

EVIDENCE BASED PRACTICES IN EARLY INTERVENTION

Abstract

The Government of Republic of North Macedonia has made a commitment to care and education for children with developmental delays by signing the Convention on the Rights of the Child. Nevertheless, early intervention centres in North Macedonia cannot always meet the preconditions and ease access and care for children with developmental disabilities or delays. In the U.S. services for young children, from birth to the 3rd birthday are called Early Intervention (EI) or Part C services. Once the child turns three (and until 21), educational services are provided under Part B of IDEA. EI focuses on family-centred services, individually planned educational programs, and specialized teaching approaches.

The primary aim of the research was to explore the EI system in the States as well as the implementation of policy into practice. The secondary goal was related to identifying positive practices and policies that can be applied in an international context. A qualitative study research methodology was used with a non-rigid and naturalistic design. Qualitative content analysis was the research tool. This paper contains a qualitative review of papers in the following areas: Historical trends in EI; Current trends in EI; Models of service delivery; Transdisciplinary EI approach; and Coaching of families within EI.

Keywords: EARLY INTERVENTION, TRANSDISCIPLINARY APPROACH, DISABILITY POLICIES, QUALITATIVE METHODOLOGY

Introduction

Early childhood interventions are interventions for children ages from birth to 3 or 5 who are living with disabilities or developmental delays, are malnourished, have low birth weight, or have chronic illnesses. The foundation of early childhood interventions is having a team around the child. In the most effective models, the early interventionist takes a lead role and is supported by professionals from other disciplines. Professionals in psychological, medical, scientific and educational fields have documented the importance of the years between birth and five for learning (Steele, 2004, 75). If there is any risk of disability, these early years become even more critical (Lerner, Lowenthal & Egan, 2003). Evidence suggests that the earlier the onset of intervention, the greater likelihood of an improved developmental

trajectory. It is argued that early intervention is more cost- and time efficient than a “wait and see” approach (Koegel, Koegel, Ashbaugh & Bradshaw, 2014, 50).

As in many other countries, the Government of Republic of North Macedonia has made a commitment to care and education for children with disabilities, as well as children with a high risk for a developmental delay. **Article 23 of the Convention on the Rights of the Child** (signed by the Government of Republic of North Macedonia) states that state parties recognize that any mentally or physically disabled child should enjoy a full and decent life. State parties ensure that children have effective access to and receive education, training, healthcare and rehabilitation services in a manner conducive to children achieving the fullest possible social integration and individual development (OHCHR, 1989). Nevertheless, early intervention centres in North Macedonia cannot always meet the preconditions and ease access and care for children with developmental disabilities. The awareness of the benefits of early intervention and early inclusion for all (children with disabilities, parents, children peers, educators) is still at a very low level.

Methodology

Research design

For the purpose of conducting this research and the nature of the available information, a qualitative research methodology was being used. Qualitative methodology provides tools for researchers to study complex phenomena within their contexts (Baxter & Jack, 2008, 544). This study used structured approaches to applying a method which ensured comparability of data across sources. The advantage of using qualitative methods is that they generate rich, detailed data and provide multiple contexts for understanding the phenomenon under study.

The primary aim of this research was to create recommendations for Early Intervention for children which are differently abled that can be applied in Macedonian context, through a research of policies and evidence based practices in the U.S. as a leading country in the EI area.

The research questions revolved around the following:

1. What are the historical and current trends regarding legislation and policy (and practice) in the field of Early Intervention Services in the United States?
2. What are the practical implications of the policies and what else is needed?

Research methods and techniques

A descriptive-explanatory cross-sectional qualitative study was conducted. This involved generating a deep understanding through using mul-

multiple types of data sources. Qualitative content analysis was used as a research tool. Content analysis is a widely used qualitative research technique (Hsieh & Shannon, 2005) which aims at building a model to describe the phenomenon in a conceptual form (Elo & Kyngas, 2008). Content analysis is also useful for examining trends and patterns in documents (Stemler, 2001). This was used to examine policy papers and documents related to the EI area through desk-top library research.

