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Seçil BAL TAŞTAN[1]

Abstract

The aim of this study was to investigate the level of psychological strain and the influences of role overload, role conflict, and organizational injustice on psychological strain among Turkish nurses. This study adopted a cross-sectional, quantitative correlational study methodology. The study sample comprised of 251 nurses selected randomly from nursing and administrative services at selected hospitals in Istanbul-Turkey. The data was collected through self-administrated questionnaire. The results revealed that the level of psychological strain, organizational injustice, role overload, and role conflict among nurses was relatively high. It was found that there was a significant, linear and positive relationship between role overload, role conflict, organizational injustice facets and psychological strain. For testing the hypotheses, multiple regression analysis was used to determine how the independent variables predict psychological strain. About 62% variance in psychological strain was explained by role overload, role conflict, and organizational injustice facets. The results also showed that role overload was the strongest predictor to contribute to psychological strain. The findings of this study provide support to the Job-Demand Control Model, Fairness Theory, and Person-Environment Theory and provide both theoretical and practical implications to display the level of psychological strain and workplace stressors among nurses as part of the postmodern organizational problems.

Keywords:
Psychological strain, Role overload, Role conflict, Organizational injustice, Nursing, Turkey.

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1. Introduction

Although the extant literature provides strong evidence about the organizational and individual outcomes, still there is lack of empirical studies capturing the impact of justice on other important individual outcomes, such as strain. Investigating the psychological strain discourse about workplace problems and perceptions of role overload, role conflict, and organizational justice from the perspective of the universal value of health gives us the opportunity to partly avoid the paralysis observable in several fields of social science (MacIntyre, 1985). The present study has been built on the collective perception and meaning related to the postmodern organization context and the consequences of it. The perspective of observing psychological strain by psychosocial work demands and stressors at work is enriched with the postmodern readings of social and organizational theories and with the implications of the discourse of the 21st century organizations. Within the framework of this postmodern reading, the author has built her suggestions on the basis of the theoretical reality and her observations with the intention of explaining the existence of psychological strain with the increasing workplace corruption and stressors due to the postmodern organization requirements. As such, the purpose of this study is to examine the relationship between workplace stressors and experienced psychological strain. Due to the theory foundations, role overload, role conflict, and organizational injustice evaluations has been identified as being among the workplace stressors, therefore, the assumptions of this study have been maintained upon the theoretical roots and prior empirical supports. The generation of the hypotheses has led to the research design of the study and by utilizing the statistical tools, the interpretations of the results could be provided. Finally, the findings were discussed and concluding remarks were noted as followed by the theoretical and practical implications of the overall study.

2. Social and Organizational Theory Foundations of the Research

In the field of workplace psychological strain, there exists social and organizational theories and research approaches. The academic publications that focus on the relationships between psychological strain, its personal and organizational consequences, and individual and organizational determinants (Barling, Kelloway, & Frone, 2005; Szilas,

2011) have provided arguments dominated by the Humanist Psychology Approach, the Demand-Control-Support Model, and the Person-Environment Fit Model. Due to the author's personal approach to the research problem and her in-dept theoretical readings, the present study has been constructed with those relevant theories among other functional, quantitative, interactional, and causal process oriented research approaches.

As for beginning the work, the *Humanist Psychology Approach*, which is inspired by human growth and development goals, enhancing the well-being of the individual by promoting individual creativity, self-esteem, and ego strength, reflected the movement led by Elton Mayo, and followed by the work of McGregor (1960); Mohrman and Ledford (1985); Cassar (1999); Massarik 1983; and Sagie (1997). This approach reflected a much more positive view of human nature and emphasized the need to retrain managers to develop their participative leadership skills and unlearn authoritarian behaviors (Branch, 2002, p.4). It acknowledged the societal function of the workplace and the benefit of participatory restructuring of the workplace, given the central role it plays in the lives of most ordinary people (Pateman, 1970).

