

WITNESSED RESUSCITATION: A CONCEPTUAL EXPLORATION

by

WENDY MARINA WALKER

A thesis submitted to

The University of Birmingham

For the degree of

DOCTOR OF PHILOSOPHY

Nursing and Physiotherapy
School of Health and Population Sciences
The University of Birmingham
June 2010

UNIVERSITY OF
BIRMINGHAM

University of Birmingham Research Archive

e-theses repository

This unpublished thesis/dissertation is copyright of the author and/or third parties. The intellectual property rights of the author or third parties in respect of this work are as defined by The Copyright Designs and Patents Act 1988 or as modified by any successor legislation.

Any use made of information contained in this thesis/dissertation must be in accordance with that legislation and must be properly acknowledged. Further distribution or reproduction in any format is prohibited without the permission of the copyright holder.

ABSTRACT

This study was designed to explore the concept of witnessed resuscitation. This was achieved through a serial approach to conceptually based research that systematically and incrementally developed understanding of the meaning of witnessed resuscitation in the context of emergency resuscitative care for adult victims of cardiorespiratory arrest. Theoretical investigation provided a strong conceptual foundation of existing knowledge and gave direction for further inquiry. Existential investigation comprised a hermeneutic-phenomenological study to explore the phenomenon of lay presence during an adult cardiopulmonary resuscitation attempt. Lived-experience material was subjected to thematic analysis and was revealing of five concepts that represented the essential nature of the lived experience. The concept of exposure emerged as the essence of this phenomenon. Research findings derived during theoretical and existential investigation were compared by adapting a method of template comparison. This process culminated in a synthesised conceptualisation of the meaning of witnessed resuscitation of a higher level of abstraction. Ongoing research is needed to determine whether this 'state of the art' conceptualisation of witnessed resuscitation holds its boundaries when applied to alternative phenomena, contexts and disciplines. Priority should be given to exploring the application of this concept in the context of patient and family-centred end-of-life care.

DEDICATION

This thesis is dedicated to the memory of my parents.

Memory can tell us only what we were,
In company with those we loved;
It cannot help us find out what each of us,
Alone, must now become.
Yet, no person is really alone;
Those who live no more still echo
Within our thoughts and words,
And what they did has become
Woven into what we are.

By Richard Fife

ACKNOWLEDGEMENTS

There are many people who have supported and encouraged me during the development of this thesis. In particular, I would like to express my gratitude to the following people:

- To accident and emergency ambulance staff and first-level registered nurses who gave freely of their time to participate in the phenomenological study. Thank you for sharing your valuable insights and for helping us to better understand the life-world of emergency resuscitative care.
- To Academic and Trust colleagues who facilitated the recruitment of registered nurses and provided a private room for the research interviews.
- My supervisors at the University of Birmingham, Professor Collette Clifford and Dr William Daly, for their inspirational support and guidance.
- My research colleague, Dr Alison Metcalfe and fellow phenomenologists - Hilary, Kate, Susan and Dawn, for your peer support.
- To my feline friends, Whiskey and Dorothy. Thank you for quietly sharing my study.
- To my parents for encouraging me to achieve in life and for their continued spiritual presence.
- To my family and friends for allowing me the time and space to study and for your quiet understanding. Very special thanks go to my husband Vic, for all his unconditional love and support. The success is ours.

TABLE OF CONTENTS

INTRODUCTION		1
CHAPTER ONE	THE STUDY	
1.0	Chapter overview	5
1.1	Purpose of the study	5
1.2	Rationale for the study	6
1.3	Strategies for conceptually based research	8
1.4	Study design	11
1.5	The process of investigation	15
	<i>1.5.1 Phase One - Theoretical investigation</i>	15
	<i>1.5.2 Phase Two - Existential investigation</i>	15
	<i>1.5.3 Phase Three - Synthesis of new insights</i>	16
1.6	Expected outcomes of this study	17
1.7	Chapter summary	18
CHAPTER TWO	DESCRIPTION OF THE RESEARCHER'S PRESUPPOSITIONS	
2.0	Chapter overview	20
2.1	Reflexivity in qualitative research	20
2.2	Personal beliefs, assumptions and pre-understandings	21
	<i>2.2.1 The belief that individuals have a right to witness a resuscitation attempt</i>	21
	<i>2.2.2 The belief that individuals have a right to autonomous choice</i>	22
	<i>2.2.3 The belief that healthcare staff have a duty of care during a resuscitation attempt</i>	24

	<i>2.2.4 The belief that healthcare staff behave in a paternalistic manner towards family members during a resuscitation attempt</i>	25
	<i>2.2.5 The belief that healthcare staff will claim a legitimate authority to deny family presence during a resuscitation attempt</i>	26
2.3	Chapter summary	27
CHAPTER THREE	DYING, SUDDEN CARDIAC DEATH AND RESUSCITATION TECHNOLOGY	
3.0	Chapter overview	28
3.1	Sudden cardiac death	29
3.2	The notion of apparent-death	30
3.3	Advances in the practice of resuscitation	30
3.4	Defining death in cardiorespiratory arrest	32
3.5	The technological death - perceived negative effects	33
3.6	The technological death - arguments in defence	35
3.7	Mechanistic versus humanistic care	36
3.8	Chapter summary	37
CHAPTER FOUR	WITNESSED RESUSCITATION: A CONCEPT ANALYSIS	
4.0	Chapter overview	39
4.1	Statement of purpose	39
4.2	Method of analysis	40
4.3	Literature search and sample selection	42
4.4	Uses of the term resuscitation	42
	<i>4.4.1 Historical development</i>	42
	<i>4.4.2 Dictionary definitions</i>	43
	<i>4.4.3 Prefixes to the term resuscitation</i>	44
	<i>4.4.4 Resuscitation to prevent cardiorespiratory arrest</i>	46

4.5	Uses of the concept witnessed resuscitation	48
	<i>4.5.1 Family-witnessed resuscitation</i>	48
	<i>4.5.2 Witnessed resuscitation - where does it occur?</i>	49
	<i>4.5.3 The witnessed collapse</i>	51
	<i>4.5.4 The role of the witness - active participation</i>	53
	<i>4.5.5 The role of the witness - passive observer</i>	55
	<i>4.5.6 Witnessed resuscitation by proxy</i>	57
4.6	Antecedents, references and consequences	58
	<i>4.6.1 Antecedents</i>	58
	<i>4.6.2 References</i>	59
	<i>4.6.3 Consequences</i>	60
4.7	Attributes of the concept of witnessed resuscitation	60
4.8	Related concepts	61
4.9	Surrogate terms	62
4.10	Model case	62
4.11	Tentative theoretical definition	63
4.12	Implications for further inquiry	63
4.13	Chapter summary	64
CHAPTER FIVE	WITNESSED RESUSCITATION: CRITICAL LITERATURE REVIEW	
5.0	Chapter overview	65
5.1	Justification for this review	65
5.2	Review process	66
	<i>5.2.1 Definition of terms</i>	67
	<i>5.2.2 Search methods</i>	68
	<i>5.2.3 Inclusion criteria</i>	68
	<i>5.2.4 Search outcome</i>	69
	<i>5.2.5 Quality appraisal</i>	70
5.3	Study findings	73
	<i>5.3.1 Effects on the resuscitation team</i>	73

	<i>5.3.2 Effects on the resuscitation event</i>	78
	<i>5.3.3 Effects on family members</i>	81
	<i>5.3.4 Antecedents</i>	83
	<i>5.3.5 References</i>	87
5.4	Critical discussion	88
	<i>5.4.1 Ways in which witnessed resuscitation has been described and defined</i>	88
	<i>5.4.2 Methodological quality of existing research</i>	89
5.5	Implications for further inquiry	91
5.6	Chapter summary	92
CHAPTER SIX	ADVANCING THE CONCEPT OF WITNESSED RESUSCITATION	
6.0	Chapter overview	94
6.1	Elements of the research process	94
6.2	Purpose of the study	95
	<i>6.2.1 Declarative statement</i>	98
	<i>6.2.2 Specific objectives</i>	98
6.3	Epistemological basis of the study - subjectivism	100
	<i>6.3.1 Methodological approaches to qualitative inquiry</i>	101
6.4	Research methodology - phenomenology	102
	<i>6.4.1 Phenomenology as a philosophy and a methodology</i>	103
	<i>6.4.2 the influences of Husserl and Heidegger</i>	103
6.5	Theoretical perspective - interpretivism	105
	<i>6.5.1 Hermeneutic phenomenology</i>	105
	<i>6.5.2 van Manen's hermeneutic-phenomenology</i>	106
6.6	Research method - interview	109
	<i>6.6.1 Sampling procedures</i>	109
	<i>6.6.2 Recruitment strategy</i>	111

6.7	Chapter summary	113
CHAPTER SEVEN	ETHICAL CONSIDERATIONS IN PHENOMENOLOGICAL RESEARCH	
7.0	Chapter overview	115
7.1	Presenting a case for the research	115
7.2	Beneficence and non-maleficence	116
7.3	Informed consent	117
7.4	Ethical interviewing	118
7.5	Confidentiality and anonymity	120
7.6	Gaining access to the study participants	121
7.7	Gaining ethical permission to proceed	122
7.8	Chapter summary	122
CHAPTER EIGHT	THE HERMENEUTIC INTERVIEW	
8.0	Chapter overview	123
8.1	Recruitment of interviewees	124
	<i>8.1.1 Stage one</i>	124
	<i>8.1.2 Stage two</i>	124
	<i>8.1.3 Revised recruitment strategy (stage two)</i>	126
8.2	Potential factors influencing recruitment	128
8.3	Characteristics of the study participants	129
8.4	The interview structure	130
	<i>8.4.1 Type and style of interview</i>	130
8.5	The interview process	132
	<i>8.5.1 Timing and setting for the interviews</i>	132

	8.5.2 <i>The one-to-one, face-to-face interview</i>	134
	8.5.3 <i>Eliciting descriptions of the lived experience</i>	135
	8.5.4 <i>Capturing the lived experience</i>	137
	8.5.5 <i>Researcher involvement in the interview</i>	138
	8.5.6 <i>Concluding the interview</i>	139
8.6	Quality of the research interview	139
8.7	Chapter summary	142
CHAPTER NINE	HERMENEUTIC-PHENOMENOLOGICAL ANALYSIS	
9.0	Chapter overview	143
9.1	Preparation of the lived-experience material	143
9.2	Familiarity with the lived-experience material	144
9.3	Interpreting the lived-experience material	146
	9.3.1 <i>van Manen's approach to hermeneutic-phenomenological analysis</i>	146
	9.3.2 <i>Coding lived-experience material</i>	147
	9.3.3 <i>The process of identifying themes</i>	153
	9.3.4 <i>Achieving saturation</i>	157
9.4	Representing the lived-experience material	158
9.5	Verifying the lived-experience material	158
	9.5.1 <i>Credibility of the research findings</i>	161
	9.5.2 <i>Dependability of the research findings</i>	164
	9.5.3 <i>Confirmability of the research findings</i>	165
	9.5.4 <i>Transferability of the research findings</i>	170
9.6	Chapter summary	171
CHAPTER TEN	PRESENTATION OF THE INTERVIEW FINDINGS	
10.0	Chapter overview	172
10.1	Placing the study findings in context	172
	10.1.1 <i>Motivating factors</i>	172

	<i>10.1.2 The location of lay presence and characteristics of the witness</i>	175
	<i>10.1.3 Witnessed interventions</i>	177
10.2	Interview findings	178
10.3	Unifying theme: Respect for lay persons	179
	<i>10.3.1 Positive contribution</i>	179
	<i>10.3.2 Valuable resource</i>	183
	<i>10.3.3 Choice and facilitation</i>	184
10.4	Unifying theme: Professional dominance	187
	<i>10.4.1 Power and control</i>	187
	<i>10.4.2 Ethical reasoning</i>	194
	<i>10.4.3 Exercising influence</i>	197
10.5	Unifying theme: Expressions of disquiet	200
	<i>10.5.1 Being watched</i>	200
	<i>10.5.2 Pressurised performance</i>	206
	<i>10.5.3 An added burden</i>	209
10.6	Unifying theme: Preparation for lay presence	212
	<i>10.6.1 Preceding factors</i>	212
	<i>10.6.2 Assessing the situation</i>	216
	<i>10.6.3 The provision of support</i>	222
10.7	Unifying theme: The perceived effects of exposure	226
	<i>10.7.1 Emotional torment</i>	228
	<i>10.7.2 Of personal benefit</i>	230
	<i>10.7.3 Untroubled by presence</i>	235
10.8	Chapter summary	240
CHAPTER ELEVEN	CRITICAL DISCUSSION OF THE INTERVIEW FINDINGS	
11.0	Chapter overview	241
11.1	The essential nature of the lived experience	242
	<i>11.1.1 The life-world existential of lived relation</i>	242
	<i>11.1.2 The life-world existential of lived space</i>	245

	<i>11.1.3 The life-world existential of lived body</i>	249
	<i>11.1.4 The life-world existential of lived time (part one)</i>	253
	<i>11.1.5 The life-world existential of lived time (part two)</i>	257
11.2	Concluding discussion	261
11.3	Chapter summary	265
CHAPTER TWELVE	SYNTHESIS OF NEW INSIGHTS	
12.0	Chapter overview	266
12.1	The process of template comparison	266
12.2	Generating universal structures	268
	<i>12.2.1 Antecedents, references and consequences</i>	268
	<i>12.2.2 Defining attributes</i>	274
	<i>12.2.3 Advanced theoretical definition of witnessed resuscitation</i>	279
12.3	Study limitations	281
12.4	Implications for healthcare practice and education	282
12.5	Further areas of investigation	285
12.6	Chapter summary	287
	REFLECTIVE SUMMARY	289
	APPENDICES	
	REFERENCES	

LIST OF FIGURES

Figure 1	Template of studies	12
Figure 2	Elements of the research design	96
Figure 3	Extract from an interview transcript	149
Figure 4	Organisation chart	160
Figure 5	Unifying theme: Respect for lay persons	180
Figure 6	Unifying theme: Professional dominance	188
Figure 7	Unifying theme: Expressions of disquiet	201
Figure 8	Unifying theme: Preparation for lay presence	213
Figure 9	Unifying theme: The perceived effects of exposure	227
Figure 10	Divergent practices within and across contexts of care	264
Figure 11	Revised defining attributes of witnessed resuscitation	275
Figure 12	Synthesised conceptualisation of witnessed resuscitation	280

LIST OF TABLES

Chapter One

Table 1.0	The nature and purpose of inquiry	13 - 14
-----------	-----------------------------------	---------

Chapter Four

Table 4.0	Process for concept analysis	40
Table 4.1	Healthcare definitions of resuscitation	44
Table 4.2	The family or relatives as witnesses to resuscitation	49
Table 4.3	Attributes of the concept of witnessed resuscitation	61

Chapter Five

Table 5.0	Summary of appraised studies	71 - 72
Table 5.1	Respondents who had experienced witnessed resuscitation	90

Chapter Six

Table 6.0	Four elements of the research process	95
Table 6.1	Procedural activities in hermeneutic-phenomenological research	107

Chapter Eight

Table 8.0	Recruitment process and outcome (stage one)	125
Table 8.1	Recruitment via University of study and outcome	126
Table 8.2	Recruitment process and outcome (stage two)	127
Table 8.3	Characteristics of participants: Ambulance staff	129

Table 8.4	Characteristics of participants: First-level registered nurses	130
Table 8.5	Quality criteria for an interview	140

Chapter Nine

Table 9.0	Transcription symbols	145
Table 9.1	Coding framework	148
Table 9.2	Basic premises identified across the interviews	150
Table 9.3	Basic premises applicable to more than one category	151
Table 9.4	Organisation of lived-experience quotations	152
Table 9.5	The grouping of basic premises into collective themes	153 - 155
Table 9.6	From collective to unifying themes	157
Table 9.7	Techniques to build trustworthiness	159

Chapter Twelve

Table 12.0	Template comparison and synthesis of the study findings	272 - 273
------------	---	-----------

Reflective Summary

Table 13.0	Publications, conference presentations and media activity	293
------------	---	-----

GLOSSARY OF TERMS

Ambulance staff

Ambulance technicians, paramedics and community paramedic officers.

Authority

Power of office vested in the nurse/doctor by virtue of their position of responsibility. Legitimated by expert knowledge, skill, competence or experience (Thompson *et al.*, 2006).

Autonomy

'Individuals should be permitted personal liberty to determine their own actions (Phillips and Dawson, 1985, p.11).

Benevolent paternalism

Interference with other persons' autonomy out of concern for their welfare (Fletcher *et al.*, 1995).

Bystander

Lay people at the scene of an adult cardiopulmonary resuscitation attempt who are either known or unknown to the victim in cardiorespiratory arrest.

Bystander cardiopulmonary resuscitation

'An attempt to perform basic cardiopulmonary resuscitation by someone who is *not* part of an organised emergency response system' (Cummins *et al.*, 1991b, p.961).

Cardiac arrest

The cessation of effective cardiac contraction, with a resultant lethal fall in cardiac output (Jowett and Thompson, 2007).

Cardiopulmonary resuscitation

An emergency life-saving procedure designed to achieve the prompt restoration of a patent airway, spontaneous breathing and effective blood circulation (Pertab, 1999).

Cardiorespiratory arrest

Sudden cessation of spontaneous respiration and circulation (Jowett and Thompson, 2007). It is a potentially reversible life-threatening situation when cardiopulmonary resuscitation is initiated and resuscitation technology is applied.

Clinical death

The interval (approximately four minutes) in which life can be restored through cardiopulmonary resuscitation (Thinkquest, 2001). Vital organs cannot function without external intervention.

Concept

‘A term used to describe a phenomenon or group of phenomena’ (Meleis, 2007, p.33).

Concept advancement

Refers to research techniques that add to the existing body of knowledge through the synthesis of new or deeper knowledge. Advancement is typically achieved through inductive inquiry of an exploratory nature, aimed at enhancing conceptual precision (Penrod and Hupcey, 2005).

Concept analysis

A core activity in theory development which enables us to name and clarify a concept that has originated in practice, research or theory (McKenna, 1997).

Duty of care

Protective beneficence by virtue of the relationship of trust in which healthcare professionals stand relative to their patients or clients (Thompson *et al.*, 2000).

Effect

‘The result or consequence of an action’ (Oxford Current English Dictionary, 1990).

Family

‘A set of parents and children or of relatives’ (Oxford Current English Dictionary, 1990).

Family-witnessed resuscitation

A programme of care that offers family members the opportunity to remain present during the resuscitation of a relative. Support is provided by an experienced trained nurse who is assigned to the family member solely for this purpose (Royal College of Nursing, 2002).

First-level registered nurse

An individual who has obtained the standards of proficiency to practice as a nurse for entry to the first level of the Nursing and Midwifery Council professional register.

First responder

A person, trained as a minimum in basic life support and the use of a defibrillator, who attends a potentially life-threatening emergency (Resuscitation Council (UK), 2003b).

Health technology

A term which covers a range of methods used to promote health, prevent and treat disease and improve rehabilitation and long term care. Includes drugs, devices and procedures (National Institute for Health Research, 2009).

Lay person

A person who is not professionally qualified to perform cardiopulmonary resuscitation.

Lay presence

Family, relatives, friends, neighbours, colleagues or indeed complete strangers who may be present at the scene of an adult cardiopulmonary resuscitation attempt and are not part of an organised emergency response system.

Paternalism

'To believe that it is right to make a decision for someone without taking into consideration that person's wishes, or even to override their express wishes' (Fletcher *et al.*, 1995, p.38).

Phenomenon

An experience, happening, incident or event. For example, the phenomenon of sudden cardiac death is part and parcel of the lived experience of emergency resuscitative care.

Primary care

Care that is delivered and received in a pre-hospital setting. Emergency resuscitative care in this out-of-hospital environment usually precedes admission to a secondary (in-hospital) environment of care.

Natural death

A death unhampered and unprolonged by health technology. Considered to be more dignified and aesthetically pleasing (Johnson *et al.*, 2000).

Relative

A person who is related to another by parentage, descent, or marriage (Oxford Current English Dictionary, 1990).

Resuscitation technology

A term which covers a range of methods used to treat cardiac and/or cardiorespiratory arrest. Includes the use of drugs such as oxygen, vasopressors and anti-arrhythmics; devices such as intravenous cannula, airway adjuncts and cardiac monitoring equipment and procedures such as artificial ventilation, cardiac massage and defibrillation.

Right

A justified claim or entitlement that requires action or restraint from others (Gillon, 1986; Rumbold, 1999; Thompson *et al.*, 2006).

Secondary care

Care that is delivered and received in a hospital setting. Emergency resuscitative care in this in-hospital environment usually follows intervention in the pre-hospital setting.

Sudden cardiac death

Irreversible cardiorespiratory arrest. A natural death from cardiac causes (Myerburg and Wellens, 2005). Three essential elements include: (1) natural process (2) unexpected occurrence and (3) rapid development (Segal *et al.*, 1985). The most frequent underlying cause among adults is coronary heart disease (Department of Health, 2005).

INTRODUCTION

The years of political, economic, social and technological change has led to advances in the practice of resuscitation, with inevitable repercussion on the whole ethos of emergency care. Despite substantial progress in the development and implementation of evidence-based resuscitation procedures, an area of practice that is yet to be fully sanctioned by healthcare staff is the presence of family members during an adult resuscitation attempt; a phenomenon commonly referred to in the literature as ‘witnessed resuscitation’.

The concept of witnessed resuscitation was initially aired at the Foote Hospital in Michigan, United States of America in 1982 when staff began to question the fairness of excluding relatives from the resuscitation room during resuscitation attempts (Doyle *et al.*, 1987). A survey at this time revealed that 13 out of 18 surviving relatives (72%) stated that they would have liked to be present during resuscitation. As a result, a highly-structured family participation programme was introduced, offering selected family members the option of being present in the resuscitation room. This was followed three years later by a retrospective survey involving the distribution of a questionnaire to 21 emergency department staff. The findings revealed that 81% ($n=17$) had experienced family presence in the resuscitation room and 71% ($n=15$) endorsed this practice. In a follow-up paper, Hanson and Strawser (1992) assert that in their nine years of facilitating acceptance of death and grieving by this method, staff members continue to find it a humanising and workable experience.

Discussion and debate surrounding the concept of witnessed resuscitation has increasingly gained momentum on an international level. Discussion has focused on presence during adult and paediatric resuscitation, yet it is the notion of family presence at the scene of an adult resuscitation attempt that has generated the most debate among healthcare professionals. This was established by Clark (2001) who identified strong evidence of support for parental presence in a review of the paediatric literature. More recently, Nibert and Ondrejeka (2005) maintained that the evidence supports a partnering with families during paediatric resuscitation activities. Several professional organisations have responded to areas of debate by producing guidance to support decision-making activities in practice, essentially aimed at driving this practice forward (Resuscitation Council (UK), 1996; Emergency Nurses Association, 2001; Royal College of Nursing, 2002; American Association of Critical-Care Nurses, 2004; American Heart Association, 2005a; European Resuscitation Council (Baskett *et al.*, 2005); European federation of Critical Care Nursing associations, European Society of Paediatric and Neonatal Intensive Care and European Society of Cardiology Council on Cardiovascular Nursing and Allied Professions Joint Position Statement (Fulbrook *et al.*, 2007).

Trends such as the development of legislation focusing on human rights (Department of Health, 1998a), a call for openness, honesty and transparency following the Bristol Inquiry (Kennedy, 2001) and greater public involvement and partnership in care (Department of Health, 1997, 2000a, 2001a, 2001b, 2001c, 2002) have undoubtedly fuelled this debate. Public involvement is increasingly being acknowledged as essential to the provision of patient-centred care and surveys which focus on the patient and carer experience are central to ensuring public engagement in the design and delivery of services (Care Quality Commission,

2010; Picker Institute Europe, 2010). A changing culture towards improved patient choice and control over end-of-life issues (Department of Health, 2003a; Department of Health, 2008) also has influence over the evolution of this concept in practice. Promoting quality of care for all adults at the end of life has prompted national dialogue about what constitutes a 'good death' and the political message is that for many this would involve 'being in the company of close family and/or friends' at the time of death (Department of Health, 2008, p.9). Family presence during resuscitation is one way in which holistic end-of-life may be realised.

Public opinion has been sought regarding the phenomenon of family presence during an adult cardiopulmonary resuscitation attempt. The evidence suggests that many family members have a desire to be with their loved one during a resuscitation attempt (Meyers *et al.*, 1998; Heckendorn *et al.*, 2005; Ong *et al.*, 2007) or would at least like to be offered this opportunity (Barratt and Wallis, 1998; Weslien *et al.*, 2006; Duran *et al.*, 2007). Patients have also indicated a preference for family presence in the event that they require resuscitation (Benjamin *et al.*, 2004; Gulla *et al.*, 2004; Heckendorn *et al.*, 2005; McMahon-Parkes *et al.*, 2009); a viewpoint echoed by the general public (Mazer *et al.*, 2006), particularly if a family member expressed a desire to attend (Berger *et al.*, 2004). There is also evidence to suggest that patients who have survived a resuscitation attempt are supportive of having their loved ones present (Eichhorn *et al.*, 2001; McMahon-Parkes *et al.*, 2009).

Despite a mandate to shift the balance of power in the National Health Service by paying greater attention to the user perspective, witnessed resuscitation remains a source of contention among accident and emergency healthcare staff (Osuagwu, 1991, 1993; Schilling, 1994; Royal College of Nursing Congress News, 1997; Boyd, 2000; Boudreaux *et al.*, 2002;

Redley *et al.*, 2004; Wright, 2004; Kopelman *et al.*, 2005) and their opinion is known to influence the extent to which family members are able to exercise their choice (McPhee, 1987; Grandstrom, 1989; Awoonor-Renner, 1991; Matthews, 1993; Adams, 1994; Gregory, 1995; Reilly, 1996; Dolan, 1997; Rider, 1999; Meyers, 2000; Vanderbeek, 2000; Meyers *et al.*, 2000; Weslien *et al.*, 2005; Duran *et al.*, 2007). Active resistance to its introduction by those at the forefront of providing emergency resuscitative care directly opposes the views of family members who have reported on the positive benefits of this experience (Doyle *et al.*, 1987; Robinson *et al.*, 1998; Holzhauser, 2006). Hence, some 20 years after its inception, witnessed resuscitation remains a highly emotive and controversial concept. Intense disagreement is seen to exist between accident and emergency healthcare staff who choose to deny family members access to their loved one during an adult resuscitation attempt and the lay public who appear to favour the premise of presence.

CHAPTER ONE

THE STUDY

1.0 Chapter overview

This chapter presents the purpose of this study and examines the various strategies that are available for use in conceptually based research. The discussion draws attention to the dynamic process of investigation and introduces the reader to each phase of the study and the content of each chapter. A distinction is made between the strategies selected for use at the stage of concept development and those designed to advance the concept of interest through inductive inquiry of an exploratory nature. Expected outcomes of the study are carefully considered in the context of the research design. The value of this investigation to the development of a descriptive (factor-isolating) theory that describes the properties and dimensions of the concept of witnessed resuscitation, the circumstances under which it occurs and the consequences of its occurrence are made known.

1.1 Purpose of the study

The purpose of this study is to develop and advance conceptual understanding of the concept of witnessed resuscitation towards a more precisely defined unit of meaning for research application and practical use. This will be achieved through a serial approach to conceptually based research that systematically and incrementally builds the knowledge base surrounding the concept of interest within the context of emergency resuscitative care for adult victims of cardiorespiratory arrest.

1.2 Rationale for the study

During the course of their professional lives, healthcare staff will be exposed to a variety of phenomena or experiences. For example, the phenomenon of sudden cardiac death is part and parcel of the lived experience of emergency resuscitative care. A concept is a term used to describe a phenomenon (Meleis, 2007) or as McKenna (1997) explains, it is a representation of a phenomenon that individuals perceive and experience in their environment. Meleis (2007) further suggests that a concept provides us with a concise summary of thoughts related to a phenomenon. She illustrates this point by drawing our attention to the concept of ‘jet lag’ which provides an efficient way of summarising what happens to individuals who travel from one time zone to another. Hence, an important premise is that a concept can give order to observations and experiences by providing a clear, shared, and conscious agreement on its properties or meanings (Meleis, 2007).

Concepts can be located on a continuum ranging from ‘the empiric (more directly experienced) to the abstract (more mentally constructed)’ (Chinn and Kramer, 1995, p.58). Empirical concepts (also referred to as concrete concepts) can be directly observed and measured using standardised instruments, for example, incontinence, weight, temperature, fatigue or stress (Chinn and Kramer, 1995; McKenna, 1997; Morse, 2000). However, as concepts become more abstract, they increasingly rely on assessment by indirect means (Chinn and Kramer, 1995). Morse (2000, p.335) refers to abstract concepts as ‘behavioural’, which in turn may be classified as ‘everyday concepts’ or ‘scientific concepts’. Scientific concepts are developed by researchers to represent particular behaviours or entities and are carefully defined as operational definitions that give the concept its particular scientific meaning (Morse, 2000). Conversely, everyday concepts function to facilitate communication

by providing labels for abstract ideas and are narrowly confined to specific situations (Morse, 2000). Nevertheless, they may be influenced by an individual's own perceptions and experience and variation in definition may arise (Chinn and Kramer, 1995).

Witnessed resuscitation is an example of an abstract, everyday concept, invented in clinical practice and for which there is no direct measure. Hence, a definition is required if we are to know what it is (Chinn and Kramer, 1995). Emergence of this concept has been met with scepticism and its use in the context of adult emergency resuscitative care is yet to be fully embraced. I find my self questioning whether a lack of definition is the root cause of resistance and advocate that understanding is an important pre-requisite to change. For this reason, a decision was made to focus on adult resuscitation events in an attempt to reduce uncertainty and ambiguity. There is also an assumption that use of the term 'witnessed resuscitation' provides a summary of thoughts related to the phenomenon of family presence during an adult resuscitation attempt. Other phenomena do exist; including parental presence and family presence during invasive procedures. Confusion is evident in the literature when these various phenomena are subsumed under the label of witnessed resuscitation without any attempt to provide a normative definition. Clinical experience in adult intensive care also leads me to believe that many forms of resuscitation exist, and that variables such as the provider, the recipient and the context of care can alter the way in which the concept is used in practical situations. Public dissatisfaction about the quality of end-of-life care is apparent in situations when expectations are unmet due to divergent practices (Awoonor-Renner, 1991; Gregory, 1995; Reilly, 1996; Dolan, 1997; Rider, 1999). Rodgers (2000a) argues that conceptual clarity is an important step in the process of developing knowledge, leading to appropriate descriptions of situations or events and to effective communication. Developing

understanding of the meaning of witnessed resuscitation will therefore help to establish a philosophy of presence during emergency resuscitative care that is constant, regardless of where the concept is applied or who applies it. This is especially important given that for some, admission to an accident and emergency department (in-hospital) will represent continuity in the emergency resuscitative care that commenced in the pre-hospital setting.

1.3 Strategies for conceptually based research

Strategies used in the development of concepts have received considerable attention during the last two decades (Meleis, 2007). A number of different approaches are available in the literature (Chinn and Kramer, 1995; Walker and Avant, 1983, 1988, 1995; Morse, 1995; Rodgers, 1989, 1991, 2000a; Schwartz-Barcott and Kim, 2000, 2002), many of which include techniques for concept analysis (Rodgers and Knalf, 2000). The origins of concept analysis can be traced to Wilson's (1963) work, from which adaptations have emerged (Walker and Avant, 1983; Chinn and Jacobs, 1983; Rodgers, 1989) for the purpose of clarifying existing concepts. One of the most popular approaches used to guide the process of concept analysis is Walker and Avant's (1983, 1988, 1995) step-by-step, linear method which aims to capture the critical elements of a selected concept 'at the current moment in time' (Walker and Avant, 1995, p.37). This is in contrast to Rodgers (1989, 1991, 2000a) who proposes an inductive, cyclical approach that emphasises evolutionary development of a concept over time.

Morse and colleagues (Morse *et al.*, 1996a, 1996b) have developed a criterion for evaluating a concept's level of maturity, the outcome of which is intended to indicate whether further enquiry to develop the concept of interest is required. In this form of concept analysis, four broad philosophical principles: epistemological, pragmatic, linguistic and logical are used to

determine the present state of knowledge surrounding a concept of interest (Hupcey and Penrod, 2005) which in turn provides evidence to support subsequent areas of inquiry. Broome (2000) discusses several approaches that may be used by researchers to systematically review existing knowledge about a concept. The various forms of appraisal include: abbreviated, methodological, theoretical, critical and integrative reviews. Such reviews are seen as invaluable to the development of a concept by providing answers to significant analytical questions about how the concept has been defined, measured and developed by others. Similarly, Morse (2000) advocates critical appraisal of the literature to explore the adequacy and appropriateness of concepts for research or for clinical application. This is achieved by adopting a process of active inquiry that enables insights to be developed and provides direction for future research.

More recently, it has been argued that methods for concept analysis should be viewed as separate and distinct from techniques of concept advancement (Penrod and Hupcey, 2005). This argument is based on the belief that concept analysis examines what is currently known about the concept, whereas concept advancement refers to techniques that add to the existing body of knowledge through the synthesis of new or deeper knowledge (Penrod and Hupcey, 2005). This view is reflected in different models of concept development that seek to expand and further clarify a concept through ongoing empirical investigation (Rodgers and Knalf, 2000). Schwartz-Barcott and Kim (2000) propose a hybrid model of concept development which comprises three phases: an initial theoretical phase; a fieldwork phase; and a final, analytical phase. The aim of the fieldwork phase is to corroborate and refine a concept by integrating insights gained through theoretical analysis with empirical observations. Rodgers (2000b) also guides the researcher to move beyond concept analysis and argues the

importance of practical application and testing to evaluate and expand the theoretical definition derived through initial analysis. Furthermore, Rodgers (2000b) holds the view that empirical investigation into situations and phenomena across different populations and settings is necessary to ensure continuing practical utility of a concept amidst changing cultural, social and disciplinary factors. Emphasis is therefore placed on the discovery of new insights by investigating real-world examples of the concept in relation to its everyday use. Schwartz-Barcott and Kim (2000) and Rodgers (2000b) place inquiry beyond concept analysis under the rubric of concept development. In contrast, Penrod and Hupcey (2005) present the argument that terms such as concept refinement, clarification, delineation and evaluation are used to indicate advancement but without clear demarcation regarding their use. They therefore propose techniques for the continued specification of conceptual understanding under the rubric of 'concept advancement'. Methodologically, advancement is typically achieved through inductive inquiry of an exploratory nature, aimed at enhancing conceptual precision through a series of small projects. Each focused inquiry is driven by the concept, (i.e. concept-driven research), and the researcher is guided to move across phenomena and contexts to build the body of evidence required to advance conceptual meaning (Penrod and Hupcey, 2005). Penrod and Hupcey (2005) provide example of an inquiry where concept advancement proceeded through a series of small projects to incrementally enhance conceptual understanding of the concept of uncertainty. Advancement commenced with a phenomenological study of states of uncertainty experienced by family caregivers. Findings were synthesised with those derived through concept analysis to produce a more comprehensive theoretical definition of the meaning of uncertainty. Continued refinement of theoretical understanding was carried out using grounded theory methodology to further delineate experiences of uncertainty during end-of-life care.

1.4 Study design

The design of this study represents a serial approach to investigation that systematically and incrementally develops the knowledge base surrounding the concept of interest by conducting three separate, yet interrelated studies (see Figure 1 - page 12). An outline of the strategies employed and the intended purpose of each research activity is presented in Table 1.0 (see pages 13 and 14). Conceptual exploration in this study comprised two phases: (1) theoretical, which represents an in-depth analysis of existing knowledge and (2) existential, which signifies exploration of the meaning of witnessed resuscitation through inductive inquiry and the synthesis of new knowledge. The term 'concept development' was selected for phase one in recognition that concept analysis and a critical review of the literature are accepted strategies for the development of concepts and the processes employed are directed towards this goal. Penrod and Hupcey (2005) recommend the use of principle-based concept analysis (Morse *et al.*, 1996a, 1996b) to determine appropriate avenues and strategies for further inquiry. However, this was rejected in favour of Rodgers (1989, 1991, 2000a) cyclical approach which featured as a popular choice in the literature among scholars. Like Penrod and Hupcey (2005), Rodgers (2000b) views concept analysis as a starting point for further inquiry and provides detailed direction for concept development activities. However, given the plethora of terms used to represent activity beyond analysis, I support the view of Penrod and Hupcey (2005) who advocate that concept advancement is a more suitable rubric to describe techniques for ongoing inquiry. Selection of the term 'concept advancement' for phase two of the study was, therefore, based on the guiding considerations of Penrod and Hupcey (2005) who argue the importance of clearly explicating the methods used for determining what is currently known about the concept, i.e. existing knowledge, as separate and distinct from the strategies used to advance conceptual understanding through inductive inquiry.

Figure 1 **Template of studies**

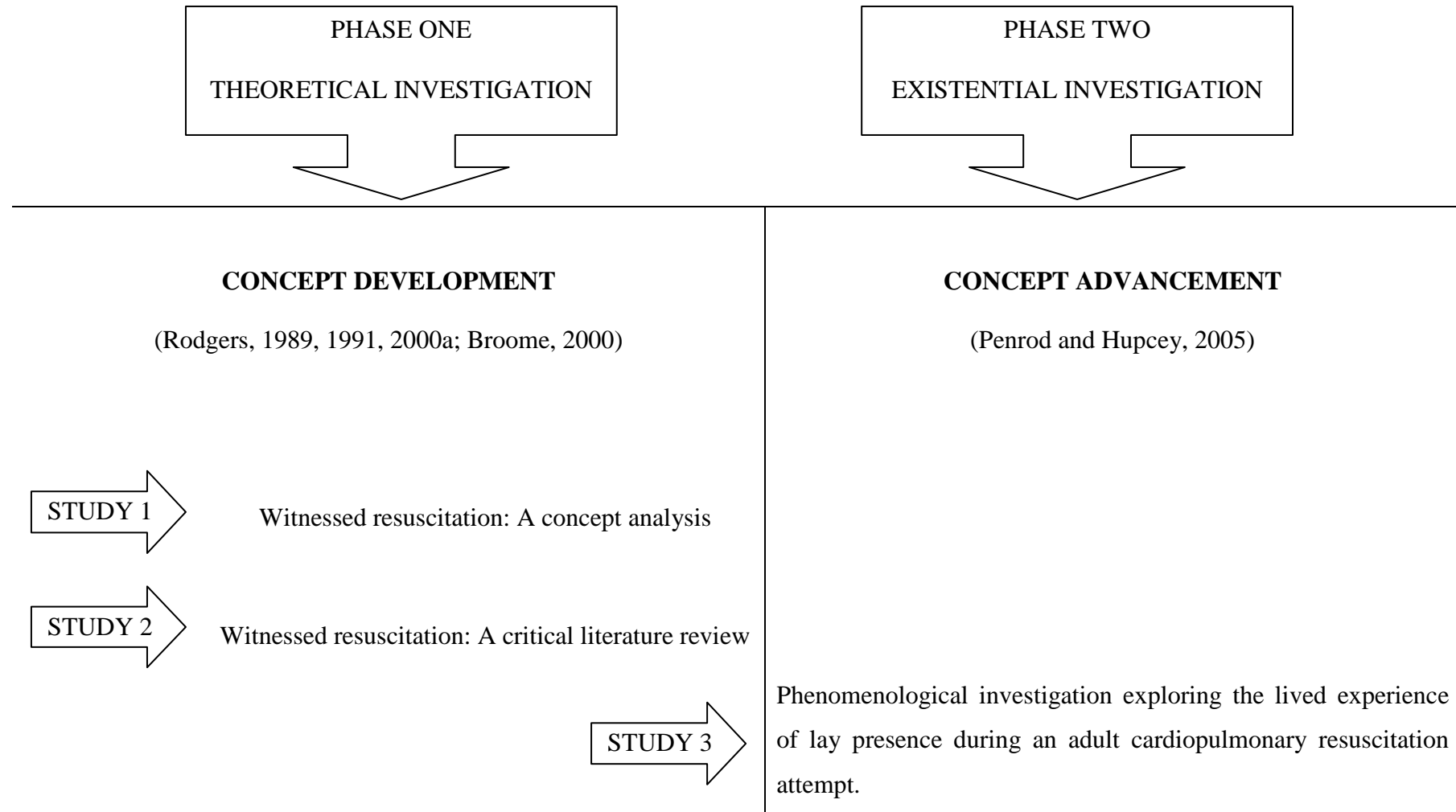


Table 1.0 The nature and purpose of inquiry

THEORETICAL INVESTIGATION	PURPOSE
<p>1. Perform a concept analysis of witnessed resuscitation.</p> <p>2. Conduct a critical review of published research on the selected concept of interest.</p>	<p>1a) To clarify the meaning of witnessed resuscitation in its current use.</p> <p>1b) To provide a tentative theoretical definition of witnessed resuscitation.</p> <p>1c) To provide a clear and rational basis for further inquiry.</p> <p>2a) To evaluate how the concept of witnessed resuscitation has been defined, measured and developed by others.</p> <p>2b) To identify gaps in knowledge and understanding.</p> <p>3c) To provide direction for further inquiry.</p>
EXISTENTIAL INVESTIGATION	PURPOSE
<p>3. Explore life-world examples of the use of witnessed resuscitation in clinical practice.</p>	<p>3a) To advance conceptual understanding of the meaning of witnessed resuscitation.</p>

<p>4. Conduct thematic analysis and interpretation of lived-experience material.</p> <p>5. Provide a rich description of the findings, followed by a critical discussion of the lived experience with reference to theoretical insights derived during phase one of the study.</p>	<p>4a) To reveal the essential nature of the lived experience of lay presence during an adult cardiopulmonary resuscitation attempt.</p> <p>5a) To increase understanding of the phenomenon of lay presence during an adult cardiopulmonary resuscitation attempt.</p>
<p>SYNTHESIS OF NEW INSIGHTS</p>	<p>PURPOSE</p>
<p>6. Compare the structural features of the concept of witnessed resuscitation, identified through existential investigation, with the findings derived during theoretical investigation.</p> <p>7. Revise the defining attributes and theoretical definition of witnessed resuscitation through the synthesis of new insights.</p>	<p>6a) To verify the findings obtained from discrete studies.</p> <p>6b) To identify areas of incongruence.</p> <p>6c) To generate universal structural features of the concept.</p> <p>6d) To provide insight into further areas of investigation.</p> <p>7a) To produce a synthesised conceptualisation of the meaning of witnessed resuscitation of a higher level of abstraction for research application and practical use.</p>

1.5 The process of investigation

1.5.1 Phase One - Theoretical investigation

The first phase of this study involves a thorough examination of existing knowledge for the purpose of determining what is currently known about the concept of witnessed resuscitation. This provides a strong conceptual foundation of existing knowledge and gives direction for further inquiry. In chapter two, I reveal how ethical-theoretical perspectives have shaped my understanding of the concept of interest and influenced my point of view. Chapter three examines the phenomenon of sudden cardiac death and in particular, focuses on the medical-technical discourse of dying and death in the context of emergency resuscitative care for adult victims of cardiorespiratory arrest. In chapter four, the meaning of the concept of witnessed resuscitation is clarified using Rodgers (1989, 1991, 2000a) evolutionary approach to concept analysis. The study examines the significance, use and application of witnessed resuscitation in a variety of contexts and across disciplines to provide a broad, yet tentative theoretical definition of witnessed resuscitation. This is followed by a critical review of international research-based publications that have examined the concept of witnessed resuscitation from the perspectives of accident and emergency healthcare staff based in primary (out-of-hospital) and secondary (in-hospital) environments of care (chapter five). Gaps in understanding are carefully analysed, from which research questions are formulated and the most appropriate method of inquiry to advance conceptual understanding is determined.

1.5.2 Phase Two - Existential investigation

Chapter six presents the philosophical and methodological bases of a study designed to advance conceptual understanding of the concept of witnessed resuscitation through existential investigation. This existential phase involves 'investigating experience as we live it

rather than as we conceptualise it' (van Manen, 1997, p.30) by exploring the phenomenon of lay presence during an adult cardiopulmonary resuscitation attempt. Emphasis is placed on the application of phenomenological research techniques based on the Heideggerian interpretive research tradition. In chapter seven, ethical considerations in the conduct of phenomenological research are examined and the processes for obtaining ethical approval to conduct the study are presented. The structure and process of the hermeneutic interview is presented in chapter eight; this being the research method selected to gather lived-experience material. In chapter nine, the steps involved in the process of analysing the lived-experience material are described and the different meanings of lay presence during an adult cardiopulmonary resuscitation attempt are presented as collective and unifying themes which characterise the lived experience. Chapter ten contains a rich description of the findings that emerged from the phenomenological study. Various dimensions of the findings are singled out and factually presented before engaging in further interpretation of the meaning of the lived experience embedded in participant descriptions. In chapter eleven, the reported findings are subjected to further scrutiny and critically discussed with reference to theoretical insights derived during phase one of the study.

1.5.3 Phase Three - Synthesis of new insights

In chapter twelve, a comparative analysis of the research findings derived during theoretical and existential investigation is carried out. This is achieved by adapting a method of template comparison for the synthesis of research findings derived from successive studies (Hupcey and Penrod, 2003). Results are critically compared and a synthesis of the antecedents, references and consequences of witnessed resuscitation occurs in areas where a conceptual match in the study findings can be made. Finally, the theoretical validity of the original

defining attributes and tentative theoretical definition of witnessed resuscitation is determined, and revisions (as necessary) are made to advance conceptual understanding of the meaning of witnessed resuscitation for research application and practical use.

1.6 Expected outcomes of this study

An expected outcome of this study is a synthesised conceptualisation of witnessed resuscitation of a higher level of abstraction. The research techniques adopted in phase one of this study represent the first level of work in theory development known as factor-isolating theory (Dickoff and James, 1968; Diers, 1979). This involves the naming and clarification of concepts (Chinn and Kramer, 1995; McKenna, 1997) and the research question is directed towards finding out ‘what *is* this?’ (Diers, 1979, p.37). The purpose of theorising at this level is to describe and serves as a foundation for developing situation-depicting (explanatory), situation-relating (predictive) and situation-producing (prescriptive) theory (Dickoff and James, 1968; Diers, 1979). Meleis (2007) identifies the important contribution of descriptive theories in identifying the properties and dimensions of a particular phenomenon, some of the circumstances under which it occurs and the consequences of its occurrence. During the synthesis stage of the study, the concept of witnessed resuscitation is advanced theoretically as linkages with related concepts become evident. These linkages are seen as ‘the essence of emergent theory, which remains focused on the concept of interest, yet clearly extends understanding beyond a single concept’ (Penrod and Hupcey, 2005, p.236).

In phase two of this study, the focus of inquiry is on the discovery of new knowledge that enhances conceptual understanding of the concept of interest by addressing gaps and inconsistencies in the literature (Penrod and Hupcey, 2005). The discovery of new knowledge

to build conceptual understanding proceeds through a phenomenological study to reveal the essential nature of the lived experience of lay presence during an adult cardiopulmonary resuscitation attempt. Olier Boyd (1989) argues that understanding an experience is useful and important for the generation of knowledge regarding a concept. This is supported by Morse *et al.* (2002) who recognises the contribution of phenomenology to the advancement of concepts by enhancing our understanding of phenomena.

In the phenomenological sense, van Manen (1997) argues that theory does not inform practice. Rather, it is the process of reflection on the lived experience that ‘increases one’s thoughtfulness and practical resourcefulness’ (van Manen, 1997, p.4). Van der Zalm and Bergum (2000) agree that the aim of phenomenology is to enlighten practice through careful descriptive and interpretive scholarship. Brink (1991, p.181) also believes that an accurate phenomenological description can enable individuals to have empathy with others by recognising ‘that’s exactly what happened to me!’ The results of phenomenological inquiry are not prescriptive in the sense of proposing change in clinical practice or in providing a blueprint for planned action (Van der Zalm and Bergum, 2000). The dynamics of such a process may, however, promote learning (Robertson-Malt, 1999) and lead individuals to develop the quality of care (Stephenson and Corben, 1997) by providing a greater understanding of the meaning given to everyday clinical experiences.

1.7 Chapter summary

The development of concepts plays an important role in knowledge development. This chapter has identified and discussed various strategies that could be used for conceptually based research. The fundamental strategies selected for this study pay attention to descriptive

theory development as a dynamic process that takes into account what is currently known about the concept of interest and uses this as a basis for advancing conceptual understanding. The study comprises theoretical and existential investigation, which culminates with the synthesis of new and existing knowledge. It is recognised that this study has the potential to reform the way in which accident and emergency healthcare staff react and respond to lay presence during an adult cardiopulmonary resuscitation attempt through increased awareness, understanding and recognition of the meaning of witnessed resuscitation.

CHAPTER TWO

DESCRIPTION OF THE RESEARCHER'S PRESUPPOSITIONS

2.0 Chapter overview

In this chapter, I examine and make explicit the preconceptions and presuppositions that I bring to the research process for the purpose of critical self-reflection and external review (Lamb and Huttlinger, 1989). This detailed account, I believe, enables the reader to recognise and pass judgment on the way(s) in which the research process is undeniably influenced by my pre-understandings about the concept of witnessed resuscitation.

2.1 Reflexivity in qualitative research

In qualitative research, the process of the researcher critically reflecting on their own values, beliefs, assumptions and preconceptions about the research topic is central to the content, conduct and ultimate product of the research (Burns and Grove, 1999; Holloway and Wheeler, 2002; Parahoo, 2006; Watson and Keady, 2008). Both Topping (2006) and Denscombe (2007) draw attention to the subjectivity of using a qualitative approach to inquiry where the researcher and the research are closely entwined. In response, Denscombe (2007, p.300) calls for a reflexive account of the 'researcher's self' and its impact on the research agenda. This critical thinking is referred to as reflexivity; a process which 'considers the reciprocal influence of the researcher and that which is researched' (Lamb and Huttlinger, 1989, p.765).

To signal their reflexivity, qualitative researchers often use the first person to describe themselves (Porter, 2000; Hansen, 2006). In accordance with this tradition, I will use the first person to reveal how ethical-theoretical perspectives have shaped my understanding of the concept of witnessed resuscitation and influenced my point of view.

Lopez and Willis (2004) advocate the use of an orientating framework by the researcher as a way of making explicit the researcher's assumptions and frame of reference. A deontological/teleological framework will be used in relation to this inquiry. Furthermore, it is proposed that this will be applied to enhance the trustworthiness of the research; thus demonstrating a commitment to the Heideggarian concept of co-constitution, which refers to the blending or fusion of the meanings articulated by the participants and the researcher during the interpretive process (Koch, 1995, 1996; Lopez and Willis, 2004).

2.2 Personal beliefs, assumptions and pre-understandings

2.2.1 The belief that individuals have a right to witness a resuscitation attempt

There appears to be a general consensus in the literature that a right is a justified claim or entitlement that imposes an obligation or duty upon others to act or refrain from acting in certain ways (Gillon, 1986; Rumbold, 1999; Thompson *et al.*, 2006). Thus, 'to have a right is said to be in a position to determine, by one's choices, what others should do or need not do' (Beauchamp and Childress, 2001, p.357). A further useful distinction is made by Feinberg (1973) who classifies a right as being either positive or negative. For example, a positive right (such as a right to emergency healthcare) invokes a correlating duty on others to provide a service, whereas with a negative right (such as the right to free speech), the only obligation placed on others is to refrain from interfering when the right holder exercises his/her claim

(Tadd and Chadwick, 1989). Personal experience of caring for the critically ill patient in need of emergency resuscitative care leads me to believe that a patient's spouse or offspring have a desire to be with their loved during what Connors (1996, p.42) describes as 'such a traumatic and potentially fatal time'. It is also my understanding that few patients will survive a cardiorespiratory arrest. I therefore believe that individuals who request access to their loved one during a resuscitation attempt are claiming a 'negative' right to be present at the time of death and that healthcare staff have a moral obligation not to hinder them in this process.

2.2.2 *The belief that individuals have a right to autonomous choice*

Autonomy is defined in the Oxford Current English Dictionary (1990) as 'the right to self-government, independence'. This definition is similar to the accounts offered by Phillips and Dawson (1985) and Thompson *et al.* (2006) who interpret autonomy as meaning that individuals should be allowed personal freedom to decide their own actions. Classically, two kinds of justification for the principle of respect for autonomy are offered: utilitarian moral reasoning which takes the production of well-being or welfare as the right criterion of action (O'Neill, 1984) and the non-consequentialist Kantian argument which, due to the nature of rational beings themselves and the moral law their reason discerns, requires the autonomy of all to be respected (Gillon, 1986).

In utilitarian ethical thinking, a moral act is one which allows for the greatest balance of good over evil. Actions can only be judged by their consequences and are therefore considered to be right insofar as they seek to maximise happiness or pleasure and minimise misery or harm (Gillon, 1986; Davis and Aroskar, 1991). It is my belief that the person best placed to assess utility in relation to the act of witnessing a resuscitation attempt is the relative him or herself.

This is supported by the Emergency Nurses Association (1995) who argues that it is the family who have the most vested interests in the outcome of the procedure and should therefore have the authority to make the decision regarding presence. A highly influential discussion in support of this argument is John Stuart Mill's *On Liberty*. Mill (1910) believed that each person is the best judge of his/her happiness and that the autonomous pursuit of goals is in itself a major source. He therefore argued against misplaced benevolent motives which either disregarded or took over securing others goals (O'Neill, 1984), thus calling for minimal paternalism except to prevent harm to others.

In contrast, the principle of respect for autonomy under Kantian rule, demands that the individual's choice of direction is upheld without discrimination, irrespective of the consequences. Recognition of a relative's request to be present during an adult resuscitation attempt is, however, seen to be dependent upon the healthcare professionals' point of view. Initiatives aimed at introducing this practice have produced ambivalent reactions and in particular, opposition from medical personnel dominates the findings of research studies that have surveyed the attitudes and opinions of accident and emergency healthcare staff (Redley and Hood, 1996; Helmer *et al.*, 2000; Weslien and Nilstun, 2003; Ong *et al.*, 2004; Yanturali *et al.*, 2005; Kirchhoff *et al.*, 2007). It is my belief that any personal rule of action; should in principle, be universally applied, irrespective of which member of the healthcare team is present at the time of a particular resuscitation event. As stated by Seedhouse (1988, p.131) 'respecting autonomy requires that the person's chosen direction should be respected, whether or not the health worker approves of that direction'. Furthermore, in response to healthcare staff who consider that allowing individuals to decide which course of action to take may not be the healthiest, Rumbold (1999) argues that it may be the most just.

2.2.3 *The belief that healthcare staff have a duty of care during a resuscitation attempt*

Whilst doctrines of respect for autonomy undoubtedly offer some moral guidance as to whether individuals have a right to witness a resuscitation attempt, Harris (1985) warns that any coherent claim to respect for others must include both respect for their wishes and concern for their welfare. Thus, certain acts of interference with other persons' autonomy are seen to be justified in the interests of client welfare, based on the principles of beneficence (to do good) or non-maleficence (at least do no harm) (Fletcher *et al.*, 1995). When faced with the decision of whether to allow family presence during resuscitation, I believe that each provider of health care has a professional duty to consider both the harm(s) and or benefit(s) that may result from their actions. The Resuscitation Council (UK) (1996) agree that decision-making must include consideration for the welfare of relatives, the patient undergoing resuscitation and the professional carers who are exposed to the resuscitation.

I believe that healthcare staff pay more attention to the possible effects of 'allowing' family presence during resuscitation when engaged in the decision-making process. For example, post traumatic distress is cited as possible negative outcome of family-witnessed resuscitation and is therefore presented as a reason to refuse this practice. However, I also believe that healthcare staff have a duty to consider the potential for psychological distress as a consequence of their decision to deny access. This pre-understanding comes from reading accounts of situations where family members have been denied access to their loved one during attempted resuscitation despite an overwhelming desire to be present (McPhee, 1987; Awoonor-Renner, 1991; Matthews, 1993; Gregory, 1995; Rider, 1999). Celia Gregory, a mother and a senior nurse recounts the events surrounding the death of her 23-year-old daughter who was admitted to an accident and emergency department following a serious

road traffic accident (Gregory, 1995). Despite her demands, she was physically restrained from entering the resuscitation room and alternatively, guided into waiting area for relatives. Two years after the tragic death of her daughter, she continues to express strong views about not being present at the time of death. This reaction is supported by Wright (1996, p.25) who, following an investigation into the immediate care of families of sudden death victims argues that ‘many will regret or feel guilt at not having been present’.

2.2.4 The belief that healthcare staff behave in a paternalistic manner towards family members during a resuscitation attempt

Despite such a notion of morality to safeguard and protect the interests of all who are witness to a resuscitation attempt, the Resuscitation Council (UK) (1996, p.7) warns that ‘exactly who is being protected, and from what, must be considered’. The danger is that healthcare staff may make decisions based on a genuine perceived need to protect or promote welfare, yet in doing so, behave in a paternalistic manner. According to Fletcher *et al.* (1995, p.38) paternalism means ‘to believe that it is right to make a decision for someone without taking into consideration that person’s wishes, or even to override their express wishes’. Benjamin and Curtis (1986) describe two types of paternalists: strong paternalists who intervene and make decisions for obviously competent persons and weak paternalists, who act to benefit or limit harm, when, possibly due to mental or physical impairment, people are unable to make their own decisions. Actual or threatened death is classified as a traumatic life event which can result in the experience of helplessness (Wright, 1999). This in turn calls for skilful intervention that seeks to promote adaptation and restore emotional equilibrium (Woolley, 1990). Hence, during a sudden, unexpected, life-threatening event when individuals may feel that they have lost control over their lives (Connors, 1996), I believe that weak paternalistic

intervention may be justified, in that offering relatives the choice of remaining with their loved one during a resuscitation attempt, restores a degree of control. Conversely, to decide for a relative what is in their best interest is, according to Rumbold (1999) denying them their individuality and value as a person. My background reading on this topic leads me to believe that healthcare staff show signs of strong paternalism by making a decision on the relative's behalf, either without firstly taking into consideration their wishes, or possibly even overriding them. This pre-understanding also comes from previous research as a Masters student investigating nurses' attitudes towards family presence during resuscitation in adult critical care settings (Walker, 1997).

2.2.5 The belief that healthcare staff will claim a legitimate authority to deny family presence during a resuscitation attempt

In relation to healthcare, Melia (1989) argues that doctors and nurses have long taken the view that 'they know best', a situation perpetuated over the years by the actions of a benevolent society and bound by a professional duty to care. Furthermore, it is argued that such actions, based on the principle of beneficence, take the form of authoritarianism on the part of the healthcare professional (Benjamin and Curtis, 1986). It is my belief that some healthcare staff may argue a legitimate authority to deny relatives access to their loved one during a resuscitation attempt, given the professional position they hold. Furthermore, I assume that healthcare staff will question whether a lay person can possibly understand the complexities of this situation, when compared to their own knowledge, skills and experience in providing emergency resuscitative care. However, as Thompson *et al.* (2006, p.54) conclude, 'if knowledge is power, true carers will aim to share their knowledge and skills with vulnerable individuals so as to empower them to reassert control'. This leads me to believe

that the hallmark of any ethical decision-making process with regards to a relative's right to witness resuscitation is the mutually interactive process of communication which assists individuals in making an informed, voluntary decision regarding their presence.

2.3 Chapter summary

Providing a reflexive account of the 'researcher's self' is an important consideration in qualitative research. This chapter has revealed how knowledge, skills and experience have shaped my understanding of the concept of witnessed resuscitation and influenced my point of view. Key ethical-theoretical perspectives to emerge include: individual rights, autonomous choice, professional duty of care, paternalism and authoritarianism. Engaging in a process of critical reflection has enabled me to recognise that there may be no clear cut right or wrong answers to the ongoing debate regarding relatives' presence during a resuscitation attempt. Rather, the rights, obligations and needs of those who are exposed to this event, whether as a recipient or as a provider of care, need to be taken into consideration. The disclosure of personal beliefs, assumptions and preconceptions at the outset of this study is therefore evaluated as a positive learning experience. The reflective insights generated will provide a frame of reference at various stages of the research process.

CHAPTER THREE

DYING, SUDDEN CARDIAC DEATH AND RESUSCITATION TECHNOLOGY

3.0 Chapter overview

Health care in the 21st century is characterised by technological innovation. Modern standards and service models of improvement for coronary heart disease range from advances in information technology through to the development of new therapies, techniques and interventions for the prevention, diagnosis and treatment of cardiac disease (Department of Health, 2000b). A highly sophisticated area of health technology is the practice of cardiopulmonary resuscitation, aimed at improving the survival of patients who are victims of cardiorespiratory arrest. This chapter examines the phenomenon of sudden cardiac death and in particular, focuses on the medical-technical discourse of dying and death. The process of dying is distinguished from the end point of death by drawing upon biomedical determinants and definitions of death. Comparison is made between the use of resuscitation technology in an attempt to reverse ‘clinical death’ and the notion of a ‘natural death’ that is proffered as a means to a ‘good’ or ‘ideal’ death. The humanistic versus mechanistic imperative is further deliberated by examining the role of the emergency team in end-of-life care and includes consideration of the effects that resuscitation technology may have on the dying process. ‘Witnessed resuscitation’ emerges as a key concept in the delivery of holistic emergency resuscitative care for adult victims of cardiorespiratory arrest.

3.1 Sudden cardiac death

Sudden cardiac death refers to a natural death from cardiac causes (Myerburg and Wellens, 2005). Three essential elements include: (1) natural process (2) unexpected occurrence and (3) rapid development (Segal *et al.*, 1985). This is supported by Zipes and Wellens (1998) who suggest that sudden cardiac death generally occurs less than or equal to one hour from the onset of symptoms and in the absence of any prior condition that would appear fatal. A 24-hour definition may be used in cases of unwitnessed deaths where the person was known to be alive and functioning normally prior to being found (Segal *et al.*, 1985; Myerburg and Wellens, 2005). The most frequent underlying cause of sudden cardiac death among adults is coronary heart disease (Goldstein, 1985; Department of Health, 2005a; Wedro, 2007), accounting for approximately 100,000 sudden cardiac deaths in the United Kingdom each year (Department of Health, 2005a). Sudden cardiac death also accounts for 300,000 to 400,000 deaths annually in the United States and is reported to be responsible for approximately 50% of the mortality from cardiovascular disease in the United States and other developed countries (Zipes and Wellens, 1998).

Physiologically, sudden cardiac death is characterised by ‘an abrupt cessation of blood flow that is incompatible with maintaining life if allowed to persist’ (Myerburg and Wellens, 2005, p.3). The cessation of effective cardiac contraction, with a resultant lethal fall in cardiac output is known as cardiac arrest or cardiorespiratory arrest in the case of sudden cessation of spontaneous respiration and circulation (Jowett and Thomson, 2007). Data from an audit in England during 2006 reported 57,345 victims of cardiac arrest (out-of-hospital) (Ambulance Service Association and Joint Royal College Ambulance Liaison Committee, 2006) and in Europe, around 700,000 people are affected by sudden cardiac arrest each year (Arawwawala

and Brett, 2006). Cardiac arrest differs from sudden cardiac death in that it is a potentially reversible life-threatening situation when resuscitation is initiated and resuscitation technology is applied. This in turn draws attention to the somewhat indistinct boundary between life and death as a consequence of resuscitation technology (Brummell, 1998) and the notion of apparent-death where the victims of cardiac arrest are regarded as recoverable.

3.2 The notion of apparent-death

In 1778, Charles Kite wrote *An Essay on the Recovery of the Apparently Dead* in which he distinguished apparent-death from real or irreversible death. He believed that life may be suspended by various causes; a situation he termed ‘suspended animation’. He further recommended techniques that might save lives, including the application of an electric shock to collapsed victims (Holleran, 2002; Alzaga *et al.*, 2005). Along similar lines to Kite (who focussed on persons apparently dead from drowning), Jellinek (1947) investigated cases of apparent-death due to electricity. In his study of first-hand observations, he searches for signs and symptoms that would make it possible to establish the boundary between apparent-death and death itself. The ‘miracle’ of seeing an apparently dead person return to life was accompanied by scepticism and unease (Jellinek, 1947; Kastenbaum, 2007). That is, until the 1950s when the combined techniques of artificial respiration (Safar *et al.*, 1958) closed-chest compression (Kouwenhoven *et al.*, 1960) and external defibrillation of the heart (Zoll *et al.*, 1956) became accepted as the initial response to revive the victim in cardiorespiratory arrest.

3.3 Advances in the practice of resuscitation

Standards for the practice of cardiopulmonary resuscitation were first published in the 1970s (Wik, 2003) and by the year 2000, collaboration to improve the practice and teaching of

resuscitation was evidenced by the production of international guidelines for cardiopulmonary resuscitation and emergency cardiovascular care (American Heart Association/International Liaison Committee on Resuscitation, 2000; Colquhoun and Nolan, 2005). Knowledge relevant to cardiopulmonary resuscitation has continued to evolve in the 21st century, resulting in several treatment recommendations that aim to improve the outcome from cardiorespiratory arrest (Nolan, 2005). One example of advancement in resuscitation technology is the development of mechanical aids such as the Lund University Cardiac Arrest System (LUCAS) device which provides automatic chest compression and active decompression during cardiac arrest (Steen *et al.*, 2005). Indeed, advances in the practice of resuscitation means that many individuals have survived what Goldstein (1985, p.23) refers to as 'the fall over the precipice of death'. In other words, death is postponed and the individual in cardiac arrest faces mortality as a reversible possibility. This is evidenced in the literature through reference to resuscitation as a 'life-saving' intervention and few would disagree with the suggestion that the goal of every resuscitation expert is to prevent premature cardiovascular death (American Heart Association, 2005b). This implies that 'life' has not ceased if it is there to be saved and that 'death' has not occurred if it is regarded as preventable. This paradoxical situation is acknowledged by Timmermans (1998) who suggests that the victim is in-between life and death during the reviving attempt. Then again, the person in cardiorespiratory arrest shows no discernable signs of life (Brummell, 1998) and as Sutcliffe (2004) points out, the general public normally associates death with a non-beating heart. For Lamb (1994), failure to maintain a distinction between the living and the dead is an unacceptable situation in society. Among the ethical reasons put forward for establishing the moment of death is the need to spare relatives unnecessary doubts.

3.4 Defining death in cardiorespiratory arrest

Hershenov (2003) argues that death is a biological concept that should be determined solely by biological factors. Worldwide, two distinct 'biological' mechanisms of death are recognised: (1) irreversible cardiorespiratory arrest and (2) brain stem death (Sutcliffe, 2004). Irreparable brain damage is the key feature of both mechanisms and their only difference is the diagnosis of death in the presence or absence of a beating heart (Sutcliffe, 2004). Criteria for the diagnosis and certification of death are set out in a Code of Practice first issued from the Department of Health in 1983 and subsequently reaffirmed in revised publications that are representative of both professional and lay interests in the care of the dying (Department of Health, 1998b; Academy of Medical Royal Colleges, 2008). The word 'death' here is defined as 'the irreversible loss of the capacity for consciousness, combined with irreversible loss of the capacity to breathe' (Academy of Medical Royal Colleges, 2008, p.11). Irreversibility is therefore identified as a key concept in the diagnosis of death (Lamb, 1994). Loss of function is not enough to declare death (Edwards and Forbes, 2003) as exemplified by resuscitation technology to provide for artificial ventilation and circulation in the case of cardiorespiratory arrest. For a period of time after the heart has stopped and respiration has ceased, the patient may still potentially be resuscitated (Willacy, 2007). The interval (approximately four minutes) in which life can be restored through cardiopulmonary resuscitation is referred to as 'clinical death' (Thinkquest, 2001). It is a critical situation where vital organs cannot function without external intervention. In the case of irreversible cardiorespiratory arrest, the Academy of Medical Royal Colleges (2008) offers standardised criteria to determine the point at which a living human being ceases to exist and death is recorded as the time at which these criteria are fulfilled.

Taylor (1997, p.265) argues that the best definition of death is ‘the event that separates the process of dying from the process of disintegration’. Hence, death is recognised as the endpoint of dying. Somatic death, i.e. the permanent, irreversible death of an organism as a whole (Thinkquest, 2001) is characterised by a number of irreversible changes. These changes include rigor mortis (limbs become stiff), livor mortis (discoloration of the body), algor mortis (cooling of the body), autolysis (breakdown of tissue) and putrefaction (invasion of the body by organisms from the gastrointestinal tract) (The Columbia Encyclopaedia, 2007). Of course, it should be remembered that some people do survive cardiorespiratory arrest and have gone on to report the occurrence of a near-death experience (van Lommel *et al.*, 2001; Simpson, 2001), thus affirming the argument that in a clinical death situation, it would be premature to suggest that death has occurred.

3.5 The technological death - perceived negative effects

Widespread commitment to health technology in contemporary western society has given rise to a professional dominance of death in the hospital setting and has undoubtedly shaped the human experience of dying through technological manipulation (Moller, 2000). Dying and death have taken on the status of a disease (Brummell, 1998) with the use of drugs, devices and procedures aimed at postponing death for as long as biologically possible (Timmermans, 2005). It is also assumed that the more health technology is used to draw out the dying process, the less humane the passing becomes (Timmermans, 1998). The potent effect of health technology on the dying process is depicted by Johnson *et al.* (2000) who examined end-of-life decisions regarding the withdrawal and withholding of life-supporting technology. Although this ethnographic study was conducted in the environment of intensive care, it is possible to relate the findings of this research to the situation of emergency resuscitative care.

Within the context of end-of-life narratives, a 'natural death' i.e. death unhampered and unprolonged by life-supporting technology was formulated as the ideal. In their analysis, the authors discuss how 'a death without machines, tubes and lines is considered both more dignified and aesthetically pleasing' (Johnson *et al.*, 2000, p.284). Technology and treatment were also conceptualised as obstacles that stood in the way of a good and timely death.

A criticism surrounding the use of resuscitation technology relates to the outcomes of resuscitation efforts. It is interesting to note that the procedures associated with resuscitation are often referred to as 'life-saving' measures, yet in reality, cardiopulmonary resuscitation is depicted as 'a desperate intervention with limited success' (Schultz *et al.*, 1996, p.13). A large British study, (the BRESUS study) showed that for every eight attempted resuscitations (in-hospital) there were only three immediate survivors (Tunstall-Pedoe *et al.*, 1992). More recently, a retrospective analysis of data from 1571 in-hospital cardiac arrests identified that 16.5% of patients (the majority of whom were residents in England) survived to be discharged (Kalbag *et al.*, 2006). With regards to survival rates for victims of out-of-hospital cardiac arrest, the Ambulance Service Association and Joint Royal College Ambulance Liaison Committee (2006) reported a return of spontaneous circulation in 32% of patients' who presented with an initial arrest rhythm of ventricular tachycardia/fibrillation. Similarly, data from America indicates survival rates of between 3-26% (Arawwawala and Brett, 2006). Given the invasive and intrusive nature of cardiopulmonary resuscitation and the perceived violent interventions of cardiac massage and electric shock (Timmermans, 1998; Davey, 2001; Page and Komaromy, 2005), it is not surprising to find that failed attempts are regarded as having a negative impact on the dignity of death (Jowett and Thompson, 2007).

3.6 The technological death - arguments in defence

Jennett (1994) and Holleran (2002) defend the decision of healthcare professionals to implement resuscitation technology by highlighting some of the dilemmas associated with the performance of life-saving measures. For example, in the absence of advanced directives or 'do not attempt resuscitation' orders, it is argued that emergency care providers have little choice other than to begin and to continue resuscitation unless or until it is certain that the situation is futile. Furthermore, Holleran (2002) suggests that patients and families have come to expect that everything possible is done to save the patient's life and that this point of view has been encouraged by advances in health technology.

Instead of concentrating on the problems associated with technological intervention, Timmermans (2005, p.1006) turns our attention to 'the hope and solace that is part of the same interventions'. He rejects the idea that resuscitation technology and the concept of dignity are inversely related (Timmermans, 1998). One argument put forward is that resuscitation provides time and space for relatives to come to terms with the possible outcome of sudden cardiac death. It is also suggested that in the event of an unsuccessful resuscitation attempt, relatives and staff may find comfort in knowing that everything medically possible has been carried out. Brummell (1998) also reminds us how health technology can be used to guide decision-making during a resuscitation event, including the decision to continue or withdraw resuscitative efforts. For example, cardiac monitoring will assist in the identification of arrest rhythms such asystole and pulseless electrical activity which usually signal a terminal event unless a reversible cause can be found and effectively treated (Resuscitation Council (UK), 2005).

3.7 Mechanistic versus humanistic care

The emergency care team has an important (and sometimes dual) role in providing life-sustaining treatment as well as influencing the quality of end-of-life care. The potential for role conflict is, however, apparent in a situation such as cardiorespiratory arrest, where the ethos of care is directed towards saving lives ‘with all means possible’ (Timmermans, 1998, p.145) rather than focusing on the possible outcome of death. Saines (1997, p.207) provides insight into the difficulties encountered by accident and emergency nurses in situations of sudden death. In this small-scale study involving six participants, issues such as ‘the high-tech, medically-dominated, physically-orientated, life-saving culture’ of accident and emergency were identified as factors which hinder the provision of quality care for the suddenly bereaved. Study participants also described how the focus changed from medical control to nursing care at the point of patient death and they expressed emotional difficulty in coping with this transition. Similar findings are reported by Page and Komaromy (2005) who explored observational data from two research studies concerned with the management of death. In the hospital-based study, cardiopulmonary resuscitation was depicted as an event that involved objective, clinical detachment and the maintenance of self-control. Case study material also portrayed a situation where medical staff left the scene in a matter of seconds when resuscitation efforts failed; giving the impression that their role was complete at the point of death.