Analysis of results

As in any other qualitative study the data collection and analysis occurred concurrently. The Yin (2003) techniques for analysis were used: pattern matching, linking data to propositions, explanation building, time-series analysis, logic models, and cross-case synthesis. A focused analysis in the EI field was used so that analysis of data that are outside the scope of the research questions is avoided. One danger associated with the analysis phase is that each data source would be treated independently and the findings will be reported separately but this was not the purpose of this study.

Research results

1. History of Early Intervention in USA

Early Intervention is a rather new field which has just five decades of history. There is a consensus on placing its origins in the 60s in the United States (Bailey, Aytch, Odom, Symons & Wolery, 1999; Shonkoff & Meisels, 1990). The importance of early experiences became a compelling concept in the 1975 creation of the Education for All Handicapped Children Act which provided "special education" services for children 5 to 21 years of age. Eleven years later, in 1986, the law was extended and broadened to incorporate the concept of support to infants 0 to 3 years old and their families. This 0 to 3 component, now called Part C of IDEA (then known as part H), addressed "an urgent and substantial need" in several areas: (1) enhancing the development of infants and toddlers with special needs; (2) reducing downstream governmental costs of special education and/or institutionalization by intervening earlier; and (3) supporting the ability of families to interact with and meet the needs of the infant/toddler (Hebbeler et al., 2011).

2. Current trends in early intervention

Since the 90s in the United States (Odom & Wolery, 2003) and later in Europe, a progressive approach has been being developed internationally, to a **family-centred practice** (Espe-Sherwindt, 2008; Soriano & Kyriazopoulou, 2010). This approach promotes changes in the roles played by the practitioners and families, in the way practitioners use their knowledge, and in how practitioners pose to families the decisions about the objectives to achieve

(García-Sánchez, Escorcia-Mora, Sánchez-López, Orcajada & Hernández-Pérez, 2014). From this family-centred practice, practitioners consider families as equal partners and necessary collaborators to get support and enhance child's development. The Intervention is always individualized, flexible and responsive to each child and family needs. Family involvement and partnership are their working goals (Escorcia-Mora et. al., 2016). Young children and families between 0 up to their 3rd birthday are served under Part C of IDEA – Individuals with Disabilities Education Act. These services are typically provided via an early interventionist or related service provider and are in the home or in a child care setting if the child is receiving care outside of the home. When the child turns 3, if they are still eligible to receive outside services, they move from an Individual Family Service Plan (IFSP) to an Individual Education Plan (IEP). Part C early intervention builds upon and provides supports and resources to assist family members and caregivers to enhance children's learning and development through everyday learning opportunities.

Analyses have revealed surprisingly large variations across states for many components of state-wide early intervention systems. More specifically, substantial differences in practice have been found with respect to criteria for eligibility for services, ways in which families gain access to the system (points of access, transitions from program to program), and the comprehensiveness of the available services (Harbin, McWilliam, & Gallagher, 2000; Spiker, Hebbeler, Wagner, Cameto, & McKenna, 2000).

2.1. Benefits of EI

When evaluating benefits derived from early identification and intervention, there are 2 major streams for measuring outcomes: (1) benefits to the child and the family; and (2) economic advantages derived from EI programs (Perrin et al., 2007).

Research shows that outcomes from EI extend well beyond early childhood. The Infant Health and Development Program tracked outcomes in low birth weight and preterm infants who received EI services. At the age of 8, improvements were noted in verbal abilities, receptive language scores, and overall cognitive performance (McCarton, 1997). At the 18-year follow-up, there were notable improvements in academic performance and endorsement of less risky behaviours, fewer arrests, and a lower dropout rate (McCormick, 1996). Other studies have generated similar positive data as long as 15 to 40 years beyond early childhood (Herrod, 2007, Walker et al., 2011). Equally important to communities and agencies are the studies demonstrating the fiscal advantages of providing quality EI services. A 2003 report from the Federal Reserve Bank of Minneapolis reveals EI programs as "economic development initiatives" that should be at the top of economic lists for local and state governments. The authors found that one program

demonstrated an \$8 return for every dollar invested in EI and estimated that 80% of the benefits were directly applicable to society in general (Reynolds et al., 2001; Bernanke, 2012; Karoly et al., 2001, Kilburn & Karoly, 2008).