The Demand-Control-Support Model, which is one of the most frequently applied work stress and psychological strain models was developed by Karasek (1979), which is also known as the job strain-control or demand-control model. The Demand-Control Model (DCM), pays attention to the human factor in the work environment and conceptualizes the work environment as purely one of human construction, capable of change to an optimal active learning environment (Karasek, 1979, Karasek & Theorell, 1990). This model theorizes that the range of control over one's environmental situation is a crucial dimension in determining health on the one hand, and active behavior/learning on the other (Karasek, Brisson, Kawakami, Houtman, Bongers, & Amick, 1998). Specifically, jobs combining high demands and low control (i.e., high strain jobs) are the worst context for a worker in terms of health (job strain hypothesis). Alternatively, jobs combining high (but not overwhelming) demands as well as high control (i.e., active jobs) provide the context for workers to have some latitude regarding how and when to deal with current and new challenges. This context leads to active behavior in workers, to new learning, to challenge, to a sense of mastery, and self-efficacy (the active learning hypothesis; cf.

Karasek & Theorell, 1990; Theorell & Karasek, 1996). A persistent problem in a wide variety of current enterprises is that demands cannot be reduced easily if survival is to be ensured in the competitive global market. The DCM is among the few theories that predict how employee health and well-being problems can nevertheless be avoided by increasing employee control (De Jonge, Dollard, Dormann, Le Blanc, and Houtman, 2000, p.270).

The contribution of Karasek's Demand-Control Model (Karasek, 1979) to the work stress field was that instead of examining the effect of different characteristics of work in them, he also took into consideration their relationships between these factors (Szilas, 2011). The model assumed that psychological strain is generated by the relative strength of two basic characteristics of work (demand and control). The demand control support model assumed the highest level of psychological strain when the psychological demands are high and both autonomy and social support are low at the workplace. The demand-control-support model is significant for my effort to connect psychological strain with organizational justice as it identifies a fundamental discrepancy (between levels of demand and levels of control) as the centre of its theoretical construct and research investigation (Karasek, 1979; Szilas, 2011).

The Person-Environment Fit Model (P-E), which has been developed during the 1970's and its importance concerning psychological strain and organizational justice research also lays in its focus on discrepancies. One of these discrepancies emerges because of a misfit between personal needs, motivation and opportunities at the workplace; the other discrepancy is between the abilities of the person and the demands from work. The person-environment fit model indicates that serious physical and mental consequences can also occur when these misfits exist primarily according to the interpretations of employees (Edwards, 2000). A review of the literature suggests that researchers have attempted to find an explanation regarding the potential relationships that exist between stress, an individual, and the environment. It has been theorized that if there is not an accurate fit between the person and the environment, strain will occur (French, Caplan, & Harrison, 1982). More specifically, P-E fit suggests that individuals fit certain occupations based on the interaction of a multitude of variables. Theoretically, P-E fit "predicts that the magnitude of strain experienced by an individual is proportional to the degree of misfit between the individual and their

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occupation" (Pithers & Soden, 1999, p. 58). Layne (2001, p.9) claimed that P-E fit was the significant antecedent of experienced stress and strain among employees. In addition, French and colleagues (1982) argued that strain could result from the mismatch between a person and the environment on dimensions important to the well-being of the individual. In sum, it is suggested that it would be meaningful to perform further validation studies to examine P-E fit and the relationship to psychological strain.

3. Literature review and development of the hypotheses
3.1. The conceptualization of psychological strain

Emotional reactivity is the key to understanding the etiology, expression, and course and outcome of disorders, as well as to understanding the promotion of health and well-being (Sinokki, 2011, p.14). However, emotions are multidimensional rather than fixed and clear-cut, and many research methods have relied on different verbal accounts of emotions, which presuppose that individuals understand the descriptions identically and that they can identify their emotional states (Buunk, 1990, p.142).