Johnson *et al.* (2000, p.285) refer to ‘the tremendous potency of medicine and individual practitioners who are able to intervene in the disease process to the extent that they can orchestrate the manner and time of death’. This latter point in particular highlights the extent to which the situation of cardiorespiratory arrest and the use of resuscitation technology are

contrary to contemporary social movements aimed at providing individuals with greater autonomy and control over the dying trajectory (Department of Health, 2003a). Medical appropriation of death may be attributed to a number of factors including: the victims' dependency on resuscitation technology, the capacity to offer hope in desperate circumstances, heroic stories of 'lives saved' and in the event of an unsuccessful resuscitation attempt, designated authority to terminate resuscitative efforts and to certify death. Page and Komaromy (2005) accept that the event of cardiorespiratory arrest demands a biological focus. Emphasis on the biomedical model does however appear to overshadow a humanistic and holistic approach to end-of-life care.

Amidst the frenzied, action-orientated and sometimes chaotic scene of resuscitation, it is possible to see how the 'person' in cardiorespiratory arrest and family members may be overlooked by a sense of clinical urgency. However, it is argued that failure to maintain a holistic approach during resuscitation, reduces dying and death to a mere clinical event rather than 'a profoundly human event that touches the lives of others' (Malone, 1993, p.34A). End-of-life care 'may be heroic and life-sustaining' *or* (my emphasis) 'it may consist of compassionate care and comfort measures for individuals during their last stage of life' (Emergency Nurses Association, 2005, p.1). A key challenge for those providing emergency resuscitative care is to carefully consider the ways in which they may achieve both.

3.8 Chapter summary

The application of resuscitation technology is an essential part of emergency care for the victim of cardiorespiratory arrest. The significance and eminent status of this medical-technical event is likely to manifest in every story that reports on the successful outcome of a

life saved, and rightly so. At the same time, it is essential to consider the impact of this medical emergency on those involved, especially given the frequency to which individuals are exposed to this highly emotive, life-threatening situation and the associated incidence of sudden cardiac death. The provision of holistic emergency resuscitative care is seen to be dependent on the delivery of care interventions that show concern for both the physical and psychological needs of the patient and the emotional welfare of family members who are witness to this critical event.

CHAPTER FOUR

WITNESSED RESUSCITATION: A CONCEPT ANALYSIS

4.0 Chapter overview

The practice of resuscitation is recognised and endorsed on an international level, yet for more than a decade it has appeared in the literature alongside words such as witnessing or witnessed to signify the practice of family presence during a resuscitation attempt. This chapter examines the concept of witnessed resuscitation using the process for analysis proposed by Rodgers (1989, 1991, 2000a). The term resuscitation is explored, followed by identification of relevant uses of the concept of witnessed resuscitation. The reader is introduced to conceptual variations that challenge the way in which the concept has become associated with family or relatives presence in the resuscitation room of an accident and emergency department. Conceptual clarity is further enhanced through the identification of references, antecedents and consequences of witnessed resuscitation and by providing a model case of the concept that includes its defining attributes.

4.1 Statement of purpose

The purpose of this analysis is to clarify the meaning of the concept of witnessed resuscitation, thus furthering progress in the development of knowledge surrounding its current use. One way of achieving this goal is through the process of concept analysis; a core activity in theory development which enables us to name and clarify a concept that has originated in practice, research or theory (McKenna, 1997).

4.2 Method of analysis

Rodgers (1989, 1991, 2000a) evolutionary view of concept analysis (see Table 4.0) was selected for this analysis. This inductive, cyclical approach to concept development places emphasis on the dynamic, changing nature of a concept over time and within a particular context (Rodgers, 2000a). The analyst proceeds through a series of overlapping and flexible phases (Knalf and Deatrck, 2000) in order to bring about the desired degree of conceptual clarity. This is in contrast to linear models of progression that can be found in Wilsonian-derived methods such as the analytical framework proposed by Walker and Avant (1983, 1988, 1995). The Wilsonian method has been criticised by Rodgers (2000a) for espousing a static view of concepts rather than focusing on theoretical growth and development in an evolutionary manner.

Table 4.0 Process for concept analysis

Identify and name the concept of interest

Obtain a list of published literature and select items to include in the sample

Identify surrogate terms and relevant uses of the concept

Identify the attributes of the concept

Identify the references, antecedents and consequences of the concept

Identify concepts that are related to the concept of interest

Identify a model case of the concept

Source of reference: Rodgers (1989)

Three distinct influences are apparent when engaging with this dynamic process: significance, use and application (Rodgers 1989, 2000a):

1. The significance of the concept - refers to the relevant purpose of the concept in practical situations. This is influenced by a variety of internal and external factors that provide incentives for the use of the concept and its ongoing development. The significance of a concept also has an impact on the frequency and extent of its use.
2. Use of the concept - refers to the way in which a concept is employed and the situations appropriate to its application.
3. Application of the concept - which marks the scope or range over which the concept is effective, along with situations that are characterised as effectively using the concept. However, application reveals not only the strengths of the concept but also its limitations.

Rather than providing a precise and absolute definition of the concept at the end of analysis, the evolutionary method views the concept analysis as a starting point for further inquiry (Rodgers, 2000a). In other words, inquiry is characterised as an ongoing process, with no definitive end point. Chinn and Kramer (1995) support the view that methods for creating conceptual meaning produce a tentative definition because both the definition and the criteria (or attributes) can be revised. For Rodgers (2000a), variation in conceptual meaning is influenced heavily by factors such as social context, professional socialisation, interaction, and education. For these reasons, a tentative theoretical definition of witnessed resuscitation is an expected outcome of this analysis, in addition to creating a firm foundation for further inquiry.

4.3 Literature search and sample selection

A computerised search of literature listed in the Cumulative Index to Nursing and Allied Health Literature, MEDLINE, and Ovid databases was performed to obtain material on the concept of interest. Key words included, witnessed resuscitation, resuscitation, cardiac arrest and life-support. The literature search also included a review of information in general and specific dictionaries, thesaurus, books, journal articles, policy documents and national/international guidelines. The final sample of literature was limited to events involving the resuscitation of adults as this was consistent with the overall purpose of this study. It did, however, include items from various disciplines such as nursing, medical and paramedical and represented the environments of primary (out-of-hospital) and secondary (in-hospital) care. The sample of literature was drawn from a broad time-frame (1984-2004), the rationale being that this enables examination of the historical development or evolution of the concept over time (Rodgers, 1989).

4.4 Uses of the term resuscitation

4.4.1 Historical development

The practice of resuscitation has developed over many centuries, with early resuscitation techniques described as ‘both numerous and humorous in light of modern scientific knowledge’ (Hermreck, 1988, p.430). Historical reports of resuscitation go back to biblical times, with an account of artificial respiration by the prophet Elisha in the 8th century BC (Thangam *et al.*, 1986). Resuscitation is also depicted in ancient European, Near Eastern and Middle Eastern mythology (Paraskos, 1993). One of many examples cited in the literature is that of the Greek hero Hercules ‘fighting for life using only hands’ which Papageorgiou (1995) correlates with the modern-day basic life support procedure. It was not until the mid

20th century that modern methods of cardiopulmonary resuscitation emerged, combining the resuscitation techniques of artificial ventilation (Safar *et al.*, 1958) closed-chest compression (Kouwenhoven *et al.*, 1960) and external defibrillation of the heart (Zoll *et al.*, 1956).

4.4.2 Dictionary definitions

According to Stedman's Concise Medical Dictionary for the Health Professions (2001), the word resuscitate i.e. to perform resuscitation is derived from the Latin 're-suscito', to raise up again, revive. Roget's Thesaurus (2002) classifies the noun resuscitation alongside words such as revive, rekindle, revivify, regenerate, revitalise, resurrect and reanimate. When used as the verb resuscitate, similar characteristics can be found. Examples include 'return or restore to life' (The Reader's Digest Great Encyclopaedic Dictionary, 1964) and 'to revive from unconsciousness or apparent death' (Oxford Current English Dictionary, 1990). Definitions found in medical, nursing and allied health dictionaries also make reference to restoration or revival when defining the term resuscitation (see Table 4.1- page 44). Further scrutiny of dictionary definitions revealed that the term resuscitation is also a feature of everyday language from a non-healthcare perspective. This is illustrated in Webster's 3rd New International Dictionary (1986) where the meaning of resuscitate is defined as 'to restore from a state of desuetude or decay' such as withered plants 'resuscitated' by rain. Similar meaning can be found in the Oxford Current English Dictionary (1990) where the example of revive; restore or return an old custom or institution etc. to vogue, vigour or vividness is given. A slightly different illustration is presented in the Cambridge Advanced Learner's Dictionary (2004). Here resuscitation is defined as 'a return to success after a difficult period', with reference to small businesses playing a part in the 'resuscitation' of the economy used to

capture this perspective. A key observation is that restoration and revival are characteristics of the term resuscitation, regardless of the context in which it is used.

Table 4.1 Healthcare definitions of resuscitation

-
1. Restoration to life or consciousness of one apparently dead, or whose respirations have ceased (Miller-Keane Encyclopaedia and Dictionary of Medicine, Nursing and Allied Health, 1997)
 2. Revival from potential or apparent death (Stedman's Concise Medical Dictionary for the Health Professions, 2001)
 3. The process of sustaining the vital functions of a person in respiratory or cardiac failure while reviving him or her, using techniques of artificial respiration and cardiac massage (Mosby's Medical, Nursing and Allied Health Dictionary, 2002)
-

4.4.3 Prefixes to the term resuscitation

Several prefixes to the term resuscitation appear in the literature. Examples include cardiac, i.e. restoration of cardiac activity, mouth to mouth/mouth to nose, i.e. first-aid techniques for re-establishing spontaneous respiration (International Dictionary of Medicine and Biology, 1986) and cardiopulmonary resuscitation, defined as 'an emergency life-saving procedure' designed to achieve the prompt restoration of a patent airway, spontaneous breathing and effective blood circulation (Pertab, 1999, p.38). Use of the term resuscitation in this way can be found in the Royal College of Nursing guidance on witnessing resuscitation where it is used to refer to 'cardiopulmonary resuscitation which can be attempted when cardiac or

respiratory functions cease' (Royal College of Nursing, 2002, p.2). The Resuscitation Council (UK) identifies three progressive stages of cardiopulmonary resuscitation: basic, intermediate and advanced life-support. Their procedures and those of the European Resuscitation Council are derived from international resuscitation guidelines, first published in 2000 (Resuscitation Council (UK), 2003a) and are subject to ongoing development and review processes. In particular, a new approach to resuscitation that maximises the time spent performing chest compressions may well be justified in light of research evidence that points to improvements in the outcome of cardiac arrest (Chamberlain *et al.*, 2003; Wik, 2003).

Wooten *et al.* (1996) also draw attention to the situation of 'trauma' resuscitation which focuses on the emergency resuscitative care of critically ill patients in an attempt to combat the morbidity and mortality associated with major traumatic injuries. Conversely, an additional prefix to the term of resuscitation is that of 'do not attempt'. This refers to the identification of patients 'for whom cardiac arrest would be a terminal event and where resuscitation would be inappropriate' (Jevon and Raby, 2002, p.4). Stewart (1995) suggests that do not attempt to resuscitate decisions are made for several reasons. This includes the scenarios when a competent, fully informed patient asks to be excluded from cardiopulmonary resuscitation, when quality of life after cardiopulmonary resuscitation is likely to be so poor that it is unacceptable to that patient and when the chances of the patient surviving cardiopulmonary resuscitation are so low that it can be regarded as futile. Broekman (1998) found that the majority of patients prefer to talk about cardiopulmonary resuscitation. However, if the patient is unable to participate in the decision making process, then relatives should be involved or at least informed of the discussions (Smith, 1997). Alternatively, the patient's wishes may be formalised by an Advance Directive (Doyal, 1995). National

guidelines are available to assist healthcare personnel in decisions regarding cardiopulmonary resuscitation and in the development of 'do not attempt resuscitation' policies (British Medical Association, Resuscitation Council (UK) and Royal College of Nursing, 2001). The importance of having a do not attempt resuscitation policy in place is stressed by Jevon (1999, p.46) who warns 'that failure to initiate cardiopulmonary resuscitation when it is indicated would be classed as negligence, while undertaking cardiopulmonary resuscitation when it is against the expressed (and recorded) wishes of the patient could be classed as trespass'.

4.4.4 Resuscitation to prevent cardiorespiratory arrest

An alternative perspective is presented in the International Dictionary of Medicine and Biology (1986). Here, resuscitation is defined as 'restoration or maintenance of vital signs in an organism that is in shock or predictably will go back into shock'. Walsh and Kent (2001) identify three main types of shock namely, hypovolaemic, cardiogenic and vasogenic; the common denominator being reduced cellular perfusion that if left uncorrected will result in irreversible shock and death. This is supported by Merrick (1994) who, in discussing the pre-hospital treatment of shock argues that the goal is to prevent or reverse anaerobic metabolism, thus avoiding cellular death and ultimately patient death. A resuscitative intervention at the basic life-support level is oxygen therapy and in advanced life-support, the addition of fluid replacement.

Fluid resuscitation is defined as 'the correction of fluid volume imbalances, especially in patients with burn injuries' (Miller-Keane Encyclopaedia and Dictionary of Medicine, Nursing and Allied Health, 1997). The choice of resuscitation fluid includes intravenous solutions of proteins, dextrans or other relatively large molecules (colloid resuscitation),

solutions that have sodium chloride as their main constituent (crystalloid resuscitation) or hypertonic saline to burns victims (hypertonic resuscitation) (International Dictionary of Medicine and Biology, 1986). Schierhout and Roberts (1998) recognise fluid resuscitation as integral to the acute medical management of critically ill patients who are hypovolaemic. Use of the term resuscitation in this manner is also acknowledged by Moran (2002, p.1686) who suggests that early haemodynamic optimisation; defined as ‘therapy to resuscitate to normal or supranormal haemodynamic values at least 12-hours postoperatively or before organ failure’, significantly reduces mortality among acute, critically ill patients.

Staying with this theme of resuscitation to prevent cardiorespiratory arrest, a strategy designed to identify and manage seriously ill patients is the concept of a medical emergency team (Lee *et al.*, 1995). In a study designed to evaluate medical emergency team interventions and outcomes over a twelve-month period, resuscitation, defined as ‘an intervention for life-threatening emergencies involving airway, breathing and circulation’ occurred in 71% ($n=371$) of the total calls made to the team (Lee *et al.*, 1995, p.183). Similar developments include the patient-at-risk team for identifying and managing seriously ill ward patients (Goldhill *et al.*, 1999) and the use of an early warning scoring system for detecting developing critical illness (Morgan *et al.*, 1997). Such initiatives are based on the principle that prevention is better than cure (Campbell and Robson, 2004). This includes identification of patients at risk, early recognition of clinical abnormalities, early access to expert medical support and appropriate facilities for treatment (Resuscitation Council (UK), 2002).

4.5 Uses of the concept witnessed resuscitation

4.5.1 Family-witnessed resuscitation

Early reports on the practice of witnessed resuscitation first emerged in the 1980s (Wilkinson, 2000) and have continued to gain momentum over the past two decades. Definitions in the literature reviewed are, however, sparse. Dolan (1997, p.1) refers to witnessed resuscitation as ‘allowing the presence of relatives during resuscitation’ and Boyd (2000, p.171) gives a similar definition stating that it is ‘the process of active ‘medical’ resuscitation in the presence of family members’. Morgan (1997, p.13) however, draws attention to the environment of care by defining witnessed resuscitation as ‘an initiative which allows relatives to be present in the resuscitation room while their loved one is being resuscitated’. The majority of authors who have published material on this topic suggest that if a resuscitation event is witnessed, it signifies ‘family’ or ‘relatives’ presence. The list of publications in Table 4.2 (see page 49) is indicative of the extent to which the family or relatives have featured as the witness when speaking of witnessed resuscitation. Furthermore, this conceptualisation appears to be consistent regardless of the national or international origin of the work, with examples given representing authors from the United States of America, England, Scotland, Canada and Australia. This could be attributed to Doyle *et al.* (1987) who set the precedence for implementation of this concept in practice following their pioneering research into ‘family participation’ during resuscitation. Repeated reference to the resuscitation room also implies that the concept is associated with an in-hospital event where those most likely to be in attendance are the next-of-kin to the person undergoing resuscitation.

Table 4.2 The family or relatives as witnesses to resuscitation

1. The presence of relatives in the resuscitation room (Back and Rooke, 1994)
 2. Should relatives be present in the resuscitation room? (Chalk, 1995)
 3. Staff attitudes towards family presence during resuscitation (Redley and Hood, 1996)
 4. Should relatives be allowed in the resuscitation room? (Mitchell and Lynch, 1997)
 5. Should relatives witness resuscitation? Ethical issues and practical considerations (Rosenczweig, 1998)
 6. The impact of education on nurses' beliefs regarding family presence in a resuscitation room (Bassler, 1999)
 7. Relatives in the resus room: don't overlook the patient! (Blomfield, 2000)
 8. Family presence during cardiopulmonary resuscitation and invasive procedures: a research-based intervention (Clark *et al.*, 2001)
 9. Family member presence during cardiopulmonary resuscitation (McClenathan *et al.*, 2002)
 10. Family-witnessed cardiopulmonary resuscitation (Kidby, 2003)
 11. Difficulties around family presence during resuscitation (Wright, 2004)
-

4.5.2 Witnessed resuscitation - where does it occur?

Although the accident and emergency department is a common place in the hospital for a resuscitation attempt to occur (Williams, 1996), there is evidence to suggest that the practice of witnessed resuscitation applies to patient populations in a variety of healthcare settings. McIlroy (1996) reports on the way in which nurses working in a coronary care unit have

addressed the option of relatives' presence during resuscitation. Walker (1997) also revealed that family presence during resuscitation in adult critical care settings is not new, with 37% ($n=30$) of the respondents indicating that they had experienced this situation. More recently, a survey by Grice *et al.* (2003) concluded that many intensive care personnel have experienced witnessed resuscitation. Similar conclusions can be drawn from studies conducted in the United States of America. For instance, a survey of United States and international critical care professionals revealed that 59% ($n=343$) of the respondents had been involved in witnessed resuscitation (McClenathan *et al.*, 2002). A further large-scale survey to identify the policies, preferences and practices of critical care and emergency nurses (MacLean *et al.*, 2003) made known that just over a third of respondents (36%, $n=345$) had taken family members to the bedside during a resuscitation attempt.

Another outlook on the environment of care is that of the trauma resuscitation room. Wooten *et al.* (1996) describe implementation of a trauma resuscitation programme where severely injured patients may be admitted directly to the operating room for resuscitation and surgical intervention. An alternative trauma resuscitation site, outlined by LaVina and Criddle (2003), is a designated resuscitation suite adjacent to a trauma-neurosurgical intensive care unit. The authors argue that conducting the trauma resuscitation procedure in this way allows for fast and efficient delivery of intensive care to severely injured patients, alongside the co-ordination of procedures with different surgical teams. Morse and Pooler (2002) conducted a secondary analysis of 193 videotapes of trauma room care. Of these, 88 tapes showed the presence of family members. However, the timing of entry into the trauma room was dependent on the patient's condition, behavioural state, and the nature of the treatments. The presence of family members in the trauma room during resuscitation is verified by Helmer *et*

al. (2000) who found that the majority of members of the American Association for the Surgery of Trauma (55.3%, $n=193$) and members of the Emergency Nurses Association (67.8%, $n=839$) who participated in their survey had experience of family presence during trauma resuscitation. It is therefore concluded that the practice of witnessed resuscitation can and does occur beyond the environment of the resuscitation room in an accident and emergency department. This argument is re-enforced through examination of literature on community based (out-of-hospital) resuscitation events and interventions.

4.5.3 *The witnessed collapse*

Baskett (1993) talks of the witnessed collapse, a situation where the collapse of an individual is witnessed by the rescuer. Indeed, there is evidence to suggest that successful outcome from cardiac arrest is strengthened when the event is witnessed (Norris, 1998) and a bystander initiates actions consistent with what is known as the 'chain of survival' (Cummins *et al.*, 1991a). This includes recognition of the early warning signs, activation of the emergency medical system and initiation of basic life-support. This is followed by rapid defibrillation, intubation and administration of cardiovascular medications.

It is reported that twelve thousand people suffer a cardiac arrest in a public place each year (Department of Health, 2003b). The cause is commonly associated with the onset of acute myocardial infarction or ischaemia (Skinner and Vincent, 1993) and in most cases the presenting arrhythmia is ventricular fibrillation (Colquhoun and Jevon, 2000). The definitive treatment for ventricular fibrillation is early defibrillation (Jevon and Raby, 2002), i.e. within eight minutes of calling for help (Department of Health, 2000b). This has led to initiation of a national defibrillator programme that has brought about the installation of automated external

defibrillators in public areas and the training of lay persons in their use (Department of Health, 2003b). Chamberlain *et al.* (2003) cite community based schemes characterised by success rates of 40-70% when defibrillation is achieved within a few minutes of collapse, arguing that best results are achieved by defibrillation within four minutes of cardiac arrest. A further initiative is implementation of community first responder schemes. This usually, though not exclusively, is a lay person that makes him or herself available to be dispatched by the ambulance control to attend a potentially life-threatening incident (Resuscitation Council (UK), 2003b). Schemes to promote community-based training serve to contest the emphatic claim that family members do not understand the resuscitation procedure (Osuagwu, 1991) whilst at the same time, give indication of an additional way in which the lay public become witness to a resuscitation attempt.

The number of out-of-hospital cardiac arrests recorded in England and Wales between 1st January and 31st December 2004 totalled 47,923 and a resuscitation attempt was made in 52% ($n=24,936$) of cases. Furthermore, the number of cardiac arrests witnessed by a bystander other than a member of the emergency medical services was 8,786 and bystander cardiopulmonary resuscitation, i.e. 'an attempt to perform basic cardiopulmonary resuscitation by someone who is *not* part of an organised emergency response system' (Cummins *et al.*, 1991b, p.961) occurred in 28.4% ($n=7,082$) of cases where effort to resuscitate was made. The number of cardiac arrests occurring in private premises such as the patient's home, nursing home or long-term care facility totalled 31,390 (81%) and 5,368 (14%) occurred in a public place such as the workplace, the street, at a mass gathering or in an ambulance (Ambulance Service Association and Joint Royal College Ambulance Liaison Committee, 2004).

In a paper by Norris (1998) on behalf of the United Kingdom Heart Attack Study Collaborative Group, it was identified that of the 1227 cardiac arrests that occurred out-of-hospital, the majority happened in the home (75%, $n=920$). Other environments included a public place, doctors' surgeries, ambulances, nursing homes and the workplace. Just over half of the arrests were witnessed (54%, $n=660$) and cardiopulmonary resuscitation was attempted in 15% ($n=177$) of cases by a relative or bystander. Axelsson *et al.* (1996) found evidence of bystander initiated cardiopulmonary resuscitation within three minutes in 82% ($n=462$) of reported cases where the collapse was witnessed ($n=564$), indicating minimal hesitation about initiating intervention. The commonest place where lay intervention occurred was in the street and 68% ($n=505/742$) of the bystanders performed cardiopulmonary resuscitation on an unknown person. An earlier study by Cobbe *et al.* (1991), involving retrospective analysis of ambulance service reports and hospital records, also revealed that cardiopulmonary resuscitation was attempted by bystanders in 45% of the 519 cardiac arrests for which data was recorded. Not only do these findings further challenge the notion that witnessed resuscitation is attributed to an in-hospital event, but also takes the definition of witnessed resuscitation beyond that of family or relatives presence to include friends, neighbours, colleagues or indeed complete strangers who are present at the scene of a pre-hospital resuscitation attempt.

4.5.4 The role of the witness - active participant

The importance of bystander presence in out-of-hospital cardiac arrest is most strikingly portrayed by Evans (1998, p.1031) who reminds us that 'only those whose arrests are witnessed stand any chance of survival'. This clearly confronts the frequently raised question of whether family members or relatives' should be allowed or invited to witness a

resuscitation attempt (Schilling, 1994; Chalk, 1995; Connors, 1996; Reilly, 1996; Mitchell and Lynch, 1997; van der Woning, 1997; Offord, 1998; Palmer, 1998; Rosenczweig, 1998; Dight, 1999; Hadfield-Law, 1999; Tsai, 2002; Ardley, 2003; Marrone and Fogg, 2003; Gulla *et al.*, 2004; Micco, 2004). The reality is that for some, being witness to a resuscitation attempt is purely down to the fact that they were present at the time of collapse and may therefore be called upon to take an active role at the scene. Axelsson *et al.* (2000a) reported on the experience of voluntary intervention in an out-of-hospital cardiac arrest situation. In the majority of cases (58%, $n=11$), cardiopulmonary resuscitation occurred in a public place and the lay rescuer was unknown to the victim. Humanitarian values appeared to be the foundation of intervention by the witness who felt an obligation to help and had the courage to do so.

In the same year, Meyers *et al.* (2000) studied 43 cases of family presence which included 24 instances of family presence during invasive procedures (56%) and 19 instances during cardiopulmonary resuscitation (44%). In a third of the cases, family members had assisted in the summoning of help and in giving aid at the onset of the emergency in the pre-hospital setting. Similarly, in a study designed to investigate relatives point of view about presence in the resuscitation room, Barratt and Wallis (1998) found that just under half of the respondents ($n=17$) had witnessed their relative collapse and 26% ($n=9$) had travelled with their relative in the ambulance. Meyers *et al.* (2000) concluded that families perceived themselves as active participants as opposed to passive observers, caring for the patient with the staff.

The preventative role of resuscitation also raises questions on the timing of family or relatives presence. Access to the patient in an emergency department, trauma resuscitation room,

intensive therapy or high dependency unit could allow the family member or relative to take an active role in providing comfort during the administration of treatment and procedures aimed at stabilising the patient. Family presence during invasive procedures has been acknowledged (Emergency Nurses Association, 1993) and subsequently researched alongside family presence during cardiopulmonary resuscitation (Meyers *et al.*, 2000; MacLean *et al.*, 2003). In the study by Meyers *et al.* (2000), survey responses from families present during invasive procedures or cardiopulmonary resuscitation were reported together. There were, however, noticeable differences in the list of most frequently performed procedures, for example, open wound exploration, peritoneal lavage and nasogastric tube insertion arguably represents a different level of invasiveness when compared with external cardiac pacing, central line insertion and endotracheal tube intubation. MacLean *et al.* (2003) suggest that family presence may be influenced by the invasiveness of interventions, having found that fewer families requested to be present during cardiopulmonary resuscitation than for invasive procedures. In their analysis of this finding, they go on to argue that the two are very different experiences that need to be better understood.

4.5.5 The role of the witness - passive observer

Several relatives have contributed to the evidence-base of witnessed resuscitation by offering personal accounts of their role as a passive observer of events during a resuscitation attempt. For example, Adams (1994) provided an emotive description of witnessing the resuscitation of her brother, insisting that the experience had helped her to come to terms with his death. Similarly, Dobson (1996, p.10) recounted the importance of being with her husband who required cardiopulmonary resuscitation. She put the observer role into perspective by explaining how she focused on her husband 'willing him to breathe and open his eyes' rather

than observing the techniques of the staff involved. Vanderbeek (2000) also discussed how being able to comfort her daughter and advocate for her at the end of her life outweighed the visual trauma of witnessing resuscitative efforts. Additional commentaries, which lend support to the practice of family presence during a resuscitation attempt as beneficial to the grieving process are presented by a variety of healthcare professionals (McPhee, 1987; Grandstrom, 1989; Jezierski, 1993; Dolan, 1997). Martin (1991, p.67) identifies 3 possible benefits for the family concerned:

1. Seeing that everything possible was being done rather than just being told 'we did everything we possibly could'.
2. Being able to touch the patient while he or she is still warm (warm is alive to the general public).
3. Being able to say whatever they need to say while there is still a chance that the patient can hear.

She goes on to argue that 'the grieving process is long and hard without eliminating any element that might help adjustment'. Similar views and opinions are found to be held by others who from their experience, recognise that observer presence gives relatives an opportunity to gain a realistic view of attempted resuscitation and possibly death (Post, 1989; Cox, 1993; Whitlock, 1994; O'Shea, 1999), which may in turn reduce the disbelief that hinders grieving (Higgs, 1994).

In contrast, Osuagwu (1991, p.363) expresses a strong and negative personal belief that observing the resuscitation of a loved one 'is non therapeutic, regretful and traumatic enough to haunt the surviving family member as long as he or she lives'. Furthermore, in a British

study by van der Woning in 1999, the concept of ‘negativity’ emerged as a key finding, with three out of five participants (60%) expressing regret at having made the decision to stay with their relative. Sights and sounds in and around the resuscitation were identified as contributing to the negative experience. Surveys of staff attitudes also reveal that staff members are fearful that procedures and/or comments made by the resuscitation team would offend grieving family members (Back and Rooke, 1994; Redley and Hood, 1996; Mitchell and Lynch, 1997).

4.5.6 *Witnessed resuscitation by proxy*

Television is recognised as an important source of information about cardiopulmonary resuscitation (Diem *et al.*, 1996). This is supported by van der Woning (1997) who claims that the veil of mystery has been lifted through various television dramas that depict a resuscitation event. Similarly, Hadfield-Law (1999) suggests that the public need little protection from resuscitation events, having been exposed to fly-on-the-wall documentaries based in the resuscitation room. These accounts are upheld by Grice *et al.* (2003) who found that 90% ($n=49$) of patients and relatives who participated in their study had some previous exposure to resuscitation and 88% ($n=48$) admitted that they had seen resuscitation on television. Gordon *et al.* (1998) conducted an observational study of three major British television medical dramas: *Casualty*, *Cardiac Arrest* and *Medics*. A total of 64 episodes were watched to assess the degree of realism when compared to the findings of the BRESUS study group who surveyed cardiopulmonary resuscitation in a number of British hospitals (Tunstall-Pedoe *et al.*, 1992). Although the overall survival rate of 25% in British fictional medical dramas was deemed to be realistic, the pattern of events leading to the need for resuscitation did not concur with the BRESUS study. For example, patients portrayed receiving

resuscitation were in a younger age group and the reasons for resuscitation were more varied and more often associated with trauma than in reality. The survival rates in this study contrast with a review of 60 occurrences of cardiopulmonary resuscitation portrayed in 97 television episodes of the American medical dramas *ER* ($n=31$), *Chicago Hope* ($n=11$) and *Rescue 911* ($n=18$) (Diem *et al.*, 1996). In this study, 75% ($n=45$) of patients undergoing cardiopulmonary resuscitation on television survived the immediate arrest and 67% ($n=40$) appeared to have survived until discharge. Baer (1996), a co-producer for the popular Chicago-based drama, *ER* defends the effort put into to making each episode credible and accurate, recognising the content as an important source of medical information for millions of viewers. There is, however, little known about how exposure to cardiopulmonary resuscitation on television influences personal choices and actions during a real-life resuscitation event.

4.6 Antecedents, references and consequences

The purpose of identifying the references of a concept is to clarify the range of events, situations or problems over which application of the concept is considered to be appropriate. The antecedents of a concept are the events or phenomena that are generally found to precede an instance of the concept whereas consequences follow its occurrence (Rodgers, 1989). To complete this task, further analysis of the literature was required. A decision was therefore made to defer presentation of the defining attributes in anticipation that this phase of the process would help to further refine important characteristics of the concept of interest.

4.6.1 Antecedents

In order for witnessed resuscitation to come about, a human collapse must occur and a resuscitation attempt must take place in the presence of others. The scene may be located in

the primary care environment (out-of-hospital) or in secondary care (in-hospital) wards and departments. The resuscitation event may be witnessed in real-life or experienced through fiction. The procedure of resuscitation is used in cases of respiratory and/or cardiac compromise or in situations of cardiac, respiratory or cardiorespiratory arrest involving the sudden cessation of cardiac and/or respiratory functions. The arrest may occur because of a primary airway, breathing or cardiovascular problem or as a result of life-threatening diseases or trauma that cause secondary respiratory or cardiac compromise (Resuscitation Council (UK), 2002). Management of an ‘arrest’ situation requires a team of that is ‘well rehearsed in both basic and advanced life-support skills’ (Lambert and Heath, 2000, p.30). Resuscitation in the out-of-hospital situation may include members of the lay public who are not part of an organised emergency response system. Those who are managing the arrest may be witnessed by others whilst performing the skills of resuscitation.

4.6.2 References

Application of the concept of witnessed resuscitation appears to differ according the context in which it is used. In the out-of-hospital environment, the concept is endorsed in situations where the presence of a witness may be life-saving for the individual who is in need of emergency resuscitative care. This contrasts with accounts of witnessed resuscitation in the secondary (in-hospital) environment of care which focuses on the presence of family members who are witness to the resuscitation of a relative. Here, application of the concept appears to be appropriate in situations where the family member may take an active role in providing comfort during the administration of treatment and procedures aimed at stabilising the patient. Alternatively, family members may adopt a passive observer role that may be of personal benefit both during and after the event.

4.6.3 Consequences

The consequences of witnessed resuscitation are well documented in the literature and contain a mixture of both positive and negative outcomes. Many accounts lack empirical validation and are heavily weighted towards the expressed opinions of healthcare personnel, relatives or patients who have experience of this practice in the secondary (in-hospital) environment of care. Research into the consequences of witnessed resuscitation has captured various perspectives. For example, mortality rates in out-of-hospital cardiac arrests in the presence of a witness (Grubb *et al.*, 1995; Norris, 1998), bystander perceptions, experiences and psychological reactions (Axelsson *et al.*, 1996; Axelsson *et al.*, 1998; Axelsson *et al.*, 2000a), perceived stress in accident and emergency healthcare staff (Redley and Hood, 1996; Timmermans, 1997; Boyd, 2000; Helmer *et al.*, 2000; Ong *et al.*, 2004), apparent threat to the resuscitation process (Back and Rooke, 1994; Mitchell and Lynch, 1997; Timmermans, 1997; Goodenough and Brysiewicz, 2003; Booth *et al.*, 2004; Ong *et al.*, 2004), inhibition to staff performance (Back and Rooke, 1994; Mitchell and Lynch, 1997; McClenathan *et al.*, 2002) and the long-term effects of relatives witnessing a resuscitation attempt (van der Woning, 1999) including those who were bereaved (Hanson and Strawser, 1992; Eichhorn *et al.*, 1996; Belanger and Reed, 1997; Robinson *et al.*, 1998). Concerns regarding medico-legal implications and professional issues relating to the concept have also been expressed (Stewart and Bowker, 1997; Offord, 1998; Fulbrook, 1998; Rosenczweig, 1998; Baskett and Lim, 2004), although no cases of litigation appeared in the literature reviewed.

4.7 Attributes of the concept of witnessed resuscitation

Initial analysis of the concept of witnessed resuscitation revealed that it is defined relatively consistently by authors on a national and international level. However, following a detailed

review of the literature, the concept was found to possess characteristics that differ according to the environment and context in which it is used. The defining attributes that reflect these wider conceptualisations of witnessed resuscitation are presented in Table 4.3.

Table 4.3 Attributes of the concept of witnessed resuscitation

1. Resuscitation is a procedure performed in an attempt to restore respiratory, cardiac or cardiorespiratory function.
 2. The ‘witness or witnesses to’ a resuscitation attempt may take an active role by applying their knowledge and skills of resuscitation or adopt the role of a passive observer.
 3. Those performing resuscitation may be ‘witnessed by’ others.
 4. Resuscitation may be witnessed in real-life or as a fictitious event.
-

4.8 Related concepts

Although various definitions, prefixes and techniques associated with the procedure of resuscitation were identified during the course of this analysis, the literature was devoid of related concepts. In hindsight, this was not surprising given the liaison between principal resuscitation organisations worldwide that has led to the production of guidelines on cardiopulmonary resuscitation that reflects an international consensus. This may also be attributed to the fact that witnessed resuscitation is a relatively new and evolving concept in practice.

4.9 Surrogate terms

A surrogate term for resuscitation in the literature was that of 'code'. This was discovered in journal articles originating in North America and appeared to be used as a substitute for the word resuscitation as opposed to offering any alternative meaning. For example, Post (1989) describes a code team's attempt to resuscitate a patient in full cardiac arrest in the presence of a family member; Kueck (1992) stresses the importance of technical competence in advanced life-support together with a caring bedside role during codes; McCabe (1997) suggests hospital-based resuscitation (code) team members are at risk of health and safety hazards and Calam *et al.* (2000, p.1255) argue that 'patients want physicians to ascertain their wishes related to resuscitation, yet discussions of 'code status' are often delayed in the hospital setting'. In each case, an association between resuscitation and code can be made.

4.10 Model case

Rodgers (1989) views the model case as a significant aspect of concept analysis, arguing that it enhances clarification by providing an everyday example of an identified case that includes the attributes of the concept. In contrast to the Walker and Avant (1983, 1988, 1995) model, Rodgers (1989) recommends that a model case is identified as opposed to constructed. It was therefore considered appropriate to select a real-life example of witnessed resuscitation that contains all the defining attributes. A nurse participating in a study by Walker (1997) described a situation where a patient had sustained a cardiac arrest in the home and the wife had initiated cardiopulmonary resuscitation. The ambulance crew arrived and he was defibrillated. The wife accompanied her husband to hospital and remained at his bedside on arrival to the coronary care unit. Reflecting on this experience the nurse stated: *'I felt that she'd been of some help and I think to have taken over then and said 'don't need you*

anymore; we'll put you in another room' would have been very unkind to her... I felt that we would have taken a lot from her... It was her situation and she had dealt with it so well... It was just so right for her to actually be there'.

4.11 Tentative theoretical definition

Witnessed resuscitation is the experience of having been 'witness to' a resuscitation attempt in which the witness took an active or passive role (*or*) the experience of being 'witnessed by' others whilst applying the skills of resuscitation.

4.12 Implications for further inquiry

Variation in the significance, use and application of the concept of witnessed resuscitation provides a strong incentive for further development. The concept is used in a variety of healthcare settings, yet it is within the primary (out-of-hospital) environment of care where its use is portrayed as being of utmost importance for the victim of cardiac, respiratory or cardiorespiratory arrest. Here, conceptualisation of the concept of witnessed resuscitation as beholden to the presence of the family or relatives is significantly challenged and extended to include members of the lay public who may be known or unknown to the victim in cardiorespiratory arrest. The concept of witnessed resuscitation is also identified as being significant for family members who are faced with the unexpected circumstance of their loved one experiencing a cardiorespiratory arrest. Again, the way in which their role as either an active or passive witness during this event appears to differ according the context of care. Further exploration of the way(s) in which witnessed resuscitation is conceptualised within the confines of primary (out-of-hospital) and secondary (in-hospital) care is therefore worthy of consideration. This could be achieved by focusing on accident and emergency healthcare

staff who are a constant feature in the process of emergency resuscitative care, regardless of the environment in which it occurs. Determining if and how the use of a concept varies among different types of practitioners, and across disciplines is viewed as appropriate in concept development work (Rodgers, 2000b).

4.13 Chapter summary

This concept analysis proved to be a challenging exercise, not least due to examination of both components of the concept of interest, namely resuscitation and the prefix of witnessed. This did, however, result in a wider conceptualisation than previously reported in the literature to include: a clear understanding of what the procedure of resuscitation entails, clarification of the environment in which a witnessed resuscitation attempt may take place, identification of the characteristics of the witness beyond that of relatives or family members and enlightenment on the role of the witness, this being either active or passive. The outcome of this inductive process is a tentative theoretical definition of witnessed resuscitation that helps to organise existing knowledge, provides conceptual clarity in the research process and further develops our understanding of this evolving concept in practice.

CHAPTER FIVE

WITNESSED RESUSCITATION: CRITICAL LITERATURE REVIEW

5.0 Chapter overview

This chapter presents a critical review of international research studies that have examined the concept of witnessed resuscitation from the perspectives of accident and emergency healthcare staff based in primary (out-of-hospital) and secondary (in-hospital) environments of care. The primary purpose is to further develop conceptual understanding of the concept of witnessed resuscitation by drawing on past empirical research as a source of data. A standardised approach to the appraisal process is achieved through the utilisation of guidelines for critiquing self-reports. The findings from individual studies are presented under the headings of five themes and the technique of synthesis is employed as a way of increasing the strength of evidence derived from descriptive research. Gaps and inconsistencies in the research literature are made known, thus giving focus and direction to future studies.

5.1 Justification for this review

According to Broome (2000, p.231), 'concept building requires a working knowledge of what previous work has been done in the area, what limitations in conceptualisation and methods have influenced the development of the concept, as well as what questions remain unanswered'. Broome (2000) identifies a critical literature review as one of six possible approaches available to the researcher for the development of concepts. The nature of the review involves an extensive analysis, interpretation and synthesis of existing research and

includes both a theoretical analysis of the findings and methodological critique of study processes. Kirkevold (1997) argues that the strength of this type of review is its ability to give focus and direction to further studies. This is supported by Polit and Hungler (1999) who suggest that familiarisation with previous studies can be useful in alerting the researcher to unresolved research problems and can provide a foundation upon which to base new knowledge.

Streubert Speziale and Carpenter (2007) advocate postponing the literature review until data analysis is complete in order to obtain the purest description of the phenomena under investigation. However, as a lecturer responsible for evidence-based teaching, it was considered unrealistic to suspend personal knowledge and judgement on the research topic. The Department of Health (2001d, 2005b) also make explicit the requirements of the researcher to provide justification for the study from an ethical perspective. It argues that research which needlessly duplicates other work or is not of sufficient quality to contribute something useful to existing knowledge, is in itself unethical. For Morse (1994a), comprehending what is known about the study topic avoids reinventing the wheel and provides a template for comparing new data with previously established work.

5.2 Review process

This review differs from the traditional viewpoint which regards the literature review as a precursory step to 'real' research (Kirkevold, 1997, p.980) or as a fundamental process and foundation for the 'research proper' (Hart, 1998, p.26). Rather, the reviewer accepts the ideas of Cooper (1989) who believes that the process of reviewing and synthesising existing knowledge is in itself a form of research which demands the same rules of rigorous inquiry, as

required in primary research. During the critical review process, answers to the following questions will be sought, consistent with the categories for analysis of a concept proposed by Rodgers (1989, 1991, 2000a):

- What are the positive and negative effects (consequences) of witnessed resuscitation as perceived by accident and emergency healthcare staff?
- What factors influence accident and emergency healthcare staff experience with and support for witnessed resuscitation (antecedents)?
- In what situations do accident and emergency healthcare staff consider application of the concept of witnessed resuscitation to be appropriate (references)?

The following questions, based on the ideas of Broome (2000) will also serve as a guide to the review process:

- What research approaches have been used to understand the concept of witnessed resuscitation?
- How has the concept of witnessed resuscitation been defined and described by researchers?
- What is the methodological quality of existing research?

5.2.1 Definition of terms

For the purpose of this review, witnessed resuscitation is defined as ‘the experience of having been ‘witness to’ a resuscitation attempt in which the witness performed an active or passive role (or) the experience of being ‘witnessed by’ others whilst applying the skills of resuscitation’; this being consistent with the tentative theoretical definition of witnessed resuscitation derived through the process of concept analysis. Accident and emergency

doctors, nurses and ambulance personnel with a professional obligation to provide emergency resuscitative care are regarded as healthcare staff, as are healthcare assistants, receptionists, technicians, therapists and chaplains who provide support at the scene of resuscitation. The term 'effect' is defined as: 'the result or consequence of an action' (Oxford Current English Dictionary, 1990).

5.2.2 *Search methods*

An electronic search of studies listed in ScienceDirect, Cumulative Index of Nursing and Allied Health Literature, MEDLINE, EMBASE, PsycINFO and British Nursing Index databases was conducted using the terms resuscitation, witnessed resuscitation, bystander presence, family presence, relatives' presence, attitudes and opinions and accident and emergency. The search phrases 'witnessed resuscitation' and 'family presence during resuscitation' produced the most discriminated set of results. The search was limited to research publications written in the English language and published between 1987 and 2009. A review of abstracts facilitated the process of identifying studies that demonstrated evidence of a 'logical planned format' for studies to be classed as research (Clifford, 1997, p.1). Subsequent examination of the reference lists and previously-published literature reviews (van der Woning, 1997; Boyd, 2000; Boudreaux *et al.*, 2002; Redley *et al.*, 2004; Axelsson *et al.*, 2005; Halm, 2005; Moreland, 2005; Martincheck, 2006; Critchell and Marik, 2007) assisted in the identification of additional studies.

5.2.3 *Inclusion criteria*

Variation in the use, significance and application of the concept of witnessed resuscitation according to the context of care provided rationale for the focus of this critical literature

review. In particular, variation across primary (out-of-hospital) and secondary (in-hospital) environments of care was identified as worthy of further exploration. This will be achieved by focusing on accident and emergency healthcare staff who are a constant feature in the process of emergency resuscitative care, regardless of the environment in which resuscitation occurs. Maintaining a focus on an adult resuscitation attempt is consistent with the overall purpose of this conceptually based study. Research studies were therefore included if they:

- Targeted accident and emergency healthcare staff for inclusion in the study sample (including resuscitation team members).
- Investigated the viewpoint of accident and emergency healthcare staff based in primary (out-of-hospital) or secondary (in-hospital) care environments.
- Focused on family/relatives presence during an adult resuscitation attempt.

5.2.4 Search outcome

A total of 30 studies were identified for review. Three studies were rejected as the findings represented the perspectives of healthcare staff based in a variety of acute and critical care locations, making it difficult to discern the views of accident and emergency healthcare staff (Knott and Kee, 2005; Duran *et al.*, 2007; Demir, 2008). The same principle of rejection was applied to two studies where a description of the bystanders' reactions (Axelsson *et al.*, 1998) and trained rescuers' attitudes and beliefs (Axelsson *et al.*, 2000b) had been sought. In both studies, the perspectives of professional and lay providers of emergency resuscitative care had been reported on collectively. A decision was also made to reject three studies where researchers had investigated family presence during resuscitation *and* invasive procedures (as indicated in the study title) (Meyers *et al.*, 2000; MacLean *et al.*, 2003; Miller and Stiles, 2009), with the aim of preserving resuscitation as the focal point of the review. This reduced

the final number of papers for review to 22. The majority of studies ($n=18$) reflected a quantitative survey design, employing either questionnaire as the method of data collection ($n=17$) or telephone interviews ($n=1$). Two researchers conducted a quasi-experimental study with a pre- and posttest design. In contrast, two studies were characterised by a qualitative approach to inquiry through the use of face-to-face interviews. Most research ($n=20$) had been carried out in the secondary (in-hospital) environment of care. Participants primarily belonged to the disciplines of nursing and medicine, although three studies had included pre-hospital emergency services personnel and four studies made explicit the inclusion of support staff. The country where most research had originated was the United States of America ($n=9$), followed by the United Kingdom ($n=5$), Australia ($n=1$), Belgium ($n=1$), Germany ($n=1$), Republic of Ireland ($n=1$), Singapore ($n=1$), South Africa ($n=1$), Sweden ($n=1$) and Turkey ($n=1$).

5.2.5 Quality appraisal

Preliminary reading gave early indication of the strength of research evidence included in this review. Based on the hierarchy of research methodologies proposed by Gray (1997) most of the studies could be rated as level five evidence, i.e. descriptive studies. According to Evans and Pearson (2001), it is not uncommon for descriptive research methods to be classified as 'low level' evidence, or for descriptive research findings be excluded from a systematic review that focuses primarily on the summary and synthesis of randomised controlled trials. They do, however, support the synthesis of findings from individual studies as a means of increasing the strength of evidence derived from descriptive research. A critical review process (as opposed to a systematic review approach) was therefore adopted for the purpose of appraising and synthesising the current state of knowledge, thus giving focus and direction

to future studies (Kirkevold, 1997; Broome, 2000; Carnwell and Daly, 2001). A standardised approach to the appraisal process was achieved through the use of guidelines for critiquing studies based on self-reports, as proposed by Polit and Hungler (1999). With regard to the use of descriptive statistics, only those effects identified by the majority of participants are reported. Where researchers had recruited family members and accident and emergency staff, a review of the findings relating to healthcare staff was retained. A summary of each study is presented in Table 5.0 (pages 71-72).

Table 5.0 Summary of appraised studies

Author(s), year and country of origin	Design	Sampling strategy	Response rate (%) and participant numbers (n=)
Doyle <i>et al.</i> (1987) USA	Questionnaire survey	Convenience	Not reported (n=21)
Back and Rooke (1994) UK	Questionnaire survey	Convenience	80% (n=20)
Chalk (1995) UK	Questionnaire survey	Random	100% (n=50)
Redley and Hood (1996) Australia	Questionnaire survey	Convenience	83% (n=133)
Mitchell and Lynch (1997) UK	Questionnaire survey	Convenience	78.6% (n=81)
Belanger and Reed (1997) USA	Questionnaire survey	Convenience	Not reported (n=41)
Timmermans (1997) USA	Descriptive interviews	Snowball	Not reported (n=57)
Bassler (1999) USA	Quasi-experimental	Nonrandomised convenience	Pretest 100% (n=46) Posttest 100% (n=46)

Table 5.0 Continued

Author(s), year and country of origin	Design	Sampling strategy	Response rate (%) and participant numbers (n=)
Boyd and White (2000) UK	Questionnaire survey	Convenience	89% (n=114)
Helmer <i>et al.</i> (2000) USA	Questionnaire survey	Convenience	42.8% (n=1,629)
Goodenough and Brysiewicz (2003) South Africa	Descriptive interviews	Purposive	Not reported (n=6)
Weslien and Nilstun (2003) Sweden	Questionnaire survey	Convenience	82% (n=175)
Booth <i>et al.</i> (2004) UK	Telephone survey	Not reported	Not reported (n=162 Emergency Departments)
Ong <i>et al.</i> (2004) Singapore	Questionnaire survey	Convenience	82.5% (n=132)
Engel <i>et al.</i> (2005) USA	Questionnaire survey	Convenience	79.8% (n=182)
Yanturali <i>et al.</i> (2005) Turkey	Questionnaire survey	Convenience	96% (n=239)
Compton <i>et al.</i> (2006) USA	Questionnaire survey	Convenience	100% (n=128)
Macy <i>et al.</i> (2006) USA	Questionnaire survey	Convenience	92.4% (n=218)
Kirchhoff <i>et al.</i> (2007) Germany	Questionnaire survey	Convenience	85% (n=464)
Madden (2007) Republic of Ireland	Questionnaire survey	Convenience	Not reported (n=90)
Mian <i>et al.</i> (2007) USA	Quasi-experimental	Convenience	Pretest 69% (n=121) Posttest 60% (n=103)
Mortelmans <i>et al.</i> (2009) Belgium	Questionnaire survey	Not reported	60% Emergency Service Departments (n=1143)

5.3 Study findings

The research findings reported in the 22 studies which formed this critical review are synthesised under the themes of:

- Effects on the resuscitation team.
- Effects on the resuscitation event.
- Effects on family members.
- Antecedents.
- References.

5.3.1 *Effects on the resuscitation team*

Inhibition of staff performance

The first British survey to examine the views of accident and emergency doctors and nurses was a pilot study conducted by Back and Rooke (1994). Almost two-thirds (65%) of the 20 respondents had experienced a situation in which relatives were present during a resuscitation event and, of these, 54% reported positive feelings. However, reservation about the practice included concern that the presence of relatives would inhibit staff performance. In Mitchell and Lynch's (1997) survey, doctors and nurses ($n=81$) expressed their views about relatives' presence in the resuscitation room during cardiac arrest or major trauma. The findings indicated that few respondents favoured this practice (37%), and among doctors the likelihood of being in favour of allowing relatives in the resuscitation room increased with seniority. One of the reasons for opposing this practice was the opinion (70%) that the team might be intimidated by relatives. Almost a decade later, Engel *et al.* (2005) assessed attitudes towards family presence during resuscitation procedures across four provider groups: technicians, nurses, resident physicians and attending physicians ($n=182$). Although the majority felt that family presence is beneficial to family members (range across groups 63-88%), technicians

were less supportive than other groups (odds ratio 0.48; 95% confidence interval (CI) 0.25 to 0.91). Staff were also concerned that family presence would make it difficult to teach trainees during a resuscitation attempt (range 50-66%). This finding is corroborated by Mian *et al.* (2007) who, in a survey of emergency department physicians ($n=35$) and nurses ($n=86$) before implementation of a family presence programme, identified that the majority of physicians (91%) and nurses (63%) were concerned that family presence during resuscitation may interfere with the teaching of residents.

Compton *et al.* (2006) surveyed 128 emergency medical service providers, of whom 70.1% were emergency medical technician-paramedics. The majority of urban and suburban personnel (95.3%) had substantial experience of performing resuscitation in the presence of family members and most (77.3%) had performed more than 20 adult cardiopulmonary resuscitation attempts. This suggests that family presence during adult cardiopulmonary resuscitation is more commonplace in the pre-hospital setting. Urban providers more often reported having been threatened or concerned about their own well-being because of family member presence (urban 66.7%, suburban 39.7%; $p = 0.003$), and a similar number reported that family presence had a negative impact on their ability to perform cardiopulmonary resuscitation (urban 53.7%, suburban 36.8%; $p = 0.061$). Overall, there was little support from all providers for family members witnessing cardiopulmonary resuscitation and few regarded their presence as appropriate (urban 24.1%, suburban 39.7%). One of the most recent surveys in the literature by Mortelmans *et al.* (2009) assessed the opinion of Belgian emergency department staff regarding family-witnessed resuscitation. A total of 1143 staff from 85 emergency departments participated in this study of which 79% were nurses and 19% physicians. Of the 85 departments who responded, 90% stated that family members would not

be given the chance to witness resuscitative efforts. Just one in three emergency department staff had a positive opinion on family-witnessed resuscitation and 66% experienced family presence as cumbersome.

Staff stress

Redley and Hood (1996) surveyed 133 emergency department workers to identify major factors of concern about family presence during resuscitation. In a breakdown of responses, more nurses were open to the possibility of allowing families to be present (around two-thirds) compared to less than half of the medical staff. The concern ranked second highest among respondents was that the emotional stress on staff would be increased (61%). Several researchers have subsequently reported this concern. Timmermans (1997) conducted in-depth interviews with 57 multi-professional emergency department healthcare providers, most of whom had personal experience of family presence during resuscitative efforts. Three different resuscitation perspectives to which healthcare providers subscribe were identified: survival, bifurcated and holistic. From the survival perspective, resuscitation was viewed as a clinical, biomedical event, driven by a set of technical interventions. This perspective was prevalent among inexperienced personnel or caregivers with a technical orientation. They expressed a belief that family presence would put extra pressure or stress on the resuscitation team. This is supported by Helmer *et al.* (2000) who surveyed 368 members of the American Association for the Surgery of Trauma and 1,261 members of the Emergency Nurses Association with regard to family presence during trauma resuscitation. The majority of respondents were of the opinion that family presence was inappropriate at all stages of the resuscitation process (Association for the Surgery of Trauma 97.8%, Emergency Nurses Association 80.2%; $p < 0.001$) and a belief that the presence of family members during trauma resuscitation would

likely increase the stress level of the trauma team members prevailed. A survey of Asian medical ($n=48$) and nursing ($n=84$) emergency department staff by Ong *et al.* in 2004 also found that this was one of the main reasons for doctors (86.5%) and nurses (85.9%) not wanting relatives to watch resuscitation procedures. Yanturali *et al.* (2005) focused on emergency physicians perspectives regarding family-witnessed resuscitation. Of the 239 participants who completed the survey, only 17% favoured this practice. Reasons for not endorsing family-witnessed resuscitation were the effects on the resuscitation team, including higher stress levels (82.7%) and the possibility of verbal (77.8%) and/or physical abuse (73.7%). Informants in a small-scale study of six emergency staff by Goodenough and Brysiewicz (2003) and resuscitation team members (89 nurses and 86 physicians) surveyed by Weslien and Nilstun (2003) also commented that performing resuscitation in the presence of family members would be stressful for staff. The majority of nurses (64%) and doctors (64%) in the initial survey by Mian *et al.* (2007) were also of the opinion that family presence during resuscitation is emotionally difficult for staff and more than two-thirds of the physicians (78%) who responded to a follow-up survey post implementation of a family presence programme, reported feelings of anxiety.

In contrast, Boyd and White (2000) found no ‘significant’ difference in the level of reported stress reactions among accident and emergency staff participating in adult cardiopulmonary arrest resuscitations with or without relatives’ presence. This pilot study involved investigation of 30 sequential cardiac arrests and the distribution of a structured questionnaire to elicit self-reported symptoms of an ‘acute stress reaction’ using the International Classification of Diseases (ICD-10) diagnostic criteria. Staff of various designations voluntarily participated in this survey within 24-hours of attending an adult cardiopulmonary

resuscitation attempt that was supported by a relatives-presence policy. Further detail of analytical processes and the results would have helped to substantiate the claims of no ‘significant’ difference in the incidence of adverse reaction. Use of a validated tool with which to measure stress reactions in the immediate post-resuscitation scenario does, however, provide opportunity for replication in similar situations. Mortelmans *et al.* (2009) also found that male staff had significantly less work stress in the presence of relatives ($p<0.001$) than females. Stress levels were also observed to be lower in large and busy departments ($p<0.05$), in experienced staff members ($p<0.001$) and in staff with pre-hospital experience ($p<0.01$).

Legal repercussions

A particular concern among emergency department staff is fear of legal ramifications (Timmermans, 1997), and medico-legal concerns have been cited as a reason for staff reluctance to engage in family-witnessed resuscitation (Booth *et al.*, 2004). First-hand experience with the presence of family members on at least one occasion was reported by 67.8% of Emergency Nurses Association members in the study by Helmer *et al.* (2000) and the majority believed that the experience had been beneficial to the patient and family (63.6%). Conversely, in the same study, 55.3% of Association for the Surgery of Trauma members had participated in a family presence situation, yet 74.8% characterised the experience as negative. Members of the American Association for the Surgery of Trauma also believed more strongly that the presence of family members during trauma resuscitation would expose caregivers to a greater risk of malpractice suits when compared with the opinions of Emergency Nurses Association members ($p<0.0001$). Ong *et al.* (2004) found that nurses and doctors were united in their concern that medico-legal issues might arise (nurses 71.8%, doctors 71.1%), and the majority of emergency physicians (52%) in the study by

Yanturali *et al.* (2005) were of the opinion that family-witnessed resuscitation might worsen legal repercussions.

Complaint from relatives

In the survey by Back and Rooke (1994), doctors raised concern that families would be more likely to complain if they witnessed a resuscitation attempt. For example, they feared that family members might claim that not enough/too much was done, the resuscitation procedure was stopped too soon/not carried on long enough, inappropriate remarks were made and that staff had been uncaring in their attitudes. Research by Goodenough and Brysiewicz (2003) took the form of a qualitative survey. Informants shared concerns that family members would be dissatisfied with staff efforts due to a lack of understanding about the resuscitation process. Similarly, emergency department staff who subscribed to the survival perspective in the study by Timmermans (1997) felt that lay people would not understand what was happening during the resuscitation and would receive a wrong impression.

5.3.2 Effects on the resuscitation event

Adverse effect on the resuscitation process

One of the reasons for accident and emergency staff opposing the concept of witnessed resuscitation is a fear that the presence of family members might adversely affect resuscitation procedures. There is concern that family presence might hinder (Back and Rooke, 1994) impede (Mitchell and Lynch, 1997), interfere with (Back and Rooke, 1994; Helmer *et al.*, 2000; Ong *et al.*, 2004) or obstruct (Timmermans, 1997) resuscitation efforts; that the resuscitation process might be rendered less effective (Goodenough and Brysiewicz, 2003); and/or might disrupt the flow of the resuscitation attempt (Yanturali *et al.*, 2005). Both nurses

and physicians in the study by Mian *et al.* (2007) were of the opinion that family presence may disrupt the organisation of the resuscitation (nurses 61%, physicians 71%). Furthermore, in a follow-up survey one year post implementation of a family presence programme, this remained a concern for the majority of respondents (nurses 54%, physicians 100%).

Booth *et al.* (2004) contacted 162 emergency departments in the United Kingdom to ask about their experiences with family-witnessed resuscitation. The results of this telephone survey indicated that 79% allowed relatives to witness an adult resuscitation attempt. Of the 34 departments not permitting family-witnessed resuscitation, reasons for staff reluctance included fears about relatives being a distraction, interfering or making excessive demands. Just over a third (57 departments) reported episodes where the presence of a family member had an adverse effect on the resuscitation process. In contrast, providers in the study by Engel *et al.* (2005) were of the opinion that family presence during resuscitation procedures would not interfere with patient care.

Safety of the environment

Practical concerns about the safety of the patient, relatives and staff have also been raised. Macy *et al.* (2006) compared emergency department staff support for and perceptions of family-witnessed resuscitation in urban ($n=108$) and suburban ($n=110$) locations. Fewer urban (38.9%) than suburban providers (62.7%) felt that it was appropriate for family members to be present during a resuscitation attempt. One area where their opinions differed most was in relation to the space available in the resuscitation room to accommodate witnessed resuscitation (urban 59.3%, suburban 38.2%). Staff who subscribed to the survival perspective in the study by Timmermans (1997) also expressed concern about inadequate space, and

others have gone on to identify this as a reason for not accommodating family members (Booth *et al.*, 2004).

Abandoning a resuscitation attempt

Mitchell and Lynch (1997) found that 68% of accident and emergency staff believed that abandoning the resuscitation attempt would become difficult in the presence of relatives, and respondents (79.3%) in the study by Yanturali *et al.* (2005) cited this as the third highest reason for rejecting family-witnessed resuscitation. Compton *et al.* (2006) found that a high percentage of emergency medical service providers had experienced situations where the family member had wanted cardiopulmonary resuscitation to continue even when this was deemed futile (65.6%). Mortelmans *et al.* (2009) also reported that 65% of emergency department staff found the decision to stop resuscitative efforts difficult in the presence of relatives. Conversely, neither members of the Association for the Surgery of Trauma nor Emergency Nurses Association members in the study by Helmer *et al.* (2000) believed strongly that family presence would lead to more prolonged or heroic resuscitative efforts. In fact, this was the only item of the questionnaire in which statistical significance did not reach a *p* value of less than 0.001. In the study by Timmermans (1997), most healthcare providers subscribed to the bifurcated perspective. Here, a second goal of taking care of the family needed to be achieved in addition to performing life-saving interventions. This perspective was characterised by a division of labour; the resuscitation team caring for the patient while family members were consoled in a separate area. Although family presence during resuscitative efforts was met with ambivalence, staff conceded that witnessing a resuscitation attempt may reduce unnecessary resuscitation demands of relatives and may help lay people to visualise the dying process. In comparison, staff who subscribed to the survival perspective

were of the opinion that those witnessing a resuscitation attempt would disagree with the decisions made by the resuscitation team.

5.3.3 *Effects on family members*

Psychological distress

When Ong *et al.* (2004) questioned whether relatives should be present during resuscitation, 80% of doctors and 78% of nurses replied in the negative. The most frequently-cited reason for not wanting relatives to be present was concern that they would be exposed to a traumatic experience (nurses 88.5%, doctors 88.7%). Similarly, Mortelmans *et al.* (2009) identified that the majority of emergency care providers who participated in their study feared traumatic distress in family members (93%). Macy *et al.* (2006) discovered that the majority (55.4%) of urban providers were of the opinion that the psychological impact on the family was mostly harmful. Psychological trauma to the witness has been identified as a reason for emergency department staff opposing this practice (Mitchell and Lynch, 1997; Booth *et al.*, 2004; Yanturali *et al.*, 2005; Mortelmans *et al.*, 2009). The majority of respondents (76%) in the study by Redley and Hood (1996) also indicated that the procedures involved would offend family members, ranking this as their highest concern from a list of nine alternatives.

Weslien and Nilstun (2003) found little difference in staff exposure to family presence during cardiopulmonary resuscitation (39% nurses, 38% physicians) when surveying the experiences and attitudes of resuscitation team members. Less than half of the respondents would 'always' or 'often' respect family members wishes to be present during a cardiopulmonary resuscitation attempt (nurses 43%, physicians 34%), and the majority of physicians claimed that that they would 'never' advise family members to be present (73%). Comments included

concern that witnessing a cardiopulmonary resuscitation attempt would be too stressful for the family members concerned. Informants in the study by Goodenough and Brysiewicz (2003) identified numerous reasons for their overriding dislike of witnessed resuscitation. In relation to the perceived effects on relatives, staff expressed concern about the sensory disturbances that would be experienced and, in particular, considered that the witness would suffer post-traumatic stress in the form of flashbacks. Respondents in the initial survey by Mian *et al.* (2007) also believed that family members might be upset watching residents being taught during a resuscitation attempt (nurses 94%, physicians 97%) and reported little change in staff views regarding this issue in the follow-up survey (nurses 87%, physicians, 100%).

Facilitating communication, understanding and acceptance of death

From the holistic perspective, Timmermans (1997) found that healthcare providers were concerned with several outcomes. Whilst survival of the patient and the goal of informing and dealing with relatives remained central, family members or significant others were recognised as active participants in the resuscitative process, caring with staff as opposed to being cared for by staff. Participants believed that family presence enabled them to communicate the outcome of resuscitation more gradually, and that witnessing intense resuscitative efforts facilitated understanding that everything possible had been done. The opportunity to touch or talk to the patient was also regarded as very helpful to the relative. The holistic resuscitation perspective usually occurred through the personal crusade of a chaplain, nurse or physician, a situation resonant of seminal research by Doyle *et al.* (1987). Others have also identified that family members/relatives are given an opportunity to see that everything possible is done (Weslien and Nilstun, 2003; Ong *et al.*, 2004) and, in the event of an unsuccessful outcome, this could facilitate mourning (Weslien and Nilstun, 2003), grieving (Mortelmans *et al.*, 2009)

and the acceptance of death (Weslien and Nilstun, 2003; Yanturali *et al.*, 2005). Further advantages identified by respondents in the study by Yanturali *et al.* (2005) were facilitating communication with family members (80.5%) and making the notification of death easier (58.5%).

5.3.4 *Antecedents*

Preparation and support for family members

A key feature in the seminal work of Doyle *et al.* (1987) was the provision of preparation and support for family members, and this remained a characteristic finding in subsequent studies. In a survey of 50 nursing and medical staff by Chalk (1995), more than half of the respondents (60%) had experienced the presence of relatives during a resuscitation attempt, yet less than half would allow relatives to be present in the future (46%). The number of staff who would allow relatives presence during a resuscitation attempt increased from 64% to 76% if relatives were well informed and accompanied by a knowledgeable member of staff. Mian *et al.* (2007) also found the role of a ‘family facilitator’ crucial to the success of a family presence programme, especially when the resuscitation team was hesitant to offer family members this option. In the study by Back and Rooke (1994), 75% of participants agreed that relatives should have the opportunity to be with a family member during cardiopulmonary resuscitation on the condition that professional support was available. Although the provision of support may offer some resolution on the issue of family presence affecting staff performance during a resuscitation attempt, concerns about human resources have been reported. For example, in the study by Back and Rooke (1994), one respondent commented on the need for a sufficient number of adequately trained staff to provide an equitable service. Furthermore, the lack of someone suitable to perform the role of chaperone was identified by

Booth *et al.* (2004). In a nationwide survey of 464 surgeons' attitudes towards family presence during trauma resuscitation, the majority of participants (90.3%) identified the trauma surgeon as the person responsible for supervising family members during the resuscitation process (Kirchhoff *et al.*, 2007). Madden (2007) also identified respondent preference (74.4%) for the development of a written policy on the practice of witnessed resuscitation. In this descriptive survey of 90 emergency nurses', the most significant barrier to family-witnessed resuscitation was conflict between members of the resuscitation team, potentially arising from the fact that the majority of emergency nurses' (58.9%) often took families to the bedside during resuscitative efforts. The development of a written policy was therefore advocated to provide 'consistent, safe and caring practices for all involved in the resuscitation process' (Madden, 2007, p.S7).

Experience of family presence during resuscitation

Belanger and Reed (1997) found experience of family-witnessed resuscitation to be an important factor in converting staff opinion. In their study, one year into a trial of family-witnessed resuscitation, 41 staff completed a questionnaire based on their experience of the programme. The majority believed that there was no impairment of their functioning in the presence of families and the reported comments suggested a more personalised approach during the delivery of emergency care. Yanturali *et al.* (2005) also discovered that those who had participated in a cardiopulmonary resuscitation attempt during which family members were present, were more likely to favour witnessed resuscitation. Macy *et al.* (2006) were of the opinion that the hospital setting and cross-racial identity of the patient and emergency department personnel might influence staff perceptions of the value of family-witnessed resuscitation. Although the authors found no difference in support for family-witnessed

resuscitation in relation to these factors, emergency department personnel with experience in family-witnessed resuscitation more often reported it as appropriate (63.3% versus 33.3%; $p<0.01$). It should however, be noted that previous experience was reported as a paediatric or adult resuscitation situation. Engel *et al.* (2005) tested the hypothesis that experience with family presence influences providers' support for this practice. Support for family presence during adult medical resuscitations was found to correlate strongly with self-reported prior experience (odds ratio 4.4; 95% CI 2.0 to 9.4). Kirchhoff *et al.* (2007) also revealed that significantly fewer surgeons practicing family presence during trauma resuscitation regarded it as a stress factor for the resuscitation team (38.7% versus 76.9%, $p<0.001$) or a burden for the family member themselves (32.3% versus 88.5%, $p<0.001$) when compared to those working at hospitals without integrated family presence. Conversely, significantly more surgeons based in trauma centres without family presence (when compared to those with) considered family member presence a negative factor on the medical quality of trauma resuscitation (56.1% versus 16.1%, $p<0.001$) and regarded the practice as a constraint on communication (76% versus 50%).

Staff training

In the study by Yanturali *et al.* (2005), a higher level of training, alongside previous knowledge was associated with higher rates of endorsement for family-witnessed resuscitation among emergency physicians. Mortelmans *et al.* (2009) reported a significant positive attitude towards the practice of family presence in staff members with pre-hospital experience ($p<0.05$) and attributed this to their familiarity of working in the presence of family members or bystanders. There was also a significantly higher willingness to have family members present in pre-hospital experienced staff members ($p<0.001$) and among staff

with longer job experience in emergency care ($p < 0.05$). Conversely, Mitchell and Lynch (1997) associated inexperience and lack of confidence in handling traumatic situations with a low level of support among accident and emergency doctors, and made recommendations for staff training to address such issues. Others have also argued the need for staff training on managing relatives/family presence during a resuscitation attempt (Ong *et al.*, 2005; Macy *et al.*, 2006). Madden (2007) also identified the need for team building and educational sessions to address the interdisciplinary conflict issues that served as a barrier to family-witnessed resuscitation in the emergency department of a large teaching hospital.

Bassler (1999) included accident and emergency nurses in a quasi-experimental study designed to examine whether nurses beliefs about family presence in the resuscitation room were altered by an educational intervention. Using a pre- and posttest design, it was found that nurses acceptance of family presence during resuscitation changed by a statistically significant amount after attending a class presentation on this topic. Posttest results indicated that 79.1% planned to give families a choice to be present in the resuscitation room, compared to 10.9% in the pretest ($p = 0.000$, $n=43$). Description of the educational intervention is superficial and the reader is left questioning how consistency in the delivery of the intervention was achieved on 17 separate occasions. Mian *et al.* (2007) also evaluated nurses and physicians values, attitudes and behaviours using a pre- and posttest design. This study involved dissemination of a questionnaire before and after implementation of a family presence programme which included a one-hour programme of education. In the posttest survey, nurses' support for family presence during resuscitation increased from 57% to 70%. Conversely, physicians showed less support for family presence pre (40%) and post (35%) implementation of the programme, although interestingly, only one of the 14 physicians who

responded to the follow-up survey had participated in the education programme. Failure to standardise the educational approach (intervention) may have accounted for differences observed between nurses and physicians, although this was acknowledged by the researchers.

5.3.5 References

Emergency care providers in the study by Mortelmans *et al.* (2009) were asked to state their opinion on whether the family member can be of any use to the staff in the case of resuscitation. Although the majority of respondents were negative about the practice of family-witnessed resuscitation (67%), 56% thought that family members could provide useful information. Some authors have also sought to determine healthcare staff opinion as to when, during resuscitative efforts, family members might be allowed access to the patient. The majority of respondents (62%) in the survey by Redley and Hood (1996) indicated that they would consider inviting family members into the resuscitation room at predetermined times and under controlled circumstances. Participants in the study by Helmer *et al.* (2000) were invited to designate which phases of the trauma resuscitation family members should be allowed to be present. From this data it was possible to conclude that the majority of respondents believed that the presence of family members during all phases of resuscitation was inappropriate. There was, however, more support for family presence during primary and secondary examination of the patient than during cardiopulmonary resuscitation. Although not stated, this may be due to the fact that the patient was not in cardiac arrest when clinical assessment was being performed. Ong *et al.* (2004) also defined procedures associated with resuscitation such as intravenous cannulation and tracheal intubation (invasive) and chest compression and ventilation (non-invasive). The majority of doctors (93.3%) and nurses

(98.6%) felt that relatives' presence should be after invasive procedures but before resuscitation was stopped.