3. Models of service delivery for infants and toddlers with disabilities and their families (key aspects of consultation, interdisciplinary collaboration, service coordination and family-centred services)

A consistent theoretical basis for research and practice grounded in human development theories, provides a framework for understanding intervention and evaluating progress (Bricker, 1986; Odom & Karnes, 1988). The theoretical position is the "transactional" model, in which developmental outcome is understood only through joint consideration of organismic, environmental, and interactional factors (Samaroff & Fiese, 1990). An additional organizing perspective for understanding human development, and early intervention, can be achieved through an integration of the transactional model with other developmental theories such as Bronfenbrenner's (1979) ecological theory (Dunst & Trivette, 1988).

Using a collaborative team process in providing EI services is a recommended practice (Bruder, 2010). A key component of a family-oriented early intervention is that the family is viewed as equal team members and integrated into aspects of assessment, planning, and intervention. EI specialists focus on overall development of the infant or toddler, parent education, and locating resources for the family. The developmental specialists focus on the interplay between family systems and a child's development (Miller & Hanft, 1998). Their primary role is to help the parent(s) understand the child's development. For example, if a child is not meeting typical developmental domains, EIs collaborate with and educate the family to promote development (Miller & Hanft, 1998). They are usually the service coordinators. Children in EI who have issues related to their fine or gross motor development skills may have two professionals on their EI team, Occupational Therapists (OTs) and Physical Therapists (PTs). An OT's role with children is to use skilled treatment to help them achieve independence in all of life's functions (Goldblatt, 2007). While OTs focus more on fine motor development, PTs focus more on gross motor development. A PT diagnoses and treats mobility issues, including sensorimotor development, cardiopulmonary status, and neurological organization related to mobility (Brown & Rule, 1993). Social workers are integral EI team members often involved in communication among the team and coordination of the team (Rosenkoetter, Hains, & Dogaru, 2007). Family support and guidance are areas of expertise for social workers. Social workers can also be service coordinators of the EI team. Speech and Language Pathologists (SLPs) working in the EI system focus on areas of delay related to communication (receptive and expressive) and swallowing (American Speech-Language Hearing Association [ASHA], 2008). SLPs

are assigned the role of maximizing the child's ability to communicate effectively (ASHA, 2008; Paul & Roth, 2011).

3.1 Transdisciplinary approach vs. multidisciplinary approach

Transdisciplinary (TD) teams utilize extensive collaboration requiring members to understand individual team roles, have knowledge of different disciplines, and a willingness to work together to provide EI services. Awareness among those working in EI programs or with EI programs is critical to improve services for young children and their families (Boyer & Thompson, 2014). The multidisciplinary model is typically defined as all EI providers maintaining independence in evaluation and treatment planning, but sharing information regarding their plans (Stepans, Thompson, & Buchanan 2002; Woodruff & McGonigel, 1988). The transdisciplinary model has been pointed out as best practice.

A TD model is designed to enable EI providers to intensively collaborate and cross discipline boundaries for the purpose of comprehensive and efficient EI services (Bruder, 2010; Moore et al., 2012). Sometimes referred to as the Primary Service Provider model (Moore et al., 2012), a TD model may utilize one EI provider to implement the service plan with the family with consistent and significant input from other team members.

The intense collaboration between team members in a TD model leads to role release, a key component of TD model (King et al., 2009; Stepans et al., 2002). Role release occurs when team members release some of their discipline-specific, direct services to one EI provider and is the compilation of a role extension, enrichment, expansion, exchange, and support. Role extension is defined as each EI provider becoming more involved in their own discipline through education and involvement (Woodruff & McGonigel, 1988).

3.2 Difficulties with transitions from a multidisciplinary to a transdisciplinary model

Although interventionists' beliefs about participation-based practices have been reported, researchers have shown that practitioners do not necessarily conduct their day-to-day practices in a manner that reflects those beliefs (e.g., Dunst, Trivette, Humphries, Raab, & Roper, 2001; McWilliam, 2000). Several investigators have found that some interventionists neither facilitate caregiver-child teaching interactions nor incorporate interventions within families' daily activities and routines (e.g., Campbell & Sawyer, 2007; Peterson, Luze, Eshbaugh, Jeon, & Kantz, 2007). Rather, researchers have reported that practitioners directly taught children with the caregivers often relegated to observers of teacher-child interactions.