As being an emotional and psychological reaction of an individual, psychological strain was defined as affective, feeling states of the individual characterized by depleted emotional resources and lack of energy (Lee & Ashforth, 1996). Beehr (1995) defined strain as states that are harmful and usually give an adverse affect on the individuals experiencing them. The "transactional theory" of Lazarus used the concept of strain to explain the pain which is experienced by individuals when environmental factors are perceived as overtaxing and exceeding their ability to cope with them (Lazarus & Folkman, 1987). Strains are the behavioral, physiological, and psychological processes that occur under the influence of stress and disrupt normal functioning (Winnubst, 1993). As such, psychological strain refers to a particular form of emotional distress arising in response to a situation involving perceived threat to an individual's well-being. Transactional models of stress emphasize the perceptual nature of stress-produced emotions (Folkman & Lazarus, 1988). According to Lazarus and Folkman (1987), strain arises when individuals perceive themselves as unable to meet environmental demands. If strain occurs, people will try to deal with either the stressor itself or with the negative effects of this stressor

(coping) (Lazarus & Folkman, 1987). French and colleagues (1982) suggested that strain can result from the mismatch between a person and the environment on dimensions important to the well-being of the person.

3.2. Factors that contribute to psychological strain

The feeling of strain is associated with psychological and physiological reactions. Emotion can takes positive and negative forms. Examples of the positive emotions are happiness, pride, relief and love. The negative emotions include anger, fright, anxiety, shame, guilt, sadness, envy, jealousy and disgust. Psychological stress centers on negative emotions, though positive emotion often serve as breathers (a break from stress), sustainers and restorers (replenishing damaged resource) (Lazarus & Folkman, 1986). Anger, anxiety, frustration, and depression are among the most important forms of negative emotion reported in the literature (Smith & Lazarus, 1993). As such, for the purpose of this research, psychological strain was viewed interactively as the result of work and role stressors that cause stress and thus strain can also be considered the reaction to stress. Physical and psychological strain can "range from a barely perceptible increase in pulse rate to disabling physical and emotional illness" (McLean, 1979, p.35). Osipow and Spokane (1987) identified four types of strain and divided strain into the following categories: vocational, psychological, interpersonal, and physical. Cooper and Marshal (1976) classified role, career development, relationship with others and organizational structure and climate as five main clusters of work stressors. Ivancevich and Matteson (1980) divided work stressors in four categories like physical environment, role and career development, relationships and organizational structures, climate and job characteristics. Parasuraman and Alutto (1984) identified contextual, role related and personal stressors as three general categories of stressors in organizational settings. Summers, DeCotiis and DeNisi (1995) proposed personal characteristics, structural organizational characteristics, procedural organizational characteristics and role characteristics as the main categories of work stressors in their model. Lack of career advancement, work load, risk taking and decision making and employee morale and organizational culture were identified as four broad categories of stressors (Vanishree, 2014, p.10). For the purpose and research decision of the present study, the role overload, role

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conflict, physical environment, and organizational injustice were identified in accordance with the previous theoretical background (e.g., Karasek, 1979; Lazarus & Folkman, 1984; Osipow & Spokane, 1998).

3.3. Role stressors: role overload, role conflict, and physical environment

As indicated by Osipow and Spokane (1998), occupational stress factors are measured in the dimension of the OSI-R referred to as the Occupational Roles Questionnaire (ORQ). The ORQ consists of six scales: Role Overload (RO), Role Insufficiency (RI), Role Ambiguity (RA), Role Boundary (RB), Responsibility (R), and Physical Environment (PE). These scales are designed to measure occupational stress (Osipow & Spokane, 1998) through defined work roles that were identified and subsequently associated with psychological strain in the literature (see, Layne, 2001). Moreover, the demands component of the model is most often conceptualized as time pressure due to a heavy workload (Fernet, Guay & Senécal, 2004; Karasek & Theorell, 1990), and it was also broadened to also include role ambiguity and role conflict (De Bruin & Taylor, 2006, p.66). The basic premise of Karasek's (1979) JDC model is that job demands and job control interact in such a way that they create different psychosocial work experiences for the individual, depending on the respective magnitudes of job demands and job control. Karasek (1979) classified these work experiences into four types of jobs, namely high-strain jobs (high demands and low control), active jobs (high demands and high control), low strain jobs (low demands and high control), and passive jobs (low demands and low control). Ortqvist and Wincent (2006) described the three facets of role stress as role conflict (incompatible expectations for a role), role ambiguity (uncertainty as to what actions will satisfy the expectations of a role) and role overload (time or lack of resources will not allow you to meet expectations for a role). Taken together, a role stressor can be defined as the pressure experienced by an individual as a result of organizational and job-specific factors in the form of demands and constraints that have been placed on them (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). Role stress theory states that organizational factors generate role expectations among role senders, who then transmit these as role pressures to the person (Idris, 2011, p.154).