5.4 Critical discussion

5.4.1 Ways in which witnessed resuscitation has been defined and described

Achieving conceptual clarity is viewed as an important part of the research process (Morse *et al.*, 1996b), promoting a shared understanding of the terms used in a study. However, it appears that research has been driven by the controversy that surrounds the practice of witnessed resuscitation to the detriment of developing conceptual understanding regarding the significance, use and application of this term. Consistent with the findings reported in chapter four, the majority of researchers indicated that if a resuscitation event is witnessed, it signifies family or relatives presence. 'Family presence' or 'relatives presence' was referred to in the title of 13 studies and the phrase 'family-witnessed resuscitation' was selected for use by four authors. However, the terms 'family' and 'relative' lacked definition and were, at times, used interchangeably by authors rather than making explicit the defining characteristics of the witness. This is in contrast to the literature pertaining to the resuscitation of a child where the notion of parental presence is made clear. Timmermans (1997) and Mian *et al.* (2007) were the only researchers to acknowledge the presence of 'friends' or 'significant others' during resuscitative efforts. Participants in the study by Goodenough and Brysiewicz (2003) were identified as having little knowledge about 'witnessed resuscitation' and the quotations presented in this paper revealed a lack of consensus and understanding about what this term means. Four authors provided the reader with a definition of the terms used in their study, although failure to include a glossary of all the terms used was apparent. Research in four settings was supported by a local protocol or set of guidelines for family presence during

resuscitation and it is acknowledged that this may have provided participants with an understanding of the practice under investigation. Boyd's (2000, p.171) definition of witnessed resuscitation as 'the process of active 'medical' resuscitation in the presence of family members' was selected for use by researchers in four studies. In each case however, this definition was applied unreservedly and without any dispute about the meaning of the words 'active', 'medical', 'resuscitation' and 'family members'. The majority of researchers also typically implied a focus on family or relatives presence during an 'adult' resuscitation attempt. There was also an identified lack of clarity surrounding the terms: resuscitation, cardiopulmonary resuscitation, trauma resuscitation and medical resuscitation. Only one author provided definition of the term 'resuscitation', explaining this as 'the life-sustaining or life-saving measures' (Mian *et al.*, 2007, p.56). Respondent opinion may have differed according to the nature of the resuscitation and the characteristics of the witness, making it difficult to determine the full meaning and implications of study findings (Polit and Hungler, 1999).

5.4.2 *Methodological quality of existing research*

Despite an apparent over-reliance on survey research featuring questionnaires, researchers are credited with making a sizeable contribution to the evidence available on this topic. There are, however, a number of limitations within this body of research. Whilst the majority of questionnaire surveys achieved the generally accepted level of 80% response rate (Murphy-Black, 2006), data were predominantly retrospective and largely confined to the self-reports of convenience samples. According to McKenna *et al.* (2006), drawbacks of retrospective survey designs are the potential for selectivity in recollection and recall bias. Furthermore, widespread use of convenience samples may have led to a selection bias (Polit and Hungler,

1999). Factors influencing external validity, such as sample size and characteristics of the respondent groups, limit the degree to which the findings can be generalised beyond those studied. A further deficit relates to the percentage of respondents who had experienced family presence during resuscitation (see Table 5.1).

Table 5.1 Respondents who had experienced witnessed resuscitation

Author(s) and year of publication	Number of participants who had experienced witnessed resuscitation
Doyle <i>et al.</i> (1987)	<i>n</i> =17 out of 21
Back and Rooke (1994)	<i>n</i> =13 out of 25
Chalk (1995)	<i>n</i> =30 out of 50
Redley and Hood (1996)	<i>n</i> =90 out of 133
Boyd and White (2000)	<i>n</i> =49 out of 114
Helmer <i>et al.</i> (2000)	<i>n</i> =1032 (<i>n</i> =1587 answered this question)
Goodenough and Brysiewicz (2003)	<i>n</i> =2 out of 6
Weslien and Nilstun (2003)	<i>n</i> =68 out of 175
Ong <i>et al.</i> (2004)	<i>n</i> =31 out of 132
Yanturali <i>et al.</i> (2005)	<i>n</i> =89 out of 239
Macy <i>et al.</i> (2006)	<i>n</i> =117 out of 218
Kirchhoff <i>et al.</i> (2007)	<i>n</i> =168 out of 464
Mortelmans <i>et al.</i> (2009)	<i>n</i> =914 out of 1142
Total	<i>n</i>=2620 out of 4306 = (61%)

On analysis of the 13 studies that provided this information, exposure to this practice totalled almost two-thirds of all accident and emergency staff surveyed (61%, *n*=2620). A question

worthy of consideration is whether lack of direct experience makes an opinion uninformed. Several survey reports also failed to give details of the questionnaire used, including developmental processes such as question generation, pilot testing or estimates of internal consistency to determine reliability. Furthermore, in relation to data analysis, inferential statistical tests were used in 11 studies, yet only four made clear the level at which the results of a set of tests would be deemed statistically significant. Doubts about the validity and reliability of the data not only undermine confidence in the findings of these studies, but also reduce the possibility of replicating the research. A detailed critique of each study is presented in Appendix A.

5.5 Implications for further enquiry

Further research in the pre-hospital setting is required to help identify similarities and/or differences in accident and emergency staff opinion along a continuum of emergency resuscitative care. This is an important consideration, given that witnessed resuscitation in primary care appears to be commonplace; yet the findings of this review suggest that family members are at risk of becoming separated from their loved ones on entering secondary care. Use of descriptive or correlational research designs is likely to prevail given the sensitive nature of this topic. In a review of the strengths and weaknesses of research designs involving quantitative measures, Walker (2005) identified a number of methodological limitations and ethical concerns associated with experimental research to determine the effects of witnessed resuscitation on bereaved relatives. In particular, she gives example of how efforts to strengthen internal and external validity of the research results, including the strict application of standardised procedures to reduce systematic error and bias are not always possible for practical, professional or ethical reasons. There is, however, an apparent need to move beyond

quantitative approaches by alternatively (or in combination) adopting techniques that examine this practice in qualitative terms. Researchers are encouraged to consider the use of qualitative methods of enquiry to advance conceptual understanding of the concept of interest (Rodgers, 2000b; Penrod and Hupcey, 2005). Furthermore, Rodgers (2000b) supports the study of interdisciplinary perspectives to examine the potential for contextual variation. The inductive and interactive nature of qualitative approaches allows researchers to gain a better understanding of people's perceptions, motivations, intentions and behaviour by means of exploration (Parahoo, 2006). In such designs, data are often collected from respondents in their natural environments, taking into account contextual factors that may influence their experiences (LoBiondo-Wood and Haber, 2006). Empirical research of this nature may provide deeper insight and understanding of witnessed resuscitation by examining the life-worlds of accident and emergency healthcare staff that have experienced it, thus making purposive sampling an important design principle for future studies.

5.6 Chapter summary

From this critical review, it is evident that witnessed resuscitation is yet to be fully sanctioned, with fewer medical than nursing staff in favour of it. Moreover, accident and emergency healthcare staff perceive both positive and negative effects and they suggest that there are more risks than benefits. This clearly has implications for the availability of witnessed resuscitation, although preparation and support for family members appears to have a role to play in converting staff views. Similarly, accident and emergency healthcare staff opinion might be modified in favour of witnessed resuscitation as a result of experience and through educational initiatives. The need for ongoing research is essential if witnessed resuscitation is to be better defined and understood. Data derived through the process of induction would not

only assist in the development of a more complete knowledge base, but would also provide a foundation from which future studies to identify and measure the effects of witnessed resuscitation can be built.

CHAPTER SIX

ADVANCING THE CONCEPT OF WITNESSED RESUSCITATION

6.0 Chapter overview

This chapter presents the philosophical and methodological bases of a study designed to advance conceptual understanding of the meaning of witnessed resuscitation by exploring life-world examples of its use in clinical practice. Emphasis is placed on the application of ideas from Heideggerian interpretive phenomenology and the utilisation of the van Manen methodological structure for ‘doing’ phenomenological research and writing. The discussion is based on a framework that gives direction and clarity to various elements of the research process and provides a decision trail relating to the fundamental choices made.

6.1 Elements of the research process

A major consideration for nurse researchers is the quest for philosophical and methodological harmony. Key areas of deliberation and debate in the research process include the nature of reality and knowledge vis-à-vis the philosophic tenets and assumptions that are derived from selected schools of philosophical thought (Chinn and Kramer, 1995). Crotty (1998) offers a framework that gives a sense of stability and direction as the researcher moves towards understanding and expounding the research process (see Table 6.0 - page 95). Its use provides a coherent structure to the important task of understanding and making known the philosophical and theoretical assumptions that lie behind the choice of methodology and methods and is helpful in justifying the research approach selected. An outline of the research

design in terms of these four elements is presented in Figure 2 (see page 96).

Table 6.0 Four elements of the research process

-
1. Epistemology - The theory of knowledge embedded in the theoretical perspective
 2. Theoretical perspective - The philosophical stance informing the methodology
 3. Research methodology - The strategy, plan of action, process or design lying behind the choice and use of particular methods
 4. Research methods - The techniques or procedures used to gather data
-

Source of reference: Crotty (1998)

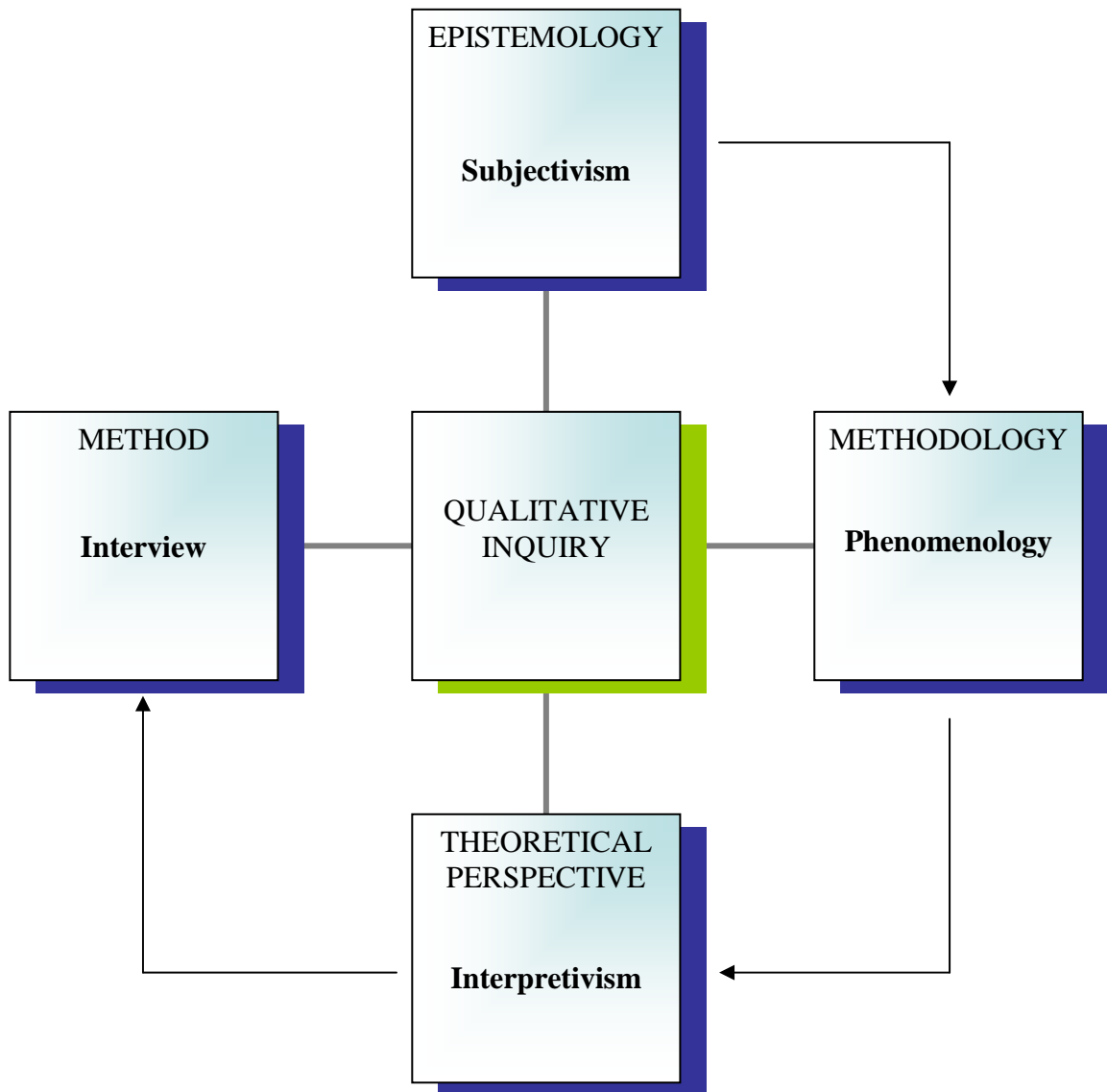
6.2 Purpose of the study

Methods used in the initial phase of this conceptually based research, i.e. concept analysis (study one) and a critical review of the literature (study two) identified gaps and inconsistencies in understanding of the concept of witnessed resuscitation. When the evidence obtained from the literature is insufficient to support a conclusion that the concept is clearly defined and understood, the researcher is guided towards a descriptive research question, primarily aimed at advancing a concept epistemologically (Penrod and Hupcey, 2005). Three research questions evolved from the researcher's pre-understanding of the concept of witnessed resuscitation:

- What is the nature of the lived experience of lay presence during an adult cardiopulmonary resuscitation attempt?
- What is it like to perform adult cardiopulmonary resuscitation in the presence of lay people?

- What are the salient characteristics of lay presence during an adult cardiopulmonary resuscitation attempt as described by ambulance staff and first-level registered nurses?

Figure 2 Elements of the research design



Use of the term ‘lay presence’ originated from analyses of existing literature during phase one of the study and after careful consideration of alternative phraseology. The language ‘bystander presence’ and ‘family-witnessed or family/relatives presence’ frequently appeared in the literature. The former was primarily attributed to the pre-hospital setting and the latter to the secondary (in-hospital) environment of care. Neither therefore appeared suitable to apply to this study, given the intention to investigate use of the concept of witnessed resuscitation in both contexts. The notion that the meaning of witnessed resuscitation was beholden to the presence of family members or relatives was significantly challenged during the process of concept analysis and conceptualisation was extended to include members of the lay public who may be known or unknown to the victim in cardiorespiratory arrest. A further contribution to conceptual clarity was recognition that witnesses at the scene of a resuscitation attempt were not part of an organised emergency response system and therefore fulfilled a criterion of ‘lay’ people. The term ‘lay presence’ was therefore purposefully selected to embrace the presence of family, relatives, friends, neighbours, colleagues or indeed complete strangers at the scene of an adult cardiopulmonary resuscitation attempt. The intention was to be inclusive, and it was anticipated that participants would recall lived experiences that represented the various characteristics of the witness. The terms ‘bystander presence’ and ‘family presence’ were, however, alluded to during the recruitment and interview stage of the study in acknowledgement that ambulance staff and first-level registered nurses respectively would be acquainted with their use. The type of resuscitation, i.e. cardiopulmonary, was also selected to promote conceptual clarity. The age group specified for the victim requiring resuscitation, i.e. an adult, age 16-years and above, was consistent with the overall purpose of this conceptually based study.

According to Wood and Ross-Kerr (2006), the way in which a research question is written serves as the basis for the design. Level one research questions typically include ‘what is’ or ‘what are’ in the stem of the question. They are designed to elicit descriptions of a single topic, population or concept and are asked in such a way that they lead to exploration by the researcher for the purpose of describing ‘what exists, as it exists’ in the natural setting (Wood and Ross-Kerr, 2006, p.12). Marshall and Rossman (1999) also recognise an exploratory research design as appropriate when the researcher seeks to identify or discover important categories of meaning. Consistent with the principles of exploratory research, the purpose of the study is written as a declarative statement that gives indication of ‘what’ the researcher intends to do, ‘when’, ‘where’ and ‘with whom’ (Wood and Ross-Kerr, 2006).

6.2.1 Declarative statement

The purpose of this study was to explore the lived experience of lay presence during an adult cardiopulmonary resuscitation attempt in primary (out-of-hospital) and secondary (in-hospital) environments of care from the perspective of accident and emergency ambulance staff and first-level registered nurses who had experienced this situation.

6.2.2 Specific objectives

- To gain insight into the lived experience of lay presence during an adult cardiopulmonary resuscitation attempt along a continuum of emergency resuscitative care - in the pre-hospital setting, on arrival and, post admission to an accident and emergency department.
- To increase understanding of the factors influencing ambulance staff and first-level registered nurses experience with and support for lay presence during an adult

cardiopulmonary resuscitation attempt (antecedents), situations in which they consider lay presence during an adult cardiopulmonary resuscitation attempt to be appropriate (references) and the positive and negative effects (consequences) of its occurrence.

Improving emergency care is one of the key priorities for the National Health Service and ambulance staff are at the forefront of providing rapid, effective response to patients with life-threatening conditions (Fillingham, 2004), including cardiorespiratory arrest. The percentage of patients suffering a cardiac arrest in England during 2006 was 57,345; an increase of 20% on 2004. Furthermore, the percentage of cardiac arrests witnessed by a person who was not part of an organised emergency response system occurred in 37% of cases ($n=9,301$) where effort to resuscitate was made (Ambulance Service Association and Joint Royal College Ambulance Liaison Committee, 2006). This data signals the opportunity to capture and explore the concept of witnessed resuscitation from the perspective of ambulance staff who perform cardiopulmonary resuscitation in the presence of a witness or witnesses in the out-of-hospital environment of care.

For some patients and their families, admission to an accident and emergency department (in-hospital) represents continuity in the emergency resuscitative care that commenced in the pre-hospital setting. Oliver and Fruth (2000) identify nurses as the most approachable and accessible member of the emergency care team. Their point of view was influenced by the findings from a survey by Redley and Hood (1996) who found that more nursing staff (70%) than medical staff (48%) had been approached by family members who wanted to enter the resuscitation room. The accessibility of nursing staff may be attributed to the provision of 24-hour nursing care and their permanent role in the accident and emergency department, in

comparison to the rotation of medical staff. For these reasons, a decision was made to obtain the perspectives of accident and emergency ambulance staff and first-level registered nurses.

6.3 Epistemological basis of the study - subjectivism

Qualitative research is a form of social inquiry (Holloway and Wheeler, 2002) which searches for meaning not 'truth' (Hill Bailey, 1997) and 'understanding' rather than explanation (Mackey, 2005). Its aim is to understand social phenomena as it occurs in the natural setting (Pope and Mays, 1995) and is typically expressed through language (Duffy, 1986). The assumption is that knowledge is created by people (Chinn and Kramer, 1995) and includes consideration of the context in which the research takes place (Schutz, 1994; Morse and Field, 1996). Individuals are referred to as 'participants' as opposed to using the term 'subjects'; a feature which according to Glesne and Peshkin (1992) implies the 'acting with' that characterises qualitative research. This naturalistic approach to inquiry is grounded in the interpretive paradigm and portrays a world in which reality is socially constructed (Glesne and Peshkin, 1992). Reality however, is a fluid entity; 'it changes and develops according to people's experiences, and the social context within which they find themselves' (Porter, 2000, p.143). This involves taking a perspective regarding 'truth' that is open and dynamic and rejects the traditions of research that rest on the assumption that knowledge exists only to the extent that it can be objectified (Chinn and Kramer, 1995).

The reasoning implicit in the design of this study was held to be inductive, utilising empirically derived understandings as a form of knowledge discovery (Kim, 1993). According to Duffy (1986), the qualitative researcher aims to arrive at this understanding from an emic (insider) research perspective, which adheres to the notion that meaning is

elicited from the participants' point of view. This represents a more humanistic and personal approach to inquiry (Playle, 1995) that openly acknowledges a subjective and interactive researcher-informant relationship as appropriate to the creation of knowledge (Hill Bailey, 1997; Porter, 2000; Racher and Robinson, 2002). Emphasis on the subjectivity of human experience indicates that knowledge development is abstract (Clifford, 1997) and fulfils the criteria of descriptive theory that is factor-isolating.

6.3.1 Methodological approaches to qualitative inquiry

Although there are many different types of qualitative research, three methodological approaches are commonly referred to in the literature. These include ethnography, grounded theory and phenomenology. While each methodology is guided by a particular philosophical stance that influences and directs the research process (Burns and Grove, 1999), the overall purpose, regardless of the differing approaches, is to 'interpret' and 'reconstruct' subjective meanings (Hill Bailey, 1997, p.19). The decision to adopt phenomenology as the methodological approach to inquiry came after careful consideration of alternative interpretive approaches. Selecting ethnography as the methodological approach to the research presented opportunity to identify cultural influences on the attitudes and behaviour of accident and emergency healthcare staff towards the practice of lay presence during an adult cardiopulmonary resuscitation attempt. Research using grounded theory was also identified as relevant to understanding interactions during the process of emergency resuscitative care and the way in which the behaviours of those present have been shaped through the process of socialisation. The role of the researcher in both methodological approaches may rely substantially or partly on observation; a method of data collection that can be used to provide a first-hand account of witnessed behaviours or events (Watson and Whyte, 2006). Dependent

on the aim of the research and the nature of the research setting, the observer role can be considered along a continuum ranging from complete participation in the activities of those being observed to complete detachment (Watson and Whyte, 2006; Mcilpatrick, 2008). Adopting an observer role in a life-threatening situation, yet refraining from participating in the action was difficult to justify given the ability of the researcher to perform life-support interventions. Conversely, taking a more participative role in the resuscitation event was likely to influence the research scene. It was also acknowledged that a resuscitation attempt would have to occur for the observation period to be utilised effectively. This potential for role conflict is acknowledged by Munhall (1988) who stresses the importance of considering these dilemmas so as to minimise or prevent harm when engaged in fieldwork research.

6.4 Research methodology - phenomenology

Phenomenology is described as an inductive, descriptive approach to an experience in which each individual is believed to have a personal and unique perception of reality (Leddy and Pepper, 1993). The nature of inquiry is to search for the meaning of everyday lived experiences from the perspective of those being studied (Omery, 1983; Cohen, 1987; Taylor, 1993; Beck, 1994; Jasper, 1994) and sees the contribution of researcher and participant knowledge as a legitimate way of coming to know (Barnum, 1998; Van der Zalm and Bergum, 2000). This in turn calls for the development of co-operative researcher-participant relationships in order to fully appreciate and understand the individual's subjective perception of events (Knaak, 1984; Hallett, 1995). Uses of the term 'to explore experience' and 'to gain insight' are regarded as being consistent with the overall purpose of a phenomenological study (McCance and Mcilpatrick, 2008). More specifically, Polit and Hungler (1999) claim that phenomenology is especially useful when a phenomenon of interest has been poorly

defined or lacks conceptualisation. Similarly, Morse *et al.* (2002) acknowledge the contribution of phenomenology to the advancement of concepts by enhancing understanding of phenomena.

6.4.1 Phenomenology as a philosophy and a methodology

Cohen (1987) highlights the complexity of phenomenology by drawing attention to the philosophical basis of this research tradition. Racher and Robinson (2002) also highlight the interwoven components of phenomenology as both a research methodology and a philosophy by locating its various forms in the positivist, postpositivist, interpretivist and constructivist paradigms. Hence, it is acknowledged that the phenomenological researcher embarks on a dual philosophical and methodological journey (Dowling, 2007) and that the research techniques will differ according to the selected school of thought (Walters, 1994; Koch, 1995; Koch, 1996; Streubert Speziale and Carpenter, 2007). Some of the most popular procedural interpretations of phenomenology cited in the literature include: the work of van Manen (1997) whose procedures articulate textual reflection on the lived experience; Colaizzi (1978), van Kaam (1984) and Giorgi (1985) which have a psychological orientation, and a 'new' phenomenology which is embraced by nurse researchers (Crotty, 1996). Maggs-Rapport (2001) calls for careful consideration of the appropriateness of these various techniques when applying a particular set of guidelines to one's own phenomenological research question.

6.4.2 The influences of Husserl and Heidegger

Several authors including Ray (1994), Walters (1994), Koch (1995), Lopez and Willis (2004), Rapport and Wainwright (2006) and Dowling (2007) distinguish between the influences of Edmund Husserl (1859-1938), the founder of phenomenology and Martin Heidegger (1889-

1976) who offered a major reinterpretation of the Husserlian phenomenological method. Some researchers choose to follow Husserl, who advocates a descriptive phenomenology while others utilise the ideas of Heidegger who emphasises understanding more than description (Burke Draucker, 1999) and believes that phenomenology is interpretive.

In Husserlian phenomenology, phenomenological reduction (or bracketing) requires the researcher to put aside and suspend any pre-conceptions about the phenomenon of study in order to study its essential structures or essences (van Manen, 1997). Knowledge of reality is based on a conscious awareness (Koch, 1995) and is considered independent of history or context. Consequently, the essences generated through Husserlian phenomenological research are assumed to represent one true description (Lopez and Willis, 2004), which in turn, suggests that a generalised description is possible. This is in contrast to Heidegger (1962) who claimed that 'we know the world before we are consciously aware that we do' (Rapport and Wainwright, 2006, p.229). The Heideggerian approach to phenomenology is underpinned by the philosophy of existentialism, the primary focus of which is on the 'here and now' of experience (Stephenson and Corben, 1997, p.117). Hence, for Heidegger, phenomenology is concerned with the nature of existence (ontology) - the study of Being or ways of Being-in-the-world (van Manen, 1997).

My 'Being-in-the-world' was as a nurse experienced in the care of critically ill patients and familiar with making decisions regarding relatives' presence when performing intensive care interventions. I was also trained to perform cardiopulmonary resuscitation in the presence of others and my role as a lecturer involves responsibility for the evidence-based teaching of intermediate and advanced life-support interventions. I had also experienced the sudden death

of two family members who received cardiopulmonary resuscitation in the presence of relatives. These personal manifestations attest to Burke Draucker's (1999, p.361) critique of Heideggerian philosophy that 'we are always already in the world'. I therefore considered it unrealistic to suspend personal experience; knowledge and judgement on the research topic as advocated in the Husserlian approach. Alternatively, this lived experience of witnessed resuscitation fuelled my interest and inspired the focus of this research. Indeed, Heidegger (1962) claimed that people make sense of the world through their existent state within it, rather than in any detached way (Maggs-Rapport, 2001). Expert knowledge on the part of the researcher is therefore seen as a valuable guide to an inquiry based on the Heideggerian tradition (Lopez and Willis, 2004).

6.5 Theoretical perspective - interpretivism

6.5.1 Hermeneutic phenomenology

Hermeneutic phenomenology is concerned with identifying, describing and interpreting everyday lived experiences (in context), with the goal of discovering meaning and achieving a sense of understanding (Benner, 1985). This commitment to meaning and understanding can be linked to Heidegger's philosophy of interpretive phenomenology which embraces the ontological-existential approach to the study of human lived experience. Interpretation is built on what Heidegger (1962) called fore-structure; i.e. that which is understood or known in advance (fore-having); a prior awareness (fore-sight); the anticipation of meaning (fore-conception) (Mackey, 2005; McCance and Mcilpatrick, 2008). Instead of bracketing existence (McKenna, 1997); this historicity of understanding (Koch, 1995) is examined, explained and incorporated into the research process (Burke Draucker, 1999; Lopez and Willis, 2004).

Interpretation within a hermeneutic tradition is assisted through use of the hermeneutic circle (Kvale, 2007) or 'circle of understanding' (Heidegger, 1962, p.195); an infinite process (Rapport and Wainwright, 2006; Kvale, 2007) which refers to the back and forth flow of understanding that takes place through Being-in-the-world (Mackey, 2005). In the search for ontological understanding, Heidegger's phenomenology dictates that interpretation of the lived experience is situated in both time and space (Mackey, 2005). van Manen (1997) describes the notion of 'lived time' (temporality) as a connectedness with past, present and future dimensions of an experience, as opposed to clock or objective time, and 'lived space' (spatiality) is space which is felt, such as exposure to an open or confined space, rather than mathematical measurements and dimensions. van Manen (1997) also draws attention to two further life-world existentials that serve as guides for reflection on the meaning of lived experiences: 'lived body' (corporeality) which refers to our physical or bodily presence in the world and 'lived other' (relationality) which is the lived relation we maintain and share with others. A further philosophical assumption underlying Heidegger's interpretive phenomenology is that of co-constitution (Koch, 1995) which refers to the blending or fusion of the meanings articulated by the participants and the researcher during the interpretive process (Koch, 1995; Koch, 1996; Lopez and Willis, 2004). Once again, this serves to reinforce how personal knowledge in the hermeneutic tradition is an integral part of phenomenological research.

6.5.2 van Manen's hermeneutic-phenomenology

The van Manen (1997) hermeneutic-phenomenologic approach to human science research and writing was selected to guide this inquiry. This methodical approach to investigation (see Table 6.1 - page 107) is firmly grounded in the interpretive philosophic tradition, although

van Manen's orientation to the human sciences, phenomenology and hermeneutics contains both descriptive and interpretive elements. This is reflected in his definition of phenomenology as a human science aimed at 'explicating the meaning of human phenomena' and at 'understanding the lived structures of meaning' (van Manen, 1997, p.4). The practical nature of van Manen's work is regarded as being influential in all the human sciences and he is credited with advancing a linguistic approach to phenomenology and hermeneutics (Ray, 1994). Dowling (2007) also suggests that van Manen has established contemporary popularity among different healthcare groups and that his contribution to human science research reflects the ongoing transformation of phenomenology as a methodological approach.

Table 6.1 Procedural activities in hermeneutic-phenomenological research

1. Turning to the nature of the lived experience
 2. Investigating experience as we live it rather than as we conceptualise it
 3. Reflecting on essential themes that constitute the nature of this lived experience
 4. Engaging in the art of phenomenological writing and re-writing
 5. Maintaining a strong and orientated relation
 6. Balancing the research context by considering parts and whole
-

Source of reference: van Manen (1997)

van Manen's framework appealed to me as it offered a linear process to hermeneutical-phenomenological research. Although a certain progression through each stage is implied, there is no pressure to proceed by completing each 'step' and no sequential order is intended.

Rather, van Manen (1997) seeks to advance the scholarly talent of the human science researcher by animating inventiveness and stimulating insight. As a scholar with a professional background in higher education, van Manen's deep interest in learning and teaching also captured my attention and his application of theory to the practice of pedagogic phenomenology helped to develop my understanding of this multifaceted approach to inquiry.

According to van Manen (1997), a suitable topic for phenomenological inquiry is determined by the questioning of the essential nature of a lived experience. This is supported by Todres and Holloway (2006) who identify the appropriateness of phenomenological research when the purpose is to provide an empathic understanding of 'what it is like' to be in or to experience a particular situation. It is also reassuring to discover that van Manen's approach had previously been adopted by researchers engaged in concept development work (Morse *et al.*, 1994; Chiu, 2000; Penrod, 2007). Like Heidegger (1962), van Manen does not embrace Husserl's approach of bracketing out our pre-understandings (Dowling, 2007). Alternatively, he argues that each phenomenological topic will figure significantly in the personal or professional life circumstances of the student researching it (van Manen, 1984) and warns that presuppositions may 'persistently creep back into our reflections' if we simply try to forget or ignore what we 'know' (van Manen, 1997, p.47). Furthermore, when exploring the phenomenon and generating lived-experience material, the researcher is guided to use personal experience as a starting point. I therefore felt at ease in selecting this particular hermeneutic-phenomenological approach; secure in the knowledge that it was acceptable to believe that my prior understandings could not (and indeed should not) be erased during the process of doing phenomenological research.

6.6 Research method - interview

Interviews are by far the leading method employed in qualitative research (Watson and Keady, 2008). They allow the researcher entrance into another person's account of their world and are regarded 'as an excellent source of data' in phenomenological inquiry (Streubert Speziale and Carpenter, 2007, p.95). Interestingly, van Manen (1997) challenges the notion of collecting 'data' due to its association with the positivist paradigm, referring instead to 'the gathering of lived-experience material' which he sees as both the source and the object of phenomenological research. He identifies the technique of interviewing as one of 12 possible methods to investigate lived human experience. However, an overlap can be seen between his proposed method of 'interviewing' (obtaining the personal life story) and 'obtaining experiential descriptions from others' in order to understand the meaning or significance of a particular human experience (van Manen, 1997). Rodgers (2000b) suggests that interviews may provide interesting insights in concept development work and could be used to explore perspectives among different types of practitioners. Kvale (2007) agrees that the purpose of an interview may be a conceptual clarification in the form of a joint endeavour to uncover the essential nature of a lived experience.

6.6.1 Sampling procedures

Participants were purposefully selected based on their experience of the topic under investigation. According to Patton (2001), the logic of purposeful sampling lies in the selection of information-rich cases that tell us a great deal about issues of central importance to the focus of the research. Ray (1994) identifies a singular person or a group of eight to 12 participants for phenomenological studies directed toward discerning the meaning of experiences. Similarly, Wilson and Hutchinson (1991) suggest that ten to 20 participants is

usually sufficient in hermeneutics research. In a review of 26 nursing research reports claiming to be based on Heideggerian interpretive phenomenology (Burke Draucker, 1999), the number of study participants ranged from two to 45 and the average was 17. Furthermore, where participants had been recruited from more than one source, the number was invariably equal.

Parahoo (2006) advocates that the study sample (size and characteristics) are decided upon at the start of a phenomenological study and allows for adjustments to be made if not enough information is forthcoming or if repetition is apparent. Based on the recommendations of Ray (1994), the proposed sample at the outset of this study was ten ambulance staff (ambulance technicians, paramedics and community paramedic officers) and ten first-level registered nurses who fulfilled the following criteria for inclusion in the study:

- Ambulance staff (ambulance technicians, paramedics and community paramedic officers) with experience of performing cardiopulmonary resuscitation for an adult (age 16-years and above) in the presence of a lay person (or lay people) in the primary (out-of-hospital) environment of care.
- First-level registered nurses with experience of performing cardiopulmonary resuscitation for an adult (age 16-years and above) in the presence of a lay person (or lay people) and that this experience was gained in a location that provides emergency resuscitative care at the point of patient entry to secondary (in-hospital) care, for example, an accident and emergency department, medical assessment unit or equivalent setting.

The design feature of obtaining interdisciplinary perspectives demonstrated the use of data or source triangulation (Holloway and Wheeler, 2002; Cowman, 2008). The purpose was to

increase completeness in the study (Shih, 1998) by varying the sources of lived-experience material by persons and across sites, i.e. within primary (out-of-hospital) and secondary (in-hospital) environments of care. This decision to maximise the range of material obtained is referred to by Sandelowski (1995, p.181) as ‘phenomenal variation’; also known as selective or criterion sampling. The expectation was that each source of information would contribute ‘an additional piece to the puzzle’, which in turn, may lead to a more complete understanding of the topic under investigation (Shih, 1998, p. 633).

The rationale for the proposed nature and number of participants for interview was based on two guiding principles for sampling in qualitative research, endorsed by Morse and Field (1996, p.65): ‘appropriateness’, which refers to the identification and utilisation of participants who can best inform the research and ‘adequacy’, which means that there is enough data to develop a full and rich description of the phenomenon under investigation. Sandelowski (1995) agrees that determining an adequate sample size is ultimately a matter of judging the quality of information obtained against the research product intended. It was proposed that ongoing evaluation of the adequacy of the sample size in relation to this study would be applied during the iterative process of gathering and analysing the lived-experience material.

6.6.2 Recruitment strategy

The setting for the first stage of research interviews was an Accident and Emergency Ambulance Trust situated in the Midlands. Geographically, the Trust provided an emergency ambulance service to an area of some 1,000 square miles, with a population of around 1.05 million. Over half of the staff were fully qualified paramedics and this group of staff are

supported by skilled ambulance technicians. Some of the more senior and experienced paramedics acted as community paramedic officers based in urban areas and rural towns. Although the Trust provided emergency care to a large geographical area, the recruitment of participants focused on one depot of the Trust (from a possible two) which responded to cardiac arrest calls in the South of the county. The rationale for this was two-fold:

1. Research participants were identified from a data sheet pertaining to cardiac arrest, routinely completed by ambulance staff in the research setting and entered onto a database for the purpose of clinical audit. Presence of the clinical audit team at the selected depot facilitated researcher access to the database.
2. The distance of travel for study participants was minimised by selecting the depot closest to the venue where research interviews were planned to take place.

The number of cardiac arrests in the South of the county (March 2004 - April 2005) was 1081, of which 456 resulted in a resuscitation attempt. A high percentage of attempted resuscitations were performed in the presence of a witness (75%, $n=343$). This may be due to the fact that the majority of cardiac arrests requiring resuscitation occurred in the home ($n=360$). This data gave reassurance that recruitment from one depot of the Trust would not adversely affect the recruitment of participants with experience of performing cardiopulmonary resuscitation in the presence of lay people.

Consideration was given to the recruitment of first-level registered nurses from one Acute National Health Service Trust in the Midlands, as this would mirror the strategy adopted for the recruitment of ambulance staff. However, much of the evidence on this topic to date has focused on an internal evaluation of family presence in the resuscitation room of an accident

and emergency department. I therefore recognised that the recruitment of first-level registered nurses from more than one Acute Trust in the Midlands would provide a greater breadth to the study findings by exploring the lived experience in more than one location. On reflection, I recognised that this was not too far removed from the strategy for the recruitment of ambulance staff. Lay presence during cardiopulmonary resuscitation in the pre-hospital setting occurred in a variety of locations, including the victim's home or workplace, a public place, or in the back of an ambulance (Trust Annual Clinical Report, April 2004 - March 2005).

Gray (2001) identifies the advanced nurse practitioner as a key member of the accident and emergency team, ideally placed to move the debate of witnessed resuscitation forward by virtue of their unique role and attributes. As a member of a regional sponsorship scheme for advanced practice and the lead for an advanced nurse practitioner course, I was aware that nurses of various grades and levels of experience accessed this area of study. It was also the norm to recruit course students from more than one Acute National Health Service Trust. A decision was therefore made to recruit first-level registered nurses through liaison with course leaders from six Universities in the Midlands with responsibility for the development of advanced nurse practitioners in the specialty of accident and emergency care. The ethical process of gaining access to the study participants is discussed in the following chapter (see 7.6 - page 121).

6.7 Chapter summary

Achieving academic and methodological rigour in the research process is a demanding task that calls for careful consideration of the philosophical and methodological bases of inquiry.

This chapter has demonstrated how harmony can be achieved in the research process by carefully considering and making known the philosophic tenets and assumptions that underpinned the choice of methodology and the research method used to gather descriptions of the lived experience. Several interpretations of phenomenology are identified as being available to guide the neophyte researcher and rigorous appraisal of the philosophy underpinning their use is seen as an essential part of the decision-making process. Crotty's (1998) framework is evaluated as a valuable structure for organising theoretical perspectives derived from the literature and in communicating individual thought processes, thus rendering the research process transparent, and hence auditable.

CHAPTER SEVEN

ETHICAL CONSIDERATIONS IN PHENOMENOLOGICAL RESEARCH

7.0 Chapter overview

Implementation of the Department of Health's research governance framework for health and social care (Department of Health, 2001d, 2005b) has placed increased responsibility on researchers to demonstrate continuous quality improvements in research practice. This includes careful planning, preparation of documentation and adherence to independent review processes to ensure that research meets the required ethical standards. This chapter examines ethical issues that required consideration when planning the next stage of the research study using phenomenological research techniques. Topics appropriate to this research methodology include those central to the life experiences of humans (Streubert Speziale and Carpenter, 2007) and may be classified as 'sensitive' areas of inquiry due to the potential for intrusion into the private sphere (Lee and Renzetti, 1993). This in turn draws attention to issues of ethical significance that may be encountered throughout the research process. Key aspects of a quality research culture are explored and strategies to promote the dignity, rights, safety and well-being of those involved in the research are presented.

7.1 Presenting a case for the research

Munhall (1988, p.151) suggests that the question to be asked from an ethical perspective is 'toward what goal and for what end?' She goes on to identify the potential for conflict between the research role that technically uses people as a means to further knowledge

(utilitarianism) and the professional duty of the nurse to treat individuals as ends in themselves (deontological ethical system) is identified. Some reconciliation is offered by reminding readers of the individual's decision to voluntarily join the research enterprise through the process of informed consent, possibly even collaborating in the research for the purpose of advancing a cause of their own. My belief is that the end result of further knowledge is seen to justify the means of involving humans in the research. Not only will this assist in advancing conceptual understanding of the meaning of witnessed resuscitation, but may also inform the policy and practices of healthcare staff in situations where the presence of lay persons during an adult cardiopulmonary resuscitation attempt is yet to be fully sanctioned.

7.2 Beneficence and non-maleficence

Two of the most fundamental ethical principles applicable to research are beneficence and non-maleficence (Eddie, 1994), which encompass the maxim: 'above all, do no harm'. In assessing the potential adverse effects, risks or hazards for research participants, it was acknowledged that recollection of a cardiopulmonary resuscitation attempt may be distressing. Those with experience of this situation will recognise it as critical, demanding skilled technical intervention as well as being highly charged emotionally. This is captured by Quinn (1998, p.1070) who defines cardiac arrest as 'the ultimate medical emergency'. It could therefore be argued that research to investigate lay presence during cardiopulmonary resuscitation fulfils the criteria of a sensitive topic - that is, one that has the potential to arouse strong emotional responses (Cowles, 1988). Practical concerns included recognition that discussing a life-threatening event such as cardiopulmonary resuscitation may be distressing

and painful for people who are bereaved. Any staff member with bereavement issues was therefore advised not to participate in the study.

7.3 Informed consent

According to Polit and Hungler (1999, p.140), ‘informed consent means that participants have adequate information regarding the research, are capable of comprehending the information, and have the power of free choice, enabling them to consent to or decline participation in the research voluntarily’. The process is embedded within the principle of respect for autonomy and includes providing participants with information about the benefits and risks of the research (Holloway and Wheeler, 2002). Despite efforts to predict all the risks at the outset of the study, Smith (1992) warns that it cannot be known for certain what the interview will uncover. Thus, in qualitative research, consent is often viewed as ‘an ongoing, transactional process’ (Polit and Hungler, 1999) known as ‘consensual decision making’ or ‘process informed consent’ (Streubert Speziale and Carpenter, 2007). In other words, ‘continually informing and asking permission establishes the needed trust to go on further in an ethical manner’ (Munhall, 1988, p.157). A further consideration in phenomenological research is recognition that the lived experience of those who are recruited to participate may render them vulnerable and less able to act autonomously. Access to potential participants is also invariably via an organisation and their endorsement of the study may be perceived by some as a subtle pressure to participate (Cook, 1995). It is therefore imperative that the researcher avoids exploitation of peoples’ vulnerability (Polit and Hungler, 1999), respects the individual’s right to self-determination (Burns and Grove, 1999) and remains sensitive to factors that may affect the individual’s perceptions of freedom to decline participation (Cook, 1995).

Recruitment to the study was via a letter of personal invitation (see Appendices B, C and D). An information sheet (see Appendices E, F and G) and a consent form (see Appendix H) were enclosed with this letter, outlining the aim of the study and the individual's involvement should they choose to partake in the research interview. Letters of invitation were disseminated by those with the right of access to the postal address of prospective participants, thus avoiding disclosure of personal details to the researcher. This is in compliance with the common law duty of confidence laid out in the Data Protection Act (Department of Health, 1998c) which stipulates that personal data cannot be passed between authorities without the permission of the individual concerned. Ethical conduct in respect of gaining consent included the provision of explicit information about the research, taking into account the need for facts to be presented in a way that was understandable to the recipient and making sure that a contact point for further information was made available. Each participant was also given a two-week period to decide whether or not they wanted to take part, thus complying with professional guidance that recommends no untoward pressure or coercion is applied to potential participants when making their choice (Royal College of Nursing, 2004). Those individuals who decided to participate in the study were required to sign and return the consent form in the pre-paid, pre-addressed envelope. Non-response was taken as an indication of a decline to participate and no further contact was made with individuals in such cases. Participants were also given the option to withdraw from the study at any stage without prejudice.

7.4 Ethical interviewing

The strategy for generating knowledge in this phenomenological study involved the conversational technique of interviewing. Each participant was invited to select a convenient

date and time for the interview to take place from a pre-determined list of possibilities. Interviews focusing on the lived experience may be tiring due the reflective character of the interview (Holloway and Wheeler, 2002). Participants were therefore informed that their involvement in the interview would last approximately one hour and, with their consent, an audio-recorder would be used to help collect information accurately. Smith (1992, p.98) suggests that 'any theoretical framework for ethical interviewing must begin with the interviewer'. This includes giving due consideration to the sensitivity of the material and extended self-disclosure. Confidence to proceed was drawn from past experience of conducting face-to-face interviews as a researcher and clinician in acute and critical care situations. It is acknowledged, however, that immersion in the lived experience of others may render the researcher vulnerable (Robley, 1995). Sque (2000, p.27) recommends a period of preparation to allow those carrying out an investigation to feel confident in their skills. There is also a need for support systems and periods of reflection to minimise the probability of what she describes as 'mortification of self'. Mindful of the emotive topic of resuscitation, a support system of debriefing with a colleague qualified in mental health was built into the research process.

Kavanaugh and Ayres (1998) stress the importance of assessing participants for signs of distress during research on sensitive topics and identify strategies for minimising discomfort. In the event that participation in the interview causes the informant emotional distress, it was made clear in the participant information sheet that participant welfare would take priority over the research. Acknowledging that follow-up support may be required, the participant information sheet also contained detail on available sources of help within the research setting e.g. team leaders, staff welfare officer, and occupational health. This is supported by Coyle

and Wright (1996, p.431) who argue that ‘it is ethically questionable for researchers to address sensitive issues without being equipped to deal with resultant distress’. In contrast, it was considered that participation in this study may prove to be an effective way of helping the interviewee understand their experience by engaging in cathartic disclosure. Holloway and Wheeler (1995, p.229) suggest that ‘research interviews can be therapeutic, although therapy is not their purpose’. Nevertheless, it was made clear to participants that this benefit could not be guaranteed.

7.5 Confidentiality and anonymity

A further ethical consideration relates to the researcher’s responsibility to give assurances of confidentiality and anonymity (McHaffie, 2000). Where anonymity is impossible, for example in a face-to-face interview, every effort should be made to ensure that the principle of confidentiality is upheld (Streubert Speziale and Carpenter, 2007). This implies that data will be used and reported in such a way that no-one other than the researcher is able to identify the source (Behi and Nolan, 1995). Measures to ensure confidentiality of personal information included the secure storage of interview material and the use of a system of coding to protect the individual’s identity during the process of hermeneutic-phenomenological analysis and in the publication of research results. Participants were also given written assurance that audio-recordings would be destroyed on completion of the study. Sample sizes in qualitative research are typically small in contrast to quantitative research (Sandelowski, 1986; Miles and Huberman, 1994; Morse and Field, 1996; Nieswiadomy, 1998). This highlighted for me the need for caution in describing any particular cardiopulmonary resuscitation event and a broad statement as to the location of the research setting e.g. ‘accident and emergency care services in the Midlands’ was proposed for use with

reference to any publications. A decision to conduct the research interviews at a venue external to the participants' normal place of work was seen as an important feature in the design of the study to safeguard the privacy of participants and to prevent any disruption to routine emergency practice. It was also considered appropriate to remind participants prior to commencement of the interview, of their responsibility to maintain the confidentiality and anonymity of clients, peers and colleagues when re-living their experiences.

7.6 Gaining access to the study participants

Permission to interview ambulance personnel, namely technicians, paramedics and community paramedic officers was obtained from the Chief Executive of the research site (see Appendices I and J). Initially, this involved making contact with senior members of staff who helped to prepare the research proposal and became established points of contact whilst undertaking the study. It was amicably agreed that research participants would be identified from a data sheet pertaining to cardiac arrest that was routinely completed by ambulance staff in the research setting and that this information would be obtained retrospectively, thereby preventing any disruption to routine emergency practice. Obtaining access to University course students and permission to conduct the research interviews on site was carried out in accordance with the research governance procedures of each University and involved initial contact with respective heads of department (see Appendix K). Holloway and Wheeler (2002) stress the importance of negotiating with those at the top of the hierarchy first, given their power to restrict access to the setting, even if everyone else agrees. Once written confirmation of permission to proceed had been obtained (see Appendix L), course leaders were asked to identify and confirm the number of potential participants who met the inclusion criteria. They were also asked to disseminate letters of invitation to participants by hand, thus preventing

disclosure of any personal details, i.e. postal addresses of the students to the researcher. In relation to my own place of work, an administrator for the advanced practice course that I led was identified as an appropriate person to complete this task.

7.7 Gaining ethical permission to proceed

An integral part of research governance is the requirement to obtain an independent scientific and ethical review of the proposed research. This included application to the local research ethics committee following electronic standard procedures that came into force on the 1st March 2004 (National Health Service, 2004). Confirmation of ethical approval to proceed with the recruitment of ambulance staff is presented in Appendix M. An application to extend the study to include the recruitment of first-level registered nurses was approved by the same local research ethics committee in May 2007 (see Appendix N).

7.8 Chapter summary

This chapter has considered ethical issues of importance when planning and conducting a research study using phenomenological research techniques. Adherence to ethical standards is arguably heightened when researching the lived experience, calling for creative strategies in the research design and careful deliberation of the potential risks involved. In striving to achieve a quality research culture, measures to promote safety and well-being undoubtedly includes preparation and support for both the researcher and those who have consented to be researched.

CHAPTER EIGHT

THE HERMENEUTIC INTERVIEW

8.0 Chapter overview

Interviewing is a popular research method, closely associated with phenomenological inquiry as a means of obtaining lived-experience material from the viewpoint of the experiencing person. The first part of this chapter focuses on the practical procedures involved in the recruitment of interviewees and includes detail of the challenges that I encountered in obtaining a volunteer sample. The outcomes of recruitment are presented and the study is placed in context by providing detail of the characteristics of the study participants, the nature of their experience and the locality of care.

The second part of this chapter demonstrates the use of interviewing to explore the meaning of the lived experience of lay presence during an adult cardiopulmonary resuscitation attempt. Different types of interviews are described and the reasons that lie behind the choice of a semi-structured interview technique involving the use of an interview schedule are made explicit. The interview process is conceptualised and analysed in the tradition of hermeneutic inquiry which acknowledges the interactive involvement of the researcher in producing essential descriptions of the lived human experience.

8.1 Recruitment of interviewees

8.1.1 Stage one

The recruitment of study participants was a staged process, commencing with ambulance staff (stage one). This involved seven rounds of recruitment over a one year period, commencing in July 2005. Potential participants were initially identified from the accident and emergency ambulance Trust cardiac arrest database (April 2005 to March 2006). This electronic file included the name of staff that had performed cardiopulmonary resuscitation in the presence of a witness and the age of the victim requiring resuscitation, thus confirming the eligibility of study participants in accordance with pre-established criteria. A further round of recruitment took place in May 2006 in an attempt to increase the sample size. Twenty eligible participants were identified from the Trust cardiac arrest database for the year April 2004 to March 2005. Recruitment came to an end when no further contacts could be identified on the cardiac arrest database (April 2004 - March 2006). A total of 69 ambulance staff were invited to participate in the study and nine subsequently volunteered to be interviewed (see Table 8.0 - page 124). One member of staff contacted the researcher to clarify eligibility prior to giving their consent. Despite repeated attempts, I was unable to make contact with one participant on the telephone number provided, which reduced the number of ambulance staff available for interview, to eight.

8.1.2 Stage two

The recruitment of first-level registered nurses via their University of study (stage two) commenced in July 2007. Once again, a staged process was adopted by liaising with one University at a time and not moving on to the next until research governance procedures and

recruitment processes had been completed. Unlike recruitment in stage one, the number of available participants was considerably lower (see Table 8.1- page 126).

Table 8.0 Recruitment process and outcome (stage one)

Period when a witnessed resuscitation event occurred	Number invited to participate	Number consenting to participate
April 2005 – June 2005	11	3
June 2005 – August 2005	9	2
August 2005 – October 2005	7	1
October 2005 – December 2005	8	0
December 2005 – February 2006	3	2
February 2006 – March 2006	11	0
April 2004 – March 2005	20	1
Total	69	9

One University rejected my application for access to study participants and unfortunately, it was two months before the respective research governance committee conveyed this decision. The committee felt that access to study participants could be more easily obtained by liaising directly with the students employing authorities and that the focus of the research did not relate to the students educational needs. The first point, I believe, failed to acknowledge the desire to obtain a regional as opposed to local perspective on this topic and the second point appears to ignore the individual’s right to determine whether participation in the study would be of any educational benefit. The disappointment of this decision, coupled with the recruitment of just two participants over a period of six months, led me to consider and plan alternative recruitment strategies. This involved notifying the local research ethics committee

of an amendment to the original study proposal, the outcome of which was a favourable ethical opinion to proceed with the proposed changes.

Table 8.1 Recruitment via University of study and outcome

University	Number of available participants	Number invited to participate	Number consenting to participate
A	3	3	2
B	8	0	0
C	0	-	-
D	4	4	0
E	0	-	-
F	1	1	1
Total		8	3

8.1.3 Revised recruitment strategy (stage two)

A second mechanism of recruiting first-level registered nurses who fulfilled the study inclusion criteria was via the Royal College of Nursing Emergency Care Association. Recruitment to the study was via an advertisement which invited individuals with an interest in participating in the study to make contact with the researcher either via telephone or email (see Appendix O). In addition to the publication of this advertisement via the Royal College of Nursing Emergency Care Association magazine, I also received requests for an electronic version of the advertisement that would enable dissemination to potential participants via email and display of the advertisement in public areas. It was also decided to introduce an additional method of sampling; the snowball sampling technique. This method of sampling is recognised as an effective technique for developing a reasonable-sized sample and is

completely compatible with purposive sampling (Denscombe, 2007). Kleiman (2004) also identifies snowball sampling in conjunction with purposeful sampling as particularly suited to phenomenological inquiry. The aim is to recruit individuals to the study through a process of reference from one participant to the next (Streeton *et al.*, 2004). Each interviewee was asked to disseminate an invitation to participate in the study to two or more people who might be included in the sample. The wording of this invitation was consistent with that contained in the advertisement presented in Appendix O, without reference to the Royal College of Nursing forum. One member of staff who had been approached by an interviewee felt the need to clarify eligibility prior to giving their consent. Interestingly, this person was not sure whether she had relevant experience, yet the examples she gave clearly indicated that her participation would help to achieve the purpose and objectives of the research. This indicated a possible lack of understanding about the meaning of witnessed resuscitation. Collectively, these changes resulted in a further eight participants being recruited to the study, five of these being as a result of snowballing. This took the total number of first-level registered nurses as participants in this study to 12 (see Table 8.2). Recruitment came to an end when no new referrals were received from interviewees via the snowball sampling technique.

Table 8.2 Recruitment process and outcome (stage two)

Recruitment via:	Number invited to participate	Number consenting to participate
Participant's University of study	8	3
Emergency Care Association	13	4
Snowball/opportunistic sampling	5	5
Total	26	12

8.2 Potential factors influencing recruitment

Hansen (2006) suggests that recruitment for interviews is often a challenge. This was certainly evidenced in this study with just 13% of ambulance staff and 46% of first-level registered nurses volunteering to participate in an interview. The research setting of accident and emergency care is a target driven environment as evidenced by policy initiatives such as the four-hour operational standard (Department of Health, 2000a), an ambulance service response within 8 minutes for life-threatening emergencies and the initiation of thrombolysis for heart attack victims within 60 minutes of calling for professional help (Department of Health, 2000b). Hence, some recruits may have perceived qualitative inquiry and/or the subject matter of the research as less valuable in an environment that is driven by the production of evidence that is measurable and quantifiable.

It is also acknowledged that personal incentives regarding participation in the study may have taken precedence over the researcher's explanation of the perceived benefits, especially as individuals were being asked to participate in their own time. In addition, ambulance services in the Midlands were undergoing a major re-organisation during the period of recruitment and it is accepted that individuals may have been reluctant to make known their views during a period of uncertainty and change. Polgar and Thomas (1995) suggest that the use of audio-recording may result in greater refusal rates and some may fear reprisal from the disclosure of their expressed views. The recruitment of first-level registered nurses via their University of study may also have been affected by not knowing the names of those who were being invited to participate (with the exception of my own place of work), which resulted in a non-personalised letter of invitation. Enhanced recruitment via the snowball sampling technique is testimony to the value of a personalised approach.

8.3 Characteristics of the study participants

Table 8.3 indicates the sample characteristics of ambulance staff. The study sample comprised: three technicians, four paramedics and one community paramedic officer. Three participants were female and five were male. All were employed by a National Health Service Accident and Emergency Ambulance Trust located in the Midlands and responded to cardiac arrests in the south of the county where their service was located. Of the 12 first-level registered nurses who volunteered to be interviewed (see Table 8.4 - page 130), ten were female and two male. Their job titles reflected a range of experience in accident and emergency care and included representation from clinical practice, management and education. Participants were recruited from eight Acute National Health Service Trusts, the majority of which were located in the Midlands.

Table 8.3 Characteristics of participants: Ambulance staff

Job title	Gender	Environment	Location
Technician	Male	Ambulance Service NHS Trust	Midlands
Technician	Female	Ambulance Service NHS Trust	Midlands
Technician	Male	Ambulance Service NHS Trust	Midlands
Paramedic	Female	Ambulance Service NHS Trust	Midlands
Paramedic	Male	Ambulance Service NHS Trust	Midlands
Paramedic	Male	Ambulance Service NHS Trust	Midlands
Paramedic	Male	Ambulance Service NHS Trust	Midlands
Community Paramedic Officer	Female	Ambulance Service NHS Trust	Midlands

Table 8.4 Characteristics of participants: First-level registered nurses

Job title	Gender	Environment	Location
Nurse Practitioner	Female	Acute NHS Trust ¹	Midlands
Advanced Nurse Practitioner	Female	Acute NHS Trust ²	Midlands
Staff Nurse	Female	Acute NHS Trust ³	Midlands
Sister	Female	Acute NHS Trust ⁴	Midlands
Sister	Female	Acute NHS Trust ²	Midlands
Divisional Nurse Manager	Male	Acute NHS Trust ⁵	North West
Nurse Consultant	Female	Acute NHS Trust ⁶	South
Staff Nurse	Female	Acute NHS Trust ³	Midlands
Practice Development Nurse	Male	Acute NHS Trust ⁷	Midlands
Senior Lecturer	Female	Acute NHS Trust ⁸	Midlands
Sister	Female	Acute NHS Trust ²	Midlands
Resuscitation and Clinical Skills Practitioner	Female	Acute NHS Trust ⁷	Midlands

8.4 The interview structure

8.4.1 Type and style of interview

There appears to be a consensus in the literature that research interviews can be located along a continuum, with structured and unstructured interview types representing opposite ends of the spectrum (Fielding, 1994; Polgar and Thomas, 1995; Nieswiadomy, 1998; Holloway and Wheeler, 2002; Robson, 2002; Parahoo, 2006; Tod, 2006). These extremes are seen to link to the depth of response sought and the degree to which the researcher has control over the content and process of the interview. According to Parahoo (2006), structured interviews aim to collect quantifiable data. The focus is on replication (Hansen, 2006) which can be achieved

by asking all participants the same set of pre-established questions in an ordered and standardised manner (Fontana and Frey, 2000). As such, structured interviews are not readily identified as a qualitative research method (Hansen, 2006) although Grbich (1999) suggests that structured open-ended interviews are useful when there are a large number of participants and comparability of the data is desirable.

Hallett (1995, p.62) stresses the importance of adopting an open and accepting interview style in phenomenology ‘which permits participants to voice their genuine views, opinions and feelings without constraint’. This infers the use of an unstructured interview technique which lets the interviewee develop their ideas and pursue their own train of thought (Denscombe, 2007). The unstructured interview is referred to in the literature as informal (Grbich, 1999; Robson, 2002), intensive (Lofland and Lofland, 1995), interactive (Morse and Field, 1996), in-depth (Britten, 1995; Hansen, 2006) non-standardised (Fielding and Thomas, 2001) and non-directive (Parahoo, 2006). Questions are open-ended (Jackson *et al.*, 2008) and may be limited to a general area of interest and concern (Robson, 2002). According to Fontana and Frey (2000), unstructured interviewing can provide a greater breadth of data, given its qualitative nature. Tod (2006) also suggests that unstructured interviews are the most in-depth and the least directive.

van Manen (1997, p.66) argues strongly that deciding on the most appropriate type of interview should be determined by ‘the fundamental question that prompted the need for the interview in the first place’. Morse and Field (1996) argue that the semi-structured interview technique is useful because it ensures that the researcher obtains the information required, whilst at the same time, gives participants the freedom to explain a situation in their own

words. This in turn provides the rich description that is required to illustrate concepts. Although control and direction of the interview lies with the researcher (Parahoo, 2006; Tod, 2006), the interviewer has flexibility over the order in which the issues are discussed (Denscombe, 2007), the freedom to add, modify or omit particular questions (Robson, 2002) and perhaps most importantly, the capacity to be responsive to the interviewee's agenda and views (Tod, 2006). After careful consideration, a semi-structured interview technique was selected. This type of interview appeared to offer a balance between flexibility and control, yet at the same time, gave reassurance that the aims of the study could be achieved. There are examples in the literature of its usefulness in phenomenological inquiry to explore a range of lived experience phenomena related to end-of-life care (Socorro *et al.*, 2001; Taylor, 2001; Hopkinson, 2002; Weslien *et al.*, 2005). Appraisal of these studies gave further support and reassurance about the use of a semi-structured interview technique in this study.

8.5 The interview process

8.5.1 Timing and setting for the interviews

Interviews with ambulance staff were completed over a period of one year (June 2005 to May 2006). Similarly, it took the same timeframe to complete individual interviews with first-level registered nurses, (i.e. July 2007 to June 2008). Each participant was contacted by telephone to arrange a mutually convenient date and time for the interview to take place. Conversation during this first contact was approached in a way that sought to establish a relationship of equality, trust and involvement by adopting a natural style of conversation. For example, I purposefully used phrases such as 'when will it be convenient to meet with you?' as opposed to 'when will it be convenient to conduct the interview?' Smythe *et al.* (2008) argue that to approach an interview with a mindset of 'conducting' is to freeze the phenomenological spirit.

The fact that all participants subsequently went on to share their experiences may be testimony to the relationship-building approach adopted during this initial contact.

Seven interviews with ambulance staff were held at the researcher's place of work. As stated in the previous chapter, this choice of venue was to maintain privacy and to prevent interruption or the presence of others by holding the interview external to the participant's normal place of work. One paramedic requested that the interview took place at his work base and this was respected. Mindful of the costs in time and the travel involved when recruiting from a wider geographical area, all participants recruited via the Royal College of Nursing Emergency Care Association and through snowballing were invited to identify a venue that was convenient to them. Despite asking participants to consider a venue external to their normal place of work, five chose their workplace. Of the remaining seven interviews, two were held at the participants' home, one at the participant's University of study and the remaining four at the researcher's place of work. Nieswiadomy (1998) argues that regardless of the setting, the researcher should attempt to seek as much privacy as possible for the interview. However, participant control over the choice of venue meant that interruptions could not always be avoided. Interruptions were most noticeable in the work environment, with persons attempting to make contact with the interviewee via telecommunications and on one occasion, someone physically entered the interview room. I found myself passively accepting the situation despite the disruptive effect that this was having on the interview encounter. The submissive role that I adopted as a visitor was an interesting reflexive thought in relation to topic of investigation, particularly as it is known that relatives submit themselves to the healthcare professionals when faced with the experience of cardiac arrest (Weslien *et al.*, 2006).

8.5.2 *The one-to-one, face-to-face interview*

Each participant was interviewed on one occasion. This took place on a one-to-one basis, which according to Holloway and Wheeler (2002) is the most common form of data collection. Participants had been advised that their involvement in the interview would last approximately one hour. Therefore, once the agreed deadline had been reached, agreement to continue the interview session was sought. This action is supported by Robson (2002) who argues that the researcher has a professional responsibility to keep the interview on schedule. Hansen (2006) suggests that a good semi-structured interview runs for between 60 and 90 minutes. The length of interviews with ambulance staff lasted between 40 and 97 minutes (average 60 minutes) and for first-level registered nurses, between 51 and 93 minutes (average 61minutes).

A decision was made to meet with the interviewees face-to-face as it is claimed that this has the advantage of developing a closer rapport (Polgar and Thomas, 1995). Furthermore, Beck (1994) is of the opinion that essential descriptions of the lived experience are obtained through the developing researcher-participant relationships that occur during the interview process. However, it is also recognised that participant responses may be influenced by the appearance and characteristics of the interviewer (Nieswiadomy, 1998). For example, it is argued that issues of dress, sexuality, age, class, ethnicity, gender and social status may influence the quality of rapport (Grbich, 1999) and make a difference to the response obtained (Tod, 2006). There are however, limits to the extent of matching that can be achieved in interviewing (Fielding, 1994), especially when recruitment to the study was reliant on a volunteer sample. Careful consideration was given to professional role differences (for example, nurse/paramedic, academic/clinician and lecturer/student) in an effort to reduce the

imbalance of power that is said to be characteristic of the interview (Grbich, 1999; Fontana and Frey, 2000; Jackson *et al.*, 2008). I attempted to foster an atmosphere of equality by making known the extent to which I valued the individual's contribution to the study. This involved listening attentively to participant responses in order to convey respect and genuine interest in their lived experience.

It is acknowledged that during a face-to-face interview, participants may consciously or unconsciously modify their answers according to what they believe the researcher wants to hear (Holloway and Wheeler, 2002; Jackson *et al.*, 2008). The interviewer effect was apparent during the course of interviewing to the extent that some participants questioned whether they had given a right or wrong answer. I attempted to counter this by gently reminding participants that I fully respected their point of view regarding the pros and cons of lay presence during an adult cardiopulmonary resuscitation attempt. Sharing my own perspectives on this topic through reflection on my presuppositions was also helpful in overcoming apparent assumption that I endorsed this practice without reservation.

8.5.3 Eliciting descriptions of the lived experience

Use of an interview schedule provided structure to the interview (see Appendix P). This was developed in accordance with the objectives of the study and included a mixture of closed and open-ended questions. Questions were organised under a list of topic headings (Robson, 2002), and the aim was to keep the conversation focused around these (Hansen, 2006). This is in keeping with van Manen's (1997) view that the role of the researcher in the hermeneutic interview is to keep the interviewee orientated to the phenomenon of investigation. Robson (2002) makes a distinction between the interviewer questions that seek to find out what

people know, what they do, and what they think or feel. Consistent with the aim of hermeneutic phenomenology, the interview schedule was designed to obtain a rich description of human actions and behaviours as experienced in the life-world (van Manen, 1997). Each interview commenced with a 'grand tour' question (Spradley, 1979); a broad descriptive question which aimed to situate the interview in the context of the participant's lived experience. This involved asking the participant to describe a situation where a lay person was present/lay people were present during an adult cardiopulmonary resuscitation attempt. The term lay presence was substituted with 'bystander presence' or 'family presence' at the outset of the interview in acknowledgement that ambulance staff and first-level registered nurses respectively would be familiar with this choice of words. Use of a broad opening question is supported by McCance and Mcilpatrick (2008) who claim that the research interview in phenomenology usually begins by asking the participant to recount a particular experience. This was followed by the use of focused questions to elicit specific detail, open-ended questions to enrich the description and closed questions requiring a yes/no answer. For example:

- Focused question - what was the relationship of the lay person to the individual undergoing resuscitation?
- Open-ended question - what interventions did the lay person witness?
- Closed question - did the lay person participate in the resuscitation event?

Probing questions were used in an attempt to gain a more in-depth response and to help participants elaborate on the issue being discussed. For example, if it was identified that lay people participated in the resuscitation event, participants were asked 'in what way?', 'what was that experience like for you?', 'how did you feel about their involvement?' Fielding and

Thomas (2001) regard probing as a key interviewing skill which needs to be handled sensitively and carefully as it can make participants feel uncomfortable and may lead to interviewer bias. The rule of thumb, they suggest, is to probe whenever the participant's statement is considered ambiguous. Some probing questions were however pre-specified on the interview schedule as a reminder to explore certain aspects of the interviewee's response to a particular question.

Additional interview tactics included the use of prompts; a way of subtly encouraging participants to reveal their knowledge or thoughts on a specific point (Denscombe, 2007). This was achieved by repeating or rephrasing a question, repeating the last few words spoken by the interviewee or by offering an example. I also utilised the face-to-face interview situation as an opportunity to confirm whether my interpretation of what had been said was correct. Denscombe (2007) argues that the good interviewer is adept at using checks and that this can be achieved by presenting a summary of what they think the participant has said. Silence was also used as a communication technique. As suggested, this allowed time for participants to reflect and voluntarily respond (Tod, 2006; Kvale, 2007) and also helped to prompt a response (van Manen, 1997).

8.5.4 Capturing the lived experience

An audio-recorder was used with the participant's permission for the purpose of capturing the exact words of the interview as accurately as possible (Holloway and Wheeler, 2002). This involved the use of a small portable digital recorder with 312 minutes of recording time. This meant that participants were free to talk without the interruption of changing cassette tapes. This equipment also had a visual display of the recording time and a red light that indicated

recording in progress. These features allowed me to pay attention to what the participants were saying, rather than focusing on the time and/or the reliability of the equipment. Similarly, I chose not to take notes during the interview as I believed that this may be distracting for the participant and may also affect my level of concentration. I did, however, make notes in the evening after each interview encounter for the purpose of contextualising elements of the interview during the process of data analysis and interpretation.

8.5.5 Researcher involvement in the interview

When using interpretive phenomenology, it is accepted that the researcher will bring their preconceptions to the interview situation (McCance and Mcilfattrick, 2008). This allowed me to adopt an interview style that reflected an exchange of views based on the presuppositional knowledge and experience of witnessed resuscitation that I possessed. Although there are potential drawbacks of self-disclosure, such as influencing the contemporaneous responses of the interviewee, Davies and Dodd (2002) argue that researcher involvement is a matter of ethical consideration, especially when participants are requesting advice or information. Jackson *et al.* (2008) also suggest that failure to respond to the questions posed by participants may negatively affect the flow of the interview. Most participants at some stage during the interview actively sought my views and opinions on the subject matter. At times, this involved seeking acceptance or agreement with the point they were making by posing a question such as 'isn't it?' or they would make a statement such as 'you know what I mean' which suggests that they assumed a level of knowledge on my part. It was also interesting to observe how my involvement in the interview appeared to stimulate participant reflection on their practice. For example, one participant asked how I would feel to be a bystander and whether I would take an active or passive role. I went on to share a lived experience towards

the close of the interview in which I referred to giving the bystander a choice. At the end of my response the participant stated; *'that's quite interesting...saying about giving the bystander a choice... I've never thought to actually ask anybody'*. This confirms Britten's (1995) assertion that providing timely responses to the questions posed by interviewees will enhance the interview encounter.

8.5.6 *Concluding the interview*

Jackson *et al.* (2008) draw attention to the importance of terminating the interview appropriately. Each interview was concluded by thanking participants for giving their time and for sharing their experiences. I attempted to avoid an abrupt termination of the interview by asking participants if they had any further issues that they would like to share on the topic and/or any questions that they would like to ask about the research or the subject matter. I also sought to find out what had motivated individuals to participate in the interview and whether they had found the experience beneficial. Determining the benefits of participation helped to establish participant satisfaction about their involvement in the interview process and the majority engaged in a reflective dialogue which indicated a positive experience. It is acknowledged that conversation related to the topic of investigation continued on every occasion once the audio-recording device was switched off. Despite the fruitful content that emerged from this two-way flow of information, I chose to regard the taped conversation as the definitive conclusion to the interview, this being in accordance with the ethical agreement of participation.

8.6 Quality of the research interview

The first interview in this study served as a pilot for the purpose of evaluating: the method of

recruitment, arrangements for the interview, use of the audio-recording equipment, the content of the interview schedule and the nature and quality of the lived-experience material obtained. The latter component of evaluation was carried with the use of Kvale's (2007) six quality criteria for a semi-structured interview that serve as guidelines for good interview practice (see Table 8.5).

Table 8.5 Quality criteria for an interview

-
- The extent of spontaneous, rich, specific and relevant answers from the interviewee
 - The shorter the interviewer's questions and the longer the interviewee's answers, the better
 - The degree to which the interviewer follows up and clarifies the meanings of the relevant aspects of the answers
 - To a large extent, the interview is interpreted throughout the interview
 - The interviewer attempts to verify his or her interpretations of the interviewee's answers in the course of the interview
 - The interview is self-reported; it is a self-reliant story that hardly requires extra explanations
-

Source of reference: Kvale (2007)

Evaluation of the pilot interview indicated quite short answers from the participant and occasional missed opportunity to follow-up relevant points. On reflection, it appeared that I had applied the interview schedule too strictly, which resulted in a lack of balance between

direction and flexibility. As the interviews progressed, the sequence of pre-determined questions was altered in response to the direction and flow of individual responses and I began to probe more deeply. A verifiable outcome was the improved depth of participant responses to individual questions, and an increase in the overall length of the research interviews, i.e. the pilot interview was the shortest of all the interviews that were held in terms of time and wordage.