3.3 Coaching of families

There are two primary coaching approaches: the early childhood coaching approach by Rush and Shelden (2011) and caregiver coaching with the family-guided routines-based intervention approach (Woods&Goldstein, 2007). Both approaches are grounded in the same research and emphasize reflection, active parent participation during visits, collaborative problem-solving, etc. This trend is aligned with how the legislation and the field's mission have evolved to emphasize the role of the service provider as a support to parents, rather than as providers of child-focused intervention. With all of that said a lot of EI providers are still doing a combination of working directly with the child and collaborating/coaching parents. Every visit is different and every visit challenges early interventionists to adapt their skills in different ways.

The current trends in the US in early intervention involve the use of coaching practices to build caregiver capacity to encourage their children's development during every day routines and interactions. Coaching is very popular, though service providers are struggling somewhat to implement it.

Recommendations for EI practices

1. Prepare parents for parenthood.

Effective parenting of young children is critical to the well-being of this nation and the world. Every child who does not experience a nurturing early environment is at risk of poor or compromised development. There seems little hope that we can expect adults, no matter where they live, to become caring parents without understanding the needs of infants and young children and how to address those needs. We know that early intervention, quality home visits, and relevant educational input can assist parents in providing more nurturing experiences for their young children—experiences that likely are necessary for sound development in all areas. Efforts to support and help educate parents must expand if we are to avoid successive generations of children who grow into adults who cannot, in turn, assist their children with healthy and positive development.

2. Transdisciplinary model as best practice.

In North Macedonia there is a high need for family-oriented early intervention services. The transdisciplinary model is the most appropriate and evidence-based practice that is cost-efficient and beneficial for all children with developmental delays and their families. There should be a smooth shift from the medical multidisciplinary model in North Macedonia towards the transdisciplinary model. Otherwise we will have clinics in homes. There should be high access to these services so that more families can benefit from this system.

3. Universal early screening.

There is no doubt that the earlier the child is identified, and the earlier the intervention starts, the better the outcomes for those children born at-risk or children with disabilities will be. We need to create an array of early detection strategies and a unified system of child-find. Well defined screening instruments should be agreed upon.

4. Coaching in Early Intervention.

One of the methods of working with parents has to be based on coaching. Parents, within this transdisciplinary method have to be coached in the best routine-based and activity-based experiences in their homes.

5. Implement linked and comprehensive approaches.

There should be a development of more comprehensive approaches for EI professionals to use with young children and their families as well as the need to build systems that link community-based service agencies such as education, health, and social welfare and individual EI program components of early detection, eligibility determination, assessment, intervention, and evaluation (Bricker et al., 2013). Families often receive assistance from multiple agencies whose professionals may or may not interact, often resulting in gaps and redundancies in services. Clearly, a need exists for professionals and their agencies to foster enhanced communication and joint goals.

6. Highly qualified EI professionals.

One of the objectives of good early intervention and early childhood special education practices is to have more professionals that will deliver services. However, one the premises have to be that these special educators have to be trained to deliver evidence-based practices. The best practice is to train small groups of implementation teams who can deliver home-based, routine-based services. Additionally, there has to be fidelity checks that will ensure continuation of evidence-based practices. The need for quality child care, in turn, would require well-trained and experienced professionals to deliver services.

7. On-line certification through on-line professional development modules.

Macedonian education needs to shift towards the use of online tools in the area of professional development. When it comes to professional development that is not organized through online courses, the best method is coaching the professionals and one-on-one trainings rather than large auditoriums training courses.

8. Joint staff development.

This research showed that EI staff is best trained when the staff development courses are joint so that they can share their different views and different perspectives and see that there are more alike than that they differ. Cross-disciplinary and interdisciplinary training programs should be created because the best practice is for professionals to work in teams. This should also be related to the manner we train our pre-services special educators and rehabilitators.

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