"Role overload" -a variable associated with role stress theory- is a form of job demand and a potential role stressor has been investigated with its consequences including work stress, occupational strain, mental and physical health, work performance, etc. Rizzo, House, and Lirtzman (1970) describe role stressors as they relate to the principle of chain of command and the principle of unity of command. Katz and Kahn (1978) reported stress was overload in the work role. Overload was defined as "the perception that one is being asked to do more than time permits, although the required activities themselves are neither intrinsically incompatible or beyond one's abilities" (Katz & Kahn, 1978, p. 598). The individual often experiences conflict between quality and quantity due to time constraints and this has been shown to produce physiological and psychological strain (Morter, 2010, p.3).

The previous literature supports the relationship between role overload and psychological stress and strain, at least in cross-sectional designs (Hallberg & Schaufeli, 2006) as well as supporting the individual outcomes including dissatisfaction at work, intention to leave, burnout, physical health problems. Decker and Borgen (1993) found that role overload for counselors was modestly correlated with strain but not correlated with job satisfaction. Trivette (1993) found that employees who worked at two or more workplaces and having high role overload had higher stress levels. The role overload of nurses in hospital settings is also found to be one of the major stressors leading to job dissatisfaction and intent to leave (Chen, Chen, Tsai, & Lo, 2007). Aitken and Schloss (1994) revealed that for institutional staff working with individuals with intellectual disabilities, role overload was reported to be high due to the physical environment. In his meta-analysis, Winefield (2000) concluded that increased stress levels in academics were associated with increased workload and reduced rewards. Malik, Sajjad, Hyder, Ahmad, Ahmed, & Hussain (2013) provided both conceptual and empirical implications about how role overload diminishes employee retention and productivity in the organizations. Park and Wilson (2003) performed a study to examine what work factors were significantly different between a high strain group and a low strain group among the factory workers at manufacturing companies and revealed that perceived job demands, poor relationships with coworkers, and heavy workload were strong work factors affecting psychological strain. Morter (2010) demonstrated that role overload was negatively related with job work–

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family balance satisfaction and job satisfaction and positively related with intention to leave. Idris (2011) examined the over time effects of three role stressors (role overload, role ambiguity, role conflict) on psychological strain among Malaysian public university academics. The study found that role overload and role ambiguity predicted strain over time (Idris, 2011). Further, Vanishree (2014) investigated the impact of role ambiguity, role conflict and role overload on job stress in Small and Medium Scale Industries and found that work overload, work ambiguity and work conflict brought about job stress among workers resulting in poor concentration, mental block and poor decision making skills. Academics were described as having difficulty in completing their assigned jobs properly due to task overload and reporting high psychological strain (Dua, 1994; Sharpley, Reynolds, Acosta, & Dua, 1996; Winefield, Gillespie, Stough, Dua, Hapuarachchi, & Boyd, 2003). Finally, long hours, work overload, time pressure, difficult or complex tasks, lack of breaks, lack of variety and poor work conditions (for example, space, temperature, light) were described as being the causes of occupational strain (Malik, 2011).

With regard to the experience of role stressors in various sectors including academic, nursing, technology, and service industries, the preceding studies provide clear empirical evidence that employees are experiencing role overload (Layne, 2001; Park & Wilson, 2003; De Bruin & Taylor, 2006; Chen et al., 2007; Morter, 2010; Karimi et al., 2014; Kersten et al., 2014; Vanishree, 2014). To summarize, the literature supports the relationship between role overload and strain, at least in a cross-sectional design. Therefore, based on the literature review and above discussion the flowing hypothesis is proposed:

H1. Role overload contributes to perceived psychological strain.