Kvale's (2007) quality criteria were applied to all subsequent interviews in order to determine the appropriateness of the study sample and the adequacy of the lived experience material obtained. This evaluative process revealed that interviewees were able to provide spontaneous, rich, specific and relevant answers and in the majority of cases, there was both depth and detail to the quality of information obtained. Wengraf (2001) argues that to go into something 'in depth' is to obtain a more detailed knowledge and understanding about it. Two first-level registered nurses (female) were unable to recall a situation where a lay person (or people) was present during an adult cardiopulmonary resuscitation attempt at the point of patient entry to secondary (in-hospital) care. Consequently, their responses represented a hypothetical explanation of the topic under investigation rather than an expression of the lived experience. Morse and Field (1996) consider it appropriate to exclude interviews in the analysis when participants have been unable to provide the information required, and recognise this as a shortfall of using a volunteer sample. This reduced the number of interviews for hermeneutic-phenomenological analysis to 18.

8.7 Chapter summary

This chapter has provided insight into the use of the research interview as a method of gaining access to the lived experience of witnessed resuscitation. Use of the semi-structured interview technique offered combined elements of structure and flexibility, and was found to be capable of producing in-depth participant responses that were in accordance with the aims of the study. The procedure of interviewing in hermeneutic inquiry is evaluated as a unique, interactive and reflexive activity that demands careful planning, preparation and ongoing evaluation to ensure a successful interview encounter and to enhance the quality of the lived experience material obtained.

CHAPTER NINE

HERMENEUTIC-PHENOMENOLOGICAL ANALYSIS

9.0 Chapter overview

This chapter details the process of analysing and interpreting the textual material obtained during the course of interviewing accident and emergency healthcare staff. The discussion is based on a framework that recognises the following stages in the analysis of qualitative data: preparation, familiarity, interpretation, representation and verification of the data (Denscombe, 2007). Consistent with the views of van Manen (1997), the term ‘data’ is substituted with that of ‘lived-experience material’.

9.1 Preparation of the lived-experience material

The first stage of analysis involved preparation of the ‘raw’ interview material and organising it in a way that would allow meaningful interpretation. Each audio-recorded interview was transcribed word for word. This decision is supported by Holloway and Wheeler (2002, p. 236) who argue that ‘the fullest and richest data can be obtained from transcribing all interviews verbatim’. Six of the interviews held with ambulance staff were fully transcribed by the researcher; an activity which allows the researcher to become ‘immersed’ in the data (Holloway and Wheeler, 2002; Hansen, 2006). For example, listening to interviews seemed to bring the discussion ‘alive’, and I was readily able to contextualise the participants’ descriptions. Transcription was, however, a lengthy process with 60 minutes of interview conversation taking up to eight hours to type word for word. It was difficult to keep abreast with the iterative process of qualitative inquiry which ideally sees data collection and analysis

occurring simultaneously. Transcription of the final two interviews held with ambulance staff and all audio-recordings produced during the interviews with first-level registered nurses therefore involved the use of a transcription service. Interestingly, these transcripts held little meaning until read while actively listening to the audio-recording of conversation between the interviewer and interviewee. Each interview transcript was given a code which served as a pseudonym to maintain anonymity of the interviewee. For example, interviews with ambulance staff were coded AS1-AS8 respectively and use of the code numbers RN1-RN12 represented the interviews with nursing staff. Every line of the interview transcript was numbered to facilitate the retrieval of lived-experience material and a wide margin on the right-hand side of the page was left free for the addition of notes. Each transcript was checked for accuracy against the audio-recording and a set of transcription symbols based on the work of Silverman (2006) were adapted and applied to ensure consistency in the presentation of material for analysis (see Table 9.0 - page 145). Minor inaudibility was evident at times, usually as a result of the interviewee speaking in a very low tone of voice. In such cases, a decision was made to apply an empty parentheses symbol to indicate the transcriber's inability to hear what was said. A sample of a transcript is presented in Appendix Q.

9.2 Familiarity with the lived-experience material

Having prepared each audio-recorded interview for analysis, the next stage involved reading and re-reading the textual material in order to become familiar with the participants' descriptions of the lived experience. This was carried out in accordance with the guidance presented by Denscombe (2007) who proposes three levels of initial reading that serve as a platform for subsequent stages of analysis: (1) reading to refresh the researcher's memory about the content and scope of the material available for analysis; (2) reading the transcript in

conjunction with field notes in order to place the material in context and (3) reading between the lines to identify implied meanings e.g. silences that are of significance in terms of the topic under investigation. Denscombe (2007) warns that it would be wrong to assume that this stage of familiarisation comes to an end when the more formal process of interpretation begins. Rather, it is acknowledged that familiarity continues to grow at each stage of the analysis due to the iterative nature of qualitative research designs.

Table 9.0 Transcription symbols

Symbol	Explanation
Interviewer	Words in non-italics indicate the interviewer's talk.
<i>Interviewee</i>	Words in italics indicate the interviewee's talk.
(2)	Numbers in parentheses indicate elapsed time (silence) in seconds.
[]	Left bracket indicates the point at which a speaker's talk is interrupted by another's talk. Right bracket indicates the point at which the interruption ends.
<u>Not at all</u>	Underscoring indicates reduced tone of voice.
<i>Not at all</i>	Bold italics indicates increased tone of voice.
<Laughs>	Words in angled brackets indicate sounds other than talk, such as laughter, coughing, crying.
*	An asterisk indicates confidential information e.g. named colleague or organisation.
...	Indicates an incomplete sentence.
()	Empty parentheses indicate the transcriber's inability to hear what was said.
(Word)	Parenthesised words are possible hearings.
(())	Double parentheses contain author's descriptions rather than transcription.

Adapted from Silverman (2006)

9.3 Interpreting the lived-experience material

9.3.1 van Manen's approach to hermeneutic-phenomenological analysis

Hermeneutic-phenomenological analysis as described by van Manen (1997) involves a process of reflectively analysing, clarifying and making explicit the structural aspects of the experience as lived and to portray these experiences by way of organised narrative or prose. van Manen (1997) identifies phenomenological themes as the experiential structures that give shape to the meaning of the lived experience. Themes, he claims are 'the stars that make up the universes of meaning we live through. By the light of these themes we can navigate and explore such universes' (van Manen, 1997, p.90). The analyst is therefore guided to engage in the activity of thematic analysis as a means of uncovering or isolating thematic aspects of lived-experience descriptions. Furthermore, he draws the researcher's attention to the identification of essential themes, i.e. those which make the phenomenon what it is and without which, the phenomenon would lose its essential meaning.

Whilst van Manen (1997) presents a strong theoretical basis for the analysis and interpretation of lived-experience material through the process of thematic analysis, there is a noticeable lack of procedural guidance to facilitate this important task. I therefore utilised the ideas of Attride-Sterling (2001) and Denscombe (2007) to produce a step-by-step guide to the analytic and interpretive process. In essence, the process of hermeneutic-phenomenological analysis involved a series of four tasks: (1) Reducing the text into manageable and meaningful text segments with the use of a coding framework; (2) Categorising issues (basic premises) arising from the process of coding; (3) Identifying themes which succinctly summarised the lived-experience material and around which, the phenomenological description would be developed; (4) Identifying key concepts that represented the essential nature of the lived

experience of lay presence during an adult cardiopulmonary resuscitation attempt. Each stage of the analysis was characterised by a back and forth movement between parts of the interview text in relation to the whole and a comparison of interviews across the full set of transcripts; an activity resonant of Heidegger's (1962, p.195) 'circle of understanding' that allows for a deeper interpretation of the meaning of the lived-experience to be achieved.

9.3.2 Coding lived-experience material

The coding framework devised for use in this study was based on the theoretical interests guiding the research, namely categories consistent with the analysis of a concept: antecedents, references and consequences (Rodgers, 1989, 1991, 2000a) (see Table 9.1 - page 148). Each code in the coding framework was clearly defined to avoid redundancy or interchangeable use (Attride-Sterling, 2001). According to van Manen (1997, p.79), formulating a thematic understanding of a lived experience is 'a process of insightful invention, discovery or disclosure'. This implies the use of inductive reasoning when engaged in the process of reflective analysis. Effort to maintain an inductive approach was made by limiting the number of codes in the coding framework to three, thus facilitating a process of discovery. Each source of lived-experience material was also analysed separately commencing with the analysis of interviews undertaken with ambulance staff. This strategy is supported by Hupcey and Penrod (2003) who argue the importance of independently analysing discrete sources of data to ensure inductive validity.

The process of coding each interview was carried out electronically, using Microsoft word-processing computer software. The technique adopted was consistent with van Manen's (1997) selective or highlighting approach to uncovering or isolating thematic aspects of the

lived-experience descriptions. This involved reading the text line-by-line and highlighting sentences or part sentences that appeared to be revealing of the experience being described (see Figure 3 - page 149). A record of the issues (basic premises) emerging from the text was maintained in the right hand column of the transcript. Once the process of coding was complete for each interview, identified issues were compiled into a list. This formed an ongoing record of the basic premises identified across the interviews (see Table 9.2 - page 150).

Table 9.1 Coding framework

Code	Label	Definition
A	Antecedents	Factors which influence ambulance staff and first-level registered nurses experience with and support for lay presence during an adult cardiopulmonary resuscitation attempt.
R	References	Situations in which ambulance staff and first-level registered nurses consider lay presence during an adult cardiopulmonary resuscitation attempt to be appropriate.
C	Consequences	What happens after or results from an instance of lay presence during an adult cardiopulmonary resuscitation attempt in primary (out-of-hospital) and secondary (in-hospital) environments of care. Includes the positive and negative effects:
C1		On the resuscitation team
C2		On the resuscitation event
C3		On the lay persons present
C4		On the patient undergoing resuscitation

Figure 3 Extract from an interview transcript

Participant asked to recall a situation of bystander presence during an adult cardiopulmonary resuscitation attempt.

	CODE	ISSUES (Basic premises)
1 Outside a pub in the street so a number of	C1	Spectators
2 bystanders around. They weren't sure what was	A	Lay ignorance
3 happening. We get there and um (2) we		
4 obviously realise it's an arrest so try and get	R	Invitation to participate
5 them involved rather than having them standing		
6 back. I think it's better if they can be helpful or	C3	Comfort and fulfilment
7 seen to be helpful then they feel like they have		
8 contributed something to the job.		
9		
10 Can you recall how many bystanders were		
11 present?		
12		
13 Definitely, definitely two cause they helped us.	R	Providing assistance
14		
15 Right.		
16		
17 Probably about four I would have thought.		
18 Three or four maximum.		
19		
20 Had they participated in the resuscitation in		
21 any way before the ambulance service arrived?		
22		
23 As far as I know they had seen the gentleman	A	Voluntary participation
24 go down and I think the landlady had actually		
25 called the ambulance () if they could help.		
26		
27 So, so what were your thoughts about this		
28 being a cardiac arrest situation and you have		
29 lay people present?		
30		
31 (3) In one respect you feel quite relaxed cause	C1	Ability to cope
32 there's someone there who can help you. Even	R	Providing assistance
33 if they don't know what's going on you can say		
34 'can you pass me this, can you get me this'. A	R	Providing assistance
35 lot of the time you don't even notice they're	C1	Immune to lay presence
36 there. You just go on to autopilot and it's only		
37 when you look and think 'ah perhaps they can	R	Providing assistance
38 help?'		

Table 9.2 Basic premises identified across the interviews

Antecedents	References	Consequences (C1)
Voluntary participation	Lay involvement**	Spectators
Voluntary withdrawal	Life-saving intervention**	Awareness of lay presence**
Evading the scene	Invitation to participate**	Ill at ease
Presenting the options	Providing assistance**	Apprehension
Autonomy in decision-making**	Key informants	Pressure to perform
Accommodating	Influence treatment protocols	Added pressure
Inviting lay presence	Nature of the resuscitation	Atmosphere*
Culture and tradition*	Phase of the resuscitation*	Conduct*
Separation	Comprehend the situation	Humanistic event*
Manipulation**		Role conflict
Barriers*		Immune to lay presence
Legitimate authority		Ability to cope
Lay ignorance		Of no detriment
Duty of care to the patient		Consequences (C2)
Benevolent paternalism		Hindrance**
Privacy		Distracting**
Lack of dignity*		Of no detriment
Advocacy *		Consequences (C3)
Lay compliance		Disturbing imagery
Lay subservience		Ordeal
Prior exposure		Raised expectations
Being in attendance*		Comprehend the situation
Setting the scene*		Appreciative understanding
Preparatory activity*		Seeing is believing
Agreement among staff*		Preparation for imminent death
Deliberation		Comfort and fulfilment**
Lay conduct*		Disbelief **
Lay assertiveness*		Denial **
Manpower resources*		Anguish
Environmental issues		Consequences (C4)
Availability of support*		Life-saving intervention**
Purpose of support*		Key informants
Provider of support		Influence treatment protocols
Ability to cope		Privacy
Endorsement of lay presence*		Lack of dignity*
		Not alone at the time of death

* Denotes basic premises unique to the experiences of first-level registered nurses

** Denotes basic premises unique to the experiences of ambulance staff

It is acknowledged that interpretive insights derived from the analysis of interviews AS1-AS8 appeared to inform the subsequent analysis of interviews undertaken with first-level registered nurses. Interestingly, this occurred despite a lack of intention to use pre-existing premises as a guide to subsequent analyses, thus reaffirming the challenges associated with the suspension (or bracketing) of existing knowledge when engaged in interpretive inquiry. I countered this by remaining open-minded to the discovery of new insights and by questioning the appropriateness of categorising new lived-experience material according to pre-existing premises. Although the majority of issues identified were common across interviews, some were unique to the experience of each group of participants. Of the 77 issues (basic premises) identified in Table 9.2, 35 relate to the antecedents of lay presence during an adult cardiopulmonary resuscitation attempt, nine to the situations in which participants considered lay presence to be appropriate (references) and 33 to the consequences of its occurrence. A small number of the premises (eight) were applicable to more than one category within the coding framework (see Table 9.3). For example, ‘lack of dignity’ was identified as a factor that influenced the participants support for and experience with witnessed resuscitation and was also considered to be a negative effect (consequence) for the person undergoing resuscitation.

Table 9.3 Basic premises applicable to more than one category

Code	Basic Premise
R, C4	Key informants
R, C4	Influence treatment protocols
A, C4	Privacy
A, C4	Lack of dignity
R, C3	Comprehend the situation
R, C4	Life-saving intervention
A, C1	Ability to cope
C1, C2	Of no detriment

In order to manage the volume of relevant material, all highlighted quotations were extracted and arranged in a separate table (see Table 9.4). Each quotation was cross-referenced to the interviewee by making a note of the interview code and line numbers, specified on the original transcript. Organisation of lived-experience material in this manner also assisted in the identification of underlying patterns that were common across the interviewees. For example, the content presented in the table below illustrates the emerging theme of ‘ethical reasoning’. Ungrammatical expressions such as ‘er’, ‘erm’ and ‘um’ and idiomatic statements such as ‘you know’ were removed from quotations at this stage to promote intelligibility of the spoken word.

Table 9.4 Organisation of lived-experience quotations

Participant quotation	Basic premise
<p><i>‘I wouldn’t change what I do to the patient whether there was somebody there or not, because what I’m doing is for the patient, not for the bystander’ (1029-1036) AS3</i></p>	<p>Duty of care to the patient</p>
<p><i>‘I think if she had come up, I think I’d have probably encouraged her not to be there, personally speaking, cause I just don’t think it’s very nice for her to see her mum in that sort of situation’ (318-321) AS4</i></p>	<p>Benevolent paternalism</p>
<p><i>‘Once you enter the resuscitation room...then curtains are pulled round and you have the privacy of...the resuscitation room’ (33-37) RN7</i></p>	<p>Privacy</p>
<p><i>‘That exposure of...being worked upon and people watching’ (529-530) RN7</i></p>	<p>Lack of dignity</p>
<p><i>‘I went into resus, spoke to just the doctor and nurses in terms of... Not even asking their permission but just saying; ‘this is the situation and she would benefit from coming in’’ (43-46) RN6</i></p>	<p>Advocacy</p>

9.3.3 *The process of identifying themes*

Once all the text had been coded and relevant material extracted the next step in the analytical process involved summarising the issues (basic premises) arising from the text and assembling them into structures of meaning, (i.e. themes) on the basis of related content (see Table 9.5 - pages 153 to 155). A total of 15 minor themes were generated from participants' descriptions. These were referred to as 'collective themes', denoting a collection or number of similar issues. Each collective theme was carefully labelled to represent the shared issues it contained. Seven basic premises, i.e. voluntary participation, life-saving intervention, voluntary withdrawal, evading the scene, disbelief, denial and anguish were removed at this stage of the analysis as it was believed that these premises were incidentally related to the purpose of the study. The grouping of these premises to form three incidental themes is further discussed in section 9.5.3 (see pages 165 -170).

Table 9.5 The grouping of basic premises into collective themes

Code	Basic premise	Collective theme
R	Lay involvement	Positive contribution
R	Invitation to participate	
R	Providing assistance	
R, C4	Key informants	Valuable resource
R, C4	Influence treatment protocols	
A	Presenting the options	Choice and facilitation
A	Autonomy in decision-making	
A	Accommodating	
A	Inviting lay presence	
A	Culture and tradition	Power and control
A	Separation	
A	Manipulation	
A	Barriers	
A	Legitimate authority	
A	Lay ignorance	

Table 9.5 Continued

Code	Basic premise	Collective theme
A	Duty of care to the patient	Ethical reasoning
A	Benevolent paternalism	
A, C4	Privacy	
A, C4	Lack of dignity	
A	Advocacy	
A	Lay compliance	Exercising influence
A	Lay subservience	
C1	Spectators	Being watched
C1	Awareness of lay presence	
C1	Ill at ease	
C1	Apprehension	
C1	Pressure to perform	Pressurised performance
C1	Added pressure	
C1	Atmosphere	
C1	Conduct	
C1	Humanistic event	An added burden
C1	Role conflict	
C2	Hindrance	
C2	Distracting	
A	Prior exposure	Preceding factors
A	Being in attendance	
A	Setting the scene	
A	Preparatory activity	
A	Agreement among staff	
A	Deliberation	Assessing the situation
A	Lay conduct	
A	Lay assertiveness	
R	Nature of the resuscitation	
R	Phase of the resuscitation	
A	Manpower resources	
A	Environmental issues	
A	Availability of support	
A	Purpose of support	The provision of support
A	Provider of support	

Table 9.5 Continued

Code	Basic premise	Collective theme
C3	Disturbing imagery	Emotional torment
C3	Ordeal	
C3	Raised expectations	
R, C3	Comprehend the situation	Of personal benefit
C3	Appreciative understanding	
C3	Seeing is believing	
C3	Preparation for imminent death	
C3	Comfort and fulfilment	
C4	Not alone at the time of death	
C1	Immune to lay presence	Untroubled by presence
A, C1	Ability to cope	
A	Endorsement of lay presence	
C1, C2	Of no detriment	

The next stage of analysis involved moving towards the identification of major ‘unifying’ themes (see Table 9.6 - page 157) comprising key concepts that would represent the essential nature of the lived experience of lay presence during an adult cardiopulmonary resuscitation attempt. The four life-world existentials of lived space (spatiality), lived body (corporeality), lived time (temporality) and lived human relation (relationality) (van Manen, 1997) served as interpretive guides for critical reflection in the generation of unifying themes. Examination of lived-experience material from the philosophical perspective of **relationality** considered the lived relation that participants maintained and shared with lay persons who were present during an adult cardiopulmonary resuscitation attempt. The key concept to emerge was that of ‘respect’. The existential of **spatiality** served as a guide to interpreting the behaviour of ambulance staff and first-level registered nurses when performing adult cardiopulmonary resuscitation in the presence of others. van Manen’s (1997, p.102) suggestion that ‘we become the space we are in’ was reflected in the behaviour and intentions of participants who

displayed professional ‘dominance’ in the presence of lay people. In the same sense, **corporeality** served as a guide to interpreting the actions and reactions of ambulance staff and first-level registered nurses when the lived body became ‘the object of someone else’s gaze’ (van Manen, 1997, p.104). This was revealing of participants expressing disquiet due to the physical (or bodily) presence of lay persons. Finally, the life-world existential of **temporality** guided the examination of past, present and future dimensions of lay presence during an adult cardiopulmonary resuscitation attempt. Preceding factors and assessment of the situation as it presented itself were interpreted as meaningful of ‘preparation’ for lay presence. There was also a sense of temporality in life-world descriptions that spoke of the support that needed to be in place at that moment in time in preparation for this practice. A connectedness with future dimensions was revealed in participants’ descriptions of the perceived effects of ‘exposure’.

Collectively, the concepts of respect, dominance, disquiet, preparation and exposure represent the essence of the lived experience of lay presence during an adult cardiopulmonary resuscitation attempt. Identification of the essential nature of the lived experience involved the use of ‘free imaginative variation’ (van Manen, 1997, p.107); a method which helps to discover the fundamental meaning of the phenomenon by imaginatively changing it. For example, I tried to conceive the phenomenon of lay presence during an adult cardiopulmonary resuscitation attempt without each concept and at the same time, added concepts to see if the phenomenon remained identifiable. During this process, I recognised that the concept of exposure was pervasive across all the unifying themes. The concept of presence was also implicit due to the nature of the inquiry.

Table 9.6 From collective to unifying themes

Collective theme	Unifying theme
Positive contribution Valuable resource Choice and facilitation	Respect for lay persons
Power and control Ethical reasoning Exercising influence	Professional dominance
Being watched Pressurised performance An added burden	Expressions of disquiet
Preceding factors Assessing the situation The provision of support	Preparation for lay presence
Emotional torment Of personal benefit Untroubled by presence	The perceived effects of exposure

9.3.4 Achieving saturation

Streubert Speziale and Carpenter (2007) suggest that repetition of discovered information during the course of qualitative analysis serves as a signal for the completion of data collection. Although it was possible to recognise repetition and confirmation of previously collected information across interviews, it was also apparent that each participant offered new insight into the lived experience of lay presence during an adult cardiopulmonary resuscitation attempt. This was evidenced by the identification of original ideas when analysing the transcript of each new informant. It is fair to say that saturation was not achieved in this study for practical reasons associated with the recruitment of participants. The gathering of lived-experience material with ambulance staff came to an end when no further contacts could be identified on the cardiac arrest database and with first-level

registered nurses when no new referrals were received via the snowball sampling technique. In defence of this situation, Van Der Zalm and Bergum (2000) remind us that the life-world does not remain static, and so another phenomenological description may always exist. van Manen (1997, p.31) also suggests that 'no single interpretation will ever exhaust the possibility of yet another complimentary, or even potentially *richer* or *deeper* description'. These perspectives, coupled with my own experience, serve to reinforce the belief that the ideal of saturation in qualitative research may indeed be a myth (Morse, 1991).

9.4 Representing the lived-experience material

The idea of identifying and extracting issues (basic premises) evident in the text, followed by the development of minor (collective) and major (unifying) themes was inspired by the analytic procedures proposed by Attride-Sterling (2001), who alternatively refers to basic, organising and global themes. Similarly, the use of an organising chart to structure and visually portray the relationship between minor and major themes (see Figure 4 - page 160) is resonant of Attride-Sterling's (2001) process of conducting qualitative analysis with the aid of thematic networks. This organising chart was developed on the same premise as the thematic network in that it 'serves as an illustrative tool in the interpretation of the text, facilitating disclosure for the researcher and understanding for the reader' (Attride-Sterling, 2001, p.390).

9.5 Verifying the lived-experience material

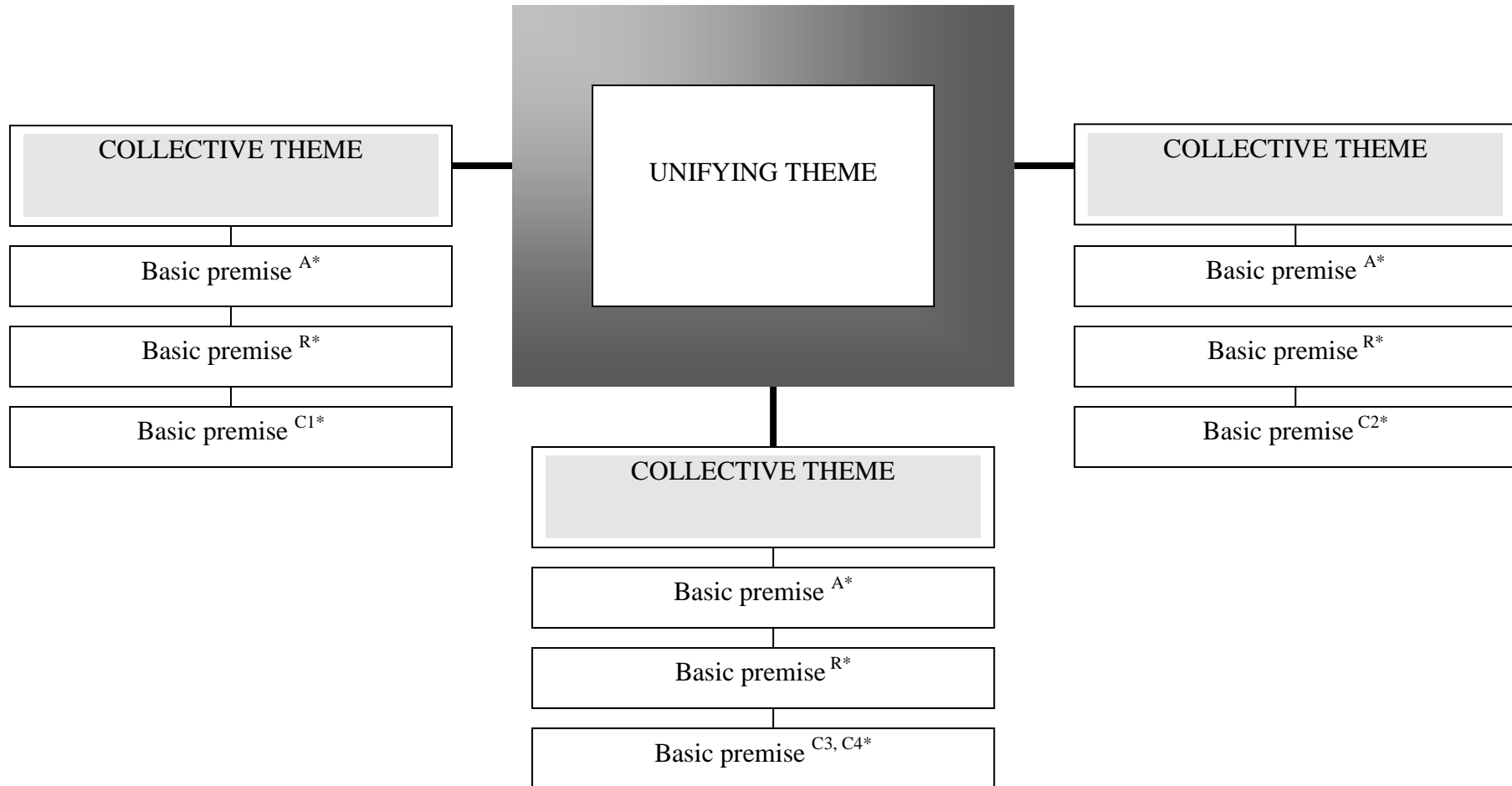
A critical ethical obligation of the qualitative researcher is to describe the experiences of others in the most faithful way possible (Munhall, 1988; Balls, 2009). This calls for the application of techniques that serve to demonstrate the trustworthiness of the study findings. Applying the conventional criteria of reliability, validity, objectivity and generalisability

presents a dilemma for the human science researcher as these terms have a different meaning in qualitative inquiry (Hallett, 1995; Holloway and Wheeler, 2002). This is supported by van Manen (1997, p.17) who argues that human science research ‘operates with its own criteria for precision, exactness and rigor’. Accordingly, criteria specific to the nature of qualitative inquiry has emerged as a basis for assessing and strengthening studies that embrace the philosophic assumptions of interpretivism. Several techniques were built into the design of this study, against which the trustworthiness of the research can be judged (see Table 9.7). These will be discussed under the headings of credibility, dependability, confirmability and transferability (Lincoln and Guba, 1985) - alternative criteria commonly referred to in the literature to represent trustworthiness in qualitative research.

Table 9.7 Techniques to build trustworthiness

-
1. Purposive sampling
 2. Data triangulation
 3. Utilising a staged approach to the interpretation of lived-experience material
 4. Engaging in peer review
 5. Providing an audit trail of research procedures and decisions
 6. Adopting a similar structure to each interview
 7. Carrying out the research in a reflexive manner
 8. Searching for essential and incidental themes
 9. Presenting an in-depth description of the study findings
 10. Being context specific
-

Figure 4 Organisation chart



* Denotes the code applied to the categories of Antecedents (A), References (R) and Consequences (C1, C2, C3, C4)

9.5.1 Credibility of the research findings

The participants in this study were purposefully selected based on their experience of the topic under investigation. This allowed for the development of information-rich descriptions that were orientated to the life-world (van Manen, 1997). The design feature of data triangulation also sought to increase the probability that credible findings would be produced by varying the sources of lived-experience material. The inclusion of eight ambulance staff and ten first-level registered nurses allowed for the emergence of patterns and the development of meanings both within and across contexts, thus achieving the goal of providing complementary perspectives (Hansen, 2006) and increasing the fullness of understanding (Shih, 1998).

Each participant provided a retrospective account of their lived experience and as such, phenomenological analysis involved interpretation of the experience as it presented itself to consciousness (van Manen, 1997). Parahoo (2006, p.301) identifies the potential for error in self-reporting due to 'the passing of time'. Todres and Holloway (2006) are also of the opinion that the richness of the account given by participants is often better when it is closer to the experience in time. All participants appeared to have no difficulty in retrieving and recalling one or more instances of lay presence during an adult cardiopulmonary resuscitation attempt. It is accepted that this may have been based on availability; a cognitive heuristic in which the person is likely to recall salient experiences based on factors such as frequency, familiarity and recency of the event (Tversky and Kahneman, 1974). It is argued that the potency of the availability heuristic lies in its potential to provide compelling evidence. Instead of reflecting back on all the events in their experience, the availability principle infers

that participants will readily recall the more prominent experiences. This in turn increases the likelihood of such descriptions being credible (Saks and Kidd, 1986).

Thematic analysis of lived-experience descriptions was carried out with the aid of a step-by-step guide that allowed for interpretation of the text at each stage (Attride-Sterling, 2001; Denscombe, 2007). Benner (1985) argues that multiple stages of interpretation allow for bias control by exposing contradictions that cannot be accounted for by an earlier or later interpretation. The credibility of interpreted meanings was further enhanced by carefully selecting a range of direct quotations of the participants' words that would allow the reader to participate in the validation of each theme (Benner, 1985; Sandelowski, 1994).

Some proponents of phenomenology such as Colaizzi (1978), Knaack (1984), Diekelman *et al.* (1989) and Streubert (1991) identify the need to validate the researcher's interpreted meaning of the lived experience by obtaining feedback from the participants. van Manen (1997) also proposes that the interviewer and interviewee work collaboratively to determine the appropriateness of each preliminary theme and sees repeated engagement as a way of bringing the essence of the phenomenon into view. Hansen (2006) suggests that this technique fulfils the desire to accurately portray the participants lived experience. Conversely, Sandelowski (1993) draws attention to the practical, theoretical, representational, and moral problems inherent in this process and warns that its use may paradoxically undermine the trustworthiness of a project. A limit on the time and funding available for a primary interview, yet alone a secondary follow-up meeting with participants was an overriding practical issue that influenced my decision to reject this technique. The ethical dilemma of asking participants to re-live their account of an emotionally charged event was also taken into

consideration. The poignancy of the lived-experience descriptions, which evoked a tearful reaction at times, confirmed that recall of an adult cardiopulmonary resuscitation attempt had the potential to arouse an emotional response.

Verbal presentation of the preliminary study findings on three separate occasions served as an alternative way of assessing whether the participants' descriptions of reality has been adequately represented. The response from some accident and emergency healthcare staff in the audience suggested that my interpretations were resonate of their lived experiences of the phenomenon under investigation. This reflects what van Manen (1997, p.27) refers to as the 'phenomenological nod' - a way of indicating that a good phenomenological description is recognised by individuals who partake in it. In other words, recollections of the lived experience are validated by the lived experience; a process he refers to as 'the validating circle of inquiry' (van Manen, 1997, p.27).

Consideration was given to inviting a group of fellow doctoral students to participate in a collaborative discussion about the emerging thematic descriptions of the lived experience. Convening a research group or holding a research seminar is advocated by van Manen (1997) as a formal way of gaining the interpretive insights of others. Rapport (2004, p.13) captures the pressure that I experienced in terms of validating the study findings through group analysis. She explains how 'individual responsibility for data becomes undermined by the need to arrive at a consensus of opinion' and how 'the desire to arrive at a 'moment of truth' becomes more important than 'journeying towards' possible truths'. Morse (1994b) also suggests that it can be problematic to involve peers who have not had any direct connection with the study, primarily as the process of inductive inquiry is dependent on insight. This left

me questioning whether members of the proposed seminar group were the most suitable to help transcend my understanding of the lived experience; firstly given their lack of involvement in the study and secondly due to the nature of their specialist knowledge which differed from the research topic. Furthermore, proceeding with their involvement from an outsider (etic) perspective felt at odds with the epistemology of the research. Each analyst's own historicity of understanding also presented the possibility of rival interpretations. This concern is acknowledged by Allen and Jenson (1990) who concede that the construction of meaning may result in different interpretations of the same text by different readers.

Alternatively, a subset of the study findings were shared and discussed with two academic colleagues who were competent in qualitative research procedures and had connection with the study in their capacity as supervisors of the research. The style of peer review adopted for the session was characteristic of the researcher thinking aloud whilst my supervisors played devil's advocate by posing probing questions (Erlandson *et al.*, 1993). This approach enhanced the credibility of the research as it served to constructively challenge my working propositions and provoked critical thinking about possible alternative explanations for some of the basic premises proposed. A commitment to introspection is commended by Streubert Speziale and Carpenter (2007, p.48) who advocate 'being open to alternative ways of knowing' as a mechanism of addressing the trustworthiness of qualitative research.

9.5.2 Dependability of the research findings

Lincoln and Guba (1985) suggest that a detailed record of the key decisions taken by the researcher provides an audit trail by which others are able to judge the dependability of the research. The objective of this strategy is to render the research process open for audit by

clearly illustrating the thought processes that led to the conclusions derived from the research (Denscombe, 2007; Streubert Speziale and Carpenter, 2007). Techniques to enhance the dependability of this study included an in-depth account of the decisions taken about the choice of study design, methodology and methods, and the development of an appropriate framework for hermeneutic-phenomenological analysis that made explicit the procedures involved at each stage of the interpretive process. Use of the semi-structured interview technique with the aid of an interview schedule also helped to achieve consistency during the process of gathering lived-experience material. This method, alongside verbatim transcription of all audio-recorded interviews ensured that a record of the interview encounter was available for external review. Hansen (2006) argues that transparency in the research process allows others to judge the suitability of the researcher's decisions, which in turn, serves as a proxy for replication (Denscombe, 2007).

9.5.3 Confirmability of the research findings

Denscombe (2007) argues that in the interests of establishing confirmability of the study findings, the research report should contain a fully reflexive account of the researcher's self. I believe that approaching the study in a reflexive manner promoted self-awareness and allowed others to judge the impact of my identity on the research process. van Manen (1989) acknowledges the importance of reflective awareness in hermeneutic inquiry if we are to become more discerning of the meaning of new life experiences. Hallett (1995) also argues that the phenomenological researcher is obliged to recognise the influence of his or her own subjectivity and its effect on the interpretive process. For me, the influence of historical connections with the life-world of the participants was mostly positive and particularly confirming when gathering lived-experience material. Prior knowledge and experience of

emergency resuscitative care was a vital resource when listening to participant descriptions and in answering the questions posed by interviewees. Furthermore, my ability to provide a genuine response to their queries appeared to be instrumental in confirming my credibility to carry out the research.

van Manen (1997) argues that not all of the meanings encountered by the analyst are unique to the phenomenon of study. He therefore draws attention to the importance of differentiating between 'essential' themes, i.e. those that make a phenomenon what it is and themes that are more incidentally related. This, I believe, mirrors what Erlandson *et al.* (1993, p.121) refer to as 'negative case analysis' which means searching for and addressing interpretations of the data that tend to refute the analyst's reconstructions of reality. During the process of apprehending essential themes, three incidental themes emerged from the analysis.

The first theme, which I chose to label 'heroic intervention' contained participant descriptions where lay people who were witness to the victim's collapse had initiated resuscitation prior to the arrival of ambulance staff. For example participant AS3 described how she had; *'got to a scene on a few occasions where somebody has been doing something, whether it's a relative or a close friend or a neighbour'*. The situation of voluntary participation was also experienced by participant AS5 who told me that;

'Normally when we get the call our controller will say; 'bystander CPR ((cardiopulmonary resuscitation)) in progress'' (AS5).

Participant RN3 confirmed this by stating;

'More frequently now ((we)) get handed over from the crew; 'CPR started by a passer-by or a next door neighbour'' (RN3).

Two first-level registered nurses also recalled situations at the outset of the interview where members of a victim's family or the lay public had initiated resuscitation prior to the patient's admission to receive secondary (in-hospital) care;

'They started CPR in the car. So the family had brought him in the car' (RN1);

'55 year old man out shopping with his wife...in Marks and Spencer's... Suddenly collapsed on the floor... Pre-hospital cardiac arrest... An ambulance was called. Marks and Spencer's staff had tried to do...CPR' (RN5).

Two ambulance staff commented on the potential for lay intervention to be life-saving; *'you think 'great, we've got some chance''* (AS7); *'always gives...the patient the best chance'* (AS8). Participant AS8 also explained how, as paramedics in the ambulance control room, they give advice to every call that comes in. This perspective was captured by participants who described how; *'the control staff will try and deal with...what's happening. Is she breathing et cetera?'* (AS3); *'the call taker asks them to do CPR'* (AS4); *'and we always say to them...to carry on doing what you're doing until the paramedics take over and tell you to stop'* (AS8). Whilst lay reticence to perform adult cardiopulmonary resuscitation was a frustration for some ambulance staff, it was suggested that;

'It is only a small percentage of families or relatives or lay persons who actually refuse to have a go at doing something. Most people... We can talk them through to... You use the terminology that you're giving somebody a better chance before the ambulance arrives' (AS8).

These descriptions represent bystander cardiopulmonary resuscitation, i.e. 'an attempt to perform basic cardiopulmonary resuscitation by someone who is *not* part of an organised emergency response system' (Cummins *et al.*, 1991b, p.961). Undoubtedly, being present at the time of collapse may be one way in the lay public become witness to an adult

cardiopulmonary resuscitation attempt. However, I believe that there is a difference between the action of performing interventions and that of witnessing the interventions of others.

The second incidental theme, which I labelled 'sheltered presence' contained participant descriptions of situations where lay persons had electively chose to remove themselves from the scene of an adult cardiopulmonary resuscitation attempt. For example, ambulance staff described situations in the home where relatives would; '*come out of the house to get away from what's going on*' (AS8); '*just get up and leave...leave us to it*' (AS6) or; '*they'll just go and sit downstairs*' (AS2). The perspective of withdrawal from the scene was reinforced by participant AS2 who pointed out that; '*they'd left the room...of their own accord*' and participant AS4 who explained that; '*when we were doing the resus, he did go and sit in another room*'. There was also evidence to suggest that some lay people evade the scene of resuscitation. This perspective was illustrated by participant AS6 who described the reaction of relatives' as he entered their home;

'He's upstairs, he's in the bathroom or he's in the kitchen or wherever. They'll stop out of the way' (AS6).

Participant AS7 also described how some lay persons are quick to escape the scene claiming that; '*you ask for help sometimes... Where's the bystanders gone? They've all vanished somewhere*' (AS7).

First-level registered nurses also presented the perspective of relatives not wanting to enter the resuscitation room, preferring instead to; '*sit with their daughter or whoever and wait*' (RN1) or; '*were quite happy to see the open door to the relatives room and peel off*' (RN4).

Initially, I was tempted to ignore the physical distance between lay persons and the victim undergoing resuscitation, preferring instead to acknowledge their physical presence per se as significant to the purpose of the study. However, in my search for meaning, I recognised that lay people may have been present in a superficial sense, i.e. within the vicinity of where the resuscitation attempt was taking place but not in a meaningful sense of being witness to the interventions performed at the scene. If I use the example of lay persons in the relatives' room versus their presence in the resuscitation room, the former can be described as out of sight whilst the latter is in full view.

Finally, the third incidental theme, which I labelled 'grief reactions', primarily related to the experience of ambulance staff. Given the sudden and alarming nature of cardiorespiratory arrest, it was not surprising to find participant descriptions of instances where lay persons had displayed signs of anguish, disbelief and denial. For example, participant AS3 described a situation where a young girl was screaming and shouting; *'do something. Help my dad. Help my dad'*. This participant went on to say;

'It's a shock and it is traumatic...for her. She just can't deal with the fact that her dad might be really poorly, and possibly dying' (AS3).

Participant RN9 vividly described the anguish of a woman who arrived at the accident and emergency department to find that her partner was in cardiac arrest;

'When she came in she was...she was very shocked. It was a completely unexpected event. She'd left him two hours before when she'd gone to work and he was fine...(3) so she was kind of like in a horror movie when she first arrived...hand over her mouth, shaking and...not really very coherent' (RN9).

Other participants described the reaction of disbelief. Participant AS7 claimed that; *'a lot of people just walk away in disbelief. They don't believe that they've gone'*. Similarly, participant AS2 recalled a situation where the relatives had; *'seemed quite stunned into silence actually. They didn't really speak at all and just went and sat downstairs'*. Participant AS6 also described a situation where the wife of the victim in cardiac arrest appeared to be in denial;

'She seemed to just blank it out, sort of wandering round, cleaning up, asking me if I wanted a cup of tea and stuff like that. Just going about her daily routine, even to the fact of stepping over the body to tidy up' (AS6).

Whilst it is important to acknowledge the effects of cardiorespiratory arrest in the context of those who are exposed to this life-threatening event, I believe that the grief reactions described are incidentally related to the situation of being witness to an adult cardiopulmonary resuscitation attempt. By focusing on the original research questions, I recognised that participant descriptions contained within this theme were of significance to the planning of care interventions for those experiencing anticipatory grief and bereavement and hence, outside the parameters of the study.

9.5.4 Transferability of the research findings

van Manen (1997) calls for the production of an orientated, strong, rich and deep text that is sufficiently animated to invite a dialogic response from those who interact with it. To this end, careful consideration was given to the way in which the study findings could or indeed, should be represented to allow for a depth of understanding about the phenomenon being described. Holloway (2005) argues that the writer must situate the study in context if the reality of the participants is to be understood and recognised by the reader. Critical content

such as describing the characteristics of study participants, defining the nature of the resuscitation attempt and the gathering of lived-experience descriptions in the context of accident and emergency care, provided a basis for comparison (Denscombe, 2007) and strengthened the case for making transferability judgement possible on the part of potential users (Lincoln and Guba, 1985).

9.6 Chapter summary

This chapter has provided an audit trail of the procedures carried out in the preparation of interview material for analysis and the subsequent stages of familiarisation, interpretation, representation and verification of the lived experience descriptions. Audio-recordings were transcribed verbatim and thematically analysed using a combination of the strategies proposed by van Manen (1997), Attride-Sterling (2001) and Denscombe (2007). A total of 15 minor themes and five major themes were generated from participants' descriptions of the lived experience. These were organised and illustrated as structures of meaning which contained essential aspects of the phenomenon under study. Five concepts were identified during the development of unifying themes. Collectively, these represent the essential nature of the lived experience of lay presence during an adult cardiopulmonary resuscitation attempt.

CHAPTER TEN

PRESENTATION OF THE INTERVIEW FINDINGS

10.0 Chapter overview

In this chapter, the interpretive product of hermeneutic phenomenological analysis is presented. The chapter begins by placing the interview findings in context of: the factors which motivated ambulance staff and first-level registered nurses to participate in this study, the locations in which lay presence during an adult cardiopulmonary resuscitation attempt took place, the characteristics of lay people at the scene of this event and the range of witnessed interventions performed. This is followed by a rich description of the participants' phenomenal world. In accordance with the recommendation of van Manen (1997), each unifying theme serves as a generative guide around which the phenomenological description of lay presence during an adult cardiopulmonary resuscitation attempt is intimately woven.

10.1 Placing the study findings in context

10.1.1 Motivating factors

Ambulance staff and first-level registered nurses had been motivated to participate in this study for a variety of reasons. Some participants admitted involvement in the study out of curiosity; '*curiosity more than... As much as anything <laughs>*' (RN4); '*I was just curious I suppose. I thought 'well, why not?'*' (AS4). This perspective was also presented by participant AS3 who admitted;

'I was inquisitive I must confess because I thought...there must be something more to it than just...the experience of the bystander and... I just wondered what it was all about really' (AS3).

Interest in the topic was a key motivating factor. This was reflected from the outset with participant AS1 who simply stated; *'I just find it a fascinating topic'*. Subsequent to the pilot interview, others went on to suggest;

'It's an area that I'm interested in <laughs> to tell you the truth, because there is a lot of debate around' (AS3);

'I looked at the subject...and I thought; 'well now that seems quite interesting'' (RN1);

'It's something that I'm actually really interested in' (RN2);

'I'm interested in witness resuscitation and have had experience in it' (RN6);

'Well it just interests me. I think it's a very interesting topic' (RN7).

Participant RN9 recalled a situation of lay presence in the resuscitation room that she had found thought-provoking. She went on to say;

'I used the word 'interesting' intentionally...and that's why I... That was what motivated me to volunteer to be involved in this study because it was very interesting and I thought (5) it could be informative' (RN9).

Other participants too were equally motivated by the opportunity to contribute to the study based on their experience of the topic under investigation. For example, participant AS7 thought; *'why not give her my experience... Maybe there's something in there that she can*

use". Similarly when I asked participant RN5 to describe what had motivated him to participate in the study, he replied;

'I've had a lot of experience...and I think most of my experience has been positive... From a witnessed resuscitation point of view, I was lucky enough to work with people who were...very forward thinking and were keen to get relatives in and it's just something that was part of my job and it was never any different. So if that can...help other people look at it in that way then that's a bonus I suppose' (RN5).

The latter point captures an intended outcome of this study, which is to engage the consumer of the research to participate in a process of reflection on the lived experience. The potential for change and/or contributing to a study that might benefit of the recipients of care was also a motivation for some. Participant RN3 suggested that;

'Change has to happen all the time and if you don't do studies and if you don't do tests and if you don't look at things, then change never happens' (RN3).

Similarly, participant AS6 thought; *'if somebody's actually doing this for the lay person or the relative's benefit, I think that's got to be a good thing'*. Participant AS7 was also of the opinion that;

'If you want to do more for the patient...and have...better results with your patient...the paperwork side and the theory side and the study side...play a part' (AS7).

For participant AS2, it was his colleagues' lack of motivation to participate in the study which influenced his decision to become involved. His feedback gave added understanding to the difficulties that I faced at the recruitment stage of the study. He explained;

'The two or three people I spoke to sort of said; 'I just chucked it in the bin', so that sort of made me feel more like maybe I should go...throw my two pence worth in' (AS2).

Conversely, practical considerations on my part apparently influenced recruitment. For example, agreement to meet participant AS8 at a time and location convenient to him appeared to have paid dividend. This was reflected in his comment of; *'you being able to put yourself out, I'm quite happy to put myself out'*. Participant RN1 had also been willing to contribute *'cause you haven't ((got to)) go miles'*. Ethical considerations also appeared to influence the decision-making process. As participant AS4 pointed out;

'You did say that if I didn't like it I could withdraw at any time so it was like a no lose situation wasn't it?... Just helped me to make my decision really' (AS4).

Finally, there was support and allegiance for me as a researcher from participants who were either fellow researchers or had understanding of University study. It was humbling to know that participants were motivated to participate for my benefit or as participant RN6 put it; *'out of loyalty to other PhD students'*.

10.1.2 The location of lay presence and characteristics of the witness

The phenomenon of performing an adult cardiopulmonary resuscitation attempt in the presence of lay people occurred in a variety of locations for ambulance staff. The presence of family members was a common feature when entering private premises such as the patient's home. For example, participant AS2 described the scene of;

'A chap lying in the front room who clearly looks deceased...his wife's kind of mortified...she watched us doing CPR for about half an hour' (AS2).

Several participants referred to specific locations in the home such as; *'resuscitating the patient in the kitchen, on the kitchen floor'* (AS8), *'upstairs in the bathroom'* (AS4), *'on the floor in the lounge'* (AS3) and a resuscitation attempt by a relative *'on the bed'* (AS3). Lay presence in the home situation was unreservedly portrayed as the norm;

'Generally, if something like that's happened, there are people there because somebody's contacted you haven't they?' (AS4).

Participant descriptions portrayed various relationships, age groups and generations of family members who were initially present at the scene of a sudden collapse. For example; *'the husband was there and there was four grown up children as well'* (AS4); *'it was the granddaughter that made the phone call'* (AS3); *'she ((the daughter)) met us at the door and said; 'I think you're too late''* (AS5) and; *'the son had dragged him out of the bathroom so he could get to him properly'* (AS6). However, as stated in the previous chapter, some family members electively chose to avoid or remove themselves from the scene of the resuscitation attempt.

An alternative location for lay presence during an adult cardiopulmonary resuscitation attempt in the out-of-hospital environment of care was in a public place. For example, participants described events that occurred; outside a pub in the street, in a supermarket car park; on a train, a roadside situation, outside a dentist's surgery and in a football stadium. In these situations, ambulance staff referred to the presence of 'bystanders' who were either known or unknown to the victim in cardiorespiratory arrest. Participant AS5 also gave an example of performing cardiopulmonary resuscitation in the back of an ambulance in the presence of the victim's wife;

'My partner was in the back ((of the ambulance)) with the gentleman and his wife. Suddenly there was a bit of a commotion...and I was shouted by my colleague and the gentleman had arrested' (AS5).

In the secondary (in-hospital) environment of care, first-level registered nurses primarily recalled situations where relatives or family members were present during an adult cardiopulmonary resuscitation attempt. Frequent reference to 'resus' or the 'resuscitation room' suggested that this was the commonest location for this event to occur. Some family members were also present on route to the resuscitation room having travelled in the ambulance with the patient. This alternative scenario was described by participant RN3 who recalled a situation where;

'The relatives actually came in the ambulance with the patient, so they had already witnessed resuscitation in the back of the ambulance and came in through ambulance doorways into resus whilst CPR was still in progress' (RN3).

Two participants who were based in the same accident and emergency department of an acute National Health Service Trust depicted a situation of lay presence where the victim in cardiorespiratory arrest had arrived by air ambulance. As participant RN7 explained;

'We have to straddle the patient and continue the CPR whilst the trolley is being pushed...from the helipad right up to A&E ((accident and emergency)) at which point there's often a big crowd of people waiting, because they all love to watch the helicopter land' (RN7).

10.1.3 Witnessed interventions

The descriptions provided by participants suggested that lay people who were present during an adult cardiopulmonary resuscitation attempt had been witness to a variety of non-invasive and invasive interventions. The range of witnessed interventions included: the sampling of arterial blood for gas analysis, peripheral and central venous cannulation, airway

management, drug administration and the combined techniques of artificial respiration, closed-chest compression, and external defibrillation of the heart. An intervention unique to the experience of lay presence in the out-of-hospital situation involved application of the Lund University Cardiac Arrest System (LUCAS) device which provided automatic chest compression and active decompression during cardiorespiratory arrest. Participant RN1 also described a situation where relatives had witnessed the resuscitation team opening the chest; ‘to do...*manual CPR*’ and participant RN5 explained how the family of a patient with a cardiac tamponade chose to remain present during the resuscitation attempt whilst a member of the resuscitation team performed a pericardial tap.

10.2 Interview findings

As identified in the previous chapter, five unifying (major) themes emerged from the interviews with ambulance staff and first-level registered nurses. Each unifying theme serves as a generative guide for the factual presentation of meaningful issues encapsulated in the collective (minor) themes. Although the five major themes are interrelated, they are presented and discussed as separate entities to enhance precision and facilitate understanding. Furthermore, meaningful issues which are attributed to each collective theme are highlighted in **bold** to further aid communication of the findings. The essential nature of the lived experience is rendered visible by carefully selecting participant quotations that serve to; ‘illustrate ideas, illuminate experience, evoke emotion and provoke response (Sandelowski, 1994, p.479). This includes the selection and use of incidents that are revealing of the contrasting ways in which ambulance staff and first-level registered nurses encountered this phenomenon in practice. The notion of adopting an analytical approach to the presentation of one’s phenomenological description is supported by van Manen (1997, p.170) who

recommends ‘writing analytically in an ever-widening searching for ground’. To this end, care has been taken to remain focused on the lived experience, thus avoiding the selection of personal opinions or descriptions that are unsubstantiated by examples from the life-world.

10.3 Unifying theme: Respect for lay persons

The unifying theme ‘respect for lay persons’ was constructed from three collective themes: ‘positive contribution’, ‘choice and facilitation’ and ‘valuable resource’ (see Figure 5 - page 180).

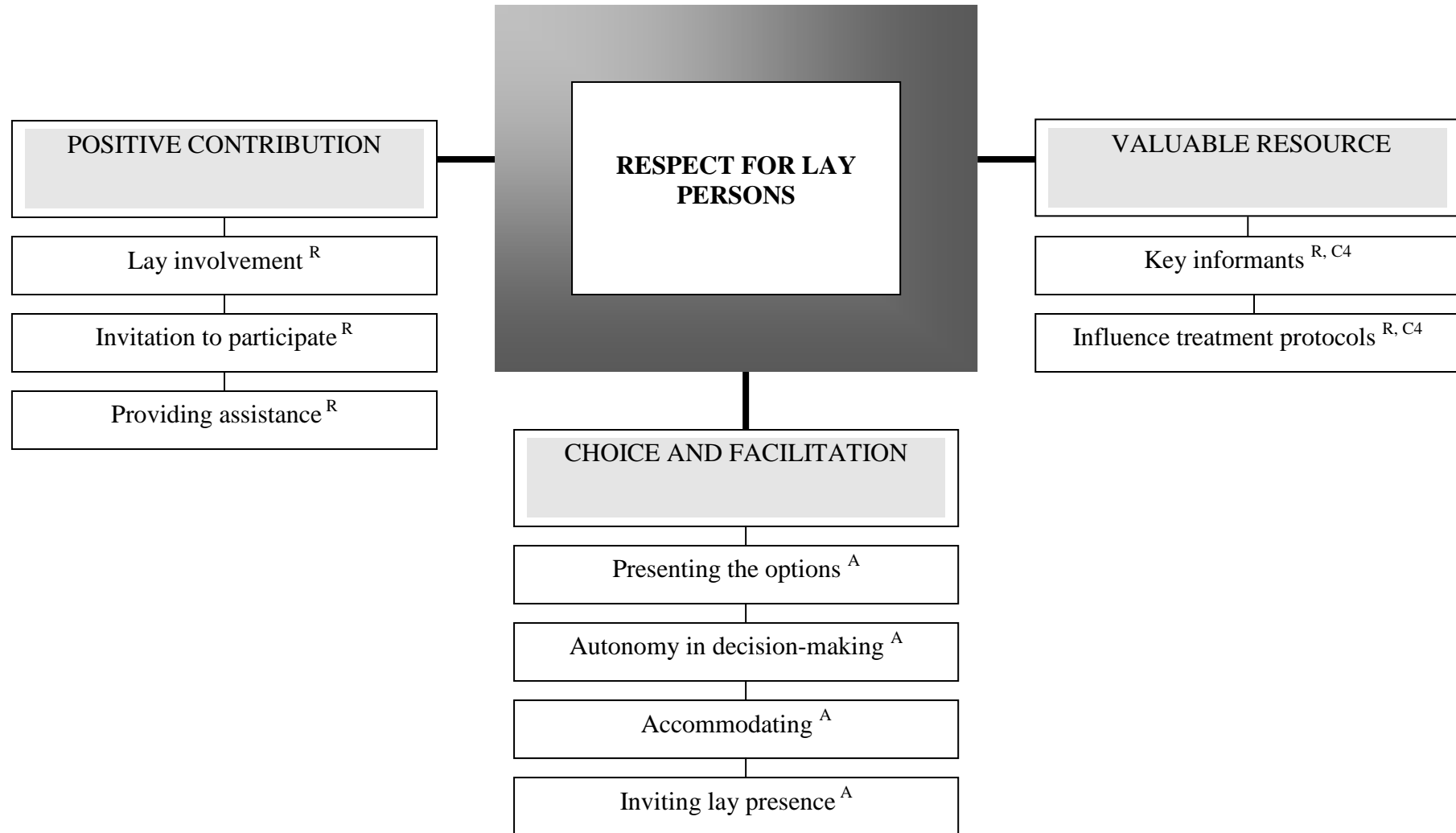
10.3.1 Positive contribution

The life-threatening situation of adult cardiorespiratory arrest was portrayed by ambulance staff as an emergency situation that was characterised by **lay involvement** at the scene of an adult cardiopulmonary resuscitation attempt. Participant descriptions went beyond the situation of lay presence and intervention prior to the arrival of ambulance staff to illustrate continued involvement at the scene. Participant AS6 described the situation of a 15-year-old boy who initiated the resuscitation of his father. When I enquired if the son continued with the resuscitation once the ambulance staff entered the home he replied; ‘*yes, until we asked him to move so we could have a little look and get round. But he was there all the time*’. This participant went on to explain;

‘We try to keep them involved...for the simple fact is that if you just move them out of the way and stand them to one side, they’ve got this...adrenaline rush that they’ve been trying to (revive the person)’ (AS6).

This perspective was also presented by participant AS4 who suggested;

Figure 5 Unifying theme: Respect for lay persons



'If you get to a scene where someone is performing CPR, a lot of the time it's easier to let them carry on while you're sorting yourself out with all your the equipment and everything... Just frees two of you up rather than one of you' (AS4).

Some ambulance staff explained how lay involvement came about by extending an **invitation to participate** at the scene of an adult cardiopulmonary resuscitation attempt. Participant AS3 recalled a resuscitation attempt which occurred in a supermarket car park. She explained how, as a community paramedic officer, she was the first member of the ambulance service to arrive at the scene and therefore enlisted the help of a first responder who; *'then stepped in and started doing good CPR'*. She went on to say;

'It's just getting those pieces of equipment on the patient that takes the first few minutes and if you've got an extra pair of hands doing either CPR or whatever then it can help you' (AS3).

Participant AS6 also stated how; *'normally, if I am on my own... I try to get the family to do something'*. Participant AS4 recalled a situation where the involvement of a relative was paramount. A two man technician crew unexpectedly arrived at the scene of cardiopulmonary arrest. She described how she started cardiopulmonary resuscitation while her colleague called for the support of a paramedic, explaining to the brother of the victim; *'I need you to help me now to start things moving before my colleague gets back'*. It became apparent that the brother had played an active part in the resuscitation attempt;

*'He helped me with ventilation, because obviously **I could** do CPR and ventilation at the same time, but it's easier if he can do one for me. So he was using the bag and mask for me and I was telling him when to do it and I was doing the CPR till my colleague came back' (AS4).*

It was apparent that ambulance staff were motivated towards participation as a way of preventing or overcoming the feeling of helplessness for people who were present at the

scene. The perspective offered by participant AS1 was that; *'its better if they can be helpful or seen to be helpful then they feel like they have contributed something to the job'*. Participant AS6 recalled a situation where he allocated a vicar the task of; *'moving people out of the way'* and invited him to travel with the victim in the ambulance in the absence of family members. This was seen as; *'a positive thing for the vicar because he felt he wasn't doing enough'*. Participant AS4 also described how she would;

'Not use people, that's the wrong word, but get people to help you or just so they feel useful maybe in what's quite a strange situation for them' (AS4).

Participant AS6 also explained how he had been taught from day one; *'to use them ((the bystanders)) for a positive effect'*. The following quotation suggests a mutual benefit;

'If there...is a big crowd you sort of pick two people out and say; 'just get those...get those back for me'... They feel that they're helping then' (AS6).

The situation of lay people **providing assistance** at the scene of an adult cardiopulmonary resuscitation attempt was clearly appreciated by the majority of ambulance staff regardless of the nature of their involvement. For example, holding equipment, fetching a blanket out of the ambulance car, getting some tissues, fetching and carrying, providing shelter with an umbrella, helping to lift the patient, moving the crowd out of the way, creating a shield with some blankets and talking to the patient were examples of less critical, yet valued lay interventions. It was also suggested that;

'People are usually quite willing to help most of the time' (AS4);

'Normally it's more that they want to help, more than they want to hinder ya' (AS6).

10.3.2 Valuable resource

The presence of lay people at the scene of a cardiorespiratory arrest was viewed by participant AS1 as; *‘excellent in the respect that they can tell you what happened beforehand’*. Other ambulance staff agreed that lay people were **key informants** who could provide background information regarding the events leading up to the collapse. Participant AS3 portrayed this in her description of attending the scene of a cardiac arrest in the street;

‘I was trying to get as much information from the people that were standing around as possible. And from what we could glean from them is that he appeared to be struggling to breath and had fallen off his bike as opposed to being hit or just falling off and bumping his head. It appeared to have been a problem that he’d had with his heart that had made him fall off his bike’ (AS3).

Participant AS8 also saw the benefit of relatives travelling in the ambulance;

‘The driver can be asking them questions, medical questions that they haven’t...didn’t know the answers to but suddenly it comes to them during the journey’ (AS8).

The ideal of lay people ‘being at hand’ to provide background information was also remarked upon by first-level registered nurses. Participant RN4 talked about the benefit of having somebody there; *‘who could give us a direct history on the patient (3)...rather than somebody running backwards and forwards to the relatives’ room’*. Participant RN5 also explained how; *‘at some point during the resuscitation, the team leader or somebody used to say; ‘right, let’s just wait a minute. Now is there anything we might have forgotten?’*” Input from relatives who were present at the scene was evaluated as; *‘useful from that point of view’*. This same participant also discussed more precise benefits for the patient;

‘If... for instance if they had (4) specific wishes about resuscitation or if they have religious...wishes or if they have (5) resuscitation directives or if they’re Jehovah’s Witnesses or anything like that’ (RN5).

It was also suggested that information provided by lay people would **influence treatment protocols**;

'Not in respect of the arrest but how that patient is dealt with. So you have a bit of history... Whether they have complained of chest pain beforehand or whether they've just collapsed. Then your mind set goes one way or the other' (AS1);

'You might find out that...the patient is a CA ((cancer)) patient who's been given months to live anyway...but that information hasn't been passed on down the phone... So hence that's why you're fighting a losing battle' (AS8);

'One example is...that their mother might say; 'well he injected himself with heroine', then they know... And you need to give them some Narcan and it reverses the, the heroine' (RN1);

'He's got a rare blood group, or...he's severely allergic to shellfish or... something like... He's a diabetic... Those are the sort of things that can help initially from the physical side of things' (RN5).

10.3.3 Choice and facilitation

Respect for lay people was also demonstrated in participant descriptions which contained evidence of **presenting the options** available to them. For example, participant RN3 described how the relatives of a patient in cardiorespiratory arrest, were given the option; *'to either stay or to go into the relatives' room'*. Participant RN6 also described a situation where flexibility was offered; *'I said if she ((the daughter)) wants to come in and out she was more than welcome'*. Participant RN1 told me that; *'usually somebody tells them; 'you may find this upsetting and...you may want to go and that's fine''*, indicating that it was also an option for relatives to leave the resuscitation room. Reflecting on the situation of relatives travelling in the ambulance, participant AS8 informed me; *'we always give them the option'*. Maintaining a

balance of **autonomy in decision-making** that primarily rested with the lay person was also made clear;

'It was the first experience I'd had of having a child on scene when something like that had happened...but I don't... I suppose in that situation it's down to the family more than us isn't it?... If the family member's there and they want to bring her up then...' (AS4);

*'We never **ask** them to go. Also, we never **tell** them to go. We always ask them if they don't want to see any more'* (AS6).

Participants also provided evidence to suggest that they were **accommodating** when lay people expressed a preference to be present during an adult cardiopulmonary resuscitation attempt;

'If they asked to go and see somebody, usually we will do our best to accommodate them' (RN4);

'We operated a system whereby if they wanted to come in, they came in' (RN5);

*'Oh I would never say no if they asked to be present... I would **never** say; 'you can't come in'. Cause why not? We're not doing anything that's a secret'* (RN7);

'I don't know any situation here where a family member who's asked hasn't been able to go in' (RN10).

'If they insisted on stopping, then I wouldn't say no' (AS6);

'If that person wants to be involved, then obviously then that's their personal preference and I wouldn't say; 'you have to got to leave while we carry on dealing with this patient'' (AS3);

'I'd say that if she ((the wife)) wanted to stay, that was fine' (AS2).

Respecting a relative's wish to stay with their loved one also extended to the transfer of the patient to hospital. Participant AS3 recalled a situation of a husband witnessing the resuscitation of his wife in their home. When I posed the question; 'if that gentleman had asked to travel in the ambulance', participant AS3 replied somewhat astoundingly; '*oh gosh, we would never say no*'. I posed a similar question to participant AS5 who also asserted; '*yeah, if...they've got the opportunity obviously to come, yes, yes, they ((relatives)) travel in the back ((of the ambulance))*'. Likewise, participant AS1 stated; '*of course, I mean, they're quite... If they want to, they are more than welcome to come in the back ((of the ambulance))*'.

Participant descriptions also contained evidence of **inviting lay presence** during an adult cardiopulmonary resuscitation attempt. Four first-level registered nurses gave an example of asking family members whether they wanted to 'come in' to the resuscitation room. This drew my attention to a physical entrance regarding access to the victim in cardiorespiratory arrest that I had not experienced during my conversations with ambulance staff. Participants also tended to provide a background to the reasons for inviting family members into the resuscitation room, for example; '*to watch the resuscitation*' (RN7), '*watch what's happening*' (RN9) '*to acknowledge the gravity of the situation*' (RN6) or to be with the dying person; '*she's going to die and she's going to die quite soon*' (RN10). The only example of invitation regarding lay presence that was given by ambulance staff related to situations involving the transportation of a patient to receive secondary (in-hospital) care. As participant AS5 explained; '*it's a routine question; 'is anybody travelling with the patient?'*'.

10.4 Unifying theme: Professional dominance

The unifying theme ‘professional dominance’ was constructed from three collective themes: ‘power and control’, ‘ethical reasoning’ and ‘exercising influence’ (see Figure 6 - page 188).

10.4.1 Power and control

Several first-level registered nurses made reference to the custom and practice of placing relatives in a waiting room on their arrival to an accident and emergency department, as opposed to experiencing their presence in the resuscitation room during an adult cardiopulmonary resuscitation attempt. Two participants specifically referred to the influence of **culture and tradition** in shaping this practice;

‘I was a student in A&E before I actually qualified there and I can remember as a student as well, it was just the thing that was assumed and I learnt it from other people...where it’s like; ‘no we don’t have lay people there’. And if that’s the case then that’s, that’s obviously the feeling from above isn’t it that we don’t have them there’ (RN2);

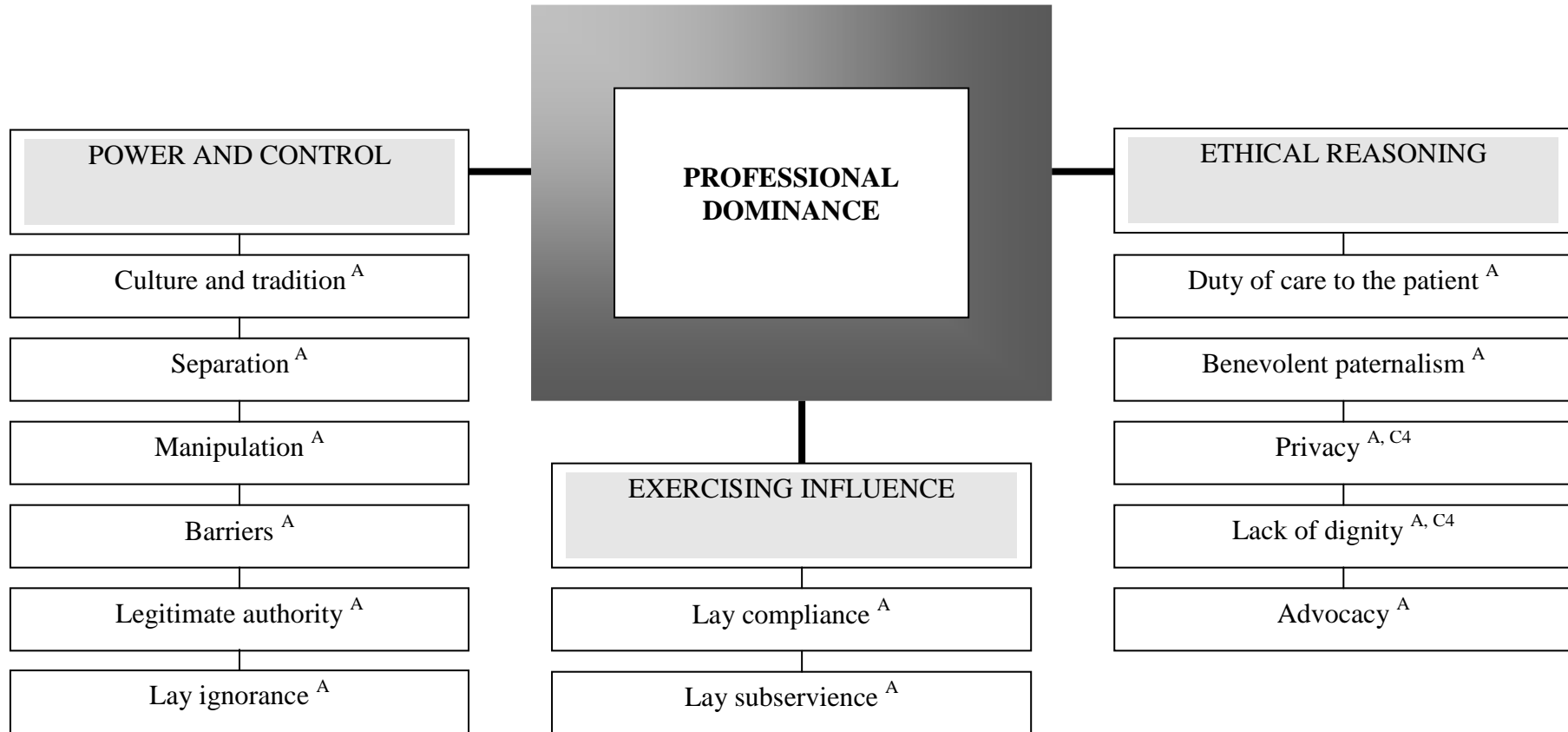
‘I can think back to when I first did my training. I saw cardiac arrests then, and the relatives were definitely taken away and I think it’s that culture... It’s actually still permeated right through the years’ (RN8).

Participant RN5 however, talked about a culture which was orientated towards the practice of family presence during an adult cardiopulmonary resuscitation attempt;

‘I think as well it’s a culture in the department...and within your team...if a new member comes in and they’re unhappy, you have to say to them; ‘we do that here, get used to it’ (RN5).

A number of first-level registered nurses described paternalistic interventions that were embedded in departmental policies and procedures and resulted in the practice of **separation**;

Figure 6 Unifying theme: Professional dominance



'It seems like the policy is to get the relatives down to the relatives' room... Somebody else greets the family and whisks them round to the relatives' room' (RN2);

'Normally the procedure is that you take them into the relatives room, which is next door to resus and somebody would dart back and forward updating them' (RN3);

'It's the policy to take them ((relatives)) away from the situation and...put them into a room where somebody can go and talk to them' (RN7);

'They get taken to the relatives' room and somebody explains to them approximately what's going on with their family member and keeps them...informed' (RN9).

Participant RN10 recalled a situation where she automatically asked the family to leave the room when their relative experienced a cardiac arrest that required defibrillation;

'My instant reflex was to say... Was to shout for a doctor and say; 'just sit outside the door for five minutes'' (RN10).

Participant RN3 suggested that relatives' who arrive; *'bang behind the ambulance...would come around to the front of reception, be taken by a receptionist and put in the relatives' room'*. It was also acknowledged that relatives may have accompanied the patient to hospital in the back of the ambulance, but as participant RN8 explained; *'we still separate them'* on arrival at the accident and emergency department. The account given by participant RN4 captured this situation in action;

*'It's probably about 20, 20 to 30 metres from the ambulance to the doors to the resuscitation room. Normally about half way down that corridor...somebody will kind of **intercept** them ((relatives)) and try to head them off'* (RN4).

Participant descriptions also suggested that staff in the accident and emergency department fail to acknowledge prior exposure to a cardiopulmonary resuscitation attempt in the pre-hospital setting;

‘What a lot of people in healthcare forget is that the patient who’s been brought in hasn’t just magic’d themselves onto...an A&E trolley. Some of them have had 40 minutes of CPR at the side of the bed at home or in the street or behind the wheel of a car with their relatives there... So there isn’t any particular reason for them not to continue seeing what’s gone on. They’ve seen it all before in a terrible environment and now this is controlled’ (RN5);

‘They miss that point sometimes I think in that actually this person collapsed in front of them and they’ve done CPR and they’ve watched CPR in the ambulance, so we’re not doing anything that they haven’t seen already’ (RN6).

Ambulance staff descriptions regarding the sequence of events on arrival to an accident and emergency department also indicated acts of paternalism that resulted in separation;

‘Somebody will take the relatives into the relatives’ room...that’s what happens to the relatives (2)... They never go into the resus room. I’ve never ever seen that’ (AS2);

‘We just get people to go in to the waiting room and then they’ll get called through and be put in to the relatives’ room’ (AS4);

‘We try to take the spouse with us so they can see exactly what’s going on. Continuity all the way through... And as soon as we get to the hospital they sort of say; ‘yes, take her through to the relatives’ room’’ (AS6);

‘Once they go into casualty they are automatically put into the (3) relatives’ room’ (AS7).

I enquired whether relatives had ever expressed a desire to stay with the patient once they entered the accident and emergency department. Participant AS6 stated; *‘yes, but the nurses normally turn them around... A couple of them have said; ‘I wish I could have been there...*

just to say my goodbye”. Another response was; *‘yeah, if that’s want they want then they will as far as we’re concerned but if the staff then say; ‘we’ll just take you to the relatives’ room’* (AS3). Participant AS7 also suggested that in his experience; *‘they have tried to come in before but obviously they’ve been put in the relatives’ room’*.

Paternalistic intervention that resulted in separation was not restricted to the environment of secondary (in-hospital) care. Participant AS4 suggested that at times, she has said to relatives; *‘shall we go in to another room and sit down...you don’t have to watch this’* and gave a specific example of a situation when; *‘we sort of put him ((the husband)) in a different room because he just... Was very unsure about what was going on’*. Other participants also described situations where separation occurred;

‘I just said... ‘Shall we go next door, sit yourself down why we just check him over, see what’s going on’. And she did and we obviously worked on him’ (AS1);

‘We went and got them ((two children)) to sit in the bedroom before we did anything else... That felt definitely the most appropriate thing to do’ (AS3).

It was also evident that ambulance staff would use **manipulation** as a mechanism for controlling lay people who were present at the scene of an adult cardiopulmonary resuscitation attempt;

‘She was ushered by us in to reception to book the patient in... It gives them something to do while you’re finding out where you’ve got to put the patient... It gets them out of your way as well. So yes, she booked him in for us’ (AS5);

‘Sometimes they want to touch and feel while you’re working. You can’t work that way. That’s when I say; ‘I just need another bottle of oxygen. Go in the back of the car, you’ll see the white bottle there and bring that in’ (AS6);

‘Some of these houses are really tight, really tight...really small rooms and you’re trying to shift, you know what I mean? ‘Shift out the way’. And we usually try; ‘put the kettle on’ (AS7);

‘We try and put the relative in the front of the ambulance, which...stops them from getting under our feet’ (AS8).

First-level registered nurses discussed the presence of **barriers** to relatives entering the resuscitation room; *‘either real or perceived’* (RN5). For participant RN4, the barrier was physical; *‘if the relatives rolled into the department when the resuscitation has started, they wouldn’t get through that door’*. Two first-level registered nurses found that in their experience, it was difficult for relatives to re-enter the resuscitation room;

‘The problem was that once they were out, it’s kind of harder to get them back in again, because then every time you go in, there is another doc ((doctor)) going in to do something’ (RN4);

‘They might want to make a phone call and want to come back in but they felt as though they couldn’t because the doors were shut’ (RN5).

Both first-level registered nurses and ambulance staff referred to the use of **legitimate authority** to control of the situation of lay presence during an adult cardiopulmonary resuscitation attempt. Interestingly first-level registered nurses referred to the use of authority by the police who may be present at the scene;

‘A lad had been shot in the street. His mother had heard from neighbours that he’d been shot and had been brought to our hospital. She arrives looking for him and the police just said; ‘you’re not seeing him’... The police were really adamant that she wasn’t coming in’ (RN5);

‘The police won’t allow them...the relatives in’ and in cases where the death was suspicious it was suggested that; ‘we have to separate the body from the relatives because we don’t know if they’re going to tamper with it’ (RN8).

Participant AS5 described a situation where he had performed cardiopulmonary resuscitation in the presence of the victim's wife who was hysterical. When I asked; 'how you cope with that sort of situation', he replied;

*'Sometimes you have to be quite firm with them because obviously it's their loved one. She's cradling him in her arms saying; 'what's happened? Come back, come back, come back' and all this lot. You've sometimes got to be firm with them and say; 'look, with all due respect, please will you **sit down** and let us get on with what we've got to do'. You've got to be firm with them sometimes' (AS5).*

Participant RN4 also gave example of a situation where the resuscitation team exerted their authority when the decision to stop resuscitation was questioned by a relative who was present in the resuscitation room;

'She ((the daughter)) said; 'you can't stop; he might come back'... In the end we had to do what we had to do, which was... We had to say; 'sorry, we are stopping now' (4)' (RN4).

There was an air of superiority in participant descriptions which expressed **lay ignorance** when it came to understanding the interventions associated with an adult cardiopulmonary resuscitation attempt;

'Most of us have got knowledge and therefore we know that it's not possible to resuscitate this patient. But a family probably wouldn't have that same knowledge. It's your loved one isn't it?... They don't know' (RN1);

'I mean people don't understand about simple things like oxygen, let alone the...complicated stuff that goes on in resus' (RN4);

'They are genuinely medically ignorant and that... They'll just sit back and; 'you're the expert. I have to take your lead on this type of thing'' (RN8);

'I don't suppose anybody else that was there had had any CPR training and... Or anything like it' (AS3);

'Obviously she ((the wife)) being a lay person didn't understand what was going on' (AS5);

'They've been talking ((the victim)) and the next thing they've gone like straight on the floor...and obviously they ((relatives))...don't know what to do' (AS7).

Some participants saw lay ignorance as a smoke screen for their actions. Participant RN8 talked about practicing; *'defensive medicine, defensive nursing'*. He went on to question; *'how do they ((relatives)) know if you've done something wrong? And if you knew you were doing wrong, why did you do wrong in the first place? <Laughs>'*. Other participants went on to suggest;

'Quite what relatives are going to sue you for I'm not quite sure because I'm sure the majority of relatives who come in and witness a resuscitation wouldn't have a clue whether you were doing something properly or not' (RN5);

'There's never gonna be a case I should imagine, unless they're a doctor... that anybody knows what you're supposed to be doing anyway' (AS3);

'They might not necessarily know what you're doing and if you're doing it correctly' (AS4);

'As long as you're confident and you put that confidence out to the relatives, I think that's a big thing too. Even if you're bluffing, which, which... You can bluff your way through it cause they don't know what's going on' (AS6).

10.4.2 Ethical reasoning

Participants frequently referred to the use of ethical reasoning to support their decisions regarding the presence of lay people during an adult cardiopulmonary resuscitation attempt. A **duty of care to the patient** who required emergency resuscitative care was readily apparent in the pre-hospital setting and within the environment of secondary (in-hospital) care;

'As far as the bystander goes, he is the by-product of the...situation really and that person is there under their own volition, they aren't being forced to be there. They're there for curiosity or whatever reason and I wouldn't change what I do to the patient whether there was somebody there or not, because what I'm doing is for the patient, not for the bystander' (AS3);

'It was so quick and I didn't have time to say; 'oh do you think they should stay?'... I was literally trying to get the bed flat and try to get everything going and try to get the oxygen and all the emergency drugs and everything' (RN3);

'The crowd of strangers isn't the first thing in your mind. The first thing in your mind is the patient... I mean all you're concentrating on really is the patient, making sure you're doing the most effective CPR' (RN7);

*'She collapsed and went into a shockable rhythm... I think at **that** time, in that split second, if I'd then said to them 'right, now this could be very distressing, we might have to shock her back... I'm going to have to use a lot of electricity. Do you want to stay in here whilst we do this or not?' All that... I'm wasting time... I need to get that equipment and get it on her straight away' (RN10).*

There was also evidence to suggest interference with lay autonomy in the form of **benevolent paternalism**. Participants expressed concern for the welfare of lay people who were: young; *'I don't think they ((grandchildren)) needed to see that and I think it would have disturbed them if they had of seen that' (AS2)*; an older person; *'I don't like the elderly half that's survived to witness what we're doing to the other half' (AS1)*; mentally disabled; *'I don't think it was good for her ((daughter with Down's Syndrome)) to have been there because she'd gone from being... I don't know what her real age was but she reverted back to a little girl in an instant' (AS6)* or distressed; *'I've had times when you've met with the relatives and it's clear that they wouldn't benefit from going in because they're so distraught' (RN5)*. Two first-level registered nurses provided rationale for their benevolent actions in the following descriptions;

'Some of them are just so acutely distressed when they arrive that it's almost making...a bad situation worse... It's just going to add to their distress and I suppose you try... You're trying actually to take them away from it; do you know what I mean? You're trying to protect them' (RN7);

'I suppose because you think like; 'this is a very distressing situation, let's get them out of the way so they don't have to see this distressing situation, try and sort it out and then we'll get them back in' (RN10).

Benevolent actions on the part of ambulance staff and first-level registered nurses primarily resulted in lay people either being encouraged to avoid the scene of the cardiopulmonary resuscitation attempt, denied access or removed from the situation;

'I think if she had come up, I think I'd have probably encouraged her not to be there, personally speaking, cause I just don't think it's very nice for her to see her mum in that sort of situation' (AS4);

'I usually say; 'look what we're about to do isn't very pleasant to watch. If you don't mind could you leave the room?'' (AS5);

'Can someone...move her...? Vomit about... They don't want to see all that do they sometimes?' (AS7);

'When people are being resuscitated, they don't... To say they don't look their best is an understatement. They look quite dishevelled and sometimes we've had to cut their clothes...cut the jackets and things like that and it's... Sometimes I think it wouldn't be particularly nice for relatives to see them like that' (RN2);

'I've seen some horrendous things and there's a couple of occasions when there is absolutely no way I would have taken the relatives in, in the first instance' (RN5).

Participant descriptions also contained evidence of concern for the welfare of the victim in cardiorespiratory arrest. It was apparent that **privacy** was paramount for some participants. For example, participant RN7 commented on the; *'privacy of...the resuscitation room'* and two ambulance staff talked about withdrawing from the public gaze; *'if it's in the street you*

can get them on the ambulance and then you've got some sort of semblance of privacy' (AS4); *'door shut. All private'* (AS5). The desire to maintain privacy and unease regarding a **lack of dignity** were presented as reasons for restricting the presence of lay people during an adult cardiopulmonary resuscitation attempt;

'That exposure of...being worked upon and people watching. It's like a sort of freak show really, isn't it? It is, isn't it?... If it was you or me... If you were on the stretcher...having CPR performed on you and you've got a crowd of people, it's just not... It's not good is it?' (RN7);

'There's this person who....you kind of just think; 'I wish nobody could see this was going on' because I can't imagine that if they knew what was going on they'd really ((not)) want everybody seeing' (RN10).

Alternatively, in situations where it was deemed appropriate for lay presence, there was evidence to suggest that first-level registered nurses would apply the ethical principle of **advocacy**;

'I have to say I... If I thought somebody was going to die, then if it was the last thing I did, I would get the relatives into that resus room (6). If I had to climb over the consultant to do it <laughs>' (RN4);

'I went into resus, spoke to just the doctor and nurses in terms of... Not even asking their permission, but just saying; 'this is the situation and she would benefit from coming in'' (RN6).

10.4.3 Exercising influence

Several participants talked about **lay compliance** with the directives of healthcare staff in the environment of secondary (in-hospital) care. Participant RN2 gave example of family presence at the time of collapse; a situation that she referred to as; *'a genuine mistake'*. She went on to explain the interventions that took place to correct this oversight;

'Somebody who had actually gone off as it were, in the department, had his relatives with him... She ((the wife)) was very compliant with the staff that just wanted to take her away... I don't know whether that was shock or whether that was what she wanted to do or... Or what really. But yeah she went' (RN2).

Lay compliance in the accident and emergency department was also borne out in participant descriptions which indicated a lack of requests to enter into the resuscitation room;

'They never ask to come in, you know. The family will say; 'how's it going?' and you say; 'well they're trying... they're trying to do everything that they can', and they accept that. They don't say; 'can we come in'' (RN1);

'I've never really had anyone that's...asked to go in... No' (RN7);

'I've not had anybody who's said; 'well look I'm going with him'' (RN8);

'I've never had somebody ask if they could be there' (RN9).

The counter-argument of course could be that the relative had no desire to enter the resuscitation room. However, participant RN8 was aware that; *'they may have thought of it, but they haven't verbalised it'*. It was also acknowledged that;

'We haven't asked them the question either... So maybe we're the ones that are in the wrong. Maybe we should give them that option' (RN7);

'Some people who perhaps don't know that that's an option or don't see that as an option wouldn't automatically think that it...was possible to be there... So they wouldn't necessarily ask' (RN10).

Participant reasoning behind lay compliance included suggestions that; *'they ((lay people)) sort of see us as in control and so they do listen' (AS1); 'that relatives want to let you get on*

with whatever you are doing' (RN3) or that lay people are probably thinking; *'well obviously that's the doctor's time now. I'll let them... I'll step back''* (RN10). Participants also associated a relationship between compliance and the trauma of the situation;

'I think a lot of people will conform anyway because it's a stress situation and they want...you to actually take them out of you know... To look after them' (RN8);

'Just being in control of the situation cause a lot of the time that's what they want. They don't want to be in charge of a situation like that cause it's not very nice for them' (AS4).

Ambulance staff suggested that in their experience, family members would subserviently follow the instruction of staff on arrival at an accident and emergency department. For example it was claimed that; *'if the staff then say; 'we'll just take you to the relatives room' or whatever ((that's what)) they tend to do'* (AS3) or; *'if the nurse or the receptionist takes them in to the relatives' room, that's where they go'* (AS2). Some participants provided an analysis of actions and behaviour in the environment of secondary (in-hospital) care that could account for a reaction of **lay subservience**;

*'I'm not saying they ((relatives)) don't have a right ((to be present)). I'm saying that they wouldn't feel they **did have a right'*** (AS2);

'Most times the...leading figure in the resuscitation area will...talk the relatives into going into another room' (AS8);

'I think people are whisked away so quickly, I don't think they kind of expect to be given the opportunity to be there' (RN2);

'I don't know whether it's because they're in a state of shock and they just want to be told' (RN8).

10.5 Unifying theme: Expressions of disquiet

The unifying theme ‘Expressions of disquiet’ was constructed from three collective themes: ‘being watched’, ‘pressurised performance’ and ‘an added burden’ (see Figure 7 - page 201).

10.5.1 *Being watched*

Both ambulance staff and first-level registered nurses described situations of performing adult cardiopulmonary resuscitation in the presence of **spectators**. Participant descriptions in the out-of-hospital context of care gave rise to the notion of ‘an audience’ who were intent on ‘watching’ the event;

‘I do remember this woman watching us and she just didn’t want to leave and she wanted to stay and see’ (AS2);

‘Like I say, this 80 year old chap, there was a huge crowd for that’ (AS3);

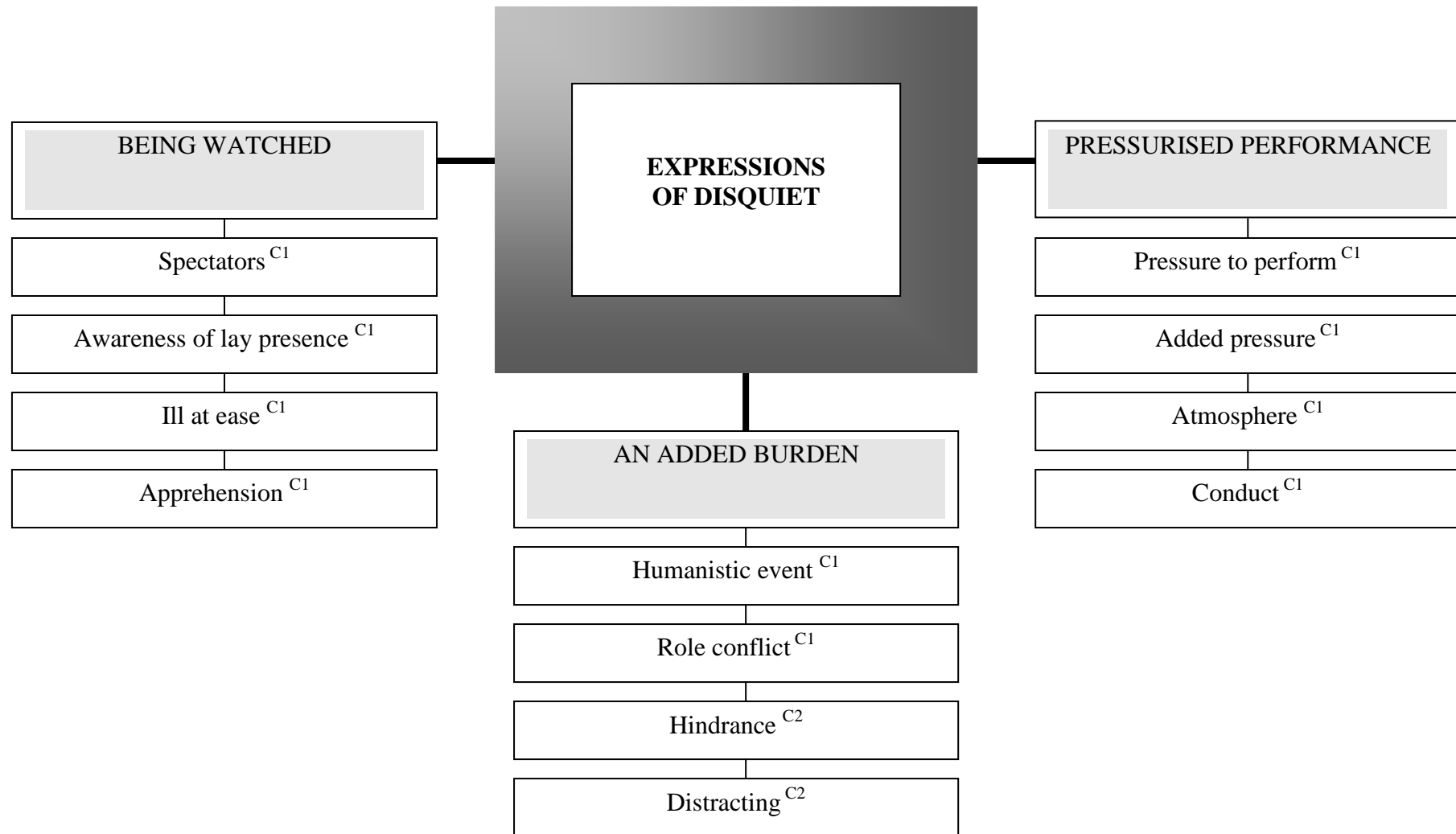
‘If you’re in the street and there’s people watching’ (AS4);

‘If they see an ambulance there’s crowds round you in no time’ (AS5);

‘This old woman who was just...she was watching us... What we were doing’ (AS7);

‘You’re trying to do your best and there’s... 500 people round you (5)’ (AS8).

Figure 7 Unifying theme: Expressions of disquiet



In the in-hospital context of care, the presence of spectators was particularly evident when a patient arrived by air ambulance. Participant RN7 remarked; *'there's often a big crowd of people waiting, because they all love to watch the helicopter land... That's full resuscitation being exhibited to a large crowd of people'*. The impression of 'being watched' was also apparent in participant descriptions of family presence in the resuscitation room;

'They were watching us to see if there was anything changing' (RN3);

'She came in and she watched the resuscitation' (RN4);

'There was quite a number of things that she ((the wife)) sat and watched while it was going on' (RN5).

Ambulance staff also talked about an **awareness of lay presence**, even though individuals at the scene were not necessarily in their view. For example, participants explained;

'It's difficult cause you're obviously just dealing with that one person but you're thinking, there's... Someone's stood over the back of me' (AS1);

'I was aware of her ((the wife)) being there' (AS2);

'They ((relatives)) stand behind you. They watch what you're doing' (AS3);

*'It was quite difficult to see **him** ((the brother)) but he did keep hovering back saying; 'anything? Anything?'... He was always sort of in the background'* (AS4);

'I don't tend to take much notice meself, because obviously you're too busy concentrating on what you're doing... You tend to know they're around' (AS7).

The presence of lay people left some ambulance staff feeling **ill at ease**, particularly when it was recognised that the resuscitation attempt was futile and/or that death was imminent. Participant AS2 recalled a situation of relatives' presence during transportation to secondary (in-hospital) care. Cardiopulmonary resuscitation was still in progress, but because of the time taken to revive the person, experience indicated a limited chance of survival;

'It just feels a bit more uncomfortable because what I'm thinking in my head is 'this guy's gone, he's gone'. You've got the relative there and it's like (2)... If I was just being honest... If it was my colleague in the back I'd say that, but I'm not going to say it to the relative...because maybe their not gone for a start off and...it sort of feels like...almost suspended disbelief...in some ways regarding there being some hope of survival. You do feel like, maybe I'm lying...and you are lying, but at the same time, there is actually a small chance they could come back' (AS2).

Other participants described similar feelings of unease;

'Oh God...It makes you want... You're trying... You're willing this person to come through really... But you know...this patient probably won't make it. But you think to yourself; 'come on'. You do (2) talk to the patient (2) when you're doing a resus (2) because you (1) just want them to (2) make it. I don't know it... Oh, it's, it's the most... It's horrible really... And they're standing there completely gob smacked, the... family' (AS3);

'If it's the family in a room and you've got the emotions of the family... I can think of when people are very upset because it's a member of their family so they're crying and they're shouting and they're, they're... And I find that personally quite distressing to hear people around me crying... A lot of the time when you know that there's not a lot you can do and it's too long. They've been down too long or whatever' (AS4);

'I don't like categorising, but in general, the old fellas tend to...go to pieces all over. Suddenly these old gentlemen just don't know what to do, and that can be difficult to deal with... It's bad enough telling them that... Sometimes they're actually... begging you to save their partner and you've done your best and it's unsuccessful' (AS8).

First-level registered nurses also described feelings of unease when performing adult cardiopulmonary resuscitation in the presence of lay people;

'They ((the resuscitation team)) felt uncomfortable if, for instance the resuscitation didn't go how they planned it... Didn't go how it should go' (RN1);

'I was kind of conscious of her ((the daughter)) being there...more than anything else probably because I knew I was the one who was going to have to...tell her when we came to the point where we admitted that we were going to stop... So I was conscious of her being there from that point of view' (RN4);

'It feels embarrassing. It feels very undignified because you're sort of straddling a patient on the trolley... I'm... I'm thinking; 'everybody's watching me' (2)' (RN10).

Participant descriptions were also laden with **apprehension** about the possible repercussions of lay presence during an adult cardiopulmonary resuscitation attempt, such as complaint and litigation. The disclosure of such fears appeared to be coupled with motives to steer clear of this practice;

'You're almost setting up a situation there where you're inviting somebody to come, come and observe what's happening and they could then make a complaint afterwards that it's your fault that they've observed something that they shouldn't have observed <laughs>. I could see that could quite easily happen' (AS2);

'Everybody is litigation minded... People are afraid to let them see what we actually do' (AS6);

'I have encountered...other situations where somebody had said... 'I don't want the relatives in, in case they sue us later'' (RN5);

'I'm sure that at some point, someone may complain about their... Finding out that their relative... They didn't want them to be present' (RN6).

Participants also appeared apprehensive about lay persons misinterpreting the situation that they were exposed to. For example, ambulance staff suggested that lay people; *'may think it's cruel to do something to their relative...beloved one or whoever it is... Even though it's assisting the patient to get him better, to bring him round, they may not think that'* (AS7) or *'they might be thinking that...some sort of miracle work's gonna be done'* (AS2). There was also fear of misconception due to the frenetic activity associated with a cardiopulmonary resuscitation attempt. Participant AS4 suggested;

'It's all quite chaotic. There is an order to it that... We know there's an order to it, but it probably looks quite chaotic' (AS4).

Cardiopulmonary resuscitation in the environment of secondary (in-hospital) care was also described as; *'chaos, it really is and if somebody thinks back to that and their relative has died, their conclusion could well be wrongly that the resuscitation was badly handled'* (RN4). Communication was also identified as an issue; *'things like body language, things you might say, the tone you might say things in... You wouldn't necessarily mean it in a certain way, but it might be...read in that way'* (RN3). In one accident and emergency department, a first-level registered nurse would sometimes lead the resuscitation team. Participant RN3 explained;

'I might have been the most senior person in there trying to lead the resus and that's acceptable, but it might not look acceptable to a relative. They might think; 'why is the nurse leading?'... Just public perception might think; 'oh they don't actually know what they are doing' if the nurse is leading' (RN3).

Participant RN2 remembered the first time that she performed cardiopulmonary resuscitation as a student nurse;

'It was a frail lady and I did a compression and I snapped her ribs... And I was like; 'oh my God, what have I done?'' And if the relatives had been there, I would

have been mortified. Because I would have thought that they would have thought that I was causing her harm' (RN2).

It was also suggested that the practice of teaching a junior nurse at the scene of an adult cardiopulmonary resuscitation attempt may be misread by lay people who are present;

'I mean obviously you don't practice on patients but...you can go through the resuscitation procedures and you would oversee a junior nurse. Again that wouldn't look good to a member of the public and they might think well; 'what are they doing? They don't know what they are doing'' (RN3).

10.5.2 Pressurised performance

Several ambulance staff talked about the **pressure to perform** cardiopulmonary resuscitation in the presence of lay people. Sometimes, the pressure originated from the demands of the situation; *'you're supposed to deal with the crowd, the patient and everything else' (AS3)* or personal expectations regarding performance, for example; *'I feel very obliged to do everything if they are stood there because it's obviously their wife, husband, (1) father' (AS1)*, but in the main, participants described a pressure to perform which originated from the reactions and perceived expectations of lay people who were present;

'If you turn up as a paramedic or one of our doctor's... I think the expectation from the relatives' point of view goes up' (AS2);

'We were resuscitating her and the husband was saying; 'is she going to be alright, is she going to be alright? And...we were saying; 'look she's very poorly, but we're doing our best'' (AS3);

'He ((the brother)) was so upset, so you want to be seen to be doing your up most, don't you for the family's sake so that they know that you tried your hardest' (AS4);

'If there's a patient there that... Well is dead, you know instinctively that no matter what you do, you aint gonna to bring that one back. They've got rigor

mortis. They've got signs of pooling. They're very stiff. But if there's a relative there you still go through the motions' (AS5);

'You get patients (relatives) sometimes...when you're doing something; they're tugging at you, like; 'are you going to save him?' 'Could you save him, save him, save him?'... You're doing your best. You're trying to do that and if you've got someone pulling at you, it's a little bit of pressure there' (AS7).

Two first-level registered nurses also recalled situations where lay people had questioned the interventions that took place during an adult cardiopulmonary resuscitation attempt;

*'She ((the daughter)) was fine. She was calm...until the point where the medic sort of said; 'we are going to have to stop, this is becoming a futile effort', and she was **insistent** that they carried ((on)), that we could get him back' (RN4);*

'They ((friends)) wanted to...know; 'what're you doing? That's not what you do. We've seen it on the telly...so why aren't you doing this, why aren't you doing that?'" (RN5).

Participant descriptions also reflected an **added pressure** to provide emergency resuscitative care in the presence of lay people. Participant AS2 gave example of a pressurised situation; *'if you can't get an airway...you've got a problem... It's even more of a problem if someone's watching you'*. Similarly, participant AS1 said; *'it's just that presence that you think; 'I've got to do this... You've got to be... Get this right''*. Participant AS3 suggested that lay presence during an adult cardiopulmonary resuscitation attempt; *'does put you under more pressure'*. When I enquired what she meant by 'more pressure', she replied; *'just because people are watching. I mean I don't like to perform in front of an audience for anything... It is nerve racking'*. Participant RN7 also drew my attention to *'the **added** stress of a relative watching'*. She went on to say;

'It's 100 times more stressful for the staff to have relatives standing while you're doing resuscitation. It's very stressful having relatives there... That's my

experience. It is more stressful when you've got relatives there. Relatives are always the most difficult part of the job' (RN7).

It was also suggested that lay presence may place additional stress on the resuscitation team due to a change in **atmosphere** within the resuscitation room and affect staff **conduct** when performing cardiopulmonary resuscitation. This was reflected in the experience of participant RN3 who stated;

'If you were in resus a lot and you had a lot of resus's, then it could put extra stress on them, because it does shift the mood. I think it shifts the mood in resus... I wouldn't say you make...light of a resus, but in order to get through it, you do kind of jolly each other along and you can't do that if there is a family member present' (RN3).

Participant RN7 also saw a changed atmosphere in the resuscitation room as potentially detrimental to team members;

'You do develop a very strange sense of humour in A&E <laughs> which actually keeps you going... We are all only human at the end of the day... Okay, it might be a cardiac arrest but ten minutes later there might be another one coming in and if you don't actually cope with it, with some coping mechanism as a team... You'd never come in the next day... You have to have some way of coping with the situation of life and death, don't you?' (RN7).

Some participants gave testimony to a change in atmosphere and conduct during an adult cardiopulmonary resuscitation attempt that took place in the resuscitation room;

'You couldn't sort of say anything other than what you were doing... The mood was definitely different, because he ((the son)) was there. It was kind of more sombre' (RN3);

*'I suspect we were all much more polite and careful with what we said to each other and **how** we discussed the progression of the arrest than we might have been without the lay person present' (RN9);*

'I think that it probably makes people (2) quieter and more considered in information that they share between themselves... Instructions that they give other members of the team... There is somebody ((present)) who is just like a sponge picking up on every single thing, probably listening for any glimmer of hope that things might be you know salvageable or survivable' (RN10).

10.5.3 An added burden

When I asked participant AS4 what it was like to perform adult cardiopulmonary resuscitation in the presence of lay people she replied;

'Horrible, I think... It's somebody's family isn't it that's watching a lot of the time... It just... It makes you think about the person, doesn't it rather than the procedure... You do realise that it's somebody's grandmother or grandfather or mother or whatever' (AS4).

The following quotations also portray the burden of family presence when the clinical activity of cardiopulmonary resuscitation is transformed into a **humanistic event**;

*'They come in as, as somebody we don't know and we... That's how it's dealt with. They're a member of the public. We don't know them and we do our best for them, our very best for them. But then when you've got their loved ones standing by you, who you're **acutely** aware that they do know them and love them dearly and that changes the situation dramatically...in the resuscitation situation' (RN7);*

'It's not just a patient in front of you... It's someone's wife or their mother or... And it makes it much more... You can relate to it... Whereas perhaps you could separate yourself a little bit before' (RN10).

I also interpreted a degree of **role conflict** for participants who were responsible for providing emergency resuscitative care for the victim in cardiorespiratory arrest and required to take care of individuals who were present at the scene. The challenge of performing a dual role was described by participant AS7 as; *'very, very, very awkward because you can't concentrate on the relatives and the patient'*. Participant AS1 shared a similar viewpoint;

'you're trying to deal with the patient. You can't deal with the relative as well'. Participant AS5 described the dilemma of performing adult cardiopulmonary resuscitation in the back of an ambulance in the presence of the victim's wife who also required their attention;

'In between putting the pads on and shocking him once and trying to calm his wife down as well... My partner actually had to explain to her what it was that we'd done, that it was an electrical charge that we had put through his body to get his heart going again' (AS5).

Participants also gave example of role conflict regarding aspects of communication and safety;

'There's only two of us there so we can't really stop to...sit them down... We've got to carry on what we were doing' (AS2);

'You just try and focus ((on)) what you're doing really which is... But also you've got to be aware of the people around... You've always got to be aware of the bystanders because obviously you don't want to get them shocked <laughs>' (AS4);

'They're like asking questions over your shoulder and; 'what are you doing that for mate' and; 'what's your mate doing?' Questions like that. You just say; 'we'll talk to you in a minute. We'll get back to you'' (AS5);

'We listen to them but we're too busy on what we're doing to worry about them, because obviously we've got to concentrate on what we're doing' (AS7);

'You need to kind of see where they are, because you don't want them jumping on the bed or something' (RN3);

'I've had to kind of talk to them as I go along, which a lot of the time can work perfectly fine, unless something starts to go wrong, in which case...you just haven't got time to do the both really' (RN4).

The burden of lay presence was also portrayed in ambulance staff descriptions that provided examples of **hindrance** at the scene of an adult cardiopulmonary resuscitation attempt.

Participant AS7 told me;

‘Sometimes they do get in the way you know; ‘come on darling...wake up, wake up’, and you try to shift them. I’m trying to shock him’ (AS7).

Participant AS6 also experienced relatives; *‘wanting to touch...while were actually doing stuff’*. A situation of extreme hindrance was described by participant AS5 who recalled a disturbance at the scene of an adult cardiopulmonary resuscitation attempt that required intervention from the police;

‘This guy just wouldn’t move. He was insistent that we were doing it all wrong. Nothing we said was right and wouldn’t we better putting a blanket over her ((his mate’s girlfriend)) and getting her warm again and this, that and the other’ (AS5).

Specific reactions of lay people were also identified as **distracting**;

‘I have been to one or two where...relatives are quite hysterical...a lot of screaming and movements like that... It can be a bit distracting’ (AS2);

‘They were sort of all, sort of crying in the room and shouting and that can be quite distracting... I find it... That’s what I don’t like about it, because they get so upset understandably, but... I think that’s why I find it... I’d rather not have people in the room than have people in the room’ (AS4);

‘We’ve had people...‘well come on mate, hurry up, do this, come on, get this done, get that done’. You think; ‘yeah, okay mate...we’re doing our best’ (AS7);

‘One of the hardest times is if somebody completely loses it and they’re running round screaming or hysterical or... It’s hard enough to get on with your job...in a cool, calm manner if you like...and that doesn’t help’ (AS8).

10.6 Unifying theme: Preparation for lay presence

The unifying theme ‘preparation for lay presence’ was constructed from three collective themes: ‘preceding factors’, ‘assessing the situation’ and ‘the provision of support’ (see Figure 8 - page 213).

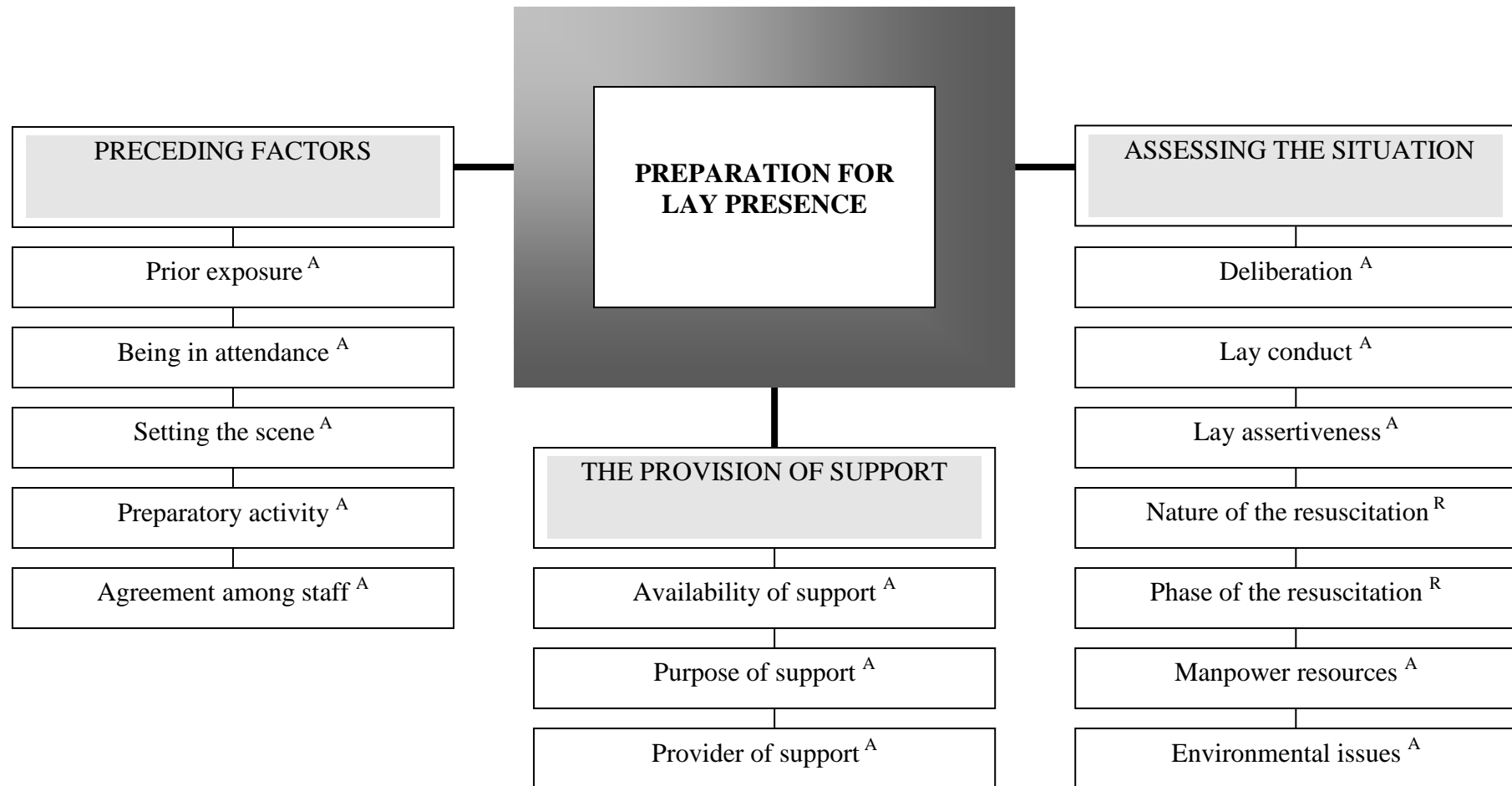
10.6.1 *Preceding factors*

Participants appeared to concede that **prior exposure** to a cardiopulmonary resuscitation attempt was a source of preparation for lay people. For example, first-level registered nurses acknowledged situations where family members had been witness to an adult cardiopulmonary resuscitation attempt in the pre-hospital setting; *‘they ((relatives)) would have seen the start of the resuscitation at the scene anyway’* (RN4); *‘she’d seen the paramedics resuscitating her husband on the floor in Marks & Spencer’s’* (RN5); or *‘by virtue of their own involvement in first aid and knowing how to resuscitate somebody’* (RN7). Participant RN3 described prior exposure as beneficial on two counts: *‘you have already had the shock element’* and have; *‘already seen that negative image’*. Participant RN10 also illustrated the potential for understanding;

‘They’ve sometimes come in the land ambulance when CPR’s been ongoing...and that can sometimes be quite helpful... I think probably distressing for them but helpful for us because as soon as we sort of say that question again; ‘what do you know about what’s happened?’ they can say; ‘well, they collapsed and...that they’ve been doing heart massage or whatever they want to call it...ever since it happened’ and so they can see probably the severity of the situation’ (RN10).

Participants also identified the media as a source of lay preparation, but there were mixed views about the extent to which television programmes represented the reality of emergency resuscitative care;

Figure 8 Unifying theme: Preparation for lay presence



'So many people say; 'I saw that on Casualty'... It does help but also it can be quite unrealistic as well cause they never lose anyone in Casualty, do they? They never die' (AS3);

'People do learn from the media and television about what sort of happens so it takes away the unknown doesn't it?... Takes away the fear factor if they've seen something on the television. They might have an idea about what's going on' (AS4);

'People have a lot of experience of seeing...resuscitation on the television' (RN5);

'I think they've got an understanding of resuscitation but they've got it from the media...like Holby City and Casualty... Its drama <laughs> where this is real life and things happen very differently than what they do to drama' (RN8);

'I have myself seen in drama programmes, people being intubated, being resuscitated, being shocked... I think they're not that far off from reality in some cases' (RN9).

It was evident from participant descriptions that access into the resuscitation room came about by the circumstance of **being in attendance**, for example, if relatives arrived with the ambulance crew or were in the company of their family member when the cardiorespiratory arrest occurred;

'They come in a special door which is around the back and they're straight into resus, so the family were with him you see, and went in' (RN1);

'A lady and the two daughters came in and again they'd come in the ambulance and the one daughter had...arrived simultaneously. So they had both come in and again I didn't feel it was appropriate to ask them to leave' (RN3);

'He was being taken through into the resus room by the paramedics; we were walking with them, well just behind them...so there was no barrier' (RN5);

'It was an elderly man, a very elderly man. He was 100 years old and his wife was there with him... He had deteriorated and eventually he did have a

*respiratory arrest and she'd been with him all the way through...in the room. And when he did have the respiratory arrest and eventually the cardiac arrest... I did say to her; 'do you want... Would you like to say in with him?'... Because she'd been with him all the way through... She'd actually watched his deterioration and I just thought it was nice that she could be with him to the end. And **why take her out** at the end when...she'd been with him all the way through' (RN7);*

'In cubicle eight an elderly woman had been brought in the morning time and she was hypothermic... She had...a VF ((ventricular fibrillation)) arrest... She was wheeled round ((to the resuscitation room)) and the relatives came round' (RN8).

First-level registered nurses expressed the importance of **setting the scene** for family members who might enter the resuscitation room. A preparatory question that participant RN10 found helpful was; *'what do you know about what's happened before?'* She went on to say;

'I think that if a relative can verbalise themselves with the little information they know, then it can help them digest what they've been told already and also gives you obviously an idea of how little or how much you need to then tell them and prepare them before they go in' (RN10).

Participants however, indicated a dilemma in terms of the time available for **preparatory activity**;

'It's a difficult situation I think really...because you can't explain to someone before you start... You can only explain as you go along can't you really?' (RN1);

'She said; 'oh I want to see my mum' and started walking towards the resus room. So I very quickly explained what was happening in terms of the arrest' (RN6);

'It's not a decision maybe a relative can make in a second' (RN7);

'You're in a very invidious position. I mean you can't have half an hour lecture on resus and what it's like before they go into the room <laughs>. You haven't got time... They're having to make a very split second decision in quite a very (2) traumatic... Traumatized frame of mind' (RN9).

First-level registered nurses also discussed the issue of **agreement among staff** in preparation for the situation of lay presence;

'We both just sort of agreed, because obviously she ((colleague)) checked ((with)) me, because I'd got other patients in resus... We both agreed that that was appropriate' (RN3);

'I've not had any objections from staff in the resus room provided you say; 'I'm going to ask the relatives, do you mind?'' (RN6);

'Knowing the department and knowing the personnel involved it is very unlikely that one day just somebody <laughs> had the experience that I did, i.e. a relative just sort of arrives... I'm sure that wouldn't have happened. It would have been discussed and agreed' (RN9);

'If...CPR's going to be ongoing and they ((relatives)) want to be in there then we would check that it's okay with the team' (RN10).

10.6.2 Assessing the situation

Both ambulance staff and first-level registered nurses gave example of situations where they would assess the situation of lay presence and engage in a process of **deliberation**. In the out-of-hospital context of care, the focus of deliberation was on determining the appropriateness of lay involvement and surveillance at the scene to maintain a safe environment;

'It's very difficult to catch that balance as to whether to get them involved with the situation so that they think that they've done as much as they can or whether to (2)...leave it...to the professionals' (AS2);

*'It's difficult to ask people; 'can you just come and do CPR'...especially if it's a relative... That must be **so** traumatic to be actually asked by the crew to help because they feel so helpless and yet to actually be involved is even more traumatic. So I don't know which is the best way of dealing with it' (AS3);*

'It would depend on the reaction of the relatives or the bystanders as to how I would get them to interact with us' (AS6);

'In a cardiac arrest the big picture is, is safety for you and your crew mate, safety for people around you' (AS8).

In contrast, first-level registered nurses carefully considered the appropriateness of family members entering the resuscitation room based on an initial assessment of the character of potential witnesses. As suggested by participant RN9;

'You've got to be a good judge of character...in terms of helping that person to decide and/or deciding for them whether they should be involved or witness the cardiac arrest resus' (RN9).

A lack of knowledge regarding the patient's preference and the unfortunate circumstance of not being able to involve them in the assessment process was a dilemma for some participants;

'It is always tricky because ideally in a talking patient you always say; 'do you mind if your relative comes in?' And you don't get that in an arrest, or in an arrested patient or a tubed patient. You have to make a lot of assumptions on what the relatives are telling you about them' (RN6);

'Say somebody arrived who wasn't the next of kin and wanted to go in, then you could have trouble from the next of kin... They could come in and say; 'well he wouldn't have wanted him in the room when he was being resuscitated' (RN7).

There was evidence to suggest that an acceptable level of **lay conduct** was required of those who requested presence at the scene;

*'She ((the daughter)) was quite calm. She wasn't screaming, shouting and grabbing at people. I couldn't see any reason not to **let her** ((enter the resuscitation room)) since that's clearly what she wanted to do' (RN4).*

It was apparent that the outcome of assessment meant that some family members did not enter the resuscitation room due to the potential for disruption as a consequence of their behaviour;

*‘There was one guy quite **early on** in my career who decided that he would try and kick the resuscitation doors down to get in there. But with an attitude like that, there was no way he was ever getting in there’ (RN4);*

‘She ((the wife)) just went absolutely crackers, ripped the shelves off the wall and CCTV television and started throwing things around and you know there was just no way on earth that she could have gone in there and she would have disrupted what was going on’ (RN5).

Ongoing assessment of lay conduct was also carried to determine the appropriateness of lay presence at the scene;

‘If they become violent, then they’re told that they will be asked to leave if they don’t calm down’ (RN1);

‘We kind of considered that they were reacting in sort of an acceptable way. They weren’t compromising themselves and they weren’t compromising the resus, so we let them stay in’ (RN3);

‘You can see when the relative is getting distressed or is likely to do something unpredictable and then you might...diplomatically take them away from the scene and you can do that without really having to say anything’ (RN4).

Participant RN10 also raised my awareness of **lay assertiveness** which appeared to influence the decision-making process. She stated;

*‘Sometimes I think that ((the)) family might prompt **us** to think; ‘well is this appropriate or not’ as in, it might be the family who say; ‘I want to be in there, I need to see them right now’ and sort of don’t take no for an answer’ (RN10).*

This situation was evident in participant descriptions which captured the insistent behaviour of lay people as they entered the accident and emergency department;

'They all stood there ((in the resuscitation room)). There wasn't any way on earth we were going to stop them...or make them go away' (RN5);

'There'll be ten of them; they're all going in regardless of what you say...The larger groups, you know lots of them, will just literally walk in and walk straight out again and a couple of people will stay' (RN6);

'It was a 17-year-old boy... So...when his mother came in...she said; 'I've got to be there. I've got to be with him'. And she did go in and she was there when...he was being resuscitated and she was also there when the resuscitation was stopped and she was there when he was pronounced dead' (RN10).

Participant RN6 also talked about relatives who arrived at the accident and emergency department, unaware or unsure about the circumstances surrounding the event. Referring to circumstances such as this as *'significant'* she said; *'I think certainly those are the ones, again in my experience, who tended to say; 'can I see her? Can I come in?''* Alternatively, it was suggested that family members made their wishes known non-verbally;

'Just their body language, facial expressions. The way they actually look at you and that. And it's just their overall general body language I think... This person would actually like to be... Come into the resuscitation room... It's just mostly their body language... Their body language' (RN8).

The **nature of the resuscitation** attempt also appeared to be a factor that influenced participants' decisions about the appropriateness of family presence during an adult cardiopulmonary resuscitation attempt. Participant RN4 told me;

'I think it depends on the nature. I mean the one I'm particularly talking about is a fella who was being attacked outside a pub with a machete... There's no way on earth that I would have taken his relatives up to have a look at him' (RN4).

Participant AS6 differentiated between; *'a normal cardiac arrest'* when he would try to get people involved and *'a traumatic one'* when he would try to keep them out the way. A

number of other participants also reflected on experiences where lay presence was deemed inappropriate because the victim in cardiorespiratory arrest was either severely injured or the interventions performed were deemed too invasive, for example, internal cardiac massage or internal defibrillation of the heart was being performed. An alternative perspective was presented by participant RN6 who referred to the; '*calm arrest*'. She described this as a situation where;

'You have a fairly experienced doctor and a fairly experienced team... Your team has got the confidence to be able to withstand somebody else coming into the picture' (RN6).

The timing of family presence in the resuscitation room also appeared to be influenced by the **phase of the resuscitation** attempt. Participant RN4 suggested that the consultants; '*were quite happy to have people **come in** during the lull in the activity'* or *once the activity had died down'*. Participant RN10 also said; '*we might perhaps try and make it a...slightly less stressful situation if we can stabilise the patient first of all'*. I also interpreted an acceptance of family presence in the resuscitation room towards the end of an adult cardiopulmonary resuscitation attempt, i.e. once it was recognised that the resuscitation attempt was futile and that death was imminent;

'You do get some very sad cases...and you think... They needed to be ((with)) them just that little bit longer, and even if it was just to hold their hand. And maybe just while the machines were being switched off... I think that just solidifies things for them a little bit... Brings it home to them... Brings it home to the relatives that they are actually dead' (RN8);

'When it becomes clear unfortunately that the patient has died or is going to die imminently (2) not all of our focus... But then perhaps a tiny bit of our focus shifts to; 'right, well...let's look at the bigger picture and who's left and what do they need to get from the situation' (RN10).

Participant RN10 described the tragic death of a patient following a road traffic accident. The patient was severely injured and experienced a cardiorespiratory arrest at the scene and also in the accident and emergency department;

'It was an unsurvivable injury so he ((the husband)) was then given the option to come down and spend some time with her in the resuscitation room... It was...a situation where he felt that he'd spent... His wife's last moments hadn't been alone and he could be with her' (RN10).

Some family members however, did not enter the resuscitation room or become reunited with their loved one until death had been confirmed;

'They ((relatives)) generally ask to just go in after... We sort of make the patient look a bit more presentable... We've got what we call a viewing room... It's better than taking them into resus. Because resus never looks great. Especially not after CPR and arrest' (RN3);

'Half-an-hour later the staff went to the relatives ((his daughters)) and told them that he'd died and took them in to see him' (RN5).

Manpower resources were identified as a factor affecting the incidence of family presence in the resuscitation room. Several first-level registered nurses talked about the missed opportunity for family presence to occur due to competing clinical demands;

'They might have wanted to stay...and it...did flash in my mind, but then I didn't go back and question it because I was then too busy trying to do the resuscitation' (RN3);

'I think it ends up, due to...staffing or my role as a sort of clinical expert that I have to sort out the patients and that often means that nobody goes out to the relatives until a bit further down the line' (RN6);

'It's the reality of the situation with...the urgency and the staffing levels and the busyness of the department and you know it's very difficult isn't it?' (RN7);

‘Time permitting... And staff permitting unfortunately’ (RN10).

Frequent reference was also made to **environmental issues** such as safety and space. These issues were presented as reasons for either averting family presence in the resuscitation room; *‘somebody sort of went over and said; ‘do you think you could come to the relatives’ room. It’s a bit...tight for space and stuff in here’’* (RN2) or restricting the number of people at the scene;

‘Priority control in resuscitation room... So from crowd control and health and safety aspects... I would limit it to two’ (RN8).

The issues of safety and space were most frequently commented on by ambulance staff in relation to performing cardiopulmonary resuscitation in the back of an ambulance. Some participants saw this as a reason for discouraging the family from travelling in the ambulance. Participant AS1 drew attention to; *‘the practicality of it, cause with how the ambulance is arranged’* but also recognised the potential for harm stating; *‘I am very messy in the back with an arrest...when I’ve finished with things I just put them on the floor out of the way...you obviously don’t want them round the person’*. Participant AS3 also expressed concern for the safety of passengers when; *‘travelling on blue lights’*. Participant AS7 was adamant that; *‘if the relatives are in the back ((of the ambulance)), they’re in the way. **They are in the way, cause there ain’t the space’***.

10.6.3 The provision of support

Several first-level registered nurses appeared reluctant to consider the possibility of lay presence without the **availability of support** in place;

'I don't think you could have relatives in the resus room and just leave them on their own. I don't think that would be appropriate' (RN3);

'One of the other Sisters ((who)) objected...was saying; 'if you have got them in there, you have got to have somebody who is going to kind of sit with them. You have to allocate a nurse'' (RN4);

*'When that call came through you would have to say; 'you... You are dealing with the arrest; you are dealing with the relatives' and that staff member would do **nothing else** apart from look after the relatives. You'd have to have a designated nurse to look after them'* (RN7);

'To me it would be very much...the availability of having somebody there... Somebody to actually go with the relatives... To sit and explain things to them' (RN8);

'It's my understanding that no-one comes in to witness an arrest without their having explicit nominated support (). Someone is with them to explain what's happening' (RN9).

The **purpose of support** was presented from the perspective of ensuring that the family member was not alone in the resuscitation room, for example; *'I think knowing that they're not there on their own just looking in as an observer... They're there with somebody else'* (RN5); *'another relative with them'* (RN1); *'somebody there to hold her ((the daughter's)) hand'* (RN4) or as participant RN8 pointed out;

'Sometimes in those situations, you don't talk, just your presence there is sufficient' (RN8).

One participant indicated agreement with family presence; *'because relatives were very closely managed'* (RN5) which I interpreted as being different to the notion of providing support. However, at a later stage in the interview this participant talked about having to be able to; *'recognise when somebody's not taking something in, needs it explaining in a*

different way'. This appeared congruent with other participant descriptions which portrayed the purpose of support in terms of communication, for example, explaining, informing, providing understanding and answering questions;

'He ((the son)) was asking questions like; 'how long are you going on for?' And 'do you think this is going to work?'" (RN3);

'((I had)) to kind of explain to her ((the daughter)) that actually what you're seeing is a last effort. The only reason he's... The only reason his lungs are filling is because we are filling them for him with a bag' (RN4);

'Before every intervention it was for example; 'there's some fluid around his heart, there's going to be a needle to put in'" (RN5);

'I just sat with her ((the wife)) and then explained to her, while they were resuscitating him. I was sat with her and explained what they were doing... Explained that his heart had stopped and we were trying to... restart his heart and resuscitate him' (RN7);

'The nurse that was actually looking after the patient stayed with the relatives while the whole resus was actually going on... She was actually explaining everything what was actually going on' (RN8);

'We do try and dedicate one nurse to that relative so that they've got...a constant person that they can ask questions of' (RN10).

In the secondary (in-hospital) environment of care, the **provider of support** was a nurse in the majority of cases. However, this was not always a qualified nurse. Participant RN4 explained;

'I allocated one of my A grades ((health care support worker)) to actually kind of sit and explain to her ((the daughter)) what was going on' (RN4).

Participant RN5 also utilised this grade of staff and made known his rationale;

'It might be a healthcare support worker who didn't possess the ins and outs of the knowledge of resuscitation...but they've got life experience' (RN5).

First-level registered nurses described the provision of support as a designated role by someone who was usually external to the resuscitation team. Participant RN3 recalled a situation where; *'the anaesthetist who wasn't actually doing the resus was talking to him ((the son)) about that'*. Similarly other participants recalled situations where either they or another member of staff fulfilled this role;

'That was the role of the nurse in charge...was the kind of carer...to stay with the carers or the relatives or at least inform them and gave them bereavement information if need be. So that was very much a sort of link role that was designated to the nurse in charge' (RN6);

'If they'd asked me directly and said; 'can I come in?' Then yes, I would take on the role of...making sure that they ((relatives)) were alright and understood what was happening' (RN7);

'So that sister was...as it were assigned to this relative and that was her role within the resus at that point. She didn't get involved in anything' (RN9);

'I was part of that team in that I was looking after him but I wasn't actually hands on with her' (RN10).

Participant RN8 identified the potential for problems in the absence of a dedicated person to fulfil this role;

'I was looking round and seeing them ((relatives)) standing there and I thought; 'well, I haven't got a problem with them standing there' because there was a nurse with them. If there hadn't been a nurse with them I think I would have had more problems because...we'd have a bit of conflict then in actually resuscitating the patient and trying to look after them' (RN8).

In the pre-hospital setting, support in the form of communication was combined with the role of providing emergency resuscitative care. Participant AS2 told me;

'I think the thing we can do to help...people who are present and that does happen... Is we tell them what we are doing. I certainly do' (AS2).

When I questioned whether he found this achievable; being able to deal with the resuscitation and at the same time, keep people informed, he reminded me; *'well it has, it has happened'*.

There was evidence from other participants to suggest that this was indeed the case;

'She ((his girlfriend)) was a pharmacist so she knew medically what was going on but she still needed a bit of... Sort of... 'what on earth is this machine that's on him' sort of thing... So you can tell her what's being done and tell her in every stage what's sort of happening to him' (AS4);

'My partner actually had to explain to her ((the wife)) what it was that we'd done... That it was an electrical charge that we had put through his body to get his heart going again' (AS5);

'A lot of ambulance people will put them in the front of the ambulance, giving us more room in the back to carry on... But if that happens then what we tend to do is keep talking to them... Let them know what's going on' (AS6);

'We try to explain to them exactly what it does ((the LUCAS device)) and what we're doing. We do explain to them what we're doing to them' (AS7);

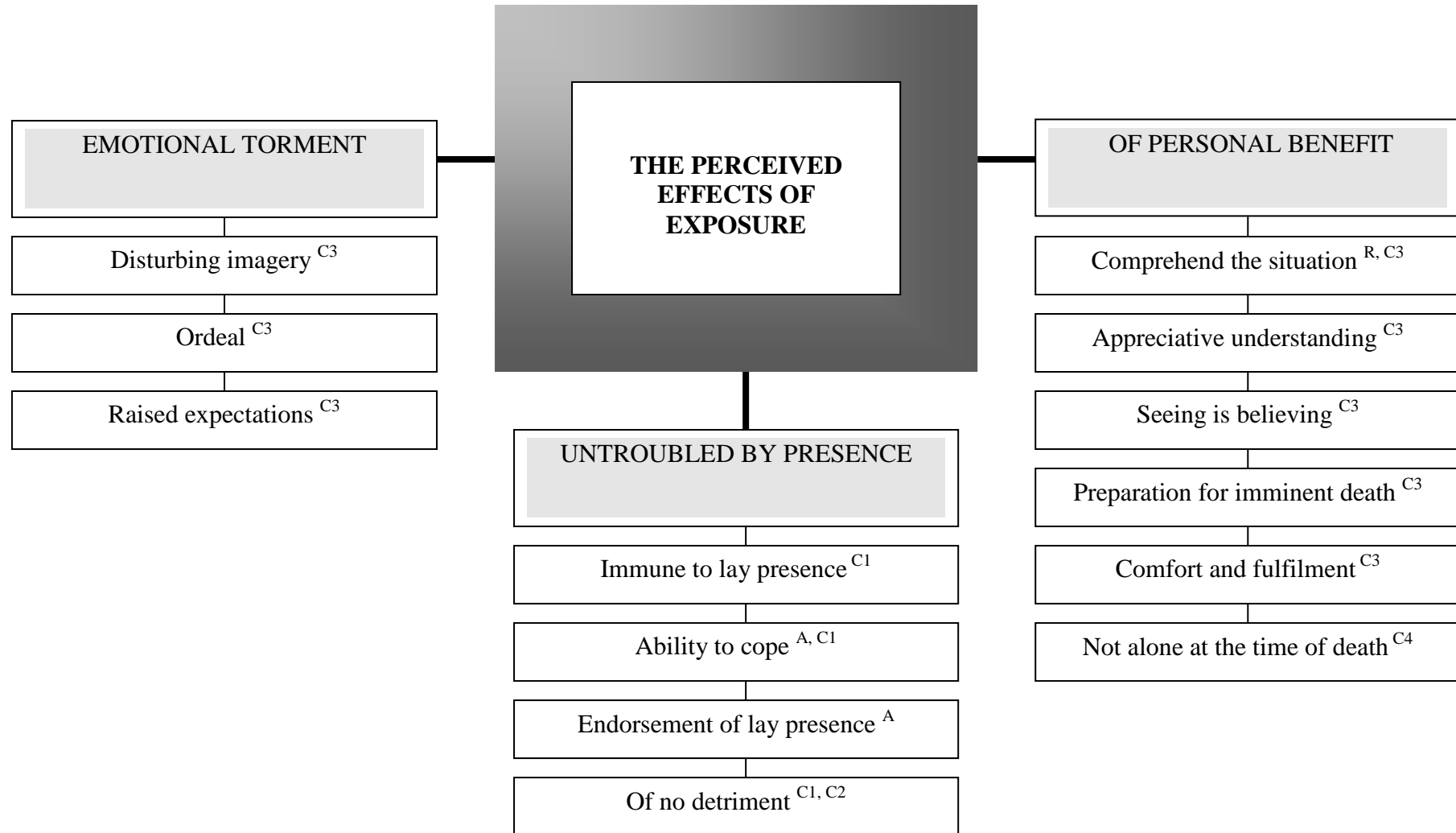
'I personally don't... Don't...send them ((relatives)) out the room. I try and explain what I shall be doing' (AS8).

10.7 Unifying theme: The perceived effects of exposure

The unifying theme 'the perceived effects of exposure' was constructed from three collective themes: 'emotional torment', 'of personal benefit' and 'untroubled by presence' (see Figure 9

- page 227).

Figure 9 Unifying theme: The perceived effects of exposure



10.7.1 Emotional torment

Several participants expressed concern for lay people who were witness to an adult cardiopulmonary resuscitation attempt from the perspective of exposing them to **disturbing imagery** that could have a lasting effect. Participants depicted an adult cardiopulmonary resuscitation attempt as; shocking, disturbing, horrible, horrendous, violent, barbaric, and brutal. A specific intervention of concern for ambulance staff was lay exposure to the Lund University Cardiac Arrest System which participants frequently referred to as ‘the thumper’;

‘I do wonder if things like the LUCAS device, watching that and the last sort of visions of your partner... It looks really quite barbaric and its sounds... Because of the suction and the actual movement of it...does look quite... (1) invasive... Not invasive but it’s quite brutal’ (AS3);

‘They are going to die and it’s the last citing of somebody that you love... I don’t know if you’ve seen the LUCAS device which is very brutal and it’s horrible to see. It’s like a pump that’s... And the whole chest is moving up and down and I just think that’s a very brutal way to see...’ (AS4);

‘It looks really horrendous and especially when you first turn it on because it really pumps down...For ((the)) family it looks horrendous’ (AS6).

Participant AS4 talked about the need to; ‘*have a look and see what the relatives... How they are reacting*’. Similarly, a goal for participant AS3 was; ‘*to make sure that everybody who had the experience of that resus (4) found that...the outcome was, not appropriate, but not too traumatic for them*’. Participant RN9 also demonstrated selfless concern for a relative who was present in the resuscitation room;

*‘I wasn’t concerned about performance... I have to say it didn’t really enter my head to worry about her thinking about me... What struck me was; ‘I wonder what she thinks about all of this. I wonder what this is like for **her** to see this. And my mind was on seeing the situation through this person’s eyes’ (RN9).*

Participant RN6 also saw the need for follow-up with relatives who had witnessed a resuscitation attempt in order to determine the long term effects of exposure and to establish best practice;

'I think the problem with A&E nursing is that you don't have any follow-up often... I think; 'I hope that was the right thing to do' because you don't get anything that says...six weeks later... There are certainly a few people who you think; 'I wonder how they're coping and whether that's made any difference to them or not' ... What if they go home and really regretted doing it. And I never know and I blindly go on doing what I've always done (2)' (RN6).

Both ambulance staff and first-level registered nurses gave example of situations where presence during an adult cardiopulmonary resuscitation attempt became an **ordeal** for those who were exposed to this event;

'I think that's happened on a couple of occasions where they've just completely freaked out and couldn't be in the room' (AS3);

'This old woman who was just... She was watching us, what we were doing... Next thing she's on the ward herself, collapsed...' (AS7);

'When the patient first went in they were crying obviously...but when they were told that...there was no point in going any further...one of the female relatives passed out on the floor' (RN1);

'I've been in situations where the relatives have been in and they might have been in for an hour and then all of a sudden they burst into tears' (RN5).

Two ambulance staff also recognised the potential for **raised expectations** as a consequence of lay presence in the out-of-hospital context of care;

'I think most people...might have to...matters of degree...of thinking that... I'm trying to think of how to say it (2)...of over expectations...they might be thinking that...some sort of miracle works gonna be done' (AS2);

'The relatives have seen us working for half an hour to get them to the hospital and five minutes later the doctors call it' (AS6).

Participant RN6 drew my attention to the issue of false hope that can arise as a consequence of family presence in the resuscitation room. She comprehensively explained;

'They get a bit of hope based on what they're viewing in terms that they can see something on the monitor happening... So they think it's all getting better and then it's normally adrenaline driven and you have to kind of within five seconds of them getting really optimistic say; 'this is probably going to be very short term'' (RN6);

'One of the team will make a not a sort of throw away comment but will make a glib comment about 'oh, the gases are getting better' or something... And they'll hear those sorts of words and you'll think 'it doesn't mean anything'. But they've just heard the word 'better'. That's bad' (RN6).

10.7.2 Of personal benefit

Several participants regarded lay presence during an adult cardiopulmonary resuscitation as appropriate situation that could help individuals to **comprehend the situation**. Participant RN6 recalled what she described as a memorable situation where the mother of a girl with learning disabilities was admitted in cardiorespiratory arrest. In discussion with the daughter's carer, it was felt that exposing the daughter to the resuscitation attempt may help her to make sense of the situation;

'I said did she ((the daughter)) want to come in and see her mother and see what was happening and she said 'yes'... It was fairly positive in terms of you could see that her state of mind changing when she saw her mother in that condition' (RN6).

Participant AS2 also described a tragic situation where a gentleman who was normally fit and well, suffered a heart attack whilst on holiday and experienced cardiorespiratory arrest two

weeks after returning home. Reflecting on the unexpectedness of this situation for the victim's wife he said;

*'Maybe it's difficult to accept in your mind...that somebody has gone when they just (I)...up until two weeks ago there was nothing wrong with them, and then suddenly they've had this MI ((myocardial infarction)) on holiday and they've come back and they're making a recovery and then they're just gone... How do we even **start** accepting what's happened let alone getting over it? So I think for **her** that was better... I think it was the best thing for her to see what... What happened' (AS2).*

A further benefit of lay presence for the experiencing person was the perception that family members gained an **appreciative understanding** of the interventions that were performed in an effort to revive their loved one. Referring to the wife who was present with her aged husband, participant RN7 stated; *'I suppose she had the whole picture...in her mind. I mean she could look back on it and think that's how he died'*. Participant AS7 presented the alternative perspective of lay presence during a successful cardiopulmonary resuscitation; *'she saw what had **happened**. That he'd cardiac arrest on the motor. We've shocked him. We've got him back'*. Participant RN1 talked about a cardiopulmonary resuscitation attempt on a 90-year-old woman which took place; *'because her daughter wanted her resuscitated'*. She told me about the indignity she felt for the patient; *'I stood back from it and looked and I thought if the daughter was here she would not have done this'*. Some participants also suggested that witnessing the effort put into the resuscitation attempt may be of consolation to family members in situations of sudden, unexpected death;

'I think for her... personally ((the wife)), that was better for her to watch. Because I think she saw that everything really was done' (AS2);

*'I thought it was just rather nice that she ((the wife)) was there and actually saw it **right to the end**. And then... that was it. He died and she was still with him. She didn't feel that she'd missed out on anything then'* (RN7);

'They see everything being done so they (I)... They're sort of confident that every possible resource... Everything possible, medication, equipment...' (RN10).

I also identified participant use of and support for the adage; **seeing is believing**;

'I've been in with relatives...the rest of their family's turned up later and said; 'What happened? 'What did you do to him?'' And the wife or husband has said; 'Oh, you know, they were marvellous. I was in there all the time and they did everything...they could have done...' Because they'd seen it and they're not hearing it from me, they're hearing it from their mum or their dad... And I think it carries more weight that way knowing that...an outsider thinks that you've done the best you can. I think that's a valuable part' (RN5);

'It's much better that they see it than you tell them' (RN9);

'There's a whole team of people just waiting to get at him... To work on him and...I'm sure it would help if the relatives were to see that rather than one doctor coming out and they're going in and the blankets up to his neck and to say this one doctor worked on him and he's told us that he's died. I don't think that that helps the relative a great deal' (AS6).

Participant RN10 also discussed family presence at the scene of an adult cardiopulmonary resuscitation attempt from the perspective that it that offered the personal benefit of hope;

'When we're doing our CPR on someone to all intents and purposes I almost imagine them as certainly dying if not sort of already dead... But I think that as a lay person, certainly as a loved one, I think whilst treatment is ongoing, whilst you can see things happening... There's hope, however small, and that means that they're still alive until people stop and I'm told otherwise' (RN10).

Conversely, participants gave example of situations where family presence at the scene of an adult cardiopulmonary resuscitation appeared to offer **preparation for imminent death** of a loved one;

'I was sat with her ((the daughter)) and explained what they were doing... And she knew. I mean she knew that he wasn't going to live' (RN4);

'Hopefully I helped prepare her for that ((her husband's death)) because I could see the line it was going, the discussions the professionals were having about...we'll try one last cycle... And I was able to say to her; 'look, it's looking grim. It's very likely that he's very soon going to die'' (RN5);

'I took her ((the daughter)) right to the bedside and she touched her mother and she could feel her mum was fairly cold and that she wasn't moving and all the things that...she as a sort of lay person like would probably associate with life' (RN6);

'As she got closer to him and as time went on, she ((his wife)) became quite distressed...more obviously distressed. She was crying. (6) <Crying>... She knew that he was dead I think by then. No-one had actually said so but she... I think she knew that just by her behaviour' (RN9);

'Ultimately, they've seen it so they know for themselves that they are... They are gone' (AS4);

'I always try to let them hear that machine say; 'no shock advised' ... If they can hear that machine say; 'no shock advised' and they can see the flat line... That helps. I think it does anyway' (AS5);

'The bereavement has already started if you like, even though they're not completely dead, we're still working on them. I think that a lot of people resign themselves to the fact that they are going to die even before we've reached the hospital' (AS6);

'You get a lot of people saying; 'I think he's gone mate'. And then next you know they're in the room crying, because they know the relatives' have gone' (AS7).

Some ambulance staff suggested that lay people gained **comfort and fulfilment** from their role as an active participant at the scene of an adult cardiopulmonary resuscitation attempt. Reflecting on the situation of lay involvement during an event that took place in a public area, participant AS1 suggested; *'I think they were (I) quite relieved in one respect that they could*

help (2)... *Feel involved in what was going on*'. She also claimed; *'I've heard other people discuss it. They say; 'although the patient died at least I tried to do something and feel better in the respect that I helped''*. Participant AS2 also recalled a situation where two sons participated in the cardiopulmonary resuscitation of their father;

*'I'd say for **certain** it was beneficial for them to do that cause they really felt that... That they'd done something'* (AS2).

I asked all participants whether, in their experience, lay presence was of any personal benefit to the victim in cardiorespiratory arrest. Several participants saw this as an ambiguous question; *'that is a **really hard** and interesting question, because he died, and arguably was already dead. (5) <Laughs>. That's very existential'* (RN9) or as participant RN3 put it; *'a bit of a spiritual thing'*. Participant RN8 also found this a difficult question to answer because; *'obviously the patient is in arrest, so I'm not sure what perception they actually have'*. Similarly other first-level registered nurses told me;

'Usually the relatives are just standing there aren't they so (2) unless the patient was awake they possibly wouldn't know that they were there' (RN1);

'I have only ever witnessed...cardiac arrests where the people have been unconscious... I don't know if it would make a big difference or not' (RN2).

Ambulance staff also advised me; *'they wouldn't know much about it would they?'* (AS5) and that; *'most patients who've experienced a cardiac arrest have no recollection of...the event'* (AS8). There was however, some indication of possible benefits; including the suggestion that the patient was **not alone at the time of death** and may find comfort from knowing their loved one was with them;

'They do say that hearing's the last thing to go, don't they? So I don't know, but I would say so. To know that somebody is with you' (AS3);

'I'm sure it is. I'm sure it is, especially if they keep talking to them. Let them know that somebody who they know, somebody whose voice they recognise is there with them in the room... They say; 'can we talk to them?' We say; 'course you can. The last thing to go is the hearing. Keep talking to them... Say what you like, sing a song, do anything... What's their favourite song? Sing that to them'' (AS6);

'Sometimes people who've died, they say... Have an out of body experience and they float above... We don't know anything about when people's hearing goes, when your senses stop. I think there's so much that we don't know... I think it might well be...a great comfort in their journey on, if there is one' (RN10).

I also interpreted a sense of 'togetherness' from participant descriptions which portrayed an intimate scene of family presence amidst the act of cardiopulmonary resuscitation;

'The priest had been down and lit some candles on the...drugs trolley on the side and there was the whole... Roman Catholic prayers were being said and...the family were all stood round. The team were carrying on with resuscitation but all the members of the family and the priest were having prayers at the time' (RN5);

'I think certainly he knew she ((his wife)) was there... Why separate them when they've been together that long... Why separate them in the last few minutes of their lives?' (RN7);

'I remember the consultant said to her ((his wife)); 'Why don't you come and sit next to him and hold his hand?'... So the sister gradually brought her a bit closer' (RN9).