"Role Conflict" - a variable that occurs when there are mixed or incompatible messages about how to satisfy expectations for a single role (Wright, 2009, p.24)- is a form of job demand and role stressor. Jackson, Schwab and Schuler (1986) found out that job or role ambiguity is also a potential source of job stress and this occurs when job or task requirements are not clearly outlined or when workers are unsure of their responsibilities and duties. Role conflict refers to incompatible requirements and expectations that the employees receive from their

supervisor or coworker (Rosen, Chang, Djurdjevic, & Eatough, 2010). While role ambiguity concerns a lack of information on expectations, role conflict is characterized by an incongruence of role expectations. In contrast to ambiguity it is a multivariate construct (Miles & Perreault, 1976). Thus, owing to that role ambiguity and role conflict are the two main components of role stress (Jackson & Schuler, 1985), this study examines whether role conflict influence employee psychological strain.

Rizzo, House and Lirtzman (1970) defined role conflict as the incompatibility of requirements and expectations from the role, where compatibility is judged based on a set of conditions that impact role performance. It has been argued that role conflict could be distinguished between the four types of conflicts: person-role conflict, intersender conflict, intrasender conflict and interrole conflict (Kahn et al., 1964; Rizzo et al., 1970). Role conflict has also been defined as the extent to which a person experiences pressures within one role that are incompatible with pressures that arise within another role (Kopelman, Greenhaus, & Connolly, 1983).

In the present study, definitions from Rizzo, House and Lirtzmann (1970) are used as the main source to come to the descriptions of each type of conflict as also provided by Nickklaus (2007). Nickklaus (2007, p.24) has indicated that person-role conflict occurs when role expectations of others are incongruent with the orientations and personal needs of the role occupant and inter-sender conflict occurs when expectations of two different role senders towards the role occupant are incompatible. Moreover, intra-sender conflict occurs when financial resources and capabilities conflict with defined role behavior and inter-role conflict occurs when a person has to play various roles at the same time, which are incongruent and incompatible (Nickklaus, 2007, p.25). Based on these definitions, it can be inferred that role conflict, that is pressure to perform in two or more incompatible ways, has been tied conclusively to occupational and psychological strain.

As pioneering the works regarding the potential impacts of role conflict on individual outcomes, Rizzo et al. (1970) indicated that academics with role conflict had certain occupational stress and psychological strain symptoms. It has been demonstrated to be a factor in job dissatisfaction and propensity to leave the organization one works for ever since the classic work of Kahn and his colleagues (1964); Rizzo,

House and Lirtzman, 1970; Fang and Baba, 1993; Cordes and Dougherty, 1993; Ram, Khoso, Shah, Chandio and Shaikih, 2011. Tosi and Tosi (1970) demonstrated that role conflict was significantly related to low overall job satisfaction. Keller (1975) explored the correlates of role conflict and role ambiguity with job satisfaction and values of employees. Keller's (1975, p.62) study reported that role conflict and ambiguity were both associated with low levels of job satisfaction while role conflict was related to extrinsic satisfaction sources. The evidence of Rowley (1996) also confirmed that higher role overloads and role conflict among academics had led to greater strain. Rosse and Rosse (1981) noted that role conflict (incompatible demands from supervisor or colleagues) significantly lead to job stress and consequently intention to leave job.