10.7.3 Untroubled by presence

Both first-level registered nurses and ambulance staff talked about being **immune to lay presence** at the scene of an adult cardiopulmonary resuscitation attempt. Participant RN2 made the analogy of; *'it's a bit like the tape recorder... It's there, so for the first 30 seconds you are really quite anxious and nervous about it... But after 30 seconds, you have forgotten*

that it's there'. Similarly, participant RN4 suggested; *'after about 10 seconds, you kind of forget they are there'*. When I asked participant AS8 what it was like to perform cardiopulmonary resuscitation in the presence of a crowd, he replied; *'I think it all goes on around you'*. Participant AS1 also suggested; *'a lot of the time you don't even notice they're there. You just go on to auto pilot'*. It was apparent that ambulance staff appeared immune to lay presence by focusing their attention on a clinically driven protocol of care;

'I wouldn't say that it makes a lot of difference to actually what you're doing because turning up to...an arrest... It's quite a straightforward procedure that you've got to follow' (AS2);

'The self-consciousness I think only lasts for the first; 'oh god, crowd'. Then after a bit, you're into your rhythm of what you're doing so you don't really take any notice of what... They're standing around and what they're doing. You just get on with it' (AS3);

'Not once you're into the resuscitation. No. They might as well not be there' (AS5).

A mixture of practical experience and confidence in emergency resuscitative care appeared to influence participants' **ability to cope** with the situation of lay presence during an adult cardiopulmonary resuscitation attempt;

'As long as you're confident and you put that confidence out to the relatives, I think that's a big thing... I haven't known any negative effects really' (AS6);

'If they're hindering me from doing the job... If they're more a nuisance than... And it's not beneficial to the patient... But with experience, 99 times out of a 100 you can, you can deal with that' (AS8);

'Maybe it's just experience because certainly, I mean in my first couple of years as a staff nurse in A&E, the thought of having relatives watching what I was doing when I was still learning myself...well it would have made me feel very self

conscious... Whereas...after 10-years odd, I suppose I was a lot more confident in what I did and kind of quite happy to let people see what...went on’ (RN4);

‘It’ll just be a confidence in my ability that I know what I’m doing. I know how to do this job and I do it reasonably well and feel very confident. Don’t feel threatened by the relatives being present at all’ (RN8).

There was also evidence to suggest that participants engaged in retrospective analysis of emergency resuscitative care situations. This activity appeared to result in an **endorsement of lay presence** during an adult cardiopulmonary resuscitation attempt, primarily as a consequence of their exposure to this practice. Two first-level registered nurses told me about their previous misgivings and renewed enthusiasm following their first experience of family presence in the resuscitation room;

‘I think certainly prior to that event, I always thought that it was better for them not to see it, but then I suppose having thought about it all...’ (RN2);

*‘It just **never** occurred to me before... It’s as simple as that. It wasn’t something I thought about. Now it’s something I will think about... I **now** feel much happier and aware of to say to somebody; ‘this is what it’s like...but if you do want to be there...’ (RN9).*

Personal experience of parental presence during attempted cardiopulmonary resuscitation of a child also led to some participants to question the appropriateness of divergent departmental policies and procedures for family members of children and adults in cardiorespiratory arrest;

‘You can’t really tear the parents away from their child. I suppose we shouldn’t do it with adults, but we do. I don’t know why it’s automatically different for paed, ((paediatrics))’ (RN3);

‘We don’t think twice about having parents in with children, it’s... That’s just accepted as normal... It’s kind of ironic really that as soon as people grow up, we take that support away from them’ (RN4);

'I mean it's always been accepted that with children, the parents come in. Nobody would dream of taking the parents out so why different for adults?' (RN5).

The value of hindsight also appeared to influence participants' thoughts about the appropriateness of separating family members from their loved one. Participant RN2 recalled a situation which appeared to be laden with regret;

'I just happened to be passing and she said; 'oh I am so and so's wife, do you know if he is in the department?'... He was in resus and I think he hadn't quite arrested at this point... I introduced her to another nurse and this other nurse put her straight down to the relatives' room and he arrested and died. And I think that would have been... It would have been really, really nice if she had been able to go in and... Because he clearly... As we walked past, he was clearly still conscious' (RN2).

Participant RN5 also described a situation where a relative's presence in the resuscitation room may have avoided a complaint;

'It was a cardiac arrest. He was then taken straight through into the resuscitation room and his relatives were escorted off to the relatives' room, so they were separated from him... Her ((the daughter's)) view...was that once we'd moved him through into the resuscitation room the staff did nothing but forge the documentation to make it look as though he'd had the best level of care possible... I couldn't get through to her that once he'd gone into that resuscitation room, everything that could possibly have been done would have been done... When the staff had taken her in...to have a look at him, he'd still got his shirt on, so in her opinion she couldn't see that anything could have been done because; 'how could you do anything if he still had his shirt on?' (RN5).

The lived experience of family presence was also evaluated as having had a calming effect on the atmosphere in the resuscitation room and on the performance of the team;

'The team works... I think...a lot more effectively and efficiently whenever the relatives are actually here because there isn't the normal shouting and yelling and screaming; 'get me, get me that, get me the other'. It tends to be a lot calmer and it tends to run more effective' (RN8);

*'I thought it was excellent because (5) it formalised the resus in a way that made it very professional and I thought that was excellent... Somehow it was **polished**' (RN9);*

'I think that people probably are quieter because (3) you just feel maybe that if you are rushing around like a mad thing that it might look like we are all disorganised' (RN10).

For some participants, retrospective analysis during the interview indicated that lay presence was **of no detriment** to the smooth running of the cardiopulmonary resuscitation attempt or of concern to those performing the interventions;

'If the patient is for resuscitation then a resuscitation attempt is made. But I don't think anybody being there has made any difference... The family haven't affected it... The outcome hasn't been anything any different' (RN1);

'I don't think they ((relatives)) have hindered the resuscitation... I haven't had anybody kind of like get in the way and...try and interfere and meddle with equipment...which I suppose is one of the biggest fears really, that they will get in the way, they will interfere, they will think they know better, because they have seen ER a few times' (RN4);

'It would run as it would run whether they were there or not' (RN7);

'The relatives didn't get in the way, didn't make a lot of fuss... They didn't go all hysterical or anything like that... Nobody seemed to be particularly put out about it, or they didn't at the time...and nobody made any comments, saying; 'can you remove the, the relatives..."' (RN8);

'She ((the wife)) didn't say; 'stop' or 'carry on' or anything like that at all. But one respects their presence and one respects the patient in a slightly different way because there is some embodiment of them through their relatives' (RN9);

'I'm not that concerned about whether the relatives are there or aren't there' (AS2);

'I'd like to think I resus'd everybody in the same... To the ((same)) capacity whether there were people there or not' (AS4);

'Doesn't make any difference to me... No. As long as they stay out of my way and don't stop me doing what I've got to do' (AS5);

'Personally I've never... I've never had a problem' (AS8).

10.8 Chapter summary

This chapter has provided detailed insight into the phenomenon of lay presence during an adult cardiopulmonary resuscitation attempt from the perspectives of ambulance staff and first-level registered nurses who have experienced this situation. The phenomenological description was intimately woven around five unifying themes, and the nature of the lived experience was rendered visible by the application of relevant participant quotations. Various dimensions of the phenomenon were singled out and factually presented before engaging in further interpretation of the meaning of the lived experience embedded in participant descriptions. In the following chapter, the reported findings are subjected to further scrutiny and critically discussed with reference to theoretical insights derived during phase one of the study.

CHAPTER ELEVEN

CRITICAL DISCUSSION OF THE INTERVIEW FINDINGS

11.0 Chapter overview

This chapter provides a critical discussion of the findings that emerged from the phenomenological study with ambulance staff and first-level registered nurses. The discussion represents personal interpretations of the phenomenon of lay presence during an adult cardiopulmonary resuscitation attempt, rather than intentionally describing this phenomenon in an evaluative way. The phenomenological description is developed around the life-world existentials of lived relation (relationality), lived space (spatiality), lived body (corporeality) and lived time (temporality) (van Manen, 1997), and draws attention to five concepts that represent the essential nature of the lived experience. Each concept is defined in the context of the study findings and highlighted in bold to facilitate communication and understanding. The findings obtained during existential investigation are compared with the theoretical insights derived during phase one of the study. This initial stage of comparison serves as a foundation for the synthesis of new insights in the following chapter. Consistent with the design of the phenomenological study, the terms ‘lay presence’ and ‘lay people’ are used to represent family, relatives, friends, neighbours and/or strangers who were present at the scene of an adult cardiopulmonary resuscitation attempt. In the concluding discussion, attention is paid to the divergent practices that emerged within and across the two contexts of care. The essence of the lived experience for the participants in this phenomenological study is also revealed.

11.1 The essential nature of the lived experience

11.1.1 *The life-world existential of lived relation*

Examination of lived-experience material from the philosophical perspective of relationality considered the lived relation that participants maintained and shared with lay people who were present during an adult cardiopulmonary resuscitation attempt. Participants portrayed a relationship that was based on the principle of **respect** for lay people in terms of their positive contribution during resuscitative efforts, their role as a valuable resource and by paying attention to their choice of direction regarding presence at the scene of this event. Respect in this sense was defined in two ways: (1) appreciation that was felt towards lay people and (2) consideration for their needs. Ambulance staff recognised the value of lay people being exposed to the situation of cardiorespiratory arrest and capitalised on the availability of their presence. This was reflected in participant descriptions which provided examples of lay participation either directly, by performing an aspect of resuscitation under supervision or indirectly by carrying out less critical interventions. On occasions, participation occurred as a result of personal invitation to assist with vital interventions such as external cardiac massage or artificial respiration. The appropriateness of lay involvement was positively remarked upon, especially when the availability of qualified manpower resources was limited. There was a caution about suggesting that lay people were ‘used’, preferring instead to describe their involvement as helpful and useful. These findings reflect the holistic perspective described by Timmermans (1997) in his assessment of the reactions of healthcare providers to the suggestion of family presence during resuscitative efforts. However, Timmermans (1997) conception of family members caring *with* staff as opposed to being cared for *by* staff differs in this study. Ambulance staff depicted a dual role which featured a clinical duty of care to the victim in cardiorespiratory arrest *and* a personal responsibility for supporting lay people who

were present at the scene. It was apparent that some ambulance staff were motivated towards lay involvement as a way of preventing or overcoming the feeling of helplessness for those who were exposed to this situation. This type of therapeutic relationship is recognised as a way of responding to autonomy and disempowerment at the time of a sudden death (Wright, 1999) and reflects the use of skilled intervention that is designed to promote adaptation and restore emotional equilibrium in a crisis situation (Woolley, 1990). Participation was also shown to be of mutual benefit in some of the examples given.

In contrast, first-level registered nurses described lay presence in the resuscitation room as a passive role, primarily involving observation at the scene. Lay people were not invited to participate in emergency care activities and inertness at the scene came through as a positive state that reduced the risk of hindrance or distraction. Lay contribution was, however, respected in terms of the part that people played in providing comfort to the dying person; by being with them, talking to them or holding their hand. This corresponds with Meyers *et al.* (2000) study which depicted family members as active participants as opposed to passive observers, caring for the patient with the staff.

The resourcefulness of lay people was depicted by ambulance staff and first-level registered nurses in terms of their role as key informants. This is in accordance with the findings of Mortelmans *et al.* (2009) who reported that more than half of the emergency department staff who participated in their study thought that family members could provide useful information. The provision of someone 'being at hand' to provide background information was described by ambulance staff and first-level registered nurses as beneficial for the victim in cardiorespiratory arrest by ensuring that their wishes could be taken into consideration and

also in terms of positively influencing treatment protocols based on the facts provided. Documented concerns about the availability of human resources to perform the role of chaperone (Back and Rooke, 1994; Booth *et al.*, 2004) was reflected in first-level registered nurses descriptions which talked about the missed opportunities for lay presence in the resuscitation room due to inadequate manpower resources to provide support during the cardiopulmonary resuscitation attempt. The suggestion of having lay people present at the scene of an adult cardiopulmonary resuscitation attempt, rather than someone running backwards and forwards to a waiting room was, therefore, interpreted as a practical solution to this problem.

Consistent with my own beliefs, there was evidence to suggest that an individual's choice of direction regarding presence at the scene of an adult cardiopulmonary resuscitation attempt was, at times, respected and facilitated. This course of action reflects contemporary social movements aimed at greater public involvement and partnership in care (Department of Health, 1997, 2000a, 2001a, 2001b, 2001c, 2002, 2003a, 2008). A key difference in the two contexts of care was the spontaneity of presence that occurred in the out-of-hospital environment and the planned approach to lay presence in secondary (in-hospital) care that came about either via invitation, by lay request or on demand. For example, first-level registered nurses gave examples of situations where they would invite lay people to 'come in' to the resuscitation room, whereas the only invitation regarding lay presence that was given by ambulance staff, related to the transportation of patients to receive secondary (in-hospital) care. Furthermore, first-level registered nurses talked about offering lay people a choice about 'entering' and 'leaving' the scene of an adult cardiopulmonary resuscitation attempt, whereas for ambulance staff, it was about accommodating lay people who expressed a preference to

‘remain’ present, thus implying that they were already in attendance. A balance of autonomy in decision-making regarding presence that primarily rested with the lay person was also made clear in the life-world examples provided by some ambulance staff.

11.1.2 The life-world existential of lived space

The existential of spatiality served as a guide to interpreting the behaviour of ambulance staff and first-level registered nurses regarding lay presence during adult cardiopulmonary resuscitation. Professional **dominance**, either as a result of a commanding position or an imposing influence emerged as being central to the maintenance of standards that were associated with the environment (or space) where an adult cardiopulmonary resuscitation attempt took place and/or the maintenance of control when performing emergency resuscitative care within the lived space. Lay exposure to an adult cardiopulmonary resuscitation attempt in the pre-hospital setting was presented as the norm, and continuity in care was important to some ambulance staff. The situation of providing family members with an opportunity to travel with the patient who required in-hospital care was not unique to this study, but I perceived that it was a more common occurrence than the findings of Barratt and Wallis (1998) who reported that just under a third of family members travelled in the ambulance with their relative. I interpreted a sense of frustration in ambulance staff descriptions that spoke of family members being separated from their loved one on entry to the secondary (in-hospital) environment of care. A report by the British Association for Accident and Emergency Medicine in conjunction with the Royal College of Nursing (1995) revealed that less than one in four hospitals allowed family members access into the resuscitation room. It was not the intention to determine prevalence in this study, but participant descriptions led me to believe that restricted access prevailed. A paternalistic

approach to the care of lay people on arrival to an accident and emergency department was evident. This frequently resulted in the custom and practice of placing lay people in a waiting room as opposed to experiencing their presence in the resuscitation room. Actions and behaviours such as; intercepting lay people, whisking them away and automatically escorting people into a waiting room were testimony to my personal belief that decisions are made about lay presence without firstly taking into consideration the wishes of those who are intimately involved in this situation. The influences of culture and tradition were regarded as significant in shaping this practice. This is contrasted with one participant's recollection of the life-world which portrayed an organisational philosophy that was orientated towards the practice of lay presence.

Paternalistic intervention that resulted in separation was not restricted to the environment of secondary (in-hospital) care, but it was certainly less evident in the descriptions provided by ambulance staff. Weslien *et al.* (2005) argue that an element of paternalism may be justified and actions that are in the best interests of people should be in focus. However, they also suggest that paternalism should not preclude finding out individuals' preference regarding presence. In this study, overcoming paternalistic intervention was sometimes driven by lay people making staff aware of their desire to be present rather than staff purposefully questioning lay people to find out about their wishes. A reluctance to pursue enquiries appeared to be associated with the fear of complaint in the event of a negative experience.

The space where an adult cardiopulmonary resuscitation attempt took place clearly influenced the way in which lay presence came about. First-level registered nurses described a dedicated location, i.e. 'the resuscitation room' which included a physical entrance. Participants

portrayed a similar picture to the anecdotal accounts in the literature that report on the experiences of family members who have been denied access into the resuscitation room (Awooner-Renner, 1991; Matthews, 1993; Gregory, 1995; Reilly, 1996; Rider, 1999). I readily perceived that the doors of the resuscitation room became a physical barrier to lay people gaining entry. The exception to this was situations where an adult cardiopulmonary resuscitation attempt took place on route to the resuscitation room, in which case, participants suggested that lay people were present as a matter of course. This latter situation appeared consistent with the more natural occurrence of lay presence that I encountered in ambulance staff descriptions of performing cardiopulmonary resuscitation in the out-of-hospital context of care. Descriptions pertaining to the pre-hospital environment appeared to suggest spontaneity of presence, greater freedom of movement for lay people to enter or leave the scene and less control over who and how many people were present. This was particularly evident when the cardiopulmonary resuscitation attempt occurred in a public place. However, an interesting observation was that ambulance staff appeared to exert more control over lay people when the space in which they were providing emergency resuscitative care became enclosed, such as a restricted space in the home or in the back of an ambulance. In such cases, the behaviour of manipulation was used in an attempt to reduce the potential for hindrance at the scene by keeping lay people at a distance, for example, placing them in a front seat of the ambulance or by keeping them occupied with tasks.

It was my belief that some accident and emergency healthcare staff may argue a legitimate authority to deny family members access to their loved one during a resuscitation attempt, given the professional position they hold. Both ambulance staff and first-level registered nurses recalled situations where they exerted authority in the interests of those who were

receiving emergency resuscitative care. In such cases, authority was used to maintain control of the emergency care situation at the scene or within the space that was occupied. The supposition of legitimate authority also materialised in the life-world of first-level registered nurses who recalled situations where access into the resuscitation room was denied because of legal and forensic concerns. In such cases, control was exerted by the police; a form of authority that I had not come across in previous literature on this topic. I also assumed that accident and emergency healthcare staff would question whether a lay person could possibly understand the complexities of emergency resuscitative care, when compared to their own knowledge, skills and experience. This was borne out in participant descriptions which considered lay people to be ignorant of the interventions associated with an adult cardiopulmonary resuscitation attempt. Perceptions regarding a lack of public knowledge and understanding appeared to reduce participant fears about lay people witnessing their interventions and gave indication as to why some ambulance staff and first-level registered nurses were perhaps more willing than others to support lay presence.

Professional dominance was also evident in participant descriptions which portrayed the use of ethical reasoning to determine the appropriateness of lay presence during an adult cardiopulmonary resuscitation attempt. Consistent with the recommendations of the Resuscitation Council (UK) (1996), analysis of emergency resuscitative care situations included consideration for the welfare of lay people who were exposed to this situation, the patient undergoing resuscitation and colleagues who were members of the resuscitation team. Acts of interference with lay autonomy were seen to be justified in the interests of patient welfare and it was possible to see how lay people were overlooked by a sense of clinical urgency and a duty of care to the victim in cardiorespiratory arrest. Actions that focused on

prioritising the medical needs of the patient reminded me of the survival resuscitation perspective which Timmermans (1997) portrayed as the uninterrupted flow of resuscitation protocols to reverse the threat of imminent death. Benevolent actions on the part of ambulance staff and first-level registered nurses primarily resulted in lay people either being encouraged to avoid the scene of a cardiopulmonary resuscitation attempt, denied access or withdrawn from the situation. There was however, some evidence to suggest that first-level registered nurses would advocate on behalf of family members in situations where lay presence was judged to be appropriate. Ethical decision-making in the interests of patient welfare included application of the principles of privacy and dignity in response to the situation of exposure and the implementation of measures that sought to provide protection.

An outcome of the use of authority and influence on the part of ambulance staff and first-level registered nurses was lay compliance at the scene of an adult cardiopulmonary resuscitation attempt. Participants gave example of situations where lay people subserviently followed their advice and directives. Furthermore, it was reasoned that lay people respected and welcomed professional expertise and authority when confronted with a traumatic situation. Autocracy in the environment of secondary (in-hospital) care was identified by some participants as a façade to lay people recognising their rights and making known their wishes regarding entry into the resuscitation room.

11.1.3 The life-world existential of lived body

The life-world existential of corporeality served as a guide to interpreting the actions and reactions of ambulance staff and first-level registered nurses when the lived body became ‘the object of someone else’s gaze’ (van Manen, 1997, p.104). Among the participant descriptions

there was attentiveness to the ‘exposure of self’ when performing adult cardiopulmonary resuscitation in the presence of lay people. Some participants appeared hypersensitive to the presence of lay people, concerned about the possible repercussions of self-disclosure, aware of a change in atmosphere and weighed down with responsibilities beyond the delivery of emergency resuscitative care. In other words, lay presence appeared to create **disquiet** for the providers of emergency resuscitative care.

Participants conveyed an awareness of ‘being watched’ by those who were present at the scene and the strength of awareness was such that some ambulance staff experienced lay presence even when individuals were out of sight. An interesting finding was the frequency to which participants referred to the perception of being watched. On the contrary, there is evidence to suggest that family members focus their attention on their loved one and identify this as a reason for entering the resuscitation room rather than to observe the techniques of the staff involved (Dobson, 1996; Meyers *et al.*, 1998; Robinson *et al.*, 1998; van der Woning, 1999). In the pre-hospital context of care, lay presence was depicted in terms of spectators or an audience involving a multitude or small number of people. This gave the impression of cardiopulmonary resuscitation as a performance and helped me to understand why participants identified practical experience and confidence in emergency resuscitative care as important to the situation of lay presence. Participants provided compelling descriptions of situations where the presence of lay people generated feelings of unease and discomfort, particularly when it was recognised that the resuscitation attempt was futile and/or that death was imminent. The phrase of ‘feeling uncomfortable’ was also applied to situations where the resuscitation did not go to plan. I interpreted a sense of unrest with the outcome of failing to revive the victim in cardiorespiratory arrest, the immediacy of lay presence which led to the

direct disclosure of death at the scene and the breaking of bad news about a sudden death without the time for rehearsal.

Participant descriptions were also laden with apprehension about the possible repercussions of lay presence at the scene of an adult cardiopulmonary resuscitation attempt and included concerns about the prospect of complaint, litigation and misinterpretation of the situation by lay people. These findings correspond with perceived concerns regarding medico-legal implications and professional issues (Back and Rooke, 1994; Stewart and Bowker, 1997; Timmermans, 1997; Offord, 1998; Fulbrook, 1998; Rosenczweig, 1998; Helmer *et al.*, 2000; Goodenough and Brysiewicz, 2003; Baskett and Lim, 2004; Booth *et al.*, 2004; Ong *et al.*, 2004; Yanturali *et al.*, 2005). This caused some ambulance staff and first-level registered nurses to approach lay presence with trepidation and served as a trigger for actions and behaviours that were orientated towards the practice of separation. However, given that there was no suggestion or disclosure of legal ramifications as a consequence of this practice, this course of action was arguably unfounded.

Participants also described how lay presence during an adult cardiopulmonary resuscitation attempt added to the pressure of their performance and created additional stress. Previous studies have shown that staff perceive an increase in stress (Doyle *et al.*, 1987; Redley and Hood, 1996; Timmermans, 1997; Helmer *et al.*, 2000; Goodenough and Brysiewicz, 2003; Weslien and Nilstun, 2003; Mian *et al.*, 2007) and have presented this as a major argument against the practice of family-witnessed resuscitation (Ong *et al.*, 2004; Yanturali *et al.*, 2005). In this study, ambulance staff and first-level registered nurses experienced additional pressure as a side-effect of lay presence. Anxiety was embedded in participant descriptions,

and I sensed that there was no room for the exposure of personal vulnerability in challenging situations. First-level registered nurses specifically referred to the additional stress that occurred due to a change in atmosphere and staff conduct when lay people were present in the resuscitation room. It was perceived that coping mechanisms such as a carefree approach to communication and the use of humour were under threat and a curtailed conversation was required when discussing care interventions. Some first-level registered nurses reflected on the situation of family presence as a humanising experience. However, similar to the findings of Hanson and Strawser (1992), participants portrayed an embodiment that appeared to increase the emotional burden of lay presence. Ambulance staff also described specific reactions such as hysteria, crying and insistence which I interpreted as distracting. This concurs with the seminal work of Doyle *et al.* (1987) who reported that some staff found it difficult to deal with the family's grief during resuscitative efforts.

Expressions of disquiet were also portrayed in ambulance staff descriptions that identified situations of hindrance in the out-of-hospital context of care. The potential for adverse effects on the resuscitation process is known to be a source of staff resistance to family presence (Back and Rooke, 1994; Mitchell and Lynch, 1997; Timmermans, 1997; Helmer *et al.*, 2000; Goodenough and Brysiewicz, 2003; Booth *et al.*, 2004; Ong *et al.*, 2004; Yanturali *et al.*, 2005; Mian *et al.*, 2007). However, ambulance staff in this study gave example of the ways in which they would use their knowledge, skills and experience to manage and overcome such situations. I did, however, interpret a degree of role conflict for participants who were tasked with the multiple responsibilities of providing emergency resuscitative care, maintaining a safe environment, and responding to the needs of lay people who were present at the scene.

11.1.4 The life-world existential of lived time (part one)

The life-world existential of lived time guided the examination of past, present and future dimensions of lay presence during an adult cardiopulmonary resuscitation attempt. Part one focuses on the discussion of past and present dimensions and future dimensions are examined in part two (commencing on page 257). **Preparation** for lay presence materialised in four defining ways: (1) the mechanisms by which lay people were introduced to or prepared for presence during an adult cardiopulmonary resuscitation attempt; (2) activities that served to prepare or get ready for lay presence; (3) assessment of the situation in preparation for or against lay presence and (4) being prepared to support lay people who were exposed to an adult cardiopulmonary resuscitation attempt. The concept of preparation and the provision of support for those who are present are featured in most European and American guidelines that aim to provide a systematic and co-ordinated approach to this practice (Resuscitation Council (UK), 1996; Emergency Nurses Association, 2001; Royal College of Nursing, 2002; American Association of Critical-Care Nurses, 2004; American Heart Association, 2005a; Baskett *et al.*, 2005; Fulbrook *et al.*, 2007).

Participants appeared to concede that prior exposure to a cardiopulmonary resuscitation attempt was a source of preparation for lay people. Television has been recognised as an important source of information about cardiopulmonary resuscitation (Diem *et al.*, 1996; van der Woning, 1997; Hadfield-Law, 1999; Grice *et al.*, 2003) and acknowledgement was given to the fact that lay recognition and understanding could be achieved by proxy. However, this did not appear to influence or inform the assessment process regarding lay presence at the scene. Similarly, several participants referred to situations where lay people had been exposed to the reality of cardiopulmonary resuscitation in the pre-hospital setting. However, this fact

also appeared to be overlooked in the secondary (in-hospital) context of care. Many first-level registered nurses talked about the importance of setting the scene and obtaining the agreement of staff before allowing lay people entry into the resuscitation room. A lack of time and reduced availability of manpower resources were identified as obstacles to effective preparatory activity. Time was also brought into the equation in terms of the clinical urgency of the situation. Lay people were sometimes hurried into the resuscitation room without preparation because death was imminent. Alternatively lay presence was not considered to be an option or was denied due to the perceived lack of time for preparation.

Both ambulance staff and first-level registered nurses gave example of situations where they would engage in a process of deliberation about lay presence as the situation occurred. In the out-of-hospital context of care, ambulance staff would assess the suitability of lay involvement and carry out a surveillance of the scene to maintain a safe environment. In contrast, first-level registered nurses carefully considered the appropriateness of lay people entering the resuscitation room, based on an initial assessment of the character of potential witnesses and their standard of behaviour. This practice is seen to be in accordance with publicised guidelines which acknowledge the importance of assessment to ensure uninterrupted resuscitative care (Resuscitation Council (UK), 1996; Royal College of Nursing, 2002; American Association of Critical-Care Nurses, 2004; Fulbrook *et al.*, 2007). The American Heart Association (2005a) also recommends offering 'select' family members the opportunity to be present during attempted resuscitation. The outcome of assessment meant that some lay people did not enter the resuscitation room due to the potential for disruption. The same principles of assessment were applied to those who entered the resuscitation room and ongoing monitoring was carried out to determine whether individuals

would be allowed to remain present or removed from the scene. Some participants expressed ambivalence about lay presence in the absence of knowing the patient's preference. The decision-making process regarding access was undoubtedly influenced by the communication behaviour of some lay people who either verbally or non-verbally expressed their desire or made clear their intent to enter the resuscitation room. In such cases it was apparent that their appearance and resolve paid off.

The incidence of lay presence in the secondary (in-hospital) environment of care was influenced by additional factors which were taken into consideration at the point of initial assessment. A key issue was the nature of the cardiopulmonary resuscitation attempt, with the likelihood of lay presence reducing as the severity of injury and invasiveness increased. The timing of lay presence in the resuscitation room was also discussed in relation to different phases of the cardiopulmonary resuscitation attempt. Unlike the pre-hospital setting, decisions were made about stabilising the patient or waiting for a lull in activity before lay people made an appearance. Previous studies have also drawn attention to the nature and phase of the resuscitation as determinants of family presence during the resuscitation attempt (Redley and Hood, 1996; Helmer *et al.*, 2000; Ong *et al.*, 2004).

First-level registered nurses gave example of situations where family members entered the resuscitation room once it was recognised that the cardiopulmonary resuscitation attempt was futile and death was imminent. For others, entry was delayed until death had been confirmed. Environmental issues of safety and space in the resuscitation room were presented as reasons for either averting lay presence or restricting the number of people at the scene. Concern about the limited amount of space available to accommodate relatives in the resuscitation

room has been raised (Timmermans, 1997; Macy *et al.*, 2006) and Booth *et al.* (2004) cited this as a reason for not allowing family-witnessed resuscitation in accident and emergency departments within the UK. Some ambulance staff also discouraged lay presence in the back of the ambulance for reasons of safety and the perceived lack of space. Placing people in the front of the ambulance was a compromise that some participants were willing to make.

In the environment of secondary (in-hospital) care, mechanisms of support were regarded as integral to the situation of exposing lay people to an adult cardiopulmonary resuscitation attempt. A key feature in the seminal work of Doyle *et al.* (1987) was the provision of support for family members who were present at the scene of a resuscitation attempt. Furthermore, this has featured in subsequent studies (Back and Rooke, 1994; Chalk, 1995; Booth *et al.*, 2004; Kirchhoff *et al.*, 2007; Mian *et al.*, 2007) and in the practice guidelines previously cited. First-level registered nurses portrayed life-world situations where a designated nurse was allocated the role of supporting lay people at the scene of an adult cardiopulmonary resuscitation attempt. Support was put in place to ensure that the person was not alone and/or to give them access to someone who could explain interventions, provide understanding and answer questions. The designated person was usually supernumerary to the resuscitation team and in the scenarios presented, a qualified nurse, a nurse support worker or an anaesthetist fulfilled this role. In the out-of-hospital context of care, support for lay persons who were present at the scene of an adult cardiopulmonary resuscitation was integrated, i.e. part of the person's role when performing cardiopulmonary resuscitation as opposed to someone intentionally being allocated to perform this task. Ambulance staff gave numerous examples of situations where support in the form of providing information, giving explanation and

responding to questions all took place amidst the activity of performing life-saving interventions.

A precursor to lay presence in the in-hospital context of care involved situations where family members arrived with the ambulance crew or were already in attendance within the accident and emergency department when the cardiorespiratory arrest occurred. The vividness of the scenarios provided reminded me of the natural occurrence that was portrayed in ambulance staff descriptions of lay presence in the out-of-hospital context of care; devoid of preparatory activity, in full view as a result of proximity and without any real or perceived barriers in place. This finding left me questioning whether guidelines which talk of the importance of preparing for a situation of lay presence at the scene of a cardiopulmonary resuscitation attempt are in fact reducing the opportunity for it to occur. I am not suggesting that ambulance staff in the pre-hospital environment of care lacked preparation for lay presence. On the contrary, I found myself experiencing an innate event where lay presence was accepted as the norm in the pre-hospital setting. Mortelmans *et al.* (2009) reported a significant positive attitude towards the practice of family presence in staff members with pre-hospital experience and attributed this to their familiarity of working in the presence of family members or bystanders.

11.1.5 The life-world existential of lived time (part two)

The life-world existential of lived time also guided the examination of future dimensions of lay presence during an adult cardiopulmonary resuscitation attempt. A connectedness with future dimensions was revealed in participants' descriptions of the perceived effects of **exposure**. Participants discussed the effects of lay people having contact with the sights and

sounds of a cardiopulmonary resuscitation attempt in both positive and negative terms. They also considered the effects of lay presence from a personal perspective and in the wider context of emergency resuscitative care. Participants talked about the chaotic scene of cardiopulmonary resuscitation and negatively labelled the nature of the interventions that they performed. Their own perceptions of cardiopulmonary resuscitation as a violent, barbaric and brutal act appeared to provoke concern that lay people would be exposed to negative imagery that could have a lasting effect. A frequently-cited concern in previous studies is the belief that the witness will be exposed to a traumatic experience (Redley and Hood, 1996; Mitchell and Lynch, 1997; Weslien and Nilstun, 2003; Goodenough and Brysiewicz, 2003; Booth *et al.*, 2004; Ong *et al.*, 2004; Yanturali *et al.*, 2005; Macy *et al.*, 2006; Mian *et al.*, 2007; Mortelmans *et al.*, 2009). Both ambulance staff and first-level registered nurses gave example of specific situations where lay presence at the scene of an adult cardiopulmonary resuscitation attempt became an ordeal for the experiencing person. However, in the absence of the lay person's perspective, it is not known whether participant descriptions of personal suffering are attributed to the nature of the interventions at the scene of cardiopulmonary resuscitation or the tragic circumstance of cardiorespiratory arrest which could result in the sudden death of a loved one. Some participants also perceived the potential for raised expectations and false hope as a consequence of lay exposure to the effort put in to reviving the person in cardiorespiratory arrest and the pattern of events. Uncertainty about the perceived negative effects created a quandary for one first-level registered nurse. Formal evaluation on a local level to evaluate lay presence appeared to be non-existent and participants appeared unaware of the research evidence available to them.

In contrast, participants presented graphic detail of situations where lay presence was perceived to be of personal benefit to the experiencing person. It was suggested that exposure to an adult cardiopulmonary resuscitation attempt was instrumental in helping lay people to come to terms with the seriousness of the situation; provided opportunity for them to gain an appreciative understanding of the life-saving interventions performed and prepared them for the possibility of imminent death. Some ambulance staff and first-level registered nurses provided examples from the life-world that confirmed their belief in the adage; 'seeing is believing'. This included the suggestion from one participant that presence at the scene of a cardiopulmonary resuscitation attempt offered the personal benefit of hope. Commentaries, which lend support to the practice of family presence during a resuscitation attempt, recognise that observer presence gives relatives an opportunity to gain a realistic view of attempted resuscitation and the possible outcome of death (Post, 1989; Martin 1991; Cox, 1993; Whitlock, 1994; O'Shea, 1999). Previous researchers have also reported on the perceived benefits of exposure to a resuscitation attempt. It is claimed that individuals have the opportunity to see that everything possible is done (Timmermans, 1997; Weslien and Nilstun, 2003; Ong *et al.*, 2004) and, in the event of an unsuccessful outcome, this could facilitate mourning (Weslien and Nilstun, 2003), grieving (Mortelmans *et al.*, 2009) and the acceptance of death (Doyle *et al.*, 1987; Yanturali *et al.*, 2005). Despite the perceived existential nature of the situation for the patient receiving emergency resuscitative care, there was some indication of possible benefits, including the suggestion that the victim in cardiorespiratory arrest was not alone at the time of death. I personally found participant descriptions of family presence at the scene of an adult cardiopulmonary resuscitation attempt extremely moving when the reality of death as outcome of this situation was portrayed. I had no reason to question the genuineness of the lived-experience material provided by participants. However, the intimate

scene of ‘togetherness’ in anticipation of a sudden cardiac death, for me, were among the most authentic descriptions. Some ambulance staff also perceived the outcomes of comfort and fulfilment for lay people who actively contributed to the resuscitation attempt.

In contrast to the perception of ‘being watched’, both ambulance staff and first-level registered nurses talked about being immune to the presence of lay people. For ambulance staff, this was attributed to following an established protocol of interventions that focused their attention on the patient who required emergency resuscitative care. Practical experience and confidence in emergency care appeared to influence participants’ ability to cope with the presence of lay people during an adult cardiopulmonary resuscitation attempt, reducing the threat of exposure and equipping them with experiential knowledge and skills to effectively manage the situation. Previous studies have associated training, experience and/or confidence with higher rates of endorsement for the practice of family-witnessed resuscitation (Mitchell and Lynch, 1997; Bassler, 1999; Yanturali *et al.*, 2005, Mian *et al.*, 2007; Mortelmans *et al.*, 2009). The sanctioning of lay presence during an adult cardiopulmonary resuscitation attempt in the secondary (in-hospital) environment of care was undoubtedly influenced by prior exposure to this situation and retrospective analysis of emergency resuscitative care delivery in practice. Some first-level registered nurses questioned the divergence in policies and procedures regarding adult and parental presence in the resuscitation room and raised uncertainty about the practice of separating family members from their loved one at such a critical time. Contrary to participant concerns about exposing lay people to the frenetic activity associated with a cardiopulmonary resuscitation attempt, first-level registered nurses gave example of situations where lay presence had a calming effect on the atmosphere in the resuscitation room. Expressions of disquiet appeared to be substituted for acceptance when

the presence of lay people had a performance enhancing effect on the delivery of emergency resuscitative care interventions. The notion of complaint by lay persons was also presented in a different light by one participant who clearly illustrated the potential for lay people to conjure up their own interpretation of the events surrounding cardiopulmonary resuscitation when excluded from the reality of the situation. This participant was not alone in describing the time and effort that was taken to prepare a patient in readiness for people seeing their loved one once death had been confirmed. However, what came through in this particular description was the potential for misunderstanding when activities in the intervening period between dying and death are hidden and/or the evidence is removed. The process of interviewing provided all participants with an opportunity to engage in phenomenological reflection on their past lived experiences. For some participants it was apparent that retrospection during the interview enabled them to reach the conclusion that lay presence during an adult cardiopulmonary resuscitation attempt was of no detriment to the smooth running of the cardiopulmonary resuscitation attempt or of concern to those who were responsible for providing this care.

11.2 Concluding discussion

Meaning, for participants in this phenomenological study was reflected in the five concepts that represented the nature of the lived experience of lay presence during an adult cardiopulmonary resuscitation attempt, namely; respect, dominance, disquiet, preparation and exposure. However, I believe that the essence of this phenomenon belongs to the concept of exposure. This concept was visible in each unifying theme and collectively emerged in three defining ways: (1) the exposure of self when performing adult cardiopulmonary resuscitation in the presence of lay people; (2) exposure of lay people to the interventions associated with

this event and (3) exposure of the person receiving emergency resuscitative care in the presence of others. This suggests that decision-making regarding this phenomenon is not limited to a single viewpoint. Rather, it involves a complex interaction between three interrelated and affected parties.

Each participant recalled one or more life-world situations where lay presence happened either spontaneously or as a planned event. This gave reassurance regarding the validity of the phenomenological description, alongside indication of lay presence during an adult cardiopulmonary resuscitation attempt in practice. Although many of the findings were common across the interviewees, I detected variation in participants' descriptions of this phenomenon. Divergent practices that emerged within and across the two contexts of care are presented in Figure 10 (see page 264). This illustrates the power differentials that I interpreted as happening in the life-world.

Some contradiction in individual descriptions of the lived experience was also evident; an outcome that I reason as being indicative of the overall level of quandary that existed in participants' recollections of performing emergency resuscitative care in the presence of lay people. Participants' descriptions of events appeared to fluctuate between personal and organisational perspectives and I recognise that this may have contributed to apparent inconsistencies in and among the findings. On the one hand, I interpreted personal support for this practice and certainly there was evidence to suggest that individuals would accommodate lay people who had a desire to enter, leave or remain at the scene. Furthermore, it was apparent that lay presence occurred in the pre- and in-hospital environment of care without any detriment to the smooth running of the cardiopulmonary resuscitation attempt. However,

organisational constraints, including a lack of time and availability of manpower resources, and environmental issues such as safety and space were seen as obstacles to the practice of lay presence, particularly so in the secondary (in-hospital) environment of care. Uncertainty about what constituted best practice and concern about the possible ramifications of exposure, also featured in participant descriptions. It was also apparent that the perceived benefits of presence for lay people had the potential to create tension for healthcare staff. For example, the witnessing of 'life-saving' interventions was perceived as positively enabling individuals to gain an appreciative understanding of attempted resuscitation, yet at the same time, this created feelings of unease and discomfort for the providers of emergency resuscitative care, particularly when it was recognised that the resuscitation attempt was futile, that death was imminent or the resuscitation did not go to plan. Expressions of disquiet about lay presence were therefore interpreted as being of self-importance at times. It was interesting to find that despite frequent exposure to lay presence in the pre-hospital setting, ambulance staff were not necessarily immune to the perceived effects of exposure. Only one participant gave example of an organisational philosophy that was orientated towards lay presence in the resuscitation room. This is contrasted with participant descriptions in the out-of-hospital context of care, where lay presence during an adult cardiopulmonary resuscitation attempt appeared to be accepted as the norm and embedded in day-to-day practice. I interpreted two separate phases of emergency resuscitative care, pre- and in-hospital, even though the reason for performing 'life-saving' interventions was the same. This lack of continuity in care did not go unrecognised by some ambulance staff and their frustration with the practice of 'separation' in the secondary (in-hospital) environment was evident. This drew my attention to the unfavourable situation of disharmony among members of the emergency care service when practices differed according to the environment of care.

Figure 10 Divergent practices within and across contexts of care

Natural event Lay presence at the scene of an adult cardiopulmonary resuscitation attempt either spontaneously or unconsciously.	←	→	Planned event Lay presence at the scene of an adult cardiopulmonary resuscitation attempt either via invitation, by lay request or on demand.
Presence Lay people at the scene of an adult cardiopulmonary resuscitation attempt and in full view of the interventions being performed.	←	→	Separation Lay people placed in a separate location during an adult cardiopulmonary resuscitation attempt.
Active role Lay people as participants at the scene of an adult cardiopulmonary resuscitation attempt, either voluntarily or as a result of invitation.	←	→	Passive role Lay people as observers at the scene of an adult cardiopulmonary resuscitation attempt.
Freedom Lay people at liberty to enter, remain or leave the scene of an adult cardiopulmonary resuscitation attempt. Unrestricted number of people present.	←	→	Control Real or perceived barriers that restrict access to the victim in cardiorespiratory. Increase in lay subservience.
Empowerment Facilitating lay presence at the scene of an adult cardiopulmonary resuscitation attempt in accordance with lay requests to be present. Decrease in the display of professional dominance.	←	→	Disempowerment A commanding influence in the environment of care inhibits lay presence at the scene of an adult resuscitation attempt, despite lay requests to be present. Increase in the display of professional dominance.
Integrated support Support for lay people at the scene of an adult cardiopulmonary resuscitation attempt is integral to the role of providing emergency resuscitative care.	←	→	Designated support A member of staff, external to the resuscitation team is nominated to provide support to lay people at the scene of an adult cardiopulmonary resuscitation attempt.
Innate practice Lay presence during an adult cardiopulmonary resuscitation attempt is accepted as the norm.	←	→	Considered approach Lay presence during an adult cardiopulmonary resuscitation attempt is dependent on professional judgement. Incidence may vary according to subjective preferences.

11.3 Chapter summary

This study is one of few to explore the practice of lay presence during an adult cardiopulmonary resuscitation attempt by examining the life-world of those who have experienced this situation. The findings shed further light on some of the previously reported attitudes and opinions regarding this practice. This was achieved by providing insight into and reflections on the lived experience. In the following chapter, conceptual understanding of the concept of witnessed resuscitation is advanced as the findings originating from this phenomenological study are synthesised with the insights derived during theoretical investigation.

CHAPTER TWELVE

THE SYNTHESIS OF NEW INSIGHTS

12.0 Chapter overview

In this chapter, research findings that emerged through theoretical and existential investigation are compared by adapting a method of template comparison proposed by Hupcey and Penrod (2003). The primary goal is to advance the concept of witnessed resuscitation through the synthesis of new insights. The chapter reports on the process and outcomes of template comparison and presents a synthesised conceptualisation of witnessed resuscitation of a higher level of abstraction for research application and practical use. This includes a revised set of defining attributes and an advanced theoretical definition of witnessed resuscitation. The limitations of this conceptually based study are presented and the implications of this research for healthcare practice and education are discussed. The chapter concludes by providing insight into areas for further investigation, directed towards continued advancement of the concept of witnessed resuscitation and its application in practice.

12.1 The process of template comparison

Hupcey and Penrod (2003) identify template comparison as a method of synthesising research findings that are derived from successive studies of the same concept. The process requires the researcher to develop a template or categorical schema of the research findings for each study and comparison is carried out with the following intentions:

1. To verify the findings obtained from discrete studies;

2. To identify areas of incongruence;
3. To generate universal structural features of the concept;
4. To provide insight into further areas of investigation.

Hupcey and Penrod (2003) draw attention to the use of this method for the synthesis of qualitatively derived findings. It was therefore acknowledged that movement away from the original ideas of the authors would be necessary to allow for comparison and synthesis of primary, qualitative research findings with secondary data derived from a variety of sources. To support this decision, two conceptually based studies involving template comparison of data sets were reviewed to determine if this was workable (Sadler, 2000; Penrod, 2007). Both studies produced a refined understanding of the concept under investigation. This was achieved through the synthesis of interview findings with secondary data that had originated from diverse sources. A further underlying premise in the use of this method is the development of knowledge in an incremental and cumulative fashion. An important initial step in the development of knowledge in this study involved the process of clarifying the meaning of witnessed resuscitation in its current use. This was achieved through the use of Rodgers (1989, 1991, 2000a) evolutionary method of concept analysis which views concept analysis as a starting point for further inquiry. This was followed by a critical review of international research studies to further develop conceptual understanding of the concept of witnessed resuscitation by drawing on past empirical research as a source of data. These two theoretical approaches to investigation provided a foundation on which to base new knowledge. Understanding of the meaning of the concept of witnessed resuscitation was advanced through a phenomenological study of lay presence during an adult cardiopulmonary resuscitation attempt. This phase of the study was conducted to explore the lived experience

of this phenomenon from the perspectives of ambulance staff and first-level registered nurses who had experienced this situation.

Template comparison also requires the researcher to work inductively from one study to the next and only compare the final template of results. Effort to maintain an inductive approach during existential investigation was made by limiting the number of codes in the coding framework to three, thus facilitating a process of discovery. Each source of lived-experience material was also analysed separately, commencing with the analysis of interviews undertaken with ambulance staff. Furthermore, deductive reasoning was countered by remaining open-minded to the discovery of new insights and by questioning the appropriateness of categorising new lived-experience material according to pre-existing premises. As such, the study appeared to fulfil most of the conditions required for template comparison to advance the concept of witnessed resuscitation to a higher level of abstraction. Hupcey and Penrod (2003) guide the analyst to look for a conceptual match in the study findings rather than a comparison of the research findings per se. This was achieved by focusing on the structural features of the concept of interest namely the antecedents, references, consequences and defining attributes.

12.2 Generating universal structures

12.2.1 Antecedents, references and consequences

The template for comparison and synthesis of the antecedents, references and consequences of witnessed resuscitation comprised the research findings derived from study two (critical literature review) and study three (phenomenological inquiry). Both studies determined the perspectives of accident and emergency healthcare staff and comprised research findings

only. Having progressed through each phase of the study in an evolutionary manner and in a direction that was orientated towards advancement, it appeared logical to place the findings from the phenomenological study as the dominant template, i.e. interpretive insights derived from the life-world were retrospectively compared with the structural features identified from the critical review of the literature. Beginning with the antecedents, the structural features in each template were critically compared to determine similarities and differences in the study findings. Overall, there was less information about the situations in which application of the concept of witnessed resuscitation was deemed to be appropriate (references), when compared to the information available on the factors which influenced experience with and support for this practice (antecedents) and the perceived effects of its occurrence (consequences). Areas of congruence were readily identifiable, although recognition appeared to be aided by the wording or labels used to describe particular features. For example, the terms preparation and support were used in each study to conceptualise components of healthcare staff activity prior to and during a witnessed resuscitation event.

The findings from the phenomenological study verified a number of perspectives that originated from the reported attitudes and opinions of accident and emergency healthcare staff. A key area of congruence in the **antecedents** of witnessed resuscitation included an apparent willingness to accommodate lay people at the scene of an adult cardiopulmonary resuscitation attempt. All participants in the phenomenological study were able to provide one or more examples of performing adult cardiopulmonary resuscitation in the presence of lay people and just under two-thirds of the respondents in the review of international research studies had experience of family or relatives presence during an adult resuscitation attempt. Examples from the life-world in the pre-hospital setting supported the perspective that lay

presence at the scene of an adult cardiopulmonary resuscitation attempt was commonplace. Similarly, there was agreement that familiarity of working with lay people in the out-of-hospital context of care and prior exposure to the phenomenon of lay presence during an adult cardiopulmonary resuscitation attempt influenced support for this practice. However, this is contrasted with descriptions of professional dominance that resulted in the conceptualisation of separation. The timing of lay presence also remained dependent on the nature and the phase of the cardiopulmonary resuscitation attempt. Preparation and support for lay presence, including an assessment of the characteristics and behaviour of lay people were also dominant features in the secondary (in-hospital) environment of care. There was also conformance with environmental issues such as a lack of space and manpower resources that resulted in missed opportunities for lay presence for either personal or practical reasons.

An area of agreement in relation to **references** included exposure of lay people to the situation as appropriate in terms of their resourcefulness as key informants. Analysis of the **consequences** of witnessed resuscitation indicated agreement among the findings that lay presence added to the pressure of performing cardiopulmonary resuscitation. This included the suggestion that lay people could hinder or distract members of the resuscitation team, thus adding to the burden of responsibility. Fears and concerns regarding medico-legal-professional ramifications prevailed, yet consistent with previous research findings, there were no reported instances of negative repercussions in the lived-experience descriptions. Participants in the phenomenological study portrayed an ability to cope with lay presence due to practical experience and confidence in emergency resuscitative care situations, which in turn, led to a sanctioning of this practice. This reflected reported findings arising from the critical literature review which associated training, experience and/or confidence with higher

rates of endorsement for the practice of family-witnessed resuscitation. Life-world examples that depicted situations where presence became an ordeal for lay people were also congruent with the opinion that family members would be exposed to a traumatic situation. There was also agreement that lay people would be exposed to disturbing imagery that could have a lasting effect. On the other hand, there was a consensus among the findings that presence at the scene of an adult cardiopulmonary resuscitation attempt enabled lay people to gain a realistic view and appreciative understanding of the life-saving interventions performed and prepared them for the possible outcome of sudden cardiac death.

The method of template comparison was also revealing of areas of incongruence. A repeated concern arising from the critical review of previous research was the opinion that family presence during a resuscitation attempt would have an adverse effect on the resuscitation process. This also included concern that abandoning a resuscitation attempt would become difficult in the presence of relatives, leading to prolonged resuscitative efforts. The phenomenological study refuted these perspectives. A new insight arising from the phenomenological study was the suggestion that lay presence had a performance enhancing effect on the cardiopulmonary resuscitation event. Furthermore, it was suggested that experience and confidence played a part in reducing the potential for undesirable effects.

The process of comparing the insights derived during phenomenological investigation with the findings identified in the critical literature review, culminated in a synthesis of the antecedents, references and consequences of witnessed resuscitation in areas where a conceptual match in the study findings could be achieved (see Table 12.0 - pages 272 and 273). Two basic premises arising from the phenomenological study, i.e. the nature and the

phase of the resuscitation have been reconceptualised as antecedents of witnessed resuscitation. Similarly, the basic premises, comprehend the situation, endorsement of lay presence and ability to cope have been reconceptualised as consequences of witnessed resuscitation as an outcome of this process.

Table 12.0 Template comparison and synthesis of the study findings

Antecedents		
<i>Critical Literature Review</i>	<i>Interviews</i>	<i>Synthesised theme</i>
Studies reporting respondent experience with family presence during resuscitation *1, 2, 3, 4, 9, 10, 11, 12, 14, 16, 18, 19, 22	Accommodating	Choice and facilitation
Staff opposition/resistance to family presence during resuscitation 5, 10, 11, 12, 14, 16, 17, 18, 19, 21, 22	Separation	Power and control
Phase of the resuscitation 4, 10, 14	Nature and phase of the cardiopulmonary resuscitation attempt	Assessing the situation
Preparation and support for relatives/family members 1, 2, 3, 13, 19, 20, 21	Setting the scene Preparatory activity	Preceding factors
	Availability of support	The provision of support
Safety of the environment 7, 13, 18	Deliberation	Assessing the situation
	Environmental issues	Assessing the situation
References		
<i>Critical Literature Review</i>	<i>Interviews</i>	<i>Synthesised theme</i>
Key informants 22	Key informants	Valuable resource

Table 12.0 Continued

Consequences		
<i>Critical Literature Review</i>	<i>Interviews</i>	<i>Synthesised theme</i>
Increase in staff stress 1, 4, 7, 10, 11, 12, 14, 16, 21	Added pressure	Pressurised performance
Inhibit staff performance 2, 5, 15, 17, 21, 22	Hindrance Distracting	An added burden
Legal repercussions 7, 10, 13, 14, 16	Apprehension	Being watched
Complaint from relatives 2, 7, 11	Apprehension	Being watched
Staff training 5, 8, 16, 21, 22	Ability to cope	Untroubled by presence
Experience of family presence during resuscitation 6, 15, 16, 18, 19	Endorsement of lay presence	Untroubled by presence
Psychological distress for relatives 4, 5, 11, 12, 13, 14, 16, 18, 21, 22	Disturbing imagery Ordeal	Emotional torment
Facilitating communication, understanding and acceptance of death 1, 7, 12, 14, 16, 22	Comprehend the situation Appreciative understanding Seeing is believing Preparation for imminent death	Of personal benefit

* Numbers **1-22** denote the following international research studies:

1 Doyle *et al.* (1987); **2** Back and Rooke (1994); **3** Chalk (1995); **4** Redley and Hood (1996); **5** Mitchell and Lynch (1997); **6** Belanger and Reed (1997); **7** Timmermans (1997); **8** Bassler (1999); **9** Boyd and White (2000); **10** Helmer *et al.* (2000); **11** Goodenough and Brysiewicz (2003); **12** Weslien and Nilstun (2003); **13** Booth *et al.* (2004); **14** Ong *et al.* (2004); **15** Engel *et al.* (2005); **16** Yanturali *et al.* (2005); **17** Compton *et al.* (2006); **18** Macy *et al.* (2006); **19** Kirchoff *et al.* (2007); **20** Madden (2007); **21** Mian *et al.* (2007); **22** Mortelmans *et al.* (2009).

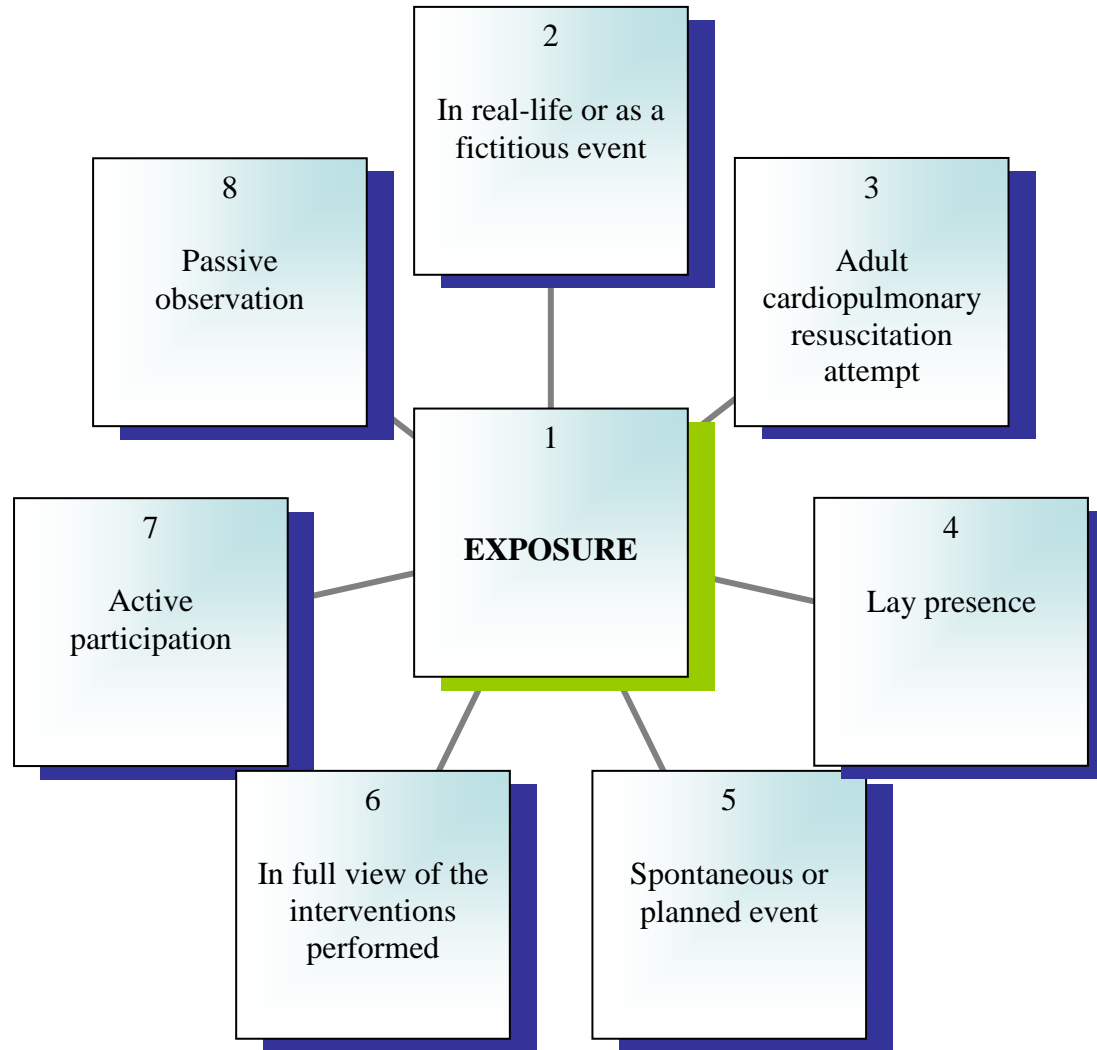
12.2.2 Defining attributes

The next stage of advancement was to compare the attributes of witnessed resuscitation derived during the evolutionary process of concept analysis with theoretical and experiential insights derived in subsequent studies. The original defining attributes were selected for comparison and revisions made (as required) to support the synthesis of new insights. A revised set of eight defining attributes which characterise the concept of witnessed resuscitation in the context of emergency resuscitative care for adult victims in cardiorespiratory arrest are presented in Figure 11 (see page 275). Each defining attribute is discussed in the context of the study findings.

1. Core attribute - Exposure

During the process of hermeneutic-phenomenological analysis, the concept of exposure emerged as the essence of the phenomenon of lay presence during an adult cardiopulmonary resuscitation attempt. 'The term 'essence' derives from the Greek *ousia*, which means the inner essential nature of a thing, the true being of a thing' (van Manen, 1997, p.177). Therefore, as depicted in Figure 11, exposure is presented as the core attribute of witnessed resuscitation. In other words, without lay exposure to an adult cardiopulmonary resuscitation attempt, witnessed resuscitation would not occur. In this sense, exposure serves as a dominant antecedent. Similarly, both the provider and recipient of emergency resuscitative care become exposed through the presence of others. Exposure may result in positive and negative effects (consequences) which in turn, may influence decision-making regarding situations in which it is deemed appropriate for a witnessed resuscitation event to occur (references).

Figure 11 Revised defining attributes of witnessed resuscitation



2. In real-life or as a fictitious event

Participants in the phenomenological study appeared to concede that prior exposure to a cardiopulmonary resuscitation attempt was a source of preparation for lay people and, consistent with the findings of the concept analysis, acknowledgement was given to the fact that lay people became witness to an adult cardiopulmonary resuscitation attempt in real-life or by proxy, such as a fictitious event on a television programme.

3. Adult cardiopulmonary resuscitation attempt

The concept analysis provided a broad conceptualisation of resuscitation, offering the perspective of witness presence in cases of respiratory and/or cardiac compromise, for example, during trauma or fluid resuscitation, or in situations which demanded the prompt restoration of a patent airway, spontaneous breathing and effective blood circulation due to respiratory, cardiac and/or cardiorespiratory arrest. The need to differentiate between witness presence during resuscitation and invasive procedures was acknowledged in the design of study two. However, despite maintaining a focus on resuscitation, the findings of the critical literature review revealed a lack of conceptual clarity regarding the nature of the resuscitation event, making it difficult to understand the full meaning and implications of the study findings. The procedure of cardiopulmonary resuscitation following a sudden cessation of spontaneous respiration and circulation was therefore selected for use in the phenomenological study. This allowed for a more precise definition of the nature of the interventions performed, and perhaps more importantly, a clearer understanding of the interventions that were witnessed by others. Maintaining a focus on cardiopulmonary resuscitation also helped to differentiate a clinical ‘death’ situation from a resuscitation event due to respiratory and/or cardiac compromise where the victim is ‘alive’ and possibly in a

conscious or semi-conscious state. It also helped to clarify the situation of performing invasive procedures in the presence of others. As illustrated in the phenomenological study, lay people were witness to the performance of invasive procedures. However, in every example provided, the procedures were an integral part of the cardiopulmonary resuscitation attempt. The defining attributes have been revised to reflect an adult cardiopulmonary resuscitation attempt, consistent with the focus of this inquiry.

4. Lay presence

Use of the term 'lay presence' was adopted for the phenomenological study to reflect the characteristics of the witness beyond the conceptualisation of family members or relatives. Consequently, this defining attribute embraces family, relatives, friends, neighbours and/or strangers who may be present at the scene of an adult cardiopulmonary resuscitation attempt. Rather than focusing on the relationship of the witness to the victim in cardiorespiratory arrest, the common denominator is the status of the witness as a lay person who is not part of an organised emergency response team.

5. Spontaneous or planned event

The phenomenological study was revealing of lay presence at the scene of an adult cardiopulmonary resuscitation attempt which came about either spontaneously, for example, a crowd of people in same location or as a planned event which occurred via invitation, by lay request or on demand. These two perspectives were prevalent regardless of the environment of care in which an adult cardiopulmonary resuscitation attempt took place and are therefore included as attributes which signify application and use of the concept in practice.

6. In full view of the interventions performed

The process of thematic analysis also uncovered the situation of sheltered presence. This incidental theme acknowledged that individuals may be within the vicinity of an adult cardiopulmonary resuscitation attempt but fail to fulfil the criteria of a witness when their view is either partially or fully obstructed. This finding has led to a revised attribute of witnessed resuscitation which requires the witness or witnesses to be in full view of the interventions performed at the scene.

7. Active participation

During the process of apprehending essential and incidental themes, the act of performing 'heroic' life-saving intervention was differentiated from the act of lay involvement alongside the emergency response team. This gave rise to a new conceptualisation of witnessed resuscitation that rejected the act of performing interventions prior to the arrival of an organised emergency response team as appropriate to the meaning of witnessed resuscitation. However, it was acknowledged that lay involvement was an antecedent to witnessed resuscitation. Participants in the phenomenological study gave example of lay people continuing resuscitative efforts alongside ambulance staff in the pre-hospital setting - a situation which clearly exposed individuals to an adult cardiopulmonary resuscitation attempt.

8. Passive observation

Consistent with the concept analysis, passive observation remains a defining attribute of witnessed resuscitation. However, this is no longer presented as a situation where the witness may adopt the role of passive observer. The phenomenological study revealed that lay people who were present at the scene of an adult cardiopulmonary resuscitation attempt in the

environment of secondary (in-hospital care) became passive observers as a consequence of professional dominance. In other words they were placed in this position as opposed to assuming it.

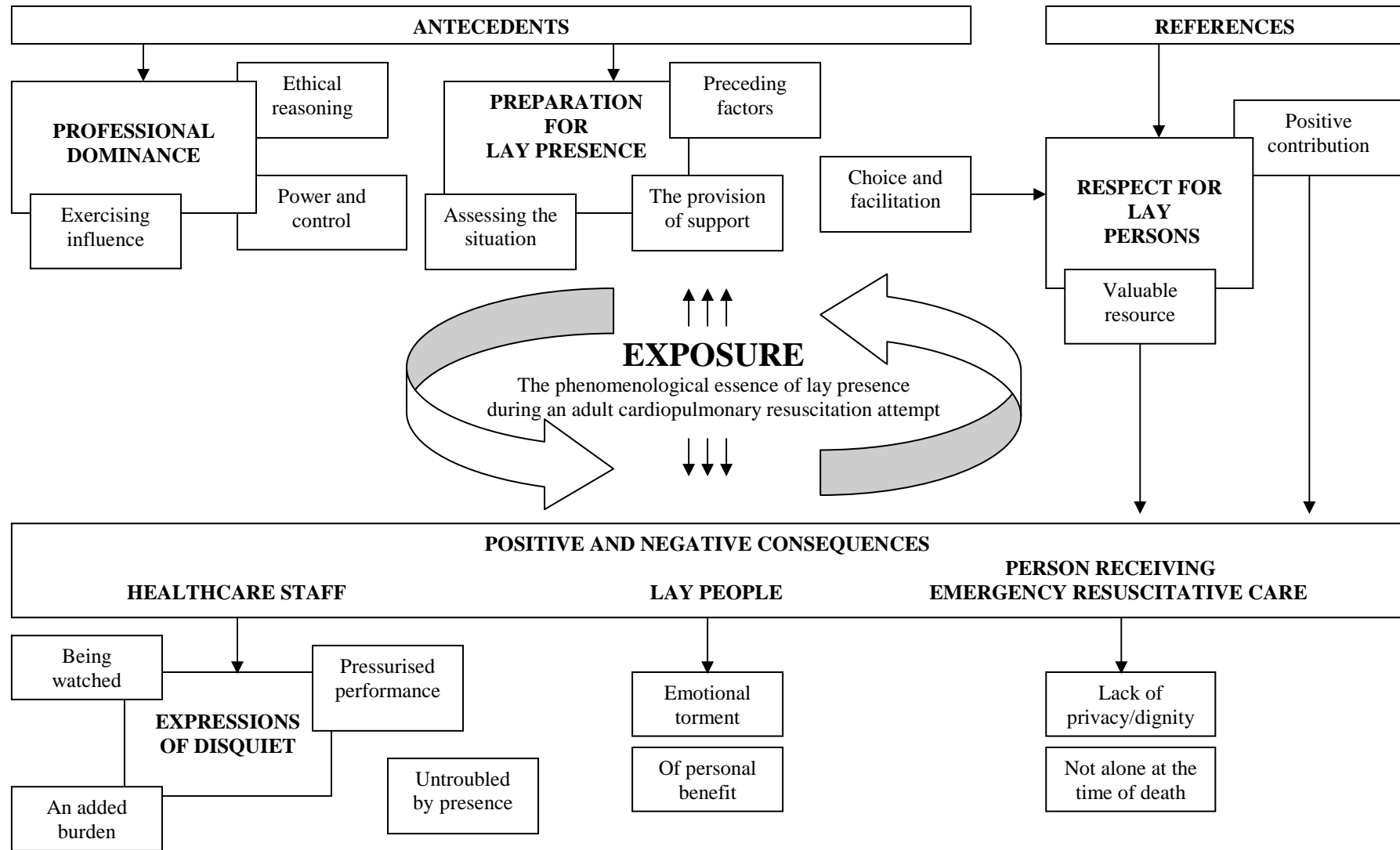
12.2.3 Advanced theoretical definition of witnessed resuscitation

A final outcome of this process was the development of an advanced theoretical definition of witnessed resuscitation (see box below). The tentative theoretical definition of witnessed resuscitation (see page 63) has been expanded to allow for the synthesis of new insights.

Witnessed resuscitation is the exposure of lay people to an adult cardiopulmonary resuscitation attempt in real-life or as a fictitious event. In a real-life situation, it occurs as either a spontaneous or planned event. The witness or witnesses are in full view of the interventions performed, and may take an active role at the scene alongside an emergency response team or become a passive observer. Members of an organised emergency response team are exposed to the presence of lay people whilst performing the procedure of adult cardiopulmonary resuscitation. The adult victim in cardiorespiratory arrest is exposed through the presence of others.

A synthesised conceptualisation of witnessed resuscitation of a higher level of abstraction is presented in Figure 12 (see page 280).

Figure 12 Synthesised conceptualisation of witnessed resuscitation



12.3 Study limitations

This conceptually based study has focused on developing understanding of the meaning of witnessed resuscitation in the context of emergency resuscitative care for adult victims of cardiorespiratory arrest. Consistent with methodologies employed in this study for conceptually based research, initial investigation examined the significance, use and application of witnessed resuscitation in a variety of contexts and across disciplines to provide a broad, yet tentative theoretical definition of witnessed resuscitation. This was followed by focused inquiry to develop and advance conceptual understanding in the context of accident and emergency care. In study two, the perspectives of accident and emergency healthcare staff were critically reviewed by using the literature as data and in study three, empirical investigation focused on obtaining life-world descriptions of the use of witnessed resuscitation from the perspectives of ambulance staff and first-level registered nurses. The limitation of focusing on two professional groups as opposed sampling members of the resuscitation team per se is acknowledged. It is also acknowledged that the results of this study which represent the perspectives of accident and emergency healthcare staff need to be balanced against the findings of previous research studies that have investigated relatives' and patients' preferences, the viewpoint of bereaved relatives and surviving patients, and the general public's stance on the issue of presence during a resuscitation attempt. International research on this topic also draws attention to the possibility of cultural variations in local, national and international healthcare systems that may account for differences in staff opinion and practices. Similarly, the findings of this study need to be considered in light of the context in which lay presence occurred, for example, the environment of primary (out-of-hospital) or secondary (in-hospital) care.

It is recognised that maintaining a focus on adult resuscitation throughout this study, may be viewed as a limitation by resuscitation team members who are exposed to lay presence during adult and paediatric resuscitation in the same environment of care. The term 'lay presence' was carefully selected for use in the phenomenological study. However, in hindsight, I recognise that the presence of family members during adult (or paediatric) resuscitation is arguably a more sensitive situation than the presence of a stranger at the scene. This study could, therefore, have been more discerning about the emotive meanings of presence with regard to the relationship of the witness to the victim in cardiorespiratory arrest. The proposed number of participants for interview in the phenomenological study was in part, based on the guiding principle of adequacy (Morse and Field, 1996). However, as acknowledged in chapter nine, saturation was not achieved for practical reasons associated with the recruitment of participants. The study sample of eight ambulance staff and ten first-level registered nurses places limitations on the breadth of the study findings and it cannot be assumed that the lived experience of the phenomenon of lay presence during an adult cardiopulmonary resuscitation attempt has been captured in its entirety. However, I believe that the naturalistic design of the study helped to address this concern by taking a dynamic perspective regarding truth and by giving due respect to the notion that reality is not a static entity. Hence, it is recognised that participant descriptions of the life-world are likely to change and develop over time, bringing new and potentially different meanings into view.

12.4 Implications for healthcare practice and education

A key feature throughout this study has been the level of controversy surrounding the concept of witnessed resuscitation in relation to existing and new knowledge. The findings indicated divergent practices within and across the context of primary (out-of-hospital) and secondary

(in-hospital) care and I was left with an overall impression that concern about the possible ramifications of exposure was responsible for the degree of opposition from accident and emergency healthcare staff. Much of the existing evidence, however, was based on opinion and conjecture. Furthermore, new insights challenged the belief that lay presence had an adverse effect on the resuscitation process. This clearly has implications for the development and implementation of evidence-based practice to strengthen and support effective clinical decision-making and reduce deliberation. A further consideration is the development of a philosophy that promotes continuity in the care provided to lay people at the scene of an adult cardiorespiratory arrest, regardless of the context in which it is provided. This study has provided an advanced conceptualisation of witnessed resuscitation for research and practical use. Clinicians, educators and researchers are therefore encouraged to apply the findings of this study to ensure that the assumed meaning of witnessed resuscitation is consistent. Collaborative working across the boundaries of care and the development of locally agreed practice guidelines are also fundamental to standardising practice. An organisational commitment to lay presence within the context of care is also required to overcome some of the barriers that currently impede the use of this concept in practice.

I believe that the concept of witnessed resuscitation is likely to receive increased attention given the current emphasis on promoting high quality care for all adults at the end of life (Department of Health, 2008). Furthermore, ensuring that healthcare staff have the necessary knowledge, skills and attitudes related to the care of the dying is critical to the success of this strategy. The significance of the concept of witnessed resuscitation needs to be embedded in education programmes that seek to bring about a changing culture towards improved patient choice and control over end-of-life issues. Admittedly, not all patients who experience a

cardiorespiratory arrest will die, but the statistics indicate that the majority do. This suggests a need for healthcare staff to look beyond the immediacy of the emergency care situation in anticipation of the outcome of sudden cardiac death. The philosophical position of existential inquiry is intended to promote learning by providing a greater understanding of the meaning given to the concept of witnessed resuscitation from the perspective of those who have experience of its use in everyday clinical practice. I therefore encourage readers to engage in a process of critical reflection on the lived-experiences presented and to carefully consider for themselves, the full meaning and implications of the study findings in relation to user involvement and the provision of patient and family-centred end-of-life care. Those engaged in emergency resuscitative care are also encouraged to consider their response to members of the lay public who request presence during an adult cardiopulmonary resuscitation attempt. The study findings suggest that a willingness to accommodate lay people at the scene of a cardiorespiratory arrest is dependent on healthcare staff surrendering a degree of power or control. The fact that some perceive this as a threat to their professional status needs to be confronted and addressed if a philosophy of holistic end-of-life care is to be realised.

Participants in the phenomenological study clearly attributed experience and confidence in emergency care situations with their ability to cope with lay presence whilst performing adult cardiopulmonary resuscitation. Furthermore experience of this situation was instrumental in converting staff views. This has implications for the use of practice and educational initiatives that seek to develop healthcare staff understanding of and experience with the concept of witnessed resuscitation. Experiential learning could be supported by mechanisms of structured reflection such as clinical supervision and preceptorship, as this may help healthcare staff to recognise and develop effective strategies for coping with the presence of lay people whilst

performing 'life-saving' interventions. The inclusion of life-world scenarios of lay presence as a mandatory component of adult basic and advanced life-support training provides an ideal opportunity for the rehearsal of performance. A culture that is orientated towards user involvement is undoubtedly required to support the application and use of the concept of witnessed resuscitation in practice. Inter-professional learning with accident and emergency ambulance staff is therefore worthy of consideration, given their familiarity of working in the presence of lay people and the apparent repertoire of knowledge, skills, experience and confidence that this brings to the phenomenon of lay presence during an adult cardiopulmonary resuscitation attempt.

12.5 Further areas of investigation

Throughout this study, the structural features of witnessed resuscitation have been developed and advanced towards a more precisely defined unit of meaning for research application and practical use. The process of investigation has focused on the development of descriptive theory which serves as a foundation for future research. Penrod (2007) draws attention to the importance of critically examining co-occurring concepts that manifest within a complex human experience. It is therefore acknowledged that the concepts which emerged as essential to the nature of the lived experience namely: respect, dominance, disquiet, preparation and exposure are worthy of further exploration. Consideration should be given to examining the concepts of exposure and presence, which prevailed in the thematic descriptions of the life-world. There is also the possibility using the synthesised conceptualisation of witnessed resuscitation as a baseline for further research aimed at validating the study findings within the context of accident and emergency care.

An important consideration in conceptually based research is ongoing inquiry to determine whether the revised attributes and advanced theoretical definition of witnessed resuscitation are precise enough to hold their boundaries when applied to alternative phenomena, disciplines and contexts. The techniques for concept advancement which featured in the design of this study allow for further strategic exploration of the concept across phenomena (e.g. parental presence), disciplines (e.g. medicine) and contexts (e.g. critical care) to expound conceptual meaning (Penrod and Hupcey, 2005). Participants in the phenomenological study indicated a variance in practices regarding lay presence dependent on whether the victim in cardiorespiratory arrest was a child or an adult - a situation which undoubtedly could alter the structural features of witnessed resuscitation. The phenomenon of parental presence is therefore, a worthy area of investigation to determine similarities and differences in the antecedents, references and consequences as a means of advancing conceptual understanding of the meaning of witnessed resuscitation.

An alternative approach to future research is to focus on the application of this concept in practice. Future research that strengthens the evidence base surrounding the consequences or effects of a witnessed resuscitation event may be particularly helpful in overcoming apparent fears and concerns about the risks and benefits of this practice. Case study methodology (Stake, 1995) could be selected to provide a deeper understanding of a witnessed resuscitation event from the perspectives of those who are intimately involved in this situation. A problem-focused approach such as action research is also worthy of consideration. This methodology has the advantage of combining research with practice development (Meyer, 2006) and seeks to bring about social change in a normative-re-educative manner. The findings of this study revealed that the concept of witnessed resuscitation is yet to be operationalised to a level

where it becomes embedded in the organisational philosophy of emergency resuscitative care. Research to further develop understanding about the relevant purpose of the concept of witnessed resuscitation in practical situations should therefore be considered. Poignant descriptions from the life-world revealed that the significance of this concept for practice undoubtedly resides in its ability to promote and achieve the delivery of holistic end-of-life care...

'Particularly in an emergency department situation where something happens unexpectedly, that people know that you've done everything you can for that person. It's much better that they see it than you tell them and they never see them again. They're like... She would have left him in the morning, gone to work and she wouldn't have seen him again... That would have been it. But she did... She did actually see him' (Participant RN9).

A priority for future research therefore, is the study of witnessed resuscitation in the wider context of patient and family-centred end-of-life care.

12.6 Chapter summary

In this chapter, the process of template comparison was presented as a method for synthesising theoretical and experiential insights derived from successive studies of the same concept. The method proposed by Hupcey and Penrod (2003) facilitated the comparison and synthesis of primary research findings with secondary sources of data. The process clearly facilitated the identification of areas where a conceptual match in research findings could be made in relation to the antecedents, references and consequences of the concept. The theoretical validity of the defining attributes and definition of witnessed resuscitation, as presented in the concept analysis was determined, and a revised set of eight defining attributes and an advanced theoretical definition of witnessed resuscitation was presented for research application and practical use. A synthesised conceptualisation of witnessed resuscitation of a

higher level of abstraction was illustrated in graphic form to succinctly convey the study findings and to express the relationships among key variables and co-occurring concepts. The limitations of this conceptually based study were presented and a discussion of the implications of this research for healthcare practice, education and research agendas gave direction for further work.

REFLECTIVE SUMMARY

A need to understand

Personal and scholarly interest in the concept of witnessed resuscitation has evolved over many years. Inspiration for this study emerged from my experience as a critical care nurse, as a lecturer and student researcher involved in academic inquiry and perhaps most expressively, as a relative with first-hand experience of the phenomenon of family presence at the scene of an adult cardiopulmonary resuscitation attempt. A combination of experiential and academic learning served to enhance my personal understanding about the concept of witnessed resuscitation, yet at the same time, I found the literature fraught with confusion about its meaning, significance, application and use in a variety of clinical settings. Frustration regarding a lack of conceptual clarity undoubtedly fuelled my curiosity in conceptually based research. A further motive for inductive inquiry of this nature was my belief that a lack of conceptual clarity could be the root cause of resistance. Conflict surrounding the concept of witnessed resuscitation often surprised me, possibly due to my experience in adult intensive care, where it could be argued that every critically ill patient is receiving a form of resuscitation through the use of health technology. However, in the same way as I have come to respect the choice and preference of individuals regarding presence during an adult cardiopulmonary resuscitation attempt, I also respected the viewpoint of healthcare staff who chose to support or oppose application of this concept in practice. This study was, however, driven by a personal desire to further understand the actions and behaviours of healthcare staff when faced with this situation in practice.

Methodological challenges

Selecting an inductive approach to inquiry came naturally when driven by the motive 'to understand'. However, engagement with qualitative research proved to be challenging in a number of ways. A particular learning curve was during the process of gaining ethical approval when the notion of developing new knowledge for the purpose of 'understanding' was challenged and a desire for measurable study outcomes made known. I believe that the same argument may have accounted for the number of ambulance staff who declined invitation to participate in the phenomenological study. Consequently, I have often found myself defending the need for inductive inquiry; usually by giving an example such as 'the effects of stress could not be measured without a prior understanding of what the concept of stress means'. Various approaches to conceptually based research were available for use. However, selection was somewhat hindered by the variety of techniques and the plethora of terms that were presented in the literature without clear demarcation regarding their use. I was therefore inspired by the work of theorists who provided procedural direction. Personally, I chose to incorporate a developmental and advancement stage in the design of this study. The former served as a platform for determining what was currently known about the concept of witnessed resuscitation, which in turn, provided a strong conceptual foundation of knowledge that served as a basis for further inquiry. I acknowledge my dependency on the use of a framework to guide the study and the application of headings and sub-headings in individual chapters. However, this offered structure in the planning, organisation and expression of ideas - techniques which some may view as being at odds with the narrative style of qualitative research. On reflection, I believe that has helped me to achieve clarity and coherence in the arguments presented.

Adopting hermeneutic phenomenology as the methodological approach to advance conceptual understanding of the concept of witnessed resuscitation allowed me to incorporate prior knowledge and experiences, consistent with Heidegger's (1962) philosophy of Being-in-the-world. I believe that this had a positive effect during the interviews and in the subsequent analyses of the lived-experience material obtained. A form of mutual respect based on a common understanding of emergency resuscitative care appeared to be at play, which in turn, led to graphic descriptions that I was able to relate to both during and after the interviews, particularly in relation to the language used.

Considerable learning took place during the processes of transcription and thematic analysis, including the identification of relevant and irrelevant material through the use of a coding framework. During my reading, I was sensitive to debates regarding the procedure of coding which could be viewed as a form of deductive reasoning in qualitative inquiry. However, I believe that the use of a coding framework was fundamental to managing the high volume of lived-experience material obtained. This led to the identification of basic premises which informed the subsequent development of collective and unifying themes. Based on my personal experience of this activity, I support Attride-Sterling's (2001) view that data reduction in this way is an essential strategy for the qualitative researcher. Furthermore, I believe that inductive validity can be achieved by remaining open-minded to the possibility of new insights. The hermeneutic-phenomenological analysis stage of the study was far more time-consuming than originally anticipated, yet at the same time, the most exciting and satisfying due to the creativity involved in the generation of new knowledge.

Original contribution of the research

I believe that this study makes an original contribution to knowledge through critical evaluation and synthesis of existing knowledge in the theoretical phase of the study and through existential investigation which advances conceptual understanding of witnessed resuscitation towards a more precisely defined unit of meaning through the synthesis of new insights. The phenomenological study in particular, brings new evidence to bear on the concept of witnessed resuscitation. This study was designed to address gaps in existing knowledge, particularly in relation to the pre-hospital setting and was unique in terms of gaining the perspectives of ambulance staff through the process of inductive inquiry. At all stages of the research process, I have maintained a rigorous approach to the analysis of existing ideas and demonstrated a willingness to consider the possibility of new or alternative interpretations. For example, in the absence of procedural guidance from van Manen (1997) during the process of hermeneutic-phenomenological analysis, I challenged myself to develop a staged approach to thematic analysis based on the ideas of more than one qualitative researcher, thus presenting a new interpretation of already known ideas and practices. I have benefited immensely from one-to-one supervisory sessions and from discussions with fellow phenomenologists. Peer review of my work has also been invaluable, leading to the refinement of ideas, enhanced critical thinking and increased ability and confidence to intellectually defend the arguments presented in my work. This has been achieved through the dissemination of knowledge as the study progressed (See Table 13.0 - page 293). At all times, there was a need to maintain a balance between writing the thesis and writing for publication. However, this was both rewarding and satisfying in terms of my personal contribution to the literature available on this topic, the constructive feedback obtained, and the interest that others have shown in my work.

Table 13.0 Publications, conference presentations and media activity

Journal publications
<p>Walker, W. Hermeneutic Inquiry: the lived experience of interviewing. Nurse Researcher, (In press). Accepted for publication 02.06.09.</p>
<p>Walker W. (2008) Dying, sudden cardiac death and resuscitation technology. International Emergency Nursing, 16: 119-126.</p>
<p>Walker W. (2008) Accident and emergency staff opinion on the effects of family presence during adult resuscitation: critical literature review. Journal of Advanced Nursing, 61 (4): 348-362.</p>
<p>Walker, W. (2007) Ethical considerations in phenomenological research. Nurse Researcher, 14 (3): 37-45.</p>
<p>Walker, W.M. (2006) Witnessed resuscitation: A concept analysis. International Journal of Nursing Studies, 43: 377-387.</p>
<p>Walker, W. (2005) The strengths and weaknesses of research designs involving quantitative measures. Journal of Research in Nursing, 10 (5): 571-582.</p>
Conference presentations
<p>Walker, W. 'Witnessed resuscitation: the lived experience of qualified nurses'. Concurrent session. Royal College of Nursing International Nursing Research Conference. Liverpool, 8th -11th April, 2008.</p>
<p>Walker, W. 'Accident and emergency staff opinion on the effects of family-presence during adult resuscitation: critical literature review'. Oral Presentation. 11th International Nursing Research Conference, Ministry of Health, Madrid, 14th-16th November, 2007.</p>
<p>Walker, W. 'Witnessed resuscitation: The lived experience of accident and emergency ambulance staff'. Concurrent session. The annual Royal College of Nursing Emergency Care Association conference and exhibition, Warrington, 23rd - 24th November, 2007.</p>
<p>Walker, W. 'Exploring the lived experience of witnessed resuscitation: The use of van Manen's methodological structure to phenomenological research'. Concurrent session, The Royal College of Nursing International Nursing Research Conference, York, 21-24 March, 2006.</p>
<p>Walker W. 'The effects of witnessed resuscitation on bereaved relatives: ethical considerations in bereavement research using qualitative methods'. Concurrent session, Royal College of Nursing Critical Care Nursing Forum Annual Conference, Newcastle Upon Tyne, 4-6 June, 2004.</p>
Media activity
<p>Walker, W. (2007) Relatives in the resuscitation room. BBC World Service Programme: Health Check. 5th November.</p>

It was encouraging to find that ambulance staff and first-level registered nurses were motivated to make a positive contribution to the evidence-base surrounding the concept of witnessed resuscitation by sharing their life-world experiences. First-level registered nurses in particular requested further information about available evidence, and a desire to learn about what constitutes best practice was evident. This study has critically reviewed and built on the available research evidence to provide a 'state of the art' conceptualisation of witnessed resuscitation for research application and practical use. This provides a firm foundation on which to build future research, based on the continued evaluation of this emotive concept in practice.

APPENDICES

- Appendix A** Critique of appraised studies
- Appendix B** Letter of invitation for ambulance staff
- Appendix C** Letter of invitation for first-level registered nurses (Version1)
- Appendix D** Letter of invitation for first-level registered nurses (Version 2)
- Appendix E** Information sheet for ambulance staff
- Appendix F** Information sheet for first-level registered nurses (Version 1)
- Appendix G** Information sheet for first-level registered nurses (Version 2)
- Appendix H** Consent form
- Appendix I** Letter to Chief Executive of National Health Service Ambulance Trust
- Appendix J** Letter of support from research site: National Health Service Ambulance Trust
- Appendix K** Letter to Head of Department in Universities
- Appendix L** Letters confirming access to first-level registered nurses via their University of study
- Appendix M** Confirmation of ethical approval to proceed with the recruitment of ambulance staff
- Appendix N** Confirmation of ethical approval to proceed with the recruitment of first-level registered nurses
- Appendix O** Recruitment advertisement
- Appendix P** Interview schedule
- Appendix Q** Sample interview transcript

APPENDIX A

CRITIQUE OF APPRAISED STUDIES

Author(s) and year of publication	Critique
Doyle <i>et al.</i> (1987)	Total population not stated. Small sample. Surveyed after participation in initial family presence programme. Superficial account of results. Various staff groupings surveyed. No breakdown of response or results for each group. No description of questionnaire or its development. Validity and reliability of research instrument not addressed.
Back and Rooke (1994)	Pilot study. Small sample. Extent to which the objective findings were representative of the opinions of medical and/or nursing staff is not disclosed. No description of questionnaire or its development. Validity and reliability of research instrument not addressed.
Chalk (1995)	Total population not stated. Lacks detail regarding the research settings, respondent characteristics and study procedures. Randomisation not described. No breakdown of results for the three categories of staff that were sampled. Items included in the questionnaire appear to adequately cover the phenomenon under investigation. Reliability of the research instrument not addressed. Superficial account of the findings leaves one questioning the researcher's decision-making criteria for allowing relatives to be present in the resuscitation room.
Redley and Hood (1996)	Larger sample size in comparison to previous studies. No description of research settings or distinction between hospitals. No breakdown of responses to staff concerns between medical and nursing staff. Identifies staff concerns from the literature to develop content validity of the questionnaire, but reliability not addressed.

Author(s) and year of publication	Critique
Mitchell and Lynch (1997)	Questionnaire comprised one closed question plus invitation for comment on the subject. Validity and reliability of the research instrument not addressed. Procedures employed in data analysis are not explicit.
Belanger and Reed (1997)	Small-scale study to evaluate family presence programme. Total population not stated. No description of the questionnaire or its development. Validity and reliability of the research instrument not addressed.
Timmermans (1997)	Multidisciplinary sample although total population not stated. The researcher verified reliability and validity of factual information by observing resuscitative efforts. Researcher role during observation is not explicit. Three perspectives of resuscitation provide a theoretical framework for analysis of future studies.
Bassler (1999)	Total population not stated. Four cases were excluded from analysis due to incomplete data. Combination of descriptive and inferential statistical procedures. Superficial description of the educational intervention. Lacks detail on how consistency in delivery of the intervention on 17 separate occasions was achieved. Small, nonrandomised convenience sample affects the generalisability of the study findings.
Boyd and White (2000)	Pilot study. Large sample. Used International Classification of Diseases (ICD-10) diagnostic criteria to develop content validity of the questionnaire. Prospective design gives greater credibility to the study results. Data analysed using inferential statistical procedures. Lacks specific detail of the results to support claims of no 'significant' difference in the incidence of adverse reactions. Validated tool with which to measure stress reactions in the immediate post-resuscitation scenario provides opportunity for replication in similar situations.

Author(s) and year of publication	Critique
Helmer <i>et al.</i> (2000)	Large-scale survey involving 18-item questionnaire. Poor response rate. Provides account of study design, method and processes. Items included in the questionnaire appear to adequately cover the phenomenon under investigation. Validity and reliability of the research instrument not addressed. Qualitative and quantitative variables were analysed using a combination of descriptive and inferential statistical procedures. Analysis and presentation of data may be misleading.
Goodenough and Brysiewicz (2003)	Total population not stated. Small sample size limits generalisation of the findings beyond the context of the study. The researchers reported on the need to give explanation of witnessed resuscitation before interviews could commence. The fact that witnessed resuscitation was a novel concept may have accounted for the low level of acceptance and negative attitudes towards this practice. Identifies steps taken to establish the trustworthiness of qualitative data obtained.
Weslien and Nilstun (2003)	Development of the questionnaire based on two pilot studies. Second version of questionnaire was tested for face validity. Reliability not addressed. Provides comparison of nurse/physician responses.
Booth <i>et al.</i> (2004)	Total population not stated. Superficial detail regarding characteristics of respondents. Provides account of study design, method and processes. Items included in the questionnaire appear to adequately cover the phenomenon under investigation. Reliability of the research instrument not addressed.

Author(s) and year of publication	Critique
Ong <i>et al.</i> (2004)	Detailed account of study design, method and sample characteristics. 21-item questionnaire indicated content validity but reliability not addressed. Combination of descriptive and inferential statistical procedures. Statistical significance was set at $p<0.05$.
Engel <i>et al.</i> (2005)	Report presented in abstract format. Multidisciplinary sample representing four provider groups. Combination of descriptive, inferential and multivariate statistical procedures. Odds ratios were generated using logistic regression analysis controlling for variables such as gender, age, years in practice and provider group. However it is not clear which factors impacted on provider support for this practice with the exception of provider group. Validity and reliability of the research instrument not addressed.
Yanturali <i>et al.</i> (2005)	Total population stated as approximate. Large sample. Restricted to the views of emergency physicians. Detailed account of study design, method, processes and respondent characteristics. Questionnaire indicated content validity but reliability of the research instrument not addressed. Combination of descriptive and inferential statistical procedures.
Compton <i>et al.</i> (2006)	Total population not stated. Study findings are unique in that they provide insight into experience of family presence during resuscitation in the pre-hospital setting. Provides account of study design, method, processes and respondent characteristics. Questionnaire indicated content validity but reliability of the research instrument not addressed. Combination of descriptive and inferential statistical procedures.

Author(s) and year of publication	Critique
Macy <i>et al.</i> (2006)	Detailed account of study design, method, processes and sample characteristics. 24-item questionnaire indicated content validity but reliability not addressed. Estimates of prior experience regarded as an inherent bias. Combination of descriptive and inferential statistical procedures. Authors acknowledge that previous experience with witnessed resuscitation does not imply greater support for the practice, as it is likely that those with experience supported the practice in the first place.
Kirchhoff <i>et al.</i> (2007)	Detailed account of study design, method, processes and sample characteristics. 21-item questionnaire indicated content validity. Questionnaire revised following a pilot. However, reliability not addressed. Combination of descriptive and inferential statistical procedures. Statistical significance was set at $p < 0.001$.
Mian <i>et al.</i> (2007)	Total population not stated. Detailed account of study design, method, processes and sample characteristics. Survey items developed from the literature and content validity of the research instrument was enhanced through expert review. Internal reliability was assessed using Chronbach's alpha. Low response rate to the follow-up survey among physicians. Failure to standardise the educational approach (intervention) may have accounted for differences observed between nurses and physicians, although this was acknowledged by the researchers. Combination of descriptive and inferential statistical procedures. Statistical significance was set at $p < 0.05$.

Author(s) and year of publication	Critique
Madden (2007)	Report presented in abstract format. Utilised an established questionnaire. Validity and reliability of the research instrument established in previous studies. Superficial account of study findings.
Mortelmans <i>et al.</i> (2009)	Large-scale survey of involving 21-item questionnaire. 85 emergency departments participated but lacks detail of the number of returned questionnaires from each department. Opinions of physicians, nurses and other emergency care providers were sought. Majority of the questionnaires were completed by nurses (79%). No breakdown of results across provider groups. Questionnaire indicated content validity but reliability of the research instrument not addressed. Combination of descriptive and inferential statistical procedures. Statistical significance was set at $p < 0.05$.

LETTER OF INVITATION FOR AMBULANCE STAFF

Dear

I am writing to you in my position as Senior Lecturer in Nursing at Staffordshire University. As part of my ongoing professional development, I am studying at the University of Birmingham for the qualification of Doctor in Health Sciences. I am conducting a research study to gain insight into the experience of bystander presence during out-of-hospital cardiopulmonary resuscitation from the perspective of accident and emergency ambulance staff who have encountered this situation. It is in relation to this that I am writing to you, to ask if you would agree to participate in this research by sharing your experience.

Further information about the study is detailed on the enclosed information sheet. Please take time to read this carefully as it may assist you in making your decision about whether or not to take part.

If you decide that you would like to take part, please read and sign the enclosed consent form and return it to me in the pre-paid envelope provided by (Specified date will be 2 weeks from the date of this letter). I will then contact you to arrange a date/time that is convenient to meet with you to talk through your experience.

Thank you for taking the time to read this letter.

Kind regards

Wendy Walker
Senior Lecturer in Nursing

APPENDIX C

LETTER OF INVITATION FOR FIRST-LEVEL REGISTERED NURSES (Version 1)

Dear

I am writing to you in my position as Lecturer in Nursing at the University of Birmingham. As part of my ongoing professional development, I am studying at the University of Birmingham for the qualification of Doctor in Health Sciences. I am conducting a research study to gain insight into the experience of having lay people present during adult cardiopulmonary resuscitation from the perspective of nurses and ambulance staff who have encountered this situation. It is in relation to this that I am writing to you, to ask if you would agree to participate in this research by sharing your experience of performing adult resuscitation in the presence of lay people.

Further information about the study is detailed on the enclosed information sheet. Please take time to read this carefully as it may assist you in making your decision about whether or not to take part.

If you decide that you would like to take part, please read and sign the enclosed consent form and return it to me in the pre-paid envelope provided by..... (Specified date will be 2 weeks from the date of this letter). I will then contact you and arrange to meet with you at a time and location that is convenient to you.

Thank you for taking the time to read this letter.

Kind regards

Wendy Walker
Lecturer in Nursing

APPENDIX D

LETTER OF INVITATION FOR FIRST-LEVEL REGISTERED NURSES (Version 2)

Dear

I am writing to you in my position as Lecturer in Nursing at the University of Birmingham. As part of my ongoing professional development, I am studying at the University of Birmingham for the qualification of Doctor in Health Sciences. I am conducting a research study to gain insight into the experience of having lay people present during adult cardiopulmonary resuscitation from the perspective of nurses and ambulance staff who have encountered this situation. It is in relation to this that I am writing to you, to ask if you would agree to participate in this research by sharing your experience of performing adult resuscitation in the presence of lay people in a location that provides emergency resuscitative care at the point of entry to secondary care e.g. an accident and emergency department, medical assessment unit or equivalent setting.

Further information about the study is detailed on the enclosed information sheet. Please take time to read this carefully as it may assist you in making your decision about whether or not to take part.

If you decide that you would like to take part, please read and sign the enclosed consent form and return it to me in the pre-paid envelope provided by..... (Specified date will be 2 weeks from the date of this letter). I will then contact you and arrange to meet with you at a time and location that is convenient to you.

Thank you for taking the time to read this letter.

Kind regards

Wendy Walker
Lecturer in Nursing

INFORMATION SHEET FOR AMBULANCE STAFF

1. Study title

The lived experience of bystander presence during out-of-hospital cardiopulmonary resuscitation

2. Invitation paragraph

You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Take time to decide whether or not you wish to take part.

3. What is the purpose of the study?

Improving emergency care is one of the key priorities for the National Health Service. Ambulance staff are at the forefront of providing rapid, effective response to patients with life-threatening conditions (Fillingham 2004), including out-of-hospital cardiac arrest. In 2003/04, (ambulance Trust named) responded to a total of 899 cardiac arrests in the South of the county of which 41% were witnessed by the lay public, that is, a bystander was present. This parallels a growing trend towards greater public involvement and partnership in care (DH 1997) in which the bystander may have taken an active (attempted resuscitation) or passive (observed resuscitation) role. The purpose of this study is to gain insight into the experience of bystander presence during out-of-hospital cardiopulmonary resuscitation from the perspective of accident and emergency ambulance staff who have encountered this situation.

The study will be conducted over a three year period.

4. Why have I been chosen?

You have been chosen to participate in this study as you are a member of staff in the accident and emergency ambulance service who has experience of performing out-of-hospital cardiopulmonary resuscitation in the presence of a witness who took an active (performed resuscitation) or passive (observed resuscitation) role.

5. Do I have to take part?

Your decision to take part in this research is entirely voluntary. In other words, it is up to you to decide whether or not to take part. If you decide that you do not wish to take part, no further contact will be made.

If you decide to take part in this study, you are still free to withdraw at any time, without giving a reason and without prejudice. If you decide to withdraw from the study, then please simply telephone or write to let me know. In the event that you withdraw from the study, all information that you have provided will be destroyed.

6. What will happen to me if I take part?

By taking part in this study you will be asked to recount your experience of performing out-of-hospital cardiopulmonary resuscitation in the presence of a witness who took an active (performed resuscitation) or passive (observed resuscitation) role. I will arrange a date/time that is convenient to meet with you to talk through your experience. The interview will last approximately one hour and will be held at The Centre for Health Policy & Practice, School of Health, Staffordshire University. This choice of venue is to maintain privacy, prevent interruption or the presence of others by holding the interview external to your normal place of work. The interview will take place outside your normal hours of work to prevent any disruption to routine emergency practice. With your permission, the interview will be tape-recorded to ensure that all the information you share is captured.

7. What are the possible disadvantages and risks of taking part?

I do acknowledge that recollection of your experience may arouse painful memories and, as such, participation in the study may be distressing for you. Support mechanisms such as team leaders, staff welfare officer and occupational health services will be able to provide you with ongoing support should you feel that you require this. These support mechanisms are available to you even if you decline to take part in the research.

The discussion of an emotionally charged event such as resuscitation may be distressing and painful for people who are bereaved. You are therefore advised not to take part if you have bereavement issues.

8. What are the possible benefits of taking part?

Sometimes, talking about an experience can be beneficial. However, this cannot be guaranteed. The information gained from this study will provide valuable insight and increased understanding of the effects of bystander presence from an individual and personal viewpoint. This will help to shed some light on the meaning that people give to their experience and in doing so, add to the knowledge available on this topic. Not only will this assist in identifying sensitive and appropriate interventions in the out-of-hospital environment, but may also inform the policy and practices of healthcare personnel based in the secondary

care setting where the presence of lay persons during a resuscitation attempt is yet to be fully supported.

9. What if new information becomes available?

Sometimes during the course of a study, new information becomes available about the area of practice that is being studied. If this happens, I will tell you about it immediately prior to commencing the interview and discuss with you whether you want to continue in the study. If you decide to continue in the study you will be asked to sign an updated consent form. Also, on receiving new information, I might consider it to be in your best interests to withdraw you from the study. If this should happen, I will fully explain the reasons.

10. What if something goes wrong?

Your participation in this study does not involve any intervention other than sharing your experience with the researcher during an interview. If you are harmed by taking part in this study, there are no special compensation arrangements. If you are harmed due to someone's negligence, then you may have grounds for a legal action but you may have to pay for it. Regardless of this, if you wish to complain, or have any concerns about any aspect of the way you have been approached or treated during the course of this study, the normal National Health Service complaints mechanisms are available to you.

11. Will my taking part in this study be kept confidential?

All information which is collected during the course of this study will be kept strictly confidential. Your interview will be given a code number to protect your identity. This code will be used during the process of analysing information and in the publication of the findings from the study.

I will store your details and the information obtained during the course of this study in a locked cabinet that only I shall have access to. Analysis of information will take place in an environment that maintains privacy of information when listening to audio tapes. All audio tapes will be destroyed on completion of the study.

12. What will happen to the results of the research study?

The findings from this study will be presented in a thesis and shared with colleagues through journal publications and at conferences. If you would like to be informed of the study results, please inform me and I will ensure that a written summary is sent to you on completion of the study.

13. Who is organising and funding the research?

The organisation taking ultimate responsibility for the initiation and ongoing management of the study is the University of Birmingham. This includes primary responsibility for ensuring that the design of the study meets appropriate standards and that arrangements are in place to ensure appropriate conduct and reporting. Administrative costs of the study are being covered by the organisation where I am employed as a Senior Lecturer in Nursing.

14. Who has reviewed the study?

This study has been reviewed by South Staffordshire Ethics Committee and their approval to proceed with the study has been given.

15. Contact for further information

I hope, after careful consideration, you may accept my invitation to participate in the study. If you do decide to take part, please complete the enclosed consent form and return it to me in the pre-paid envelope by..... (Specified date will be 2 weeks from the date of this letter). You will be given a copy of the signed consent form at the time of interview.

If you decide that you do not wish to take part in this study, please disregard this letter.

Thank you for taking the time to read this information sheet. If you require any further information, please do not hesitate to contact me on

INFORMATION SHEET FOR FIRST-LEVEL REGISTERED NURSES (Version 1)

1. Study title

The lived experience of bystander presence during cardiopulmonary resuscitation

2. Invitation paragraph

You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Take time to decide whether or not you wish to take part.

3. What is the purpose of the study?

Improving emergency care is one of the key priorities for the National Health Service. A controversial topic of debate in emergency care worldwide is the practice of having lay people present during an adult resuscitation attempt. For some patients and their families, admission to A&E represents continuity in the resuscitative care that commenced in the pre-hospital setting. The purpose of this study is to gain insight into the experience of bystander presence during cardiopulmonary resuscitation from the perspective of accident and emergency nurses and ambulance staff who have encountered this situation.

The study will be conducted over a three year period.

4. Why have I been chosen?

You have been chosen to participate in this study as you are a first-level registered nurse who is based in an accident and emergency department. It is anticipated that you may have experienced the situation of performing adult resuscitation in the presence of the lay public and your account of this experience is valuable to this study and the future development of this practice.

5. Do I have to take part?

Your decision to take part in this research is entirely voluntary. In other words, it is up to you to decide whether or not to take part. If you decide that you do not wish to take part, no further contact will be made.

If you decide to take part in this study, you are still free to withdraw at any time, without giving a reason and without prejudice. If you decide to withdraw from the study, then please simply telephone or write to let me know. In the event that you withdraw from the study, all information that you have provided will be destroyed.

6. What will happen to me if I take part?

By taking part in this study you will be asked to recount your experience of performing cardiopulmonary resuscitation in the presence of lay people, for example, the patient's next of kin. I will arrange a date/time that is convenient to meet with you to talk through your experience. The interview will last approximately one hour and will be held at the School of Health Sciences, University of Birmingham. This choice of venue is to maintain privacy, prevent interruption or the presence of others by holding the interview external to your normal place of work. The interview will take place outside your normal hours of work to prevent any disruption to routine emergency practice. With your permission, the interview will be tape-recorded to ensure that all the information you share is captured.

7. What are the possible disadvantages and risks of taking part?

I do acknowledge that recollection of your experience may arouse painful memories and, as such, participation in the study may be distressing for you. Support mechanisms such as your Trust occupational health services will be able to provide you with ongoing support should you feel that you require this. These support mechanisms are available to you even if you decline to take part in the research.

The discussion of an emotionally charged event such as resuscitation may be distressing and painful for people who are bereaved. You are therefore advised not to take part if you have bereavement issues.

8. What are the possible benefits of taking part?

Sometimes, talking about an experience can be beneficial. However, this cannot be guaranteed. The information gained from this study will provide valuable insight and increased understanding of the effects of bystander presence from an individual and personal viewpoint. This will help to shed some light on the meaning that people give to their experience and in doing so, add to the knowledge available on this topic. Not only will this assist in identifying sensitive and appropriate interventions in the out-of-hospital environment, but may also inform the policy and practices of healthcare personnel based in the secondary care setting where the presence of lay persons during a resuscitation attempt is yet to be fully supported.

9. What if new information becomes available?

Sometimes during the course of a study, new information becomes available about the area of

practice that is being studied. If this happens, I will tell you about it immediately prior to commencing the interview and discuss with you whether you want to continue in the study. If you decide to continue in the study you will be asked to sign an updated consent form. Also, on receiving new information, I might consider it to be in your best interests to withdraw you from the study. If this should happen, I will fully explain the reasons.

10. What if something goes wrong?

Your participation in this study does not involve any intervention other than sharing your experience with the researcher during an interview. If you are harmed by taking part in this study, there are no special compensation arrangements. If you are harmed due to someone's negligence, then you may have grounds for a legal action but you may have to pay for it. Regardless of this, if you wish to complain, or have any concerns about any aspect of the way you have been approached or treated during the course of this study, the normal National Health Service complaints mechanisms are available to you.

11. Will my taking part in this study be kept confidential?

All information which is collected during the course of this study will be kept strictly confidential. Your interview will be given a code number to protect your identity. This code will be used during the process of analysing information and in the publication of the findings from the study.

I will store your details and the information obtained during the course of this study in a locked cabinet that only I shall have access to. Analysis of information will take place in an environment that maintains privacy of information when listening to audio tapes. All audio tapes will be destroyed on completion of the study.

12. What will happen to the results of the research study?

The findings from this study will be presented in a thesis and shared with colleagues through journal publications and at conferences. If you would like to be informed of the study results, please inform me and I will ensure that a written summary is sent to you on completion of the study.

13. Who is organising and funding the research?

The organisation taking ultimate responsibility for the initiation and ongoing management of the study is the University of Birmingham. This includes primary responsibility for ensuring that the design of the study meets appropriate standards and that arrangements are in place to ensure appropriate conduct and reporting.

14. Who has reviewed the study?

This study has been reviewed by South Staffordshire Ethics Committee and their approval to proceed with the study has been given.

15. Contact for further information

I hope, after careful consideration, you may accept my invitation to participate in the study. If you do decide to take part, please complete the enclosed consent form and return it to me in the pre-paid envelope by (Specified date will be 2 weeks from the date of this letter). You will be given a copy of the signed consent form at the time of interview.

If you decide that you do not wish to take part in this study, please disregard this letter.

Thank you for taking the time to read this information sheet. If you require any further information, please do not hesitate to contact me on

INFORMATION SHEET FOR FIRST-LEVEL REGISTERED NURSES (Version 2)

1. Study title

The lived experience of bystander presence during adult cardiopulmonary resuscitation

2. Invitation paragraph

You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Take time to decide whether or not you wish to take part.

3. What is the purpose of the study?

Improving emergency care is one of the key priorities for the National Health Service. A controversial topic of debate in emergency care worldwide is the practice of having lay people present during an adult resuscitation attempt. For some patients and their families, admission to A&E represents continuity in the resuscitative care that commenced in the pre-hospital setting. The purpose of this study is to gain insight into the experience of bystander presence during cardiopulmonary resuscitation from the perspective of nurses and ambulance staff who have encountered this situation.

The study will be conducted over a three year period.

4. Why have I been chosen?

You have been chosen to participate in this study as you are a first-level registered nurse with experience in accident and emergency nursing in the environment of secondary care. It is anticipated that you may have experienced the situation of performing adult resuscitation in the presence of the lay public in a location that provides emergency resuscitative care at the point of patient entry to secondary care e.g. an accident and emergency department, medical assessment unit or equivalent setting. Your account of this experience is valuable to this study and the future development of this practice.

5. Do I have to take part?

Your decision to take part in this research is entirely voluntary. In other words, it is up to you to decide whether or not to take part. If you decide that you do not wish to take part, no further contact will be made. If you decide to take part in this study, you are still free to withdraw at any time, without giving a reason and without prejudice. If you decide to withdraw from the study, then please simply telephone or write to let me know. In the event that you withdraw from the study, all information that you have provided will be destroyed.

6. What will happen to me if I take part?

By taking part in this study you will be asked to recount your experience of performing adult cardiopulmonary resuscitation in the presence of lay people, for example, the patient's next of kin. The interview will last approximately one hour and will be conducted in confidence at a time and location that is convenient to you. I do however request that the interview is held external to your normal place of work and outside your normal hours of work in order to prevent any disruption to routine emergency practice. With your permission, the interview will be tape-recorded to ensure that all the information you share is captured. Travelling expenses will be reimbursed to a maximum of £10.00.

7. What are the possible disadvantages and risks of taking part?

I do acknowledge that recollection of your experience may arouse painful memories and, as such, participation in the study may be distressing for you. Support mechanisms such as your Trust occupational health services will be able to provide you with ongoing support should you feel that you require this. These support mechanisms are available to you even if you decline to take part in the research.

The discussion of an emotionally charged event such as resuscitation may be distressing and painful for people who are bereaved. You are therefore advised not to take part if you have bereavement issues.

8. What are the possible benefits of taking part?

Sometimes, talking about an experience can be beneficial. However, this cannot be guaranteed. The information gained from this study will provide valuable insight and increased understanding of the effects of bystander presence from an individual and personal viewpoint. This will help to shed some light on the meaning that people give to their experience and in doing so, add to the knowledge available on this topic. Not only will this assist in identifying sensitive and appropriate interventions in the out-of-hospital environment, but may also inform the policy and practices of healthcare personnel based in the secondary care setting where the presence of lay persons during a resuscitation attempt is yet to be fully supported.

9. What if new information becomes available?

Sometimes during the course of a study, new information becomes available about the area of practice that is being studied. If this happens, I will tell you about it immediately prior to commencing the interview and discuss with you whether you want to continue in the study. If you decide to continue in the study you will be asked to sign an updated consent form. Also, on receiving new information, I might consider it to be in your best interests to withdraw you from the study. If this should happen, I will fully explain the reasons.

10. What if something goes wrong?

Your participation in this study does not involve any intervention other than sharing your experience with the researcher during an interview. If you are harmed by taking part in this study, there are no special compensation arrangements. If you are harmed due to someone's negligence, then you may have grounds for a legal action but you may have to pay for it. Regardless of this, if you wish to complain, or have any concerns about any aspect of the way you have been approached or treated during the course of this study, the normal National Health Service complaints mechanisms are available to you.

11. Will my taking part in this study be kept confidential?

All information which is collected during the course of this study will be kept strictly confidential. Your interview will be given a code number to protect your identity. This code will be used during the process of analysing information and in the publication of the findings from the study.

I will store your details and the information obtained during the course of this study in a locked cabinet that only I shall have access to. Analysis of information will take place in an environment that maintains privacy of information when listening to audio tapes. All audio tapes will be destroyed on completion of the study.

12. What will happen to the results of the research study?

The findings from this study will be presented in a thesis and shared with colleagues through journal publications and at conferences. If you would like to be informed of the study results, please inform me and I will ensure that a written summary is sent to you on completion of the study.

13. Who is organising and funding the research?

The organisation taking ultimate responsibility for the initiation and ongoing management of the study is the University of Birmingham. This includes primary responsibility for ensuring that the design of the study meets appropriate standards and that arrangements are in place to ensure appropriate conduct and reporting.

14. Who has reviewed the study?

This study has been reviewed by South Staffordshire Ethics Committee and their approval to proceed with the study has been given.

15. Contact for further information

I hope, after careful consideration, you may accept my invitation to participate in the study. If you do decide to take part, please complete the enclosed consent form and return it to me in the pre-paid envelope by (Specified date will be 2 weeks from the date of this letter). You will be given a copy of the signed consent form at the time of interview.

If you decide that you do not wish to take part in this study, please disregard this letter.

Thank you for taking the time to read this information sheet. If you require any further information, please do not hesitate to contact me on

CONSENT FORM

Title of Project:	
Name of Researcher:	
	Please initial box
1. I confirm that I have read and understand the information sheet dated for the above study and have had the opportunity to ask questions.	<input type="checkbox"/>
2. I understand that my participation is voluntary and that I am free to withdraw at anytime, without giving any reason and without prejudice.	<input type="checkbox"/>
3. I give permission for my interview to be tape-recorded.	<input type="checkbox"/>
4. I agree to take part in the above study.	<input type="checkbox"/>

Name of Participant

Date

Signature

Contact Telephone Number of Participant:

APPENDIX I

**LETTER TO CHIEF EXECUTIVE OF NATIONAL HEALTH SERVICE
AMBULANCE TRUST**

Dear

Please find enclosed, a research proposal designed to explore the experience of bystander presence during out-of-hospital cardiopulmonary resuscitation. I am writing to ask if you would consider (name of ambulance Trust) as the research site.

I am currently in the first year of study with the University of Birmingham for the qualification of PhD in Health Sciences under the supervision of Professor Collette Clifford and Dr William Daly. My clinical background is as a nurse, specialising in the field of intensive and critical care. I am currently employed as a Senior Lecturer in Nursing at Staffordshire University.

I would be grateful if you could advise whether you agree to this research being undertaken with (name of ambulance Trust) on the condition that it receives full ethical approval by the Local Research ethics Committee.

Should you feel it necessary, I would be pleased to meet with you to discuss any questions or queries that you may have.

Kind regards

Wendy Walker
Senior Lecturer in Nursing

APPENDIX J

**LETTER OF SUPPORT FROM RESEARCH SITE:
NATIONAL HEALTH SERVICE AMBULANCE TRUST**

3 June 2004

Mrs Wendy Walker
Staffordshire University
Blackheath Lane
Stafford
ST18 0AD

Dear Mrs Walker

BYSTANDER PRESENCE OOH CPR

Reference:

A. Your letter dated 25 May 2004.

Thank you for your letter at reference A.

I strongly support your proposed research into 'Bystander Presence in Out of Hospital Resuscitation'.

Yours sincerely

Chief Executive



LETTER TO HEAD OF UNIVERSITY

Dear

I am currently studying for the qualification of PhD in Health Sciences at the University of Birmingham where I am also employed as a Lecturer in Nursing. The PhD study is designed to explore bystander presence during adult cardiopulmonary resuscitation from the perspective of accident and emergency nurses and ambulance staff who have encountered this situation in practice. The study has been reviewed by South Staffordshire Ethics Committee and I am pleased to enclose a copy of their approval to proceed with the next stage of the research i.e. the recruitment of nursing staff.

I am writing to ask your agreement to recruit first-level registered nurses who are studying at (name University) and are undertaking post-registration studies to support their development as an Advanced Practitioner in the specialty of Accident and Emergency care.

This would involve my liaison with the course leader to identify and confirm the number of potential participants. I will also be seeking agreement of the course leader to disseminate letters of invitation to participants on my behalf, thus preventing disclosure of any personal details i.e. postal address of the student(s).

Participation in this study will be in the form of an interview lasting approximately one hour. Recruitment may be assisted by conducting interviews at a venue that is familiar and convenient to the student. I would therefore be grateful if you could confirm whether you are also in agreement for me to conduct the interviews at (name University). Again, this will involve liaison with the course leader to determine a suitable room and convenient dates for a room booking.

Should you feel it necessary, I will be pleased to meet with you to discuss any questions or queries you may have. Alternatively, please do not hesitate to telephone me on.....

I look forward to hearing from you

Yours Sincerely

Wendy Walker
Lecturer in Nursing

APPENDIX L

**LETTERS CONFIRMING ACCESS TO FIRST-LEVEL REGISTERED NURSES
VIA THEIR UNIVERSITY OF STUDY**

27th June 2007

Mrs Wendy Walker
School of Health Sciences
The University of Birmingham

Dear Mrs Walker,

Ethics application: The lived experience of bystander presence during out-of-hospital cardiopulmonary resuscitation.

Thank you for contacting me about access to First Level Registered Nurses undertaking postgraduate courses in the School. I have received copies of your documentation and confirmation of ethical approval from the South Staffordshire LREC and am happy to approve access to the students.

I suggest you ask the Postgraduate Administrator to forward your request to relevant students.

Yours sincerely,

Chair of Ethics Committee, School of Health Sciences

Ms. W. Walker,
Lecturer in Nursing,
School of Health Sciences,
University of Birmingham,
Edgbaston,
Birmingham B15 2TT

Dear Ms. Walker,

Thank you for your letter dated 1 October 07 concerning your request to gain access to First Level Registered Nurses undertaking post-registration studies within the School of Health Sciences in this Faculty.

I can confirm that I am happy for you to contact _____ as requested, and am forwarding a copy of this letter and all your correspondence to her so she may contact you direct.

Good luck with your studies.

Yours sincerely,

Dean,
Faculty of Education, Health & Sciences

9 November 2007

Ms Wendy Walker
Lecturer in Nursing
School of Health Sciences
University of Birmingham
Edgbaston
Birmingham
B15 2TT

Dear Wendy

Thank you for your letter of 18 October 2007 requesting access to first level registered nurses who are undertaking post-registration studies in the School of Health at this University to support their development as advanced practitioners.

I have discussed your request with colleagues and I am pleased to be able to inform you that your request has been approved. Please contact _____ to discuss how to proceed further.

I would be grateful if you would inform me of the outcome of your study which obviously, is pertinent to the future developments in nursing.

I wish you every success in your PhD.

Very kind regards.

Yours sincerely

Dean of School of Health

APPENDIX M

**CONFIRMATION OF ETHICAL APPROVAL TO PROCEED WITH THE
RECRUITMENT OF AMBULANCE STAFF**



05 April 2005

Mrs Wendy M Walker
Senior Lecturer
Staffordshire University
Faculty of Health & Sciences
Blackheath Lane
Stafford
ST18 0AD

Dear Mrs Walker

Full title of study: *The lived experience of bystander presence during out-of-hospital cardiopulmonary resuscitation*

REC reference number: 04/Q2602/64

Thank you for your letter of 10 March 2005, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chairperson.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised.

However, the Committee has not yet been notified of the outcome of any site-specific assessment (SSA) for the research site(s) taking part in this study. The favourable opinion does not therefore apply to any other site at present. I will write to you again as soon as one Local Research Ethics Committee has notified the outcome of a SSA. In the meantime no study procedures should be initiated at sites requiring SSA.

Conditions of approval

The favourable opinion is given provided that you comply with the conditions set out in the attached document. You are advised to study the conditions carefully.

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document Type:	Version:	Dated:	Date Received:
Application		12/01/2005	13/01/2005
Investigator CV		14/01/2005	13/01/2005
Protocol		14/01/2005	13/01/2005
Covering Letter		14/01/2005	13/01/2005

Letter from Sponsor		15/12/2004	13/01/2005
Peer Review		13/12/2004	13/01/2005
Interview Schedules/Topic Guides		14/01/2005	13/01/2005
Letters of Invitation to Participants		14/01/2005	13/01/2005
Participant Information Sheet		14/01/2005	13/01/2005
Participant Consent Form		14/01/2005	13/01/2005
Response to Request for Further Information		10/03/2005	05/04/2005
indemnity approval		16/09/2004	13/01/2005
Supervisor CV			13/01/2005

Management approval

The study should not commence at any NHS site until the local Principal Investigator has obtained final management approval from the R&D Department for the relevant NHS care organisation.

Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

Notification of other bodies

The Committee Administrator will notify the research sponsor that the study has a favourable ethical opinion.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

04/Q2602/64

Please quote this number on all correspondence

With the Committee's best wishes for the success of this project,

Yours sincerely,



PP

Enclosures ✓ Standard approval conditions

✓ Site approval form (SF1)

**CONFIRMATION OF ETHICAL APPROVAL TO PROCEED WITH THE
RECRUITMENT OF FIRST-LEVEL REGISTERED NURSES**



08 May 2007

Mrs W M Walker
Senior Lecturer
Faculty of Health & Sciences
Blackheath Lane
Stafford
ST18 OAD

Dear Mrs Walker

Study title: The lived experience of bystander presence during out-of-hospital cardiopulmonary resuscitation
REC reference: 04/Q2602/64
Amendment number: AM01
Amendment date: 12 April 2007

The above amendment was reviewed at the meeting of the Sub-Committee of the REC held on 03 May 2007.

Ethical opinion

The members of the Committee present gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

*However the consent form should not be changed. Participants should not have to sign a declaration that they are suitable for the study; the researcher should automatically establish that at the time of taking consent.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Protocol	3	30 March 2007
Participant Information Sheet	3	30 March 2007
Participant Consent Form *	2	30 March 2007
Notice of Substantial Amendment (non-CTIMPs)		12 April 2007
Letter of invitation to participant	2	30 March 2007
Interview Schedules/Topic Guides	2	30 March 2007
Covering Letter		12 April 2007

Membership of the Committee

The members of the Committee who were present at the meeting are listed on the attached sheet.

R&D approval

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D approval of the research.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

04/Q2602/64 AM01:

Please quote this number on all correspondence

Yours sincerely

[Redacted signature]

Committee Co-ordinator

E-mail: [Redacted email address]

RECRUITMENT ADVERTISEMENT

RELATIVES IN THE RESUSCITATION ROOM

An invitation to participate in a research study

The practice of family presence during an adult resuscitation attempt has stimulated widespread discussion and debate over the past two decades. It has attracted the attention of researchers worldwide and their findings suggest that this practice remains a contentious issue for accident and emergency staff who are at the forefront of providing emergency resuscitative care. Further research is essential if this practice is to be better defined and understood (Walker 2007).

In 2007, I received the Freda Ashmore award for research projects in nursing. This funding is being used to support a research study that will form part of my doctoral thesis. The aim of this study is to find out more about accident and emergency nurses experience of family presence during adult cardiopulmonary resuscitation events.

Are you a first level registered nurse?

Are you a member of the Emergency Care Association?
(RCN Forum 2102)

Do you have experience of accident and emergency nursing in the environment of secondary care?

If your answer to the above three questions is **YES** and you are interested in participating in this study, please contact Wendy Walker, Lecturer in Nursing, University of Birmingham.



.....or email.....

An interview will be conducted in confidence at a time and location that is convenient to you.

INTERVIEW SCHEDULE

1. The interview will commence with a 'grand tour' question

- a. Ask participant to describe a situation when a lay person (or lay people) were present during an adult cardiopulmonary resuscitation attempt.
- b. What was the relationship of the lay person/persons to the person undergoing resuscitation?
- c. Did the lay person (lay people) participate in the resuscitation event?
If yes, what role did they take?
- d. What interventions did the lay persons witness?
- e. How long ago was this resuscitation event?
- f. Was this the first time that you had experienced the presence of a lay person (lay persons) during CPR?
- g. Why did you choose this particular event to describe?
- h. What was it like to perform resuscitation in the presence of lay people?
- i. What was the outcome of this resuscitation?

2. Questions to determine the effects of lay presence

- a. How did the presence of a lay person (lay people) affect the resuscitation attempt?
- b. How did the presence of a lay person (lay people) affect you?
- c. What about your performance – was it affected in any way?
- d. Do you think 'being present' during the resuscitation was (explore) helpful/harmful to the lay person (lay people)?
- e. Do you think the presence of a lay person (lay people) was (explore) helpful/harmful to the person undergoing resuscitation?

3. Questions to determine practices

Based on your experience.....

- a. Did the lay person (lay people) travel in the ambulance?
- b. What happened to the lay person (lay people) on arrival at the accident and emergency department?
- c. Are there any situations where you have considered it inappropriate/appropriate for a lay person (lay persons) to remain present during CPR?
- d. So what equips you to deal with situations where lay persons are present during resuscitation?
- e. What do you think helps the lay public deal with this situation?

4. General questions

- a. Is it the norm to have lay people present during CPR or the exception?
- b. In what way (if any) do you consider practices relating to lay persons presence during adult cardiopulmonary resuscitation attempt could be improved?

5. Concluding questions

- a. What motivated you to participate in this research?
- b. Has participation been beneficial for you? If yes - In what way?
- c. Are there any further issues about the presence of lay people during adult cardiopulmonary resuscitation that you would like to share?

Thank you for sharing your experience.

APPENDIX Q

SAMPLE TRANSCRIPT INTERVIEW

1 Participant asked to recall a situation of bystander presence during an adult cardiopulmonary
2 resuscitation attempt.

3

4 *Outside a pub in the street so a number of bystanders around. They weren't sure what was*
5 *happening. We get there and um (2) we obviously realise it's an arrest so try and get them*
6 *involved rather than having them standing back. I think it's better if they can be helpful or*
7 *seen to be helpful then they feel like they have contributed something to the job.*

8

9 Can you recall how many bystanders were present?

10

11 *Definitely, definitely two cause they helped us.*

12

13 Right.

14

15 *Probably about four I would have thought. Three or four maximum.*

16

17 Had they participated in the resuscitation in any way before the ambulance service arrived?

18

19 *As far as I know they had seen the gentleman go down and I think the landlady had actually*
20 *called the ambulance () if they could help.*

21

22 So, so what were your thoughts about this being a cardiac arrest situation and you have lay
23 people present?

24

25 *(3) In one respect you feel quite relaxed cause there's someone there who can help you. Even*
26 *if they don't know what's going on you can say 'can you pass me this, can you get me this'. A*
27 *lot of the time you don't even notice they're there. You just go on to auto pilot and it's only*
28 *when you look and think 'ah perhaps they can help?'*

29

30 What was the relationship of the two people to the person who had collapsed?

31

32 *I don't think there was one. They just happened to be passing or were in the pub there at the*
33 *time.*

34

35 Would you describe the bystanders as active or passive?

36

37 *Passive initially. Cause () funnily enough we happened to be passing the job as it came in*
38 *so it was only a matter of a minute or so before we got there when they called. But with only*
39 *two of us it's difficult to get everything organised and get all the kit ready so we asked them if*
40 *they'd help and one of them had done a CPR course.*

41

42 So they went from passive to then taking an active role. So can I just clarify, was that both or
43 just one of them that had taken an active role?

44

45 *It was initially one and then we asked the second one if they could come and give us a hand so
46 they both became active.*

47

48 Okay, thank you. So does having bystanders present affect you in any way?

49

50 *I think it's the whole idea you want to make sure you do everything right if people are there.
51 You want to look professional. I think it's the biggest part trying to look professional, be in
52 control of the situation because you're aware that the person's there thinking... I mean they
53 possibly don't know what's going on but it's just that presence that you think 'I've got to do
54 this. You've got to be, get that right, get this right', and then often you just forget they're
55 there.*

56

57 Did the bystanders affect the resuscitation in any way?

58

59 *Only in the fact that they were helping, cause (5), um...*

60

61 So you thought their presence was [*Was helpful, yeah*].

62

63 Do you consider there were any negative effects about having bystanders present?

64

65 *Only the effect it might have on them afterwards.*

66

67 So if we can pick up on that. So what effect do you think it might have on them afterwards?

68

69 *I think if they hadn't participated and obviously I've never been in that situation, but if they
70 hadn't participated they probably would be very 'perhaps I could have done something to
71 help'. It would have played on their mind. Whereas if they'd taken a more active role; well if
72 it was me I'd feel as if I'd tried to help and at least I'd done something. But then you're more
73 worried about if you get in the way of the professionals coming in. It's a vicious circle really.
74 If you don't help you feel like perhaps you could have done something. If you do help you
75 don't want to get in the way of the other people who come in with the ambulance.*

76

77 Did the bystanders say anything to you at the time of the resuscitation or immediately
78 afterwards?

79

80 *Afterwards they didn't really have anything, enough time to say anything. They said thank you
81 and they obviously helped us (2) a lot and um. During the CPR they stood back initially and
82 we said 'do you want to help' and they said yeah.*

83

84 So have you had any situations where those who have taken an either active or passive role
85 have come back to say that this had either a positive or negative effect?

86

87 (3) *Not personally. I've heard other people discuss it. They say 'although the patient died at
88 least I tried to do something and feel better in the respect that I helped'.*

89

90 That's interesting.

91

92 *I'd say that's a... That's going back a couple of years ().*

93

94 And do you find that your other colleagues share those comments?

95

96 *Yeah. It's obviously different if it's a family member. Whereas this gentleman wasn't related,*

97 *as far as we know, not related to anyone involved.*

98

99 So can I ask you why do you think it's different if it's a family member? (2) Do you think
100 *[Well from my perspective, I feel very obliged to do everything if they are stood there because*
101 *it's obviously their wife, husband, (1) father and it just seems... I don't know, (1) not more*
102 *pressure as such but you're aware that this person has a family around them whereas if, like*
103 *this gentleman collapsed in the street, you don't think, think about the family until you get to*
104 *hospital, handover and they say 'can you ring the family'?]*

105

106 So do you feel there is more pressure on you as a team if there is a family member present?

107

108 *Yeah.*

109

110 And what about the bystanders? Do you consider the effects of being present during
111 resuscitation are different for a family member than say, a stranger?

112

113 *I think, I think there's possibly a big difference. If it was my father on the floor, I know (2) I*
114 *know that would affect me more in the long term than if I was a stranger, so...*

115

116 Do you consider that there are any positive or negative effects of bystander presence on the
117 person undergoing resuscitation?

118

119 *I don't think there are any negative effects in the respect that you can't do any harm by trying*
120 *cause they're already on, well the worst condition they could possibly be in. So I think, no I*
121 *don't think there are any negatives. I mean positive, you're helping, you're trying something.*
122 *It might just be in that one second that you've done something that brings them back.*

123

124 What was the outcome of this resuscitation? Did you successfully resuscitate the patient at the
125 scene?

126

127 *Shaking my head. No, we transported him to hospital but unfortunately he died at the*
128 *hospital.*

129

130 So what happened to the bystanders? Presumably with the bystanders being strangers, they
131 were left at the scene?

132

133 *Yeah. We did. They were going to go and contact the family and let them know what had*
134 *happened.*

135

136 So can I ask you then in terms of if those were relatives at the scene, have you had experience
137 whereby the relatives have either requested to accompany you in the ambulance or have
138 actually accompanied you?

139

140 *Yes. We had a young lad accompany us when his er father arrested. For my personal choice, I
141 don't like them in the back with me if I'm working on the patient, so I ask if they'll sit at the
142 front. Of course, I mean, they're quite... If they want to, they are more than welcome to come
143 in the back and obviously see what you are doing cause then it puts their mind at rest thinking
144 at least you're helping, at least you're trying. But just from my personal choice I don't like
145 anybody in the back watching.*

146

147 So can I just explore; what's the difference of having someone watch you perform
148 resuscitation at the roadside or in the home, compared to someone watching in the back of the
149 ambulance?

150

151 *(4) I don't really know. I've never really thought about it. <Laughs>.*

152

153 Please don't feel that I am making any judgement, that that's right or wrong.

154

155 *I think it's the fact it's so enclosed in the back of the vehicle. It's more; a lot of it's to do with
156 the practicality of it, cause with how the ambulance is arranged. I'd sit in the um, the escort
157 seat when I'm working on a patient, so they'd be sat in the attendant's seat. It's just the
158 getting in the way I think a lot of it and worried about... And also about making a mistake if
159 they're there. I mean they probably won't know it's a mistake or you've done...*

160

161 So is about being in a confined area?

162

163 *Yeah.*

164

165 Trying to deal with that situation whilst also travelling along at speed?

166

167 *I know it sounds horrible but you're trying to deal with the patient. You can't deal with the
168 relative as well.*

169

170 Is there usually just one you in the back at the time of transportation?

171

172 *In the arrests I've done, the majority of them have just been one in the back, but there can be
173 two which is another reason why we don't tend to take a relative in the back.*

174

175 So if a relative approached you and asked to travel in the ambulance you would allow them,
176 but preferably sitting in the front seat?

177

178 *In the back of the ambulance things are flying everywhere. I am very messy in the back with
179 an arrest. I shouldn't be saying this but when I've finished with things I just put them on the
180 floor out of the way cause you don't, you obviously don't want them round the person.*

181

182 Do you feel that 'messy environment' may cause concern to those who are present?

183

184 *(3) Only in the respect if they know what's going on (2). If they're not, obviously if they don't*
185 *know what we're doing they might think everyone works like this. Generally I mean an arrest*
186 *is a messy job really with all your kit and your drugs and it's just, I mean cause, not a rush,*
187 *but you're trying to obviously do your best in the quickest, slickest way you can, so, you do*
188 *flick tops off drugs and <laughs> pick them up after.*

189

190 So in terms of this incident of having bystanders present. Was this your first experience of
191 having bystanders present during resuscitation?

192

193 *No.*

194

195 And how long ago was that particular resuscitation event?

196

197 *Er, December.*

198

199 Do you feel that the event is still vivid to you?

200

201 *Yeah.*

202

203 So for what reason do you think that stands out? If it wasn't the first time that you'd
204 experienced it, why do you think it stands out so much to you?

205

206 *Um, I think a lot of it's got to do with, we happened to be passing the job at the time. We*
207 *weren't actually responding to it. Uh, that it was outside in a public place. I think that's my*
208 *first one outside in a public place and um, (3) I don't know. Just generally all my arrests stick*
209 *with me. I can remember the majority of them.*

210

211 Right. And do you feel that your views about having bystanders present have changed with
212 experience of this situation?

213

214 *(4) No, I think witnesses are excellent in the respect that they can tell you what happened*
215 *beforehand. And so even the more experience I gain... You still... They're the best person to*
216 *talk to.*

217

218 And how important is that information to you?

219

220 *Exceedingly important cause your treatment protocols change (2). Not in respect of the arrest*
221 *but how that patient is dealt with. So you have a bit of history. You know whether they have*
222 *complained of chest pain beforehand or whether they've just collapsed. Then your mind set*
223 *goes one way or the other.*

224

225 Okay. So looking back to that particular experience but also drawing upon other experiences
226 that you've had, do you think that practices related to bystander presence could be improved
227 in any way?

228

229 *(4) Um, (3) yes in the fact that more people could be trained in CPR, not how people perform*
230 *the CPR cause you're never going to do any harm just by trying, but I think you need to um*

231 *increase the knowledge of people, cause obviously it would be a very harrowing, well almost*
232 *scary situation to be in if you've never done it before. So that little bit of training could just*
233 *(2) make them feel better about it and at least they've tried.*

234

235 Does your organisation have any scheme by which the lay public are trained?

236

237 *Yeah we do. Um, our internal training does er, does first aid at work courses and CPR to lay*
238 *people if they want to have a course run at work or in the schools. We do a lot of the schools.*

239 *Go round teaching CPR to the children. The primary school.*

240

241 And do those people volunteer to participate or do they call upon your organisation [They
242 call] to go and do some specific training.

243

244 *Cause I know um, that we do training outside of our own service so they call.*

245

246 Do you find that there are any other ways in which the lay public become familiar with
247 resuscitation?

248

249 *Daft as it sounds, Casualty or programmes like that or the hospital programmes. It's*
250 *amazing. They turn round and say 'I saw that on Casualty last week so I thought I'd help'.*

251

252 So how accurate a picture of CPR do you think the TV gives the lay public?

253

254 *Not very accurate I'd say, cause they always manage to, well, they get everybody back. It's*
255 *very rarely that um, they don't. Two minutes of CPR and the person's up talking.*

256

257 What about the procedure itself? Do you think that's portrayed accurately?

258

259 *Yeah, yeah, from a lay perspective, the way they perform CPR and how they show it on TV, I*
260 *thinks it's very good.*

261

262 Do you think that the outcome seen on TV has an effect on what people expect of you?

263

264 *Yes, they um, (3) they see sort of five minutes worth of or two minutes worth of resuscitation*
265 *and that person's up, talking fine. Our protocol's 40 minutes and (4) unless you've, that*

266 *person's very lucky and it's witnessed and there's somebody there to actually, instantly treat*
267 *that patient, you very rarely get anybody back within two minutes.*

268

269 So can I ask you a little bit more about the types of interventions that the lay people were
270 witness to at the resuscitation you described?

271

272 *Yeah, we intubated the patient; put a tube down his throat. Asked the um, one of the lay*
273 *bystanders to bag for us so they were um breathing for the patient and cannulated so to set up*

274 *an IV and administer drugs which is only really what we can do differently to lay people.*

275

276 So the patient didn't require defibrillation?

277

278 *No, oh sorry, yes, actually this one yes he did. I'm getting them mixed up now. Yeah, he was*
279 *actually defib'd seven times followed by (standstill).*

280

281 And in terms of the bystanders' safety, what sort of procedures do you take?

282

283 *You have to make sure that they are well back or out of the way, that it's not wet anywhere,*
284 *there's no metal attached or they're lying on any metal. Nobody's touching the patient at all.*

285 *You shout clearly for you need them to clear the scene. Tell them you're going to shock and*
286 *then tell tem when you have shocked so that they can go back and touch the patient.*

287

288 And in your experience, do lay people usually accept the instructions that you give?

289

290 *Yes. I think a lot of the time they are quite relieved when we arrive cause um, it puts their*
291 *mind at rest. I suppose without sort of blowing our own trumpet, they sort of see us as in*
292 *control and so they do listen.*

293

294 In your experience, are there any occasions when you've considered it inappropriate for lay
295 people to be present during resuscitation?

296

297 *(4) Only when it's... I don't like... If you go out to an elderly couple. I don't like the elderly*
298 *half that's survived to witness what we're doing to the other half. I think... I think it's too*
299 *much for them to take really cause it's quite barbaric performing CPR and the interventions*
300 *that we do.*

301

302 Have you experienced any situations when that's actually been the case, when it's been an
303 elderly person?

304

305 *Yeah, not long before the one we've been talking about.*

306

307 Can you talk me through that situation?

308

309 *We walked into the bedroom and found um, the gentleman on the floor and saw immediately*
310 *what had happened because we actually got it through as just um, unconscious. I just said*
311 *um, 'Shall we go next door, sit yourself down why we just check him over, see what's going*
312 *on'. And she did and we obviously worked on him. Luckily there was another member there*
313 *with her but I just think it's too much for them to take. It's a lot to take full stop, how ever old*
314 *you are. It's a shocking thing to go through.*

315

316 If that family member had wanted to remain present, what would your reaction have been to
317 that situation?

318

319 *I would let them be present. It might give them peace of mind that they're helping and we've*
320 *tried our best and couldn't get him back. At least they've seen then that something has been*
321 *done, we've not just been in a closed bedroom doing nothing, just clock watching, oh it's half*
322 *an hour now, we'll leave it.*

323

324 So would you say that that is one of the possible advantages of them being present? You used
325 the term [For them you mean or...] *Yes for them. You said 'at least they would have seen that*
326 *something had been done and not clock watching'.*

327

328 *I don't think we clock watch <laughs>. Er, I'd like... I'd like to see everything being done if it*
329 *was me (3). Obviously, you try your best when you're in a situation like that and not um,*
330 *every time it doesn't work.*

331

332 Just to clarify. I wasn't thinking that the ambulance crew were clock watching [<laughs> I
333 just suddenly thought then]. Obviously I was just trying to make sure that I was correct in
334 thinking that a possible advantage for the relative was seeing that something had been done
335 and I just wanted to make sure that I had not interpreted what you said incorrectly. So
336 moving on to some general questions, I'm interested to know what motivated you to
337 participate in this research.

338

339 *I just find it a fascinating topic. I'd love to know if the person who's been there and watched*
340 *somebody perform CPR, whether that has had an effect on them and whether they prefer*
341 *being involved and that's perhaps had a more positive effect than if they just stood there and*
342 *not being involved. I mean, we don't do it every day but obviously we go out to arrests on*
343 *numerous occasions so it becomes second nature to us. I mean obviously, I can remember*
344 *every cardiac arrest, but that's, that's me. A lot of other people perhaps won't, but I know*
345 *what effect it has on me and I wondered if it has a similar effect on somebody who isn't*
346 *trained like we are.*

347

348 If we did go out and asked the lay person what effect presence during resuscitation had on
349 them, what response do you think they would give?

350

351 *(3) If it was me, I'd, I'd be (2) what's the word? Um, (4) not thankful, but I'd be glad that I'd*
352 *helped. Obviously I can't speak for other people but I know in my mind that I've done*
353 *something cause I've tried to help and I've done my best to try and make a bad situation a bit*
354 *better.*

355

356 So have the reactions of lay people given you any indication as to whether their experience
357 has been positive or negative?

358

359 *In think in the job we were discussing, I think they were (1) quite relieved in one respect that*
360 *they could help (2)... Feel involved in what was going on.*

361

362 You said if it was you in that situation you would want to be present. Do you feel this has
363 anything to do with being a health professional?

364

365 *Yes, I think, I think it does. Cause obviously we just go into auto pilot if we see someone*
366 *collapse. It would be airway, breathing and circulation and administer CPR. It's just like*
367 *second nature. Whereas if I wasn't trained, I'd be thinking 'are my hands in the right*
368 *position, am I doing any damage if I'm doing it like this' or more worried about getting things*
369 *wrong because it's not so much second nature to you.*

370

371 Any other factors that motivated you to participate in this research? You said it was a topic
372 that fascinates you.

373

374 (3) *Um, (3) also cause of what I do, what else I do in the service dealing with the cardiac
375 arrests. I just think it would be very interesting to know your findings.*

376

377 Okay. Thank you. Well I will make sure that you do get a copy of what the findings of the
378 research are. So do you think that participation in this interview has been beneficial to you in
379 any way?

380

381 (6) *Um, I suppose yes and no really <laughs> just to be awkward.*

382

383 So if we take yes first then, in what way do you think it's been beneficial?

384

385 *Because you see what other people go through (2) when you're there. You can, you see the
386 panic and terror on their face and then when you arrive they're like <sighs> thank you, and
387 you think... I don't know. It's quite funny.*

388

389 So has participating in this research made you think any differently about [I now, I think well,
390 I now want to know what they are thinking, if that makes sense <laughs>]. So you would like
391 some more research [Yes please] from the lay persons perspective. Obviously, this is the first
392 stage of the research and hopefully the next stage will be to gain the bystanders perspective.

393

394 *It would be very interesting I should think. I would imagine it sticks in their minds a lot more
395 than it does ours.*

396

397 So do you think that would be useful information for you as a member of the ambulance staff?

398

399 *I think it would cause at least then perhaps we'd address the bystanders differently. Although
400 I know I don't like them in the back of the ambulance and I don't particularly mind them
401 when I'm out in public or in the house cause I just switch off. At least then you'd appreciate
402 you know what they're thinking while they're there. Can I include them? Or will they feel
403 perhaps a bit more at ease if I do, or will they prefer us to say 'do you mind going next door'.*

404

405 So do you think we need more research to inform whether practice should change or not? Do
406 you think that's a possibility?

407

408 *Yeah. I think so.*

409

410 Are there any further issues about lay presence during CPR that you would like to share?

411

412 (8) *Um, can I ask you a question?*

413

414 Yes, by all means.

415

416 *How would you feel to be a bystander? Would you be active or passive do you think or have
417 you come across that?*

418

419 Um yes, I have had a situation um, where I have been called to someone that collapsed in
420 church with the impression from people that this person had possibly had a cardiac arrest and
421 I must admit that I was quite relieved when I got in to see the person that he was starting to
422 come round. Although I'm trained to perform resuscitation, I think its very different trying to
423 perform resuscitation in an environment where you haven't got any resources [Yeah]. And I
424 can recall that the person wanted to be sick and I was looking for a vomit bowl only to find a
425 bucket you know, well it was a waste paper bin. So I was nervous from the perspective that
426 although, although I'd got resuscitation skills, I had worked in an environment where the
427 equipment was always available so it never; I had never had to call upon basic life-support
428 skills. I had always got the equipment to perform advanced life support. Um, so I was really
429 relieved when he started to stir <laughs> and realised that he was a bit dehydrated and there
430 was that typical smell of melaena and I realised that this chap had probably got a bleed
431 somewhere. Um, in terms of if it was one of my family members um, then my perspective on
432 this is that it's down to people's personal choice and I don't think until you are in the situation
433 for me, that I could probably say that I wanted to be present or not. Um, my heart says at this
434 point in time [Yeah] that I would want to be present. If it actually happened, I think I could
435 only make that decision at that time. But what I would hope is that the people around me
436 would allow me to make that decision. That at the end of the day [Yeah] it's my choice as to
437 whether I stay or leave, but I know, as a health professional, I couldn't just walk away and not
438 attempt the resuscitation. I couldn't just automatically choose to walk away until I knew that
439 somebody who was capable of taking over the resuscitation was actually present. And then
440 whether I stay or not, I think I can only find out <laughs> heaven forbid [*In the case it ever*
441 *happens*] heaven forbid if the situation should ever happen. But thank you for asking my
442 personal perspective. I wouldn't wish it to influence your own views in any way, but certainly
443 one of the reasons I am doing this research is because at the end of the day I think it is about
444 choice for individuals [Yeah]. Even though I, I would support there are occasions when it
445 would be right for us to consider the safety and also an element of protection for individuals if
446 we think they're vulnerable, which I think is what you were saying with regard to the elderly
447 people.