Thang and Chang (2010) examined the potential effects of role conflict on employee work outcomes and their study results showed that role conflict had negative impact on employee creativity at work. Ram et al. (2011) investigated the impacts of role conflict and ambiguity as factors in stress among the managers in manufacturing industry of Pakistan. Their results showed that role conflict and role ambiguity were the predictors of strain at work (p.113). A line of stress studies has also explored the experience of role conflict among academics (Dua, 1994; Taris, Peeters, Le Blanc, Schreurs, & Schaufeli, 2001; Winefield et al., 2003). Consistent with the previous evidence, Idris (2011) found that role conflict had significant effect on psychological strain. Karimi and his collagues (2014) concluded that role conflict and occupational stress were positively related. Hence, it can be assumed that the experience of role conflict hinders a person's well being in his/her work and causes psychological strain. Consequently, based on the theoretical background and previous evidences, the following hypothesis is generated.

H2. Role conflict contributes to perceived psychological strain.

3.4. Contextual stressor: organizational injustice

In the literature, the association between psychosocial factors at work and employees' physical and psychological health has been studied within various organizational settings and industries. Good social relations at work and fair work environment are important resources for employee psychological health, however, these factors may also cause

strain on employees (Layne, 2001). The integrative organizational justice research has provided an opportunity for researchers to follow in the steps of Adams (1965) and connect the research fields of psychological strain and organizational justice (Szilas, 2011). It has been argued that a lack of influence on the decision-making process and evaluations of interpersonal inequality and create a stressful situation, which may foster psychological distress (Tepper, 2001; Vermunt & Steensma, 2003; Rousseau, Salek, Aube & Morin, 2009).

Organizational justice describes the role of fairness as it directly relates to the workplace and specifically, organizational justice is concerned with the evaluations in which employees determine if they have been treated fairly in their jobs and the ways in which those determinations influence other work-related variables (Moorman, 1991; Al-Zu'bi, 2010). Employee's perceptions relate to three dimensions of organizational justice: distributive justice, procedural justice, and interactional justice. Distributive justice refers to the perceived fairness of the outcomes that an individual receives from organization (Al-Zu'bi, 2010). Interactional justice reflects concerns about the fairness of the non-procedurally dictated aspects of interaction; however, research has identified two subcategories of interactional justice: informational justice and interpersonal justice (Folger & Cropanzano, 2001). These two subcategories of informational and interpersonal justice overlap considerably; however, research suggests that they should be considered separately, as each has differential effects on justice perceptions (Colquitt, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001). Procedural justice represents individuals' perceptions of the fairness of the process used to make decisions affecting them, such as those relating to pay, promotions, and punishment (Thibaut & Walker, 1975).

The linkages between organizational justice and psychological strain are accrued in line with the considering organizational injustice a stressor itself. According to this approach, organizational injustice is just like any other stressors (e.g. overwork, role overload, role conflict, role ambiguity) and thus it can directly cause strain (Cropanzano, Goldman, & Folger, 2005; Szilas, 2011). Consistent with the transactional model of Lazarus and Folkman (1984), Cropanzano and colleagues (2005) addressed the role of individual appraisals and especially the individual justice judgments on their feelings of occupational strain. With another approach, the relationship between organizational justice and strain has

been explained by considering organizational justice to be a moderator in the strain process (Zohar, 1995). Such kind of an approach has gained acceptance as a result of a body of empirical results (see, Howard & Cordes, 2010).

As a result of their research study among safety guards, De Boer and colleagues (2002) found that distributive justice and procedural justice predicted some physiological consequences of the workers. Another study revealed that (Elovainio, Kivimäki, & Helkama 2001) employees' control over work evokes some justice judgments, which eventually determines the level of experienced strain. Within the framework of the present study, Zohar's (1995) and Szilas' (2011) works were significant milestones for linking organizational justice to work strain. Zohar (1995) extended role stress theory with the concept of role justice and Cropanzano and colleagues (2005) have continues research on explaining psychological strain and work stress with organizational justice. Thus, this study has attempted to apply those scholars' approach (Zohar, 1995; Cropanzano et al., 2005; Suurd, 2008; Szilas, 2011) for suggesting the connection between organizational justice and psychological strain.