448

449 *That's quite interesting. We obviously go in to a scene. Sort of my mind set is the person in*
450 *front of us. Interesting in saying about giving the bystander a choice. Cause we don't really*
451 *think like that. Our priority is the patient. But you try and... Never thought to actually ask.*
452 *Like the elderly lady. I said 'shall we go next door' and I didn't give her the choice to stay*
453 *cause I didn't think it was beneficial for her. I've never thought to actually ask anybody.*

454

455 So do you think that might give you food for thought?

456

457 *Yeah <laughs>. I mean it's changing our mindset as well (3). It's difficult cause you're*
458 *obviously just dealing with that one person but you're thinking, there's... Someone's stood*
459 *over the back of me.*

460

461 So picking up on that comment that you must deal with the patient but you've also got a set of
462 witnesses that you also have to deal with, does that cause you difficulty or conflict that you've
463 got two sets of people that you feel are equal priority or is that not the case?

464

465 *Not in the situations I've been in. I wouldn't say there's conflict. A couple occasions we've*
466 *suggested that they um, may want to just leave while we get on with what we're doing but...*
467

468 So in terms of your skills and abilities to deal with an emergency situation but also a set of lay
469 people, what enables you to deal with that situation so well?

470

471 *Training I think. Cause obviously, it's the... Well it is a matter of life and death, so the*
472 *training is sort of drilled into you. I think that's a big part.*

473

474 So does your training include scenarios where lay people are present during resuscitation?

475

476 (2) *Yes, actually, thinking back, it does. I mean the lay people are always pretending to be lay*
477 *people and causing trouble and diving on top of the patient saying 'this is my husband' and*
478 *trying to drag um... I mean we go to the extremes. Obviously you do get people like that so we*
479 *go to extremes in the training. Then, then you've got two patients. Obviously you've got the*
480 *hysterical other half that you need to try and sort of deal with in a nice compassionate way*
481 *while you try to concentrate on the other half.*

482

483 I think it is to your credit that you can use that combination of skills in such an effective way.

484

485 *You just don't think about it at the time to be honest (3). You sought of get on... Its afterwards*
486 *you think, ooh.*

487

488 In your experience, have you ever had relatives or patients come back with any complaint?

489

490 *Not in my experience, no. Obviously can't comment on anybody else's who I've worked with.*

491

492 Anything else that you would like to add?

493

494 *Lots of things I could think of but would go on for ever <laughs>.*

495

496 You're more than welcome if you wish to. When you say you've got lots of other things you
497 can think of [*just things along the same points I've already said, just thinking of other jobs*
498 *that's all*].

499

500 But very similar [*Yeah*] to the responses that you've already given? Okay.

501

502 Respondent thanked for participating in this study and for sharing their experiences with me.

REFERENCES

Academy of Medical Royal Colleges (2008) **A Code of Practice for the Diagnosis and Confirmation of Death**. London: AMRC.

Adams, S. (1994) **Personal Communication**. **British Medical Journal**, 308: 1687

Allen, M.N. and Jensen, L. (1990) Hermeneutical inquiry: meaning and scope. **Western Journal of Nursing Research**, 12 (2): 241-253.

Alzaga, A.G., Varon, J. and Baskett, P. (2005) Charles Kite: The clinical epidemiology of sudden cardiac death and the origin of the early defibrillator. **Resuscitation**, 64: 7-12.

Ambulance Service Association and Joint Royal College Ambulance Liaison Committee, (2004) **National Out-of-Hospital Cardiac Arrest Project** [online].

www.asa.uk.net/content_files/files/NationalOutOfHospitalCardiacArrestAudit [Accessed January 9th 2008]

Ambulance Service Association and Joint Royal College Ambulance Liaison Committee (2006) **National Out-of-Hospital Cardiac Arrest Project** [online].

http://asa.uk.net/content_files/files/ASANationalCardiacArrestAudit06Master3Sept07.pdf
[Accessed April 26th 2010]

American Association of Critical-Care Nurses (2004) **Family presence during CPR and Invasive Procedures** [online]. [www.aacn.org/AACN/practiceAlert.nsf/Files/FP/\\$file/Family%20Presence%20During%20CPR%2011-2004.pdf](http://www.aacn.org/AACN/practiceAlert.nsf/Files/FP/$file/Family%20Presence%20During%20CPR%2011-2004.pdf) [Accessed October 10th 2007]

American Heart Association in collaboration with International Liaison Committee on Resuscitation (2000) Guidelines 2000 for cardiopulmonary resuscitation and emergency cardiovascular care – an international consensus on science. **Resuscitation**, 46: 1-447.

American Heart Association (2005a) Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care: Part 2. Ethical Issues. **Circulation**, 112 (21): Supplement, IV-6 - IV-11.

American Heart Association (2005b) International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. Part 1: Introduction. **Circulation**, 112: (Supplement I) III-1-III-4.

Arawwawala, D. and Brett, S. (2006) Changes to the European Resuscitation Council cardiac arrest management guidelines - a commentary. **British Journal of Cardiology**, 13 (6): 425-49.

Ardley, C. (2003) Should relatives be denied access to the resuscitation room? **Intensive and Critical Care Nursing**, 19: 1-10.

Attride-Sterling, J. (2001) Thematic networks: an analytical tool for qualitative research.

Qualitative Research, 1 (3): 385-405.

Awoonor - Renner, S. (1991) I desperately need to see my son. **British Medical Journal**, 302 (6772): 356.

Axelsson, A., Herlitz, J., Ekström, L. and Holmberg, S. (1996) Bystander-initiated cardiopulmonary resuscitation out-of-hospital. A first description of the bystanders and their experiences. **Resuscitation**, 33: 3-11.

Axelsson, A., Herlitz, J., Karlsson, T., Lindqvist, J., Graves, J.R., Ekström, L. and Holmberg, S. (1998) Factors surrounding cardiopulmonary resuscitation influencing bystanders' psychological reactions. **Resuscitation**, 37: 13-20.

Axelsson, A., Herlitz, J. and Fridlund, B. (2000a) How bystanders perceive their cardiopulmonary resuscitation intervention: a qualitative study. **Resuscitation**, 47: 71-78.

Axelsson, A., Thorén, A., Holmberg, S. and Herlitz, J. (2000b) Attitudes of Swedish lay rescuers toward CPR performance in an emergency: a survey of 1012 recently trained CPR rescuers. **Resuscitation**, 44: 27-36.

Axelsson, A.B., Zettergren, M. and Axelsson, C. (2005) Good and bad experiences of family presence during acute care and resuscitation. What makes the difference? **European Journal of Cardiovascular Nursing**, 4: 161-169.

Back, D. and Rooke, V. (1994) The presence of relatives in the resuscitation room. **Nursing Times**, 90 (30): 34-35.

Baer, N.A. (1996) Cardiopulmonary resuscitation on television. **The New England Journal of Medicine**, 334 (24): 1604-1605.

Balls, P. (2009) Phenomenology in nursing research: methodology, interviewing and transcribing. **Nursing Times**, 105 (32): 30-33.

Barnum, B.S. (1998) **Nursing Theory: Analysis, Application, Evaluation**. 5th ed. Philadelphia: Lippincott.

Barratt, F. and Wallis, D.N. (1998) Relatives in the resuscitation room: their point of view. **Journal of Accident and Emergency Medicine**, 15: 109-111.

Baskett, P.J. (1993) **Resuscitation Handbook**. 2nd ed. London: Wolfe.

Baskett, P.J.F. and Lim, A. (2004) The varying ethical attitudes towards resuscitation in Europe. **Resuscitation**, 62: 267-273.

Baskett, P.J.F., Steen, P.A. and Bossaert, L. (2005) European Resuscitation Council Guidelines for Resuscitation 2005. Section 8. The ethics of resuscitation and end-of-life decisions. **Resuscitation**, 67S1: S171-S180.

Bassler, P.C. (1999) The impact of education on nurses' beliefs regarding family presence in a resuscitation room. **Journal for Nurses in Staff Development**, 15 (3): 126-131.

Beauchamp, T.L. and Childress, J.F. (2001) **Principles of Biomedical Ethics**. 5th ed. Oxford: Oxford University Press.

Beck, C.T. (1994) Phenomenology: its use in nursing research. **International Journal of Nursing Studies**, 31 (6): 499-510.

Behi, R. and Nolan, M. (1995) Ethical issues in research. **British Journal of Nursing**, 4 (12): 712-716.

Belanger, M.A. and Reed, S. (1997) A rural community hospital's experience with family-witnessed resuscitation. **Journal of Emergency Nursing**, 23 (3): 238-239.

Benjamin, M. and Curtis, J. (1986) **Ethics in Nursing**. 2nd ed. Oxford: Oxford University Press.

Benjamin, M., Holger, J. and Carr, M. (2004) Personal preferences regarding family member presence during resuscitation. **Academic Emergency Medicine**, 11 (7): 750-753.

Benner, P. (1985) Quality of life: a phenomenological perspective on explanation, prediction, and understanding in nursing science. **Advances in Nursing Science**, 8 (1): 1-14.

Berger, J.T., Brody, G., Eisenstein, L. and Pollack, S. (2004) Do potential recipients of cardiopulmonary resuscitation want their family members to attend? A survey of public preferences. **The Journal of Clinical Ethics**, 15 (3): 237-242.

Blomfield, R. (2000) Relatives in the resuscitation room: don't overlook the patient! **Accident and Emergency Nursing**, 8 (1): 52-53.

Booth, M.G., Woolrich, L. and Kinsella, J. (2004) Family witnessed resuscitation in UK emergency departments: a survey of practice. **European Journal of Anaesthesiology**, 21: 725-728.

Boudreaux, E.D., Francis, J.L. and Loyacano, T. (2002) Family presence during invasive procedures and resuscitations in the emergency department: A critical review and suggestions for future research. **Annals of Emergency Medicine**, 40 (2): 193-205.

Boyd, R. (2000) Witnessed resuscitation by relatives. **Resuscitation**, 43: 171-176.

Boyd, R. and White, S. (2000) Does witnessed cardiopulmonary resuscitation alter perceived stress in accident and emergency staff? **European Journal of Emergency Medicine**, 7: 51-53.

Brink, P.J. (1991) 'Issues of reliability and validity'. In Morse, J.M. (ed.) **Qualitative Nursing Research: A Contemporary Dialogue**. Newbury Park, CA: Sage Publications. pp.164-186.

British Association for Accident and Emergency Medicine and the Royal College of Nursing (1995) **Bereavement Care in A&E Departments**. London: RCN.

British Medical Association, Resuscitation Council (UK), Royal College of Nursing (2001) **Decisions Relating to Cardiopulmonary Resuscitation: A Joint Statement from the British Medical Association, Resuscitation Council (UK) and the Royal College of Nursing**. London: BMA.

Britten, N. (1995) Qualitative research: qualitative interviews in medical research. **British Medical Journal**, 311 (6999): 251-253.

Broekman, B. (1998) Discussing resuscitation with patients, why not? **Resuscitation**, 37: 2062.

Broome, M.E. (2000) 'Integrative literature reviews for the development of concepts'. In Rodgers, B.L. and Knafl, K.A. **Concept Development in Nursing: Foundations, Techniques and Applications**. 2nd ed. Philadelphia: W.B. Saunders Company. pp.231-250.

Brummell, S. (1998) Resuscitation in the A&E department: can concepts of death aid decision making? **Accident and Emergency Nursing**, 6: 75-81.

Burke Draucker, C.B. (1999) The critique of Heideggerian hermeneutical nursing research. **Journal of Advanced Nursing**, 30 (2): 360-373.

Burns, N. and Grove, S.K. (1999) **Understanding Nursing Research**. 2nd ed. Philadelphia: W.B. Saunders Company.

Calam, B., Far, S. and Andrew, R. (2000) Discussions of 'code status' on a family practice teaching ward: what barriers do family physicians face? **Canadian Medical Association Journal**, 163 (10): 1255-1259.

Cambridge Advanced Learner's Dictionary (2004) Cambridge University Press [online]. www.dictionary.cambridge.org [Accessed April 30th 2004]

Campbell, K. and Robson, D. (2004) Adult resuscitation guidelines. **Community Practitioner**, 77 (4): 152-154.

Care Quality Commission (2010) Inpatient survey results published. [online]. www.cqc.org.uk/newsandevents/newsstories.cfm?FaArea1=customwidgets.content_view_1&cit_id=36255 [Accessed May 22nd 2010]

Carnwell, R. and Daly, B. (2001) Strategies for the construction of a critical review of the literature. **Nurse Education in Practice**, 1: 57-63.

Chalk, A. (1995) Should relatives be present in the resuscitation room? **Accident and Emergency Nursing**, 3: 58-61.

Chamberlain, D., Handley, A.J., Colquhoun, M. (2003) Time for change? **Resuscitation**, 58: 237-247.

Chinn, P.L. and Jacobs, M.K. (1983) **Theory and Nursing: A Systematic Approach**. St Louis: Mosby.

Chinn, P.L. and Kramer, M.K. (1995) **Theory and Nursing: A Systematic Approach**. 4th ed. St Louis: Mosby.

Chiu, L. (2000) Lived experience of spirituality in Taiwanese women with breast cancer. **Western Journal of Nursing Research**, 22 (1): 29-53.

Clark, A.P., Calvin, A.O., Meyers, T.A., Eichhorn, D.E. and Guzetta, C.E. (2001) Family presence during CPR and invasive procedures: a research-based intervention. **Critical Care Nursing Clinics of North America**, 13: 569-575.

Clifford, C. (1997) **Nursing and Health Care Research: A Skills-Based Introduction**. 2nd ed. London: Prentice Hall.

Cobbe, S.M., Redmond, M.J., Watson, J.M., Hollingworth, J. and Carrington, D.J. (1991). 'Heartstart Scotland' - initial experience of a national scheme for out of hospital defibrillation. **British Medical Journal**, 302 (6791): 1517-1520.

Cohen, M.Z. (1987) A historical overview of the phenomenological movement. **IMAGE: Journal of Nursing Scholarship**, 19 (1): 31-34.

Colaizzi, P. (1978) 'Psychological research as the phenomenologist views it'. In Valle, R. and King, M. (eds.) **Existential Phenomenological Alternatives for Psychology**. New York: Oxford University Press. pp. 48-71.

Colquhoun, M. and Jevon, P. (2000) **Resuscitation in Primary Care**. Oxford: Butterworth Heinemann.

Colquhoun, M. and Nolan, J. (2005) 'Introduction'. In **Resuscitation Council (UK) Resuscitation Guidelines 2005**. London: Resuscitation Council (UK). pp. 5-7.

Compton, S., Madgy A., Goldstein, M., Sandhu, J., Dunne, R. and Swor, R. (2006) Emergency medical service providers' experiences with family presence during resuscitation. **Resuscitation**, 70: 223-228.

Connors, P. (1996) Should relatives be allowed in the resuscitation room? **Nursing Standard**, 10 (44): 42-44.

Cook, A.S. (1995) Ethical issues in bereavement research: An overview. **Death Studies**, 19: 103-122.

Cooper, H.M. (1989) **Integrating Research: A Guide for Literature Reviews**. 2nd ed. Newbury Park: Sage Publications.

Cowles, K.V. (1988) Issues in qualitative research on sensitive topics. **Western Journal of Nursing Research**, 10 (2): 163-179.

Cowman, S. (2008) 'Triangulation'. In Watson, R., McKenna, H., Cowman, S. and Keady, J. (eds.) **Nursing Research: Designs and Methods**. Edinburgh: Churchill Livingstone. pp. 269-278.

Cox, C.M. (1993) Families and codes - one emergency department's experience. **Journal of Emergency Nursing**, 19 (1): 5.

Coyle, A. and Wright, C. (1996) Using the Counselling Interview To Collect Data on Sensitive Topics. **Journal of Health Psychology**, 1 (14): 431-440.

Critchell, D.C. and Marik, P.E. (2007) Should family members be present during cardiopulmonary resuscitation? A review of the literature. **American Journal of Hospice and Palliative Medicine**, 24 (4): 311-317.

Crotty, M. (1996) **Phenomenology and Nursing Research**. Melbourne: Churchill Livingstone.

Crotty, M. (1998) **The Foundations of Social Research: Meaning and Perspective in the Research Process**. London: Sage Publications Ltd.

Cummins, R.O., Ornato, J.P., Thies, W.H. and Pepe, P.E. (1991a) Improving survival from sudden cardiac arrest: The 'chain of survival' concept. **Circulation**, 83 (5): 1832-1847.

Cummins, R.O., Chamberlain, D.A., Abramson, N.S., Allen, M., Baskett, P.J., Becker, L., Bossaert, L., Delooz, H.H., Dick, W.F. and Eisenberg, M.S. (1991b) Recommended guidelines for uniform reporting from out-of-hospital cardiac arrest: The Utstein style. A statement for health professionals from a task force of the American Heart Association, the European Resuscitation Council, the Heart and Stroke Foundation of Canada, and the Australian Resuscitation Council. **Circulation**, 84: 960-975.

Davey, B. (2001) Do-not-resuscitate decisions: too many, too few, too late? **Mortality**, 6 (3): 247-264.

Davies, D. and Dodd, J. (2002) Qualitative research and the question of rigour. **Qualitative Health Research**, 12 (2): 279-289.

Davis, A.J. and Aroskar, M.A. (1991) **Ethical Dilemmas and Nursing Practice**. 3rd ed. Norwalk: Appleton and Lange.

Demir, F. (2008) Presence of patients' families during cardiopulmonary resuscitation: physicians' and nurses' opinions. **Journal of Advanced Nursing**, 63 (4), 409-416.

Denscombe, M. (2007) **The Good Research Guide: for small-scale social research projects**. 3rd ed. Berkshire: McGraw Hill Open University Press.

Department of Health (1983) **Cadaveric organs for transplantation: A code of practice including the diagnosis of brain stem death.** London: HMSO.

Department of Health (1997) **The New NHS: Modern, Dependable.** London: The Stationery Office.

Department of Health (1998a) **Human Rights Act.** London: The Stationery Office Limited.

Department of Health (1998b) **A code of practice for the diagnosis of brain stem death.** London: HMSO.

Department of Health (1998c) **Data Protection Act.** London: The Stationery Office.

Department of Health (2000a) **The NHS Plan. A plan for investment. A plan for reform.** London: HMSO.

Department of Health (2000b) **National Service Framework for Coronary Heart Disease.** London: DH.

Department of Health (2001a) **Shifting the Balance of Power.** London: DH.

Department of Health (2001b) **Involving Patients and the Public in Healthcare: a discussion document.** London: DH.

Department of Health (2001c) **Reforming the NHS Complaints Procedure: a listening document**. London: DH.

Department of Health (2001d) **Research Governance Framework for Health and Social Care**. London: DH.

Department of Health (2002) **Supporting the Implementation of Patient Advice and Liaison Services (PALS): a resource pack**. London: DH.

Department of Health (2003a) **Building on the best: Choice, responsiveness and equity in the NHS**. London: DH.

Department of Health (2003b) **National Defibrillator Programme background**. [online]. www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/CoronaryHeart [Accessed May 5th 2004]

Department of Health (2005a) **National Service Framework for Coronary Heart Disease. Chapter Eight: Arrhythmias and Sudden Cardiac Death**. London: DH.

Department of Health (2005b) **Research Governance Framework for Health and Social Care**. 2nd ed. London: DH.

Department of Health (2008) **End of life care strategy: Promoting high quality care for all adults at the end of life**. London: DH.

Dickoff, J. and James, P. (1968) A theory of theories: a position paper. **Nursing Research**, 17 (3): 197-203.

Diekelman, N.L., Allen, D. and Tanner, C. (1989) **The NLN criteria of appraisal of baccalaureate programs : A critical hermeneutic analysis**. New York : National League for Nursing Press.

Diem, D.J., Lantos, M.D. and Tulskey, J.A. (1996) Cardiopulmonary Resuscitation on Television: Miracles and Misinformation. **The New England Journal of Medicine**, 334: 1578-1560.

Diers, D. (1979) **Research in Nursing Practice**. Philadelphia: J.B. Lippincott Company.

Dight, A. (1999) Should relatives be allowed in the resuscitation room? **Nursing Times**, 95 (17): 31.

Dobson, M.E. (1996) **Personal Communication**. **Nursing Standard**, 11 (5): 10.

Dolan, B. (1997) Underlying compassion in casualty. **Emergency Nurse**, 5 (2): 1.

Dowling, M. (2007) From Husserl to van Manen. A review of different phenomenological approaches. **International Journal of Nursing Studies**, 44: 131-142.

Doyal, L. (1995) Advance directives. **British Medical Journal**, 310: 612-613.

Doyle, C.J., Post, H., Burney, R.E., Maino, J., Keefe, M. and Rhee, K.J. (1987) Family participation during resuscitation: an option. **Annals of Emergency Medicine**, 16 (6): 673-675.

Duffy, M.E. (1986) Quantitative and qualitative research: antagonistic or complimentary? **Nursing and Health Care**, 8 (6): 356-357.

Duran, C.R., Oman, K.S., Jordan, J. and Szymanski, D. (2007) Attitudes toward and beliefs about family presence: a survey of healthcare providers, patients' families and patients. **American Journal of Critical Care**, 16 (3): 270-279.

Eddie, F.C.T. (1994) Moral and ethical dilemmas in relation to research projects. **British Journal of Nursing**, 3 (4): 182-184.

Edwards, S.D. and Forbes, K. (2003) Nursing practice and the definition of human death. **Nursing Inquiry**, 10 (4): 229-235.

Eichhorn, D.J., Meyers, T.A., Mitchell, T.G. and Guzzetta, C.E. (1996) Opening the doors: family presence during resuscitation. **Journal of Cardiovascular Nursing**, 10 (4): 59-70.

Eichhorn, D.J., Meyers, T.A., Guzzetta, C.E. Clark, A.P., Klein, J.D., Taliaferro, E. and Calvin, A.O. (2001) Family presence during invasive procedures and resuscitation: hearing the voice of the patient. **American Journal of Nursing**, 101 (5): 48-55.

Emergency Nurses Association (1993) **General Assembly. Resolution 93:02. Family presence at the bedside during invasive procedures and/or resuscitation.** Park Ridge, IL: ENA.

Emergency Nurses Association (1995) Family Presence at the bedside during invasive procedures and/or resuscitation. **Journal of Emergency Nursing**, 21 (2): 26A.

Emergency Nurses Association (2001) **Presenting the Option for Family Presence.** 2nd ed. Bedford Park, IL: ENA.

Emergency Nurses Association (2005) **End-of-Life Care in the Emergency Department.** [online]. www.ena.org/about/position/PDFs/End-of-LifeCare.PDF [Accessed January 23rd 2008].

Engel, K.G., Desmond, J.S., Brandt, M.M., Berry-Bovia, M., Heckendorn, J.T. and Ubel, P.A. (2005) Provider experience and attitudes towards family presence during resuscitation procedures. **Academic Emergency Medicine**, 12 (5): Supplement 1, 81.

Erlandson, D.A., Harris, E.L., Skipper, B.L. and Allen, S.D. (1993) **Doing Naturalistic Inquiry: A Guide to Methods.** Newbury Park, CA: Sage Publications.

Evans, D. and Pearson, A. (2001) Systematic reviews: gatekeepers of nursing knowledge. **Journal of Clinical Nursing**, 10: 593-599.

Evans, T. (1998) Cardiac arrests outside hospital. **British Medical Journal**, 316: 1031-1032

Feinberg, J. (1973) **Social Philosophy**. Englewood Cliffs, NJ: Prentice-Hall.

Fielding, N. (1994) Varieties of research interviews. **Nurse Researcher**, 1 (3): 4-13.

Fielding, N. and Thomas, H. (2001) 'Qualitative Interviewing'. In Gilbert, N. (ed.) **Researching Social Life**. 2nd ed. London: Sage Publications Ltd. pp. 123-144.

Fillingham D. (2004) Emergency care. **Health Service Journal**, 22nd January (Supplement): 2-11.

Fletcher, N., Holt, J., Brazier, M. and Harris, J. (1995) **Ethics, Law and Nursing**.
Manchester: Manchester University Press.

Fontana, A. and Frey, J.H. (2000) 'The Interview: from structured questions to negotiated text'. In Denzin, N.K. and Lincoln, Y.S. **Handbook of Qualitative Research**. 5th ed.
Thousand Oaks, CA: Sage Publications, Inc. pp. 645-672.

Fulbrook, P., Latour, J., Albarran, J., Graaf, de W., Lynch, F., Devictor, D. and Norekvål, T. (2007) The Presence of Family Members During Cardiopulmonary Resuscitation Working Group. The Presence of Family Members During Cardiopulmonary Resuscitation: European federation of Critical Care Nursing associations, European Society of Paediatric and Neonatal Intensive Care and European Society of Cardiology Council on Cardiovascular Nursing and

Allied Professions Joint Position Statement. **Connect: The World of Critical Care Nursing**, 5 (4): 86-88.

Fulbrook, S. (1998) Legal implications of relatives witnessing resuscitation. **British Journal of Theatre Nursing**, 7 (10): 33-35.

Gillon, R. (1986) **Philosophical Medical Ethics**. Chichester: John Wiley and Sons.

Giorgi, A. (1985) **Phenomenology and Psychological Research**. Pittsburgh, PA: Duquesne University Press.

Glesne, C. and Peshkin, A. (1992) **Becoming Qualitative Researchers: An Introduction**. White Plains, NY: Longman.

Goldhill, D., Worthington, L., Mulcahy, A., Tarling, M. and Sumner, A. (1999) The patient-at-risk team: identifying and managing seriously ill ward patients. **Anaesthesia**, 54: 853-860.

Goldstein, S. (1985) 'Characteristics of sudden death victims and the natural history of survivors of out-of-hospital sudden death'. In Morganroth, J. and Horowitz, L.N. (eds.) **Sudden Cardiac Death**. Orlando: Grune and Stratton. pp. 23-32.

Goodenough, T.J. and Brysiewicz, P. (2003) Witnessed resuscitation - exploring the attitudes and practices of the emergency staff working in Level 1 Emergency Departments in the

province of KwaZulu-Natal. **Curationis: The South African Journal of Nursing**, 26 (2): 56-63.

Gordon, P.N., Williamson, S. and Lawler, P.G. (1998) As seen on TV: observational study of cardiopulmonary resuscitation in British television medical dramas. **British Medical Journal**, 317: 780-783.

Grandstrom, D. (1989) The family has a role even during a code. **Nursing**, 52 (8): 15-19.

Gray, A. (2001) 'The advanced nurse practitioner: empowerment in witnessed resuscitation'. In Bartter, K. (2001) **Ethical Issues in Advanced Nursing Practice**. Oxford: Butterworth Heinemann. pp. 101-117.

Gray, M.J.A. (1997) **Evidence-based Health Care**. Edinburgh: Churchill Livingstone.

Grbich, C. (1999) **Qualitative Research in Health: An Introduction**. London: Sage Publications Ltd.

Gregory, C.M. (1995) I should have been with Lisa when she died. **Accident and Emergency Nursing**, 3: 136-138.

Grice, A.S., Picton, P. and Deakin, C.D.S. (2003) Study examining attitudes of staff, patients and relatives to witnessed resuscitation in adult intensive care units. **British Journal of Anaesthesia**, 91 (6): 820-824.

Grubb, N.R., Elton, R.A. and Fox, K.A.A. (1995) In-hospital mortality after out-of-hospital cardiac arrest. **The Lancet**, 346: 417-421.

Gulla, J.M., Twist, M. and Singer, A.J. (2004) Should families be present at resuscitation? **Annals of Emergency Medicine**, 44 (4): S67.

Hadfield-Law, L. (1999) Do relatives have a place in the resuscitation room? **Care of the Critically Ill**, 15 (1): 19-22.

Hallett, C. (1995) Understanding the phenomenological approach to research. **Nurse Researcher**, 3 (2): 55-65.

Halm, M.A. (2005) Family presence during resuscitation: A critical review of the literature. **American Journal of Critical Care**, 14 (6): 494-511.

Hansen, E.C. (2006) **Successful Qualitative Health Research: A Practical Introduction**. Berkshire: Open University Press.

Hanson, C. and Strawser, D. (1992) Family presence during cardiopulmonary resuscitation: Foote Hospital emergency department's nine-year perspective. **Journal of Emergency Nursing**, 18 (2): 104-106.

Harris, J. (1985) **The Value of Life**. London: Routledge and Kegan Paul.

Hart, C. (1998) **Doing a Literature Review: Releasing the Social Science Research Imagination**. London: Sage Publications Ltd.

Heckendorn, J.T., Chakel, S.S., Ubel, P.A. and Engel, K.G. (2005) Family presence during critical resuscitation in the emergency department: Do patients and family members agree? **Academic Emergency Medicine**, 12 (5): Supplement 1, 81.

Heidegger, M. (1962) **Being and Time**. Translated by Macquarrie, J. and Robinson, E. Oxford: Blackwell Publishing Ltd.

Helmer, S.D., Smith, S., Dort, J.M., Shapiro, W.M. and Katan, B.S. (2000) Family presence during trauma resuscitation: A survey of AAST and ENA members. **The Journal of Trauma: Injury, Infection and Critical Care**, 48 (6): 1015-1024.

Hermreck, A.S. (1988) The History of Cardiopulmonary Resuscitation. **The American Journal of Surgery**, 156: 430-436.

Hershenov, D. (2003) The problematic role of 'irreversibility' in the definition of death. **Bioethics**, 17 (1): 89-100.

Higgs, R. (1994) Relatives wishes should be accommodated. **British Medical Journal**, 308: 1688.

Hill Bailey, P. (1997) Finding your way around qualitative methods in nursing research.

Journal of Advanced Nursing, 25: 18-22.

Holleran, R.S. (2002) When is dead, dead? The ethics of resuscitation in emergency care.

Emergency Nursing, 37 (1): 11-18.

Holloway, I. (ed.) (2005) **Qualitative Research in Health Care**. Berkshire: Oxford

University Press.

Holloway, I. and Wheeler, S. (1995) Ethical Issues in Qualitative Nursing Research. **Nursing**

Ethics, 2 (3): 223-232.

Holloway, I. and Wheeler, S. (2002) **Qualitative Research in Nursing**. 2nd ed. Oxford:

Blackwell Science.

Holzhauser, K., Finucane, J. and De Vries, S.M. (2006) Family presence during resuscitation:

A randomised controlled trial of the impact of family presence. **Australasian Emergency**

Nursing Journal, 8 (4): 139-147.

Hopkinson, J.B. (2002) The hidden benefit : the supportive function of the nursing handover

for qualified nurses caring for dying people in hospital. **Journal of Clinical Nursing**, 11 :

168-175.

Hupcey, J.E. and Penrod, J. (2003) Concept advancement: enhancing inductive validity. **Research and Theory for Nursing Practice**, 17 (1): 19-30.

Hupcey, J.E. and Penrod, J. (2005) Concept analysis: examining the state of the science. **Research and Theory for Nursing Practice: An International Journal**, 19 (2): 197-208.

International Dictionary of Medicine and Biology (1986) Volume III. New York: John Wiley and Sons.

Jackson, D., Daly, J. and Davidson, P. (2008) 'Interviews'. In Watson, R., McKenna, H., Cowman, S. and Keady, J. (eds.) **Nursing Research: Designs and Methods**. Edinburgh: Churchill Livingstone. pp. 281- 288.

Jasper, M.A. (1994) Issues in phenomenology for researchers of nursing. **Journal of Advanced Nursing**, 19: 309-314.

Jellinek, S. (1947) **Dying, apparent-death and resuscitation**. London: Baillière, Tindall and Cox.

Jennett, B. (1994) 'Medical Technology, Social and Health Care Issues'. In Gillon, R. (Ed.) **Principles of Health Care Ethics**. Chichester: John Wiley and Sons. pp. 861-872.

Jevon, P. (1999) Do not resuscitate orders: the issues. **Nursing Standard**, 13 (40): 45-46.

Jevon, P. and Raby, M. (2002) Resuscitation in primary care. **Nursing Standard**, 17 (7): 33-35.

Jeziarski, M. (1993) Foote Hospital emergency department: Shattering a paradigm. **Journal of Emergency Nursing**, 19: 266-267.

Johnson, N., Cook, D., Giacomini, M. and Willms, D. (2000) Towards a 'good' death: End-of-life narratives constructed in an intensive care unit. **Culture, Medicine and Psychiatry**, 24: 275-295.

Jowett, N.I. and Thompson, D.R. (2007) **Comprehensive Coronary Care**. 4th ed. Edinburgh: Baillière Tindall.

Kalbag, A., Kotyra, Z., Richards, M., Spearpoint, K. and Brett, S.J. (2006) Long-term survival and residual hazard after in-hospital cardiac arrest. **Resuscitation**, 68 (1): 79-83.

Kastenbaum, R. (2007) **Definitions of Death**. [online]. www.deathreference.com/Da-Em/Definitions-of-Death.html [Accessed January 9th 2008]

Kavanaugh, K. and Ayres, L. (1998) 'Not as bad as it could have been': Assessing and mitigating harm during research interviews on sensitive topics. **Research in Nursing and Health**, 21: 91-97.

Kennedy, J. (2001) **Learning from Bristol: the report of the public inquiry into children's heart surgery at the Bristol Royal Infirmary 1984-1995**. [online]. www.bristol-inquiry.org.uk [Accessed June 19th 2006]

Kidby, J. (2003) Family-witnessed cardiopulmonary resuscitation. **Nursing Standard**, 17 (51): 33-36.

Kim, H.S. (1993) Identifying alternative linkages among philosophy, theory and method in nursing science. **Journal of Advanced Nursing**, 18: 793-800.

Kirchhoff, C., Stegmaier, J., Buhmann, S., Leidel, BA., Biberthaler, P., Mutschler, W. and Kanz, KG. (2007) Trauma surgeons' attitude towards family presence during trauma resuscitation: A nationwide survey. **Resuscitation**, 75: 267-275.

Kirkevold, M. (1997) Integrative nursing research – an important strategy to further the development of nursing science and nursing practice. **Journal of Advanced Nursing**, 25: 977-984.

Kite, C. (1788) **Essay on the recovery of the apparently dead**. xxvi-274.

Kleiman, S. (2004) Phenomenology: to wonder and search for meanings. **Nurse Researcher**, 11 (4): 7-19.

Knaack, P. (1984) Phenomenological research. **Western Journal of Nursing Research**, 6 (1): 107-114.

Knalf, K.A. and Deatrick, J.A. (2000) 'Knowledge synthesis and concept development in nursing'. In Rodgers, B.L. and Knalf, K.A. **Concept Development in Nursing: Foundations, Techniques and Applications**. 2nd ed. Philadelphia: W.B. Saunders Company. pp. 29-54.

Knott, A. and Kee, C.C. (2005) Nurses' beliefs about family presence during resuscitation. **Applied Nursing Research**, 18: 192-198.

Koch, T. (1995) Interpretive approaches in nursing research: the influence of Husserl and Heidegger. **Journal of Advanced Nursing**, 21: 827-836.

Koch, T. (1996) Implementation of a hermeneutic inquiry in nursing: philosophy, rigour and representation. **Journal of Advanced Nursing**, 24:174-184.

Kopelman, M.B., Ubel, P.A. and Engel, K.G. (2005) Changing times, changing opinions: history informing the family presence debate. **Academic Emergency Medicine**, 12 (10): 999-1002.

Kouwenhoven, W.B., Jude, J.R. and Knickerbocker, G.G. (1960) Closed-chest cardiac massage. **Journal of the American Medical Association**, 173: 1064-1067.

Kueck, L.T. (1992) **Personal Communication**. **Journal of Emergency Nursing**, 18 (4): 302.

Kvale, S. (2007) **Doing Interviews**. London: Sage Publications Ltd.

Lamb, D. (1994) 'What is death?' In Gillon, R. (ed.) **Principles of Health Care Ethics**.
Chichester: John Wiley and Sons. pp. 1027-1040.

Lamb, G.S. and Huttlinger, K. (1989) Reflexivity in nursing research. **Western Journal of Nursing Research**, 11 (6): 765-772.

Lambert, J. and Heath, G. (2000) Why do A&E nurses fear using their advanced life-support skills? **Emergency Nurse**, 8 (5): 30-32.

LaVina, M. and Criddle, L. (2003) Resuscitating trauma patients in the intensive care unit. **Journal of Emergency Nursing**, 29 (1): 83-84.

Leddy, S. and Pepper, J.M. (1993) **Conceptual Bases of Professional Nursing**. 3rd ed.
Philadelphia: J.B. Lippincott Company.

Lee, A., Bishop, G., Hillman, K.M. and Daffurn, K. (1995) The Medical Emergency Team. **Anaesthesia and Intensive Care**, 23 (2): 183-186.

Lee, R.M. and Renzetti, C.M. (1993) 'The problems of researching sensitive topics'. An overview and introduction. In Renzetti, C.M. and Lee, R.M. (eds.) **Researching Sensitive Topics**. Newbury Park CA: Sage. pp. 3-13.

Lincoln, Y.S and Guba, E.G. (1985) **Naturalistic Inquiry**. Newbury Park, CA: Sage Publications.

LoBiondo-Wood, G. and Haber, J. (2006) **Nursing Research: Methods and Critical Appraisal for Evidence-Based Practice**. 6th ed. St. Louis, Missouri: Mosby.

Lofland, J. and Lofland, L.H. (1995) **Analysing Social Settings: A Guide to Qualitative Observation and Analysis**. 3rd ed. Belmont, CA: Wadsworth.

Lopez, K.A. and Willis, D.G. (2004) Descriptive versus interpretive phenomenology: their contribution to nursing knowledge. **Qualitative Health Research**, 14 (5): 726-735.

Mackey, S. (2005) Phenomenological nursing research: methodological insights derived from Heidegger's interpretive phenomenology. **International Journal of Nursing Studies**, 42: 179-186.

MacLean, S.L., Guzzetta, C.E., White, C., Fontaine, D., Eichhorn, D.J., Meyers, T.A. and Desy, P. (2003) Family presence during cardiopulmonary resuscitation and invasive procedures. **American Journal of Critical Care**, 12 (3): 246-257.

Macy, C., Lampe, E., O'Neil, B., Swor, R., Zalenski, R. and Compton, S. (2006) The relationship between the hospital setting and perceptions of family-witnessed resuscitation in the emergency department. **Resuscitation**, 70: 74-79.

Madden, E. (2007) Emergency nurses' current practices and understanding of family presence during cardio-pulmonary resuscitation. **European Journal of Cardiovascular Nursing**, 6 (Supplement 1): S6-S7.

Maggs-Rapport, F. (2001) 'Best research practice': in pursuit of methodological rigour. **Journal of Advanced Nursing**, 35 (3): 373-383.

Malone, R. (1993) The ethics of exclusion and the myth of control. **Journal of Emergency Nursing**, 19 (2): 33A-34A.

Marrone, L. and Fogg, C. (2003) Should the family be present during resuscitation? **Nursing**, 33 (10): 32cc1-32cc2.

Marshall C. and Rossman, G.B. (1999) **Designing Qualitative Research**. 3rd ed. Thousand Oaks, CA: Sage Publications, Inc.

Martin, J. (1991) Rethinking traditional thoughts. **Journal of Emergency Nursing**, 17 (2): 67-68.

Martincheck, T. (2006) Nurses beliefs and practices of family presence during CPR and invasive procedures. **Topics in Emergency Medicine**, 28 (2): 144-148.

Matthews, J. (1993) Insignificant Others? **Nursing Times**, 89 (13): 42.

Mazer, M.A., Cox, L.A. and Capon, J.A. (2006) The public's attitude and perception concerning witnessed cardiopulmonary resuscitation. **Critical Care Medicine**, 34 (12): 2925-2928.

McCabe, E. (1997) Code team hazards. **Nursing Management**, 28 (3): 48K-48L.

McCance, T. and Mcilpatrick, S. (2008) 'Phenomenology'. In Watson, R., McKenna, H., Cowman, S. and Keady, J. (eds.) **Nursing Research: Designs and Methods**. Edinburgh: Churchill Livingstone. pp. 231-241.

McClenathan, B.M., Torrington, K.G. and Uyehara, C.F.T. (2002) Family member presence during cardio-pulmonary resuscitation: a survey of US and international critical care professionals. **Chest**, 122 (6): 2204-2211.

McHaffie, H.E. (2000) 'Ethical issues in research'. In Cormack, D. (ed.) **The Research Process in Nursing**. 4th ed. Oxford: Blackwell Science Ltd. pp. 51-61.

Mcilpatrick, S. (2008) 'Observation'. In Watson, R., McKenna, H., Cowman, S. and Keady, J. (eds.) **Nursing Research: Designs and Methods**. Edinburgh: Churchill Livingstone. pp. 309-319.

McIlroy, K. (1996) Relatives and resuscitation. **Nursing Standard**, 10 (39): 10.

McKenna, H.P. (1997) **Nursing Theories and Models**. London: Routledge Taylor and Francis Group.

McKenna, H., Hasson, F. and Keeney, S. (2006) 'Surveys'. In Gerrish, K., Lacey A. (eds.) **The Research Process in Nursing**. 5th ed. Oxford: Blackwell Publishing Ltd. pp. 260-273.

McMahon-Parkes, K., Moule, P., Bengler, J. and Albarran, J. (2009) The views and preferences of resuscitated and non-resuscitated patients towards family-witnessed resuscitation: A qualitative study. **International Journal of Nursing Studies**, 46: 220-229.

McPhee, A.T. (1987) Impressions: Let the family in. **Journal of Emergency Nursing**, 13 (2): 120-121.

Meleis, A.I. (2007) **Theoretical Nursing: Development and Progress**. 4th ed. Philadelphia: Lippincott Williams and Wilkins.

Melia, K.M. (1989) **Everyday Nursing Ethics**. London: Macmillan.

Merrick, C. (1994) (ed.) **PHTLS: Pre-Hospital Trauma Life Support Basic and Advanced**. St Louis: Mosby Lifeline.

Meyer, J. (2006) 'Action Research'. In Gerrish, K., Lacey A. (eds.) **The Research Process in Nursing**. 5th ed. Oxford: Blackwell Publishing Ltd. pp. 274-288.

Meyers, T.A. (2000) 'Why couldn't I have seen him?' **American Journal of Nursing**, 100 (2): 9.

Meyers, T.A., Eichhorn, D.J., Clark, A.P., Klein, J.D., Taliaferro, E. and Calvin, A. (2000) Family presence during invasive procedures and resuscitation. **American Journal of Nursing**, 100 (2): 32-42.

Meyers, T.A., Eichhorn, D.J. and Guzzetta, C.E. (1998) Do families want to be present during CPR? A retrospective survey. **Journal of Emergency Nursing**, 24 (5): 400-405.

Mian, P., Warchal, S., Whitney, S., Fitzmaurice, J. and Tancredi, D. (2007) Impact of a multifaceted intervention on nurses' and physicians' attitudes and behaviours toward family presence during resuscitation. **Critical Care Nurse**, 27 (1): 52-61.

Micco, G. (2004) Should a loved one be allowed in the resuscitation room? The times they are a-changin'. **Journal of Clinical Ethics**, 15, (3): 243-249.

Miles, M.B. and Huberman, A.M. (1994) **An Expanded Sourcebook: Qualitative Data Analysis**. 2nd ed. Thousand Oaks: Sage Publications.

Mill, J.S. (1910) **Utilitarianism, Liberty and Considerations on Representative Government**. London: Dent.

Miller, J.H. and Stiles, A. (2009) Family presence during resuscitation and invasive procedures: the nurse experience. **Qualitative Health Research**, 19 (10): 1431-1442.

Miller-Keane Encyclopaedica and Dictionary of Medicine, Nursing and Allied Health (1997) 6th ed. Philadelphia: W.B. Saunders Company.

Mitchell, M.H. and Lynch, M.B. (1997) Should relatives be allowed in the resuscitation room? **Journal of Accident and Emergency Medicine**, 14: 366-369.

Moller, D.W. (2000) **Life's End: Technocratic Dying in an Age of Spiritual Yearning**. Baywood Publishing Company, Amityville, NY. [online]. www.baywood.com/books/previewbook.asp?id=0-89503-202-3 [Accessed January 26th 2008]

Moran, M. (2002) Meta-analysis of hemodynamic optimisation in high-risk patients. **Critical Care Medicine**, 30: 1686-1692.

Moreland, P. (2005) Family presence during invasive procedures and resuscitation in the emergency department: A review of the literature. **Journal of Emergency Nursing**, 31 (1): 58-72.

Morgan, J. (1997) Introducing witnessed resuscitation in A&E. **Emergency Nurse**, 5 (2): 13-18.

Morgan, R.J.M., Williams, F. and Wright, M.M. (1997) An early warning scoring system for detecting critical illness. **Clinical Intensive Care**, 8: 100.

Morse, J.M. (ed.) (1991) **Qualitative Nursing Research: A Contemporary Dialogue**. Newbury Park, CA: Sage Publications.

Morse, J.M. (1994a) (ed.) **Critical Issues in Qualitative Research Methods**. Thousand Oaks, CA: Sage Publications, Inc.

Morse, J.M. (1994b) 'Designing funded qualitative research'. In Denzin, N.K. and Lincoln, Y.S. (eds.) **Handbook of Qualitative Research**. Thousand Oaks, CA: Sage Publications, Inc. pp. 220-235.

Morse, J. M. (1995) Exploring the theoretical basis of nursing using advanced techniques of concept analysis. **Advances in Nursing Science**, 17 (3): 31-46.

Morse, J.M. (2000) 'Exploring pragmatic utility: concept analysis by critically appraising the literature'. In Rodgers, B.L. and Knalf, K.A. **Concept Development in Nursing: Foundations, Techniques and Applications**. 2nd ed. Philadelphia: W.B. Saunders Company. pp. 333-352.

Morse, J.M., Botorff, J.L. and Hutchinson, S. (1994) The phenomenology of comfort. **Journal of Advanced Nursing**, 20: 189-195.

Morse, J.M. and Field, P.A. (1996) **Nursing Research: The Application of Qualitative Approaches**. 2nd ed. Cheltenham: Stanley Thornes (Publishers) Ltd.

Morse, J.M., Hupcey, J.E., Mitcham, C. and Lenz, E.R (1996a) Concept analysis in nursing research: a critical appraisal. **Scholarly Inquiry for Nursing Practice: An International Journal**, 10 (3): 253-277.

Morse, J.M., Hupcey, J.E., Penrod, J. and Mitcham, C. (2002) Integrating concepts for the development of qualitatively-derived theory. **Research and Theory for Nursing Practice: An International Journal**, 16 (1): 5-18.

Morse, J.M., Mitcham, C., Hupcey, J.E. and Tasón, M.C. (1996b) Criteria for concept evaluation. **Journal of Advanced Nursing**, 24: 385-390.

Morse, J.M. and Pooler, C. (2002) Patient-family-nurse interactions in the trauma-resuscitation room. **American Journal of Critical Care**, 11 (3): 240-249.

Mortelmans, L.J.M., Cas, W.M.F., Van Hellemond, P.L.A. and De Cauwer, H.G. (2009) Should relatives witness resuscitation in the emergency department? The point of view of the Belgian emergency department staff. **European Journal of Emergency Medicine**, 16 (2): 87-91.

Mosby's Medical, Nursing and Allied Health Dictionary (2002) 6th ed. St. Louis: Mosby.

Munhall, P.L. (1988) Ethical considerations in qualitative research. **Western Journal of Nursing Research**, 10 (2): 150-162.

Murphy-Black, T. (2006) 'Using Questionnaires'. In Gerrish, K., Lacey A. (eds.) **The Research Process in Nursing**. 5th ed. Oxford: Blackwell Publishing Ltd. pp. 367-382.

Myerburg, R.J. and Wellens, H.J.J. (2005) 'Epidemiology of cardiac arrest'. In Priori, S. and Zipes, D. (eds.) **Sudden cardiac death: A handbook for clinical practice**. Oxford: Blackwell Publishing. pp. 3-20.

National Health Service (2004) **Central Office for Research Ethics Committees (COREC)**. [online]. www.corecform.org.uk [Accessed August 16th 2004]

National Institute for Health Research (2009) **Health Technology Assessment Programme**. [online]. www.nchta.org/about/whatishta.shtml [Accessed February 22nd 2009]

Nieswiadomy, R.M. (1998) **Foundations in Nursing Research**. 3rd ed. Stamford: Appleton and Lange.

Nolan, J. (2005) European Resuscitation Council Guidelines for Resuscitation 2005. **Resuscitation**, 67S1: S3-S6.

Norris, R.M. (1998) Fatality outside hospital from acute coronary events in three British health districts, 1994-1995. United Kingdom Heart Attack Study Collaborative Group. **British Medical Journal**, 316 (7137): 1065-1070.

Offord, R.J. (1998) Should relatives of patients with cardiac arrest be invited to be present during cardiopulmonary resuscitation? **Intensive and Critical Care Nursing**, 14: 288-293.

Olier Boyd, C. (1989) Phenomenological Research in Nursing. Response: clarifying the issues. **Nursing Science Quarterly**, 2 (1): 16-19.

Oliver, J.E. and Fruth, R. (2000) Family presence during resuscitation. **American Journal of Nursing**, 100 (5) (Supplement 1): 15-18.

Omery, A. (1983) Phenomenology: a method for nursing research. **Advances in Nursing Science**, 5 (2): 49-63

O'Neill, O. (1984) Paternalism and partial autonomy. **Journal of Medical Ethics**, 10: 173-178.

Ong, M.E.H., Chan, Y.H., Srither, D.E. and Lim, Y.H. (2004) Asian medical staff attitudes towards witnessed resuscitation. **Resuscitation**, 60: 45-50.

Ong, M.E.H., Chung, W.L. and Mei, S.E. (2007) Comparing attitudes of the public and medical staff towards witnessed resuscitation in an Asian population. **Resuscitation**, 73: 103-108.

O'Shea, F. (1999) Should relatives be allowed in the resuscitation room? **Nursing Times**, 95 (17): 30.

Osuagwu, C. (1991) ED Codes: Keep the family out. **Journal of Emergency Nursing**, 17 (6): 363.

Osuagwu, C. (1993) More on family presence during resuscitation. **Journal of Emergency Nursing**, 19 (4): 276-277.

Oxford Current English Dictionary (1990) Oxford: Oxford University Press.

Page, S. and Komaromy, C. (2005) Professional performance: The case of unexpected and expected deaths. **Mortality**, 10 (4): 294-307.

Palmer, I.P. (1998) Should relatives be allowed in the resuscitation room? **Journal of Accident and Emergency Medicine**, 15: 364-366.

Papageorgiou, E. (1995) Death, life and resuscitation in ancient Greek religion. **Resuscitation**, 30: 177-178.

Parahoo, K. (2006) **Nursing Research: Principles, Process and Issues**. 2nd ed. Hampshire: Palgrave Macmillan.

Paraskos, J.A. (1993) History of CPR and the Role of the National Conference. **Annals of Emergency Medicine**, 22 (2): 275-280.

Patton, M.Q. (2001) **Qualitative Evaluation and Research Methods**. 2nd ed. Newbury Park: Sage Publications.

Penrod, J. (2007) Living with uncertainty: concept advancement. **Journal of Advanced Nursing**, 57 (6): 658-667.

Penrod, J. and Hupcey, J.E. (2005) Concept advancement: Extending science through concept driven research. **Research and Theory for Nursing Practice: An International Journal**, 19 (3): 231-241.

Pertab, D. (1999) Basic life support techniques in adults. **Professional Nurse**, 15 (1): 37-41.

Phillips, M. and Dawson, J. (1985) **Doctors Dilemmas: Medical Ethics and Contemporary Science**. Brighton: The Harvester Press Ltd.

Picker Institute Europe (2010) Making patient views count. [online]. www.pickereurope.org/
[Accessed May 22nd 2010]

Playle J.F. (1995) Humanism and positivism in nursing: contradictions and conflicts. **Journal of Advanced Nursing**, 22: 979-984.

Polgar, S. and Thomas, S.A. (1995) **Introduction to Research in the Health Sciences**. 3rd ed. Edinburgh: Churchill Livingstone.

Polit, D.F. and Hungler, B.P. (1999) **Nursing Research: Principles and Methods**. 6th ed. Philadelphia: J.B. Lippincott.

Porter, S. (2000) 'Qualitative research'. In Cormack, D.F.S. (ed.) **The Research Process in Nursing**. 4th ed. Oxford: Blackwell Science. pp. 141-151.

Post, H. (1989) Letting the family in during a code. **Nursing**, 89 (3): 43-46.

Quinn, T. (1998) Cardiopulmonary resuscitation: new European guidelines. **British Journal of Nursing**, 7 (18): 1070-1077.

Racher, F.E. and Robinson, S. (2002) Are phenomenology and postpositivism strange bedfellows? **Western Journal of Nursing Research**, 25 (5): 464-481.

Rapport, F. (2004) 'Shifting sands in qualitative methodology'. In Rapport, F. (ed.) **New Qualitative Methodologies in Health and Social Care Research**. London: Routledge. pp.1-17.

Rapport, F. and Wainwright, P. (2006) Phenomenology as a paradigm of movement. **Nursing Inquiry**, 13 (3): 228-236.

Ray, M.A. (1994) 'The richness of phenomenology: philosophic, theoretic and methodologic concerns'. In Morse J.M. (ed.) **Critical Issues in Qualitative Research Methods**. Thousand Oaks, CA: Sage Publications, Inc. pp. 117-133.

Redley, B., Botti, M. and Duke M. (2004) Family member presence during resuscitation in the emergency department: An Australian perspective. **Emergency Medicine Australasia**, 16: 295-308.

Redley, B. and Hood, K. (1996) Staff attitudes towards family presence during resuscitation. **Accident and Emergency Nursing**, 4: 145-151.

Reilly, H. (1996) Should a loved one watch your battle for life? **Daily Mail**, November 12: 42.

Resuscitation Council (UK) (1996) **Should Relatives Witness Resuscitation?** London: Resuscitation Council (UK).

Resuscitation Council (UK) (2002) **Intermediate Life Support Course Manual**. London: Resuscitation Council (UK).

Resuscitation Council (UK) (2003a) **Resuscitation Guidelines – Update on the process of changes to the guidelines**. [online]. www.resus.org.uk/pages/guide05.htm [Accessed January 14th 2004]

Resuscitation Council (UK) (2003b) **'First Responder' and other terms**. [online]. www.resus.org.uk/pages/FirstRsp.htm [Accessed June 14th 2004]

Resuscitation Council (UK) (2005) **Resuscitation Guidelines 2005**. London: Resuscitation Council (UK).

Rider, E. (1999) For pity's sake, relatives must be allowed in the resuscitation room. **Nursing Times**, 95 (20): 21.

Robertson-Malt, S. (1999) Listening to them and reading me: a hermeneutic approach to understanding the experience of illness. **Journal of Advanced Nursing**, 29 (2): 290-297.

Robinson, S.M., Mackenzie-Ross, S., Campbell Hewson, G.L., Egleston, C.V. and Prevost, A.T. (1998) Psychological effect of witnessed resuscitation on bereaved relatives. **The Lancet**, 352 (9128): 614-617.

Robley L.R (1995) The Ethics of Qualitative Nursing Research. **Journal of Professional Nursing**, 11 (1): 45-48.

Robson, C. (2002) **Real World Research: A Resource for Social Scientists and Practitioner-Researchers**. 2nd ed. Malden, MA: Blackwell Publishing.

Rodgers, B.L. (1989) Concepts, analysis and the development of nursing knowledge: the evolutionary cycle. **Journal of Advanced Nursing**, 14: 330-335.

Rodgers, B.L. (1991) Using Concept Analysis to Enhance Clinical Practice and Research. **Dimensions of Critical Care Nursing**, 10 (1): 28-34.

Rodgers, B.L. (2000a) 'Concept analysis: an evolutionary view'. In Rodgers, B.L. and Knalf, K.A. **Concept Development in Nursing: Foundations, Techniques and Applications**. 2nd ed. Philadelphia: W.B. Saunders Company. pp. 65-102.

Rodgers, B.L. (2000b) 'Beyond analysis: further adventures in concept development'. In Rodgers, B.L. and Knalf, K.A. **Concept Development in Nursing: Foundations, Techniques and Applications**. 2nd ed. Philadelphia: W.B. Saunders Company. pp. 321-331.

Rodgers, B.L. and Knalf, K.A. (2000) 'Introduction to concept development in nursing'. In Rodgers, B.L. and Knalf, K.A. **Concept Development in Nursing: Foundations, Techniques and Applications**. 2nd ed. Philadelphia: W.B. Saunders Company. pp. 1-6.

Rodget's Thesaurus of English words and phrases (2002) London: Penguin Books.

Rosenczweig, C. (1998) Should relatives witness resuscitation? Ethical issues and practical considerations. **Canadian Medical Association Journal**, 158 (5): 617-620.

Royal College of Nursing Congress News (1997) Resuscitation debate goes against relatives. **Nursing Standard**, 11 (36): 9.

Royal College of Nursing (2002) **Witnessing resuscitation: Guidance for nursing staff**. London: RCN.

Royal College of Nursing (2004) **Research ethics: RCN guidance for nurses**. London: RCN.

Rumbold, G. (1999) **Ethics in Nursing Practice**. 3rd ed. London: Ballière Tindall.

Sadler, J.J. (2000) 'A multiphase approach to concept analysis and development'. In Rodgers, B.L. and Knalf, K.A. **Concept Development in Nursing: Foundations, Techniques and Applications**. 2nd ed. Philadelphia: W.B. Saunders Company. pp. 251-283.

Safar, P., Escarra, L. and Elam, J. (1958) A comparison of the mouth to mouth and mouth to airway methods of artificial respiration with the chest pressure arm-lift method. **New England Journal of Medicine**, 258: 671-677.

Saines, J.C. (1997) Phenomenon of sudden death: Part 2. **Accident and Emergency Nursing**, 5: 205-209.

Saks, M.J. and Kidd, R.F. (1986) 'Human information processing and adjudication: Trial by heuristics'. In Arkes, H.R. and Hammond, K.R. (eds.) **Judgement and Decision Making: An Interdisciplinary Reader**. Cambridge: Cambridge University Press. pp. 213-242.

Sandelowski, M. (1986) The problem of rigor in qualitative research. **Advances in Nursing Science**, 8 (3): 27-37.

Sandelowski, M. (1993) Rigor or rigor mortis: The problem of rigor in qualitative research revisited. **Advances in Nursing Science**, 16 (2): 1-8.

Sandelowski, M. (1994) The use of quotes in qualitative research. **Research in Nursing and Health**, 17 (6): 479-482.

Sandelowski, M. (1995) Sample size in qualitative research. **Research in Nursing and Health**, 18: 179-183.

Schierhout, G. and Roberts, R. (1998) Fluid resuscitation with colloid or crystalloid solutions in critically ill patients: a systematic review of randomised trials. **British Medical Journal**, 316: 961-964.

Schilling, R.J. (1994) **Personal Communication**. **British Medical Journal**, 309: 406.

Schultz, S.C., Cullinane, D.C., Pasquale., M.D., Magnant, C. and Evans, S.R.T. (1996) Predicting in-hospital mortality during cardiopulmonary resuscitation. **Resuscitation**, 33: 13-17.

Schutz, S.E. (1994) Exploring the benefits of a subjective approach in qualitative nursing research. **Journal of Advanced Nursing**, 20: 412-417.

Schwartz-Barcott, D. and Kim, H.S. (2000) 'An expansion and elaboration of the hybrid model of concept development'. In Rodgers, B.L. and Knalf, K.A. **Concept Development in Nursing: Foundations, Techniques and Applications**. 2nd ed. Philadelphia: W.B. Saunders Company. pp. 129-160.

Schwartz-Barcott, D. and Kim, H.S. (2002) From practice to theory: tightening the link via three fieldwork strategies. **Journal of Advanced Nursing**, 39 (3): 281-289.

Seedhouse, D. (1988) **Ethics: The Heart of Health Care**. Chichester: John Wiley and Sons.

Segal, B.L., Iskandrian, A.S. and Kolter, M.N. (1985) 'Sudden Cardiac Death'. In Morganroth, J. and Horowitz, L.N. (eds.) **Sudden Cardiac Death**. Orlando: Grune and Stratton. pp. 1-21.

Shih, F.J. (1998) Triangulation in nursing research: issues of conceptual clarity and purpose. **Journal of Advanced Nursing**, 28 (3): 631-641.

Silverman, D. (2006) **Interpreting Qualitative Data: Methods for Analyzing Talk, Text and Interaction**. 3rd ed. London: Sage Publications Ltd.

Simpson, S.M. (2001) Near death experience: a concept analysis as applied to nursing. **Journal of Advanced Nursing**, 36 (4): 520-526.

Skinner, D.V. and Vincent, R. (1993) **Cardiopulmonary Resuscitation**. Oxford: University Press.

Smith, L. (1992) Ethical issues in interviewing. **Journal of Advanced Nursing**, 17: 98-103.

Smith, S. (1997) When views of care conflict. **Nursing Times**, 93 (19): 30-31.

Smythe, E.A., Ironside, P.M., Sims, S.L., Swenson, M.M. and Spence, D.G. (2008) Doing Heideggerian hermeneutic research: A discussion paper. **International Journal of Nursing Studies**, 45: 1389-1397.

Socorro, L.L., Tolson, D. and Fleming, V. (2001) Exploring Spanish emergency nurses' lived experience of the care for suddenly bereaved families. **Journal of Advanced Nursing**, 35 (4): 562-570.

Spradley, J. (1979) **The Ethnographic Interview**. New York: Holt, Rinehart and Winston.

Sque, M. (2000) Researching the Bereaved: An Investigator's Experience. **Nursing Ethics**, 7 (1): 23-34.

Stake, R.E. (1995) **The Art of Case Study Research**. Thousand Oaks: Sage Publications.

Stedman's Concise Medical Dictionary for the Health Professions (2001) 4th ed.
Philadelphia: Lippincott Williams and Wilkins.

Steen, S., Sjöberg, T., Olsson, P. and Young, M. (2005) Treatment of out-of-hospital cardiac arrest with LUCAS, a new device for automatic mechanical compression and active decompression resuscitation. **Resuscitation**, 67 (1): 25-30.

Stephenson, N. and Corben, V. (1997) 'Phenomenology'. In Smith, P. (ed.) **Research Mindedness for Practice: An Interactive Approach for Nursing and Health Care**. New York: Churchill Livingstone. pp.115-138.

Stewart, K. (1995) Discussing cardiopulmonary resuscitation with patients and relatives. **Postgraduate Medical Journal**, 71: 585-589.

Stewart, K. and Bowker, L. (1997) Resuscitation witnessed by relatives: Might lead to a breach in confidentiality. **British Medical Journal**, 314: 145.

Streeton, R., Cooke, M. and Campbell, J. (2004) Researching the researchers: using a snowball sampling technique. **Nurse Researcher**, 12 (1): 35-46.

Streubert, H.J. (1991) Phenomenological research as a theoretic initiative in community health nursing. **Public Health Nursing**, 8 (2): 119-123.

Streubert Speziale H.J. and Carpenter D.R. (2007) **Qualitative Research in Nursing: Advancing the Humanistic Imperative**. 4th ed. Philadelphia: Lippincott Williams and Wilkins.

Sutcliffe, A.J. (2004) Current issues in the diagnosis of brain stem death. **Indian Journal of Critical Care Medicine**, 8 (3): 185-189.

Tadd, W. and Chadwick, R. (1989) A Bill of Wrongs: why the students' Bill of rights gets it wrong. **The Professional Nurse**, September: 584-586.

Taylor, B. (1993) Phenomenology: one way to understand nursing practice. **International Journal of Nursing Studies**, 30 (2): 171-179.

Taylor, C. (2001) Patients' experiences of 'feeling on their own' following diagnosis of colorectal cancer: a phenomenological approach. **International Journal of Nursing Studies**, 38: 651-661.

Taylor, R.M. (1997) Re-examining the definition and criteria of death. **Seminars in Neurology**, 17 (3): 265-270.

Thangam, S., Weil, M.H. and Rackow, E.C. (1986) Cardiopulmonary resuscitation: A historical review. **Acute Care**, 12: 63-94.

The Columbia Encyclopaedia (2007) 6th ed. New York: Columbia University Press.
[online]. www.bartleby.com/65/de/death.html [Accessed January 9th 2008]

The Reader's Digest Great Encyclopaedic Dictionary (1964) 2nd ed. Volume 2. London: The Reader's Digest Association Limited.

Thinkquest (2001) Science, mortified by semantics: definitions of different types of death.
[online]. www.library.thinkquest.org/C0122781/science/semantics.htm [Accessed January 9th 2008]

Thompson, I.E., Melia, K.M., Boyd, K.M. and Horsburgh, D. (2006) **Nursing Ethics**. 5th ed. Edinburgh: Churchill Livingstone.

Timmermans, S. (1997) High Touch in High Tech: The presence of relatives and friends during resuscitative efforts. **Scholarly Inquiry for Nursing Practice: An International Journal**, 11 (2): 153-168.

Timmermans, S. (1998) Resuscitation technology in the emergency department: towards a dignified death. **Sociology of Health and Illness**, 20 (2): 144-167.

Timmermans, S. (2005) Death brokering: constructing culturally appropriate deaths.

Sociology of Health and Illness, 27 (7): 993-1013.

Tod, A. (2006) 'Interviewing'. In Gerrish, K. and Lacey, A. (eds.) **The Research Process in Nursing**. 5th ed. Oxford: Blackwell Publishing Ltd. pp.337-352.

Todres, L. and Holloway, I. (2006) 'Phenomenological Research'. In Gerrish, K. and Lacey, A. (eds.) **The Research Process in Nursing**. 5th ed. Oxford: Blackwell Publishing Ltd. pp. 224-238.

Topping, A. (2006) 'The quantitative-qualitative continuum'. In Gerrish, K. and Lacey, A. (eds.) **The Research Process in Nursing**. 5th ed. Oxford: Blackwell Publishing. pp.157-172

Tsai, E. (2002) Should family members be present during cardiopulmonary resuscitation? **The New England Journal of Medicine**, 346 (13): 1019-1021.

Tunstall-Pedoe, H., Bailey L., Chamberlain, D.A., Marsden, A.K., Ward, M.E. and Zideman, D.A. (1992) Survey of 3765 cardiopulmonary resuscitations in British Hospitals (the BRESUS study); methods and overall results. **British Medical Journal**, 304 (6838): 1347-1351.

Tversky, K and Kahneman, D. (1974) Judgement under uncertainty: heuristics and biases. **Science, New Series**, 185 (4157): 1134-1131.

Vanderbeek, J. (2000) Till death do us part. **American Journal of Nursing**, 100 (2): 44.

van der Woning, M. (1997) Should relatives be invited to witness a resuscitation attempt? A review of the literature. **Accident and Emergency Nursing**, 5: 215-218.

van der Woning, M. (1999) Relatives in the resuscitation area: a phenomenological study. **Nursing in Critical Care**, 4 (4): 186-192.

Van der Zalm, J.E. and Bergum, V. (2000) Hermeneutic-phenomenology: providing living knowledge for nursing practice. **Journal of Advanced Nursing**, 31 (1): 211-218.

van Kaam, A. (1984) **Existential Foundation of Psychology**. New York: Doubleday.

van Lommel, P., van Wees, R., Meyers, V. and Elfferich, I. (2001) Near-death experience in survivors of cardiac arrest: a prospective study in the Netherlands. **The Lancet**, 358: 2039-2045.

van Manen, M. (1984) Practicing phenomenological writing. **Phenomenology and Pedagogy**, 2 (1): 36-69.

van Manen, M. (1989) Pedagogical text as method: phenomenological research as writing. **Saybrook Review**, 7 (2): 23-45.

van Manen, M. (1997) **Researching Lived Experience: Human Science for an Action Sensitive Pedagogy**. 2nd ed. Ontario: The Althouse Press.

Walker, L.O. and Avant, K.C. (1983) **Strategies for Theory Construction in Nursing**. Norwalk, CT: Appleton Century-Crofts.

Walker, L.O. and Avant, K.C. (1988) **Strategies for Theory Construction in Nursing**. 2nd ed. Norwalk, CT: Appleton and Lange.

Walker, L.O. and Avant, K.C. (1995) **Strategies for Theory Construction in Nursing**. 3rd ed. Norwalk, CT: Appleton and Lange.

Walker, W. (2005) The strengths and weaknesses of research designs involving quantitative measures. **Journal of Research in Nursing**, 10 (5): 571-582.

Walker, W.M. (1997) **Nurses' attitudes towards family presence during active resuscitation in adult critical care settings**. MSc Thesis, University of Wolverhampton.

Walsh, M. and Kent, A. (2001) **Accident and Emergency Nursing**. 4th ed. Oxford: Butterworth-Heinemann.

Walters, A.J. (1994) Phenomenology as a way of understanding in nursing. **Contemporary Nurse**, 3 (3): 134-141.

Watson, H. and Whyte, R. (2006) 'Using Observation'. In Gerrish, K. and Lacey, A. (eds.) **The Research Process in Nursing**. 5th ed. Oxford: Blackwell Publishing Ltd. pp. 383-398.

Watson, R. and Keady, J. (2008) 'The Nature and Language of Nursing Research'. In Watson, R., McKenna, H., Cowman, S. and Keady, J. (eds.) **Nursing Research: Designs and Methods**. Edinburgh: Churchill Livingstone. pp. 3-12.

Webster's 3rd New International Dictionary of the English Language Unabridged Volume II (1986). Chicago: Encyclopaedia Britannica, Inc.

Wedro, B.C. (2007) **What are the causes of sudden cardiac death?** [online].
www.medicinenet.com/sudden_cardiac_death/article.htm [Accessed January 9th 2008]

Wengraf, T. (2001) **Qualitative Research Interviewing: Biographic Narrative and Semi-Structured Methods**. London: Sage Publications Ltd.

Weslien, M. and Nilstun, T. (2003) Family presence during CPR – the experiences and attitudes of code team members. **Nursing Science and Research in the Nordic Countries**, 67 (23): 31-34.

Weslien, M., Nilstun, T., Lundqvist, A. and Fridlund, B. (2005) When the unreal becomes real: family members' experiences of cardiac arrest. **Nursing in Critical Care**, 10 (1): 15-22.

Weslien, M., Nilstun, T., Lundqvist, A. and Fridlund, B. (2006) Narratives about resuscitation-family members differ about presence. **European Journal of Cardiovascular Nursing**, 5: 68-74.

Whitlock, M. (1994) The doctor's perspective. **British Medical Journal**, 308: 1687.

Wik, L. (2003) Rediscovering the importance of chest compressions to improve the outcome from cardiac arrest. **Resuscitation**, 58: 267-269.

Wilkinson, R. (2000) Witnessing resuscitation. **RCN Magazine**, Winter edition pp. 32-33.

Willacy, H. (2007) **Death (Recognition and Certification)** [online]. www.patient.co.uk/printer.asp?doc=40000026 [Accessed January 9th 2008]

Williams, K. (1996) Witnessing resuscitation can help relatives. **Nursing Standard**, 11 (3): 12.

Wilson, H.S. and Hutchinson, S.A. (1991) Triangulation of qualitative methods: Heideggerian hermeneutics and grounded theory. **Qualitative Health Research**, 1 (2): 263-276.

Wilson, J. (1963) **Thinking with concepts**. Cambridge: Cambridge University Press.

Wood, M.J. and Ross-Kerr, J.C. (2006) **Basic Steps in Planning Nursing Research: From Question to Proposal**. 6th ed. Sudbury, MA: Jones and Bartlett Publishers.

Woolley, N. (1990) Crisis theory: a paradigm of effective intervention with families of critically ill people. **Journal of Advanced Nursing**, 15: 1402-1408.

Wooten, C., Kusler, D., Kracun, M.D., Botsford, J. and Lawlor, R. (1996) Choreographing Trauma Resuscitation in the OR. **AORN Journal**, 64 (3): 415-423.

Wright, B. (1996) **Sudden Death**. 2nd ed. Edinburgh: Churchill Livingstone.

Wright, B. (1999) Responding to autonomy and disempowerment at the time of a sudden death. **Accident and Emergency Nursing**, 7: 154-157.

Wright, B. (2004) Difficulties around family presence during resuscitation. **Accident and Emergency Nursing**, 12: 65-66.

Yanturali, S., Ersoy, G., Yuruktumen, A., Aksay, E., Suner, S., Sonmez, Y., Oray, D., Colak, N. and Cimrin A.H. (2005) A national survey of Turkish emergency physicians perspectives regarding family witnessed cardiopulmonary resuscitation. **International Journal of Clinical Practice**, 59 (4): 441-446.

Zipes, D.P. and Wellens, H.J.J. (1998) Sudden Cardiac Death. **Circulation**, 98: 2334-2351.

Zoll, P.M., Linenthal, A.J., Gibson, W.M., Paul, M.H. and Norman, L.R. (1956) Termination of ventricular fibrillation in man by externally applied counter shock. **New England Journal of Medicine**, 254: 727-732.