Furthermore, recent research indicated that overall justice perception had significant relationship with organizational outcomes including commitment, job satisfaction, turnover intentions, job performance, organizational citizenship behavior, and trust (Ambrose & Schminke, 2006; Jones & Martens, 2009). The prediction that the organizational justice facets will influence strain has received support in the recent literature. The theoretical support for distributive justice's relation to strain is based on Adams' (1965) "equity theory". According to the theory, exposure to perceived inequity contributes to an individual's experience of tension and stress. Perceived distributive justices' link to strain has been confirmed by a number of authors (e.g., Francis & Barling, 2005; Tepper, 2001; Rousseau et al., 2009). At the empirical level, many studies indicate that distributive injustice negatively influenced psychological health outcomes (Francis & Barling, 2005; Judge & Colquitt, 2004; Lambert, Hogan, & Allen, 2006; Spell & Arnold, 2007). Studies have also found support for the relationship between the sub facets of justice, i.e. procedural justice, and strain (see Elovainio et al., 2001; Francis & Barling, 2005; Judge & Colquitt, 2004). Vermunt and Steensma (2003) linked informational justice to stress and strain and

implied that supervisors who do not provide information to subordinates may cause potentially stressful situations. Judge and Colquitt (2004) revealed evidence that interpersonal injustice predicted reported psychological stress. For supporting prior evidences, Suurd (2008) conducted a study for examining relationships among the justice facets, overall justice, strain, and intent to turnover in a military context and the results of this study suggested that justice evaluations from different sources (coworkers, supervisors and organizations) and at different levels (sub facets of distributive, interactional, and interpersonal justice and overall justice) were related to strain and intentions to turnover (Suurd, 2008, p.43). In addition, Rousseau and colleagues' (2009) study found that distributive justice, procedural justice, and psychological distress were significantly related and the perception of injustice at work increased psychological health-related problems (p.305). Interactional injustice has been linked to strain based on its negative influence on valuable coping resources such as social support, since social support could buffer the relationship between perceived stress and strain (Cohen, 1985).

Other studies have also confirmed the health consequences of organizational injustice and its main and interactive effects on psychological strain at work (e.g., Tepper, 2001; Eib, Bernhard-Oettel, & Näswall, 2011). Consistent with predictions derived from a framework that integrates strain and coping theory with justice theory, Tepper's (2001) research revealed that relationships between justice and psychological strain were stronger when distributive justice was lower (p.211). In the literature, the mediating effect of organizational justice was also tested. For example, the results of a study suggested that that job control affected strain through justice evaluations (Elovainio, Kivimäki, & Helkama, 2001, p.418). Moreover, by testing the uncertainty management model of fairness judgments, Elovainio and colleagues (2005) demonstrated the combined effects of uncertainty and organizational justice on employee strain and health problems (p.2508). On the other side, there exists a contrary finding related to the justice and strain link. For example, an experimental study was performed by Durepos (2007) in order to test the effects of procedural injustice and outcome favorability on strain and physiological indices of strain within a sample of university students. However, in large part the hypotheses suggesting the contributions of justice sub facet on self reported

psychological strain were not supported. In addition, it is recognized that the research on the link between justice and strain has not gained adequate attention in Turkish cultural context. Although the concept of organizational justice has received some attention in the literature, the potential contribution of justice to psychological strain has practically been ignored in research studies. Therefore, since there are contrary findings related to the given subject and due to the scant research in Turkey, the present study attempted to investigate the link between perceived organizational justice facets and psychological strain. Accordingly, the following hypothesis is proposed.

H3. Overall organizational injustice contributes to perceived psychological strain.
H3a. Distributive injustice contributes to perceived psychological strain.
H3b. Procedural injustice contributes to perceived psychological strain.
H3c. Interactional injustice contributes to perceived psychological strain.

The framework in Figure 1 presents the research model for this research study that consisted of independent and dependent variables. The independent variables in this research study were role overload, role conflict, and the components of organizational injustice, namely distributive injustice, procedural, and interactional injustice, while dependent variable includes employee's workplace psychological outcome, namely psychological strain.
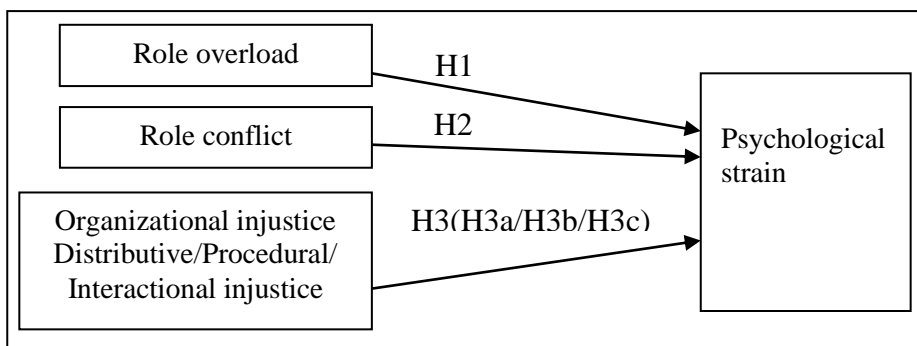
Figure 1. The research model

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4. Methodology
4.1. Data and sample

To gather data for this study, a random sample of employees was selected from the population of 6 health care organizations in Istanbul. The number of employees including nurses and administrative nurses in these hospitals at was 385 employees. The questionnaire forms were personally handed by the researcher and instructions were given to each nursing staff and administrative board. 274 questionnaires returned and due to incomplete and invalid responses 23 questionnaire forms were eliminated. 251 responses were used for data analyses, thus the response rate was 71% (=274/385). In terms of demographic findings, (91.6%) of respondents were females, and the remaining (8.4%) were males. In terms of the age group of respondents, 38.2% of them were between 22-29 years, whereas 28.5% fell into the 30-36 age group, whereas 32.1% fell into the 37-45 age group, only 1.2% are above 46. As for the educational levels of these nursing staff, the majority were university and heath care education degree holders (87.7%), a few of the respondents had master degree (6,6%), and some of them has Higher Education degree from nursing and health care services programmes (5.7%).

4.2. Measures

The self-administered questionnaire was designed to test the three hypotheses and three sub hypotheses were separated into two sections. The questionnaire consisted of 55 questions, whereby the first section obtained the demographic variables of the respondents such as gender, age, education level, current position and years of service with the hospital, while the second section was to test the hypotheses (our parts, namely role overload, role conflict, organizational justice, and psychological strain). The measures used in the research are introduced as below:

Psychological strain was measured using the 12-item version of the General Health Questionnaire (GHQ; Bank, Clegg, Jackson, Kemp, Stafford, & Wall, 1980). The GHQ includes items pertaining to such factors as depression and self-confidence. The respondents were asked to consider their psychological strain symptoms over the past six months. Prior research revealed high internal consistency for this measure (α's ranging from .82 to .90; see Bank et al., 1980). The scale was also used in the research study of Francis and Barling (2005) and the

internal consistency for the GHQ was high in their study (α =0.92). The items were rated on a 4-point response scale ranging from 1 (better than usual) to 4 (much worse than usual) in both studies of Bank et al. (1980) and Francis and Barling (2005). However, in the presents study, the items were responded on a 5-point scale. The higher scores were indicative of more psychological strain due to the compute of the scores.

Role overload was measured by employing the role overload scale with 13 items originally developed by Reilly (1982). Prior researchers have used the scale to measure role overload (see Thiagarajan, Chakrabarty, & Taylor, 2006; Morter, 2010). The scale was a 5-point Likert-type scale, with a range of 1, indicating *strongly disagree,* to 5, indicating *strongly agree.* The reliability of Reilly's overload scale has been confirmed extensively. In Reilly's original study, the value of Cronbach's alpha was computed as .88. Thiagarajan et al. (2006) performed a factor analysis of Reilly's scale to determine the unidimensionality of the scale and their study revealed fit indexes exceeding .95 (Thiagarajan et al., 2006). Morter's (2010) study has reported the reliability coefficient of .94.

Role conflict was measured by using the established 8 item scale developed by Rizzo, House and Lirtzman (1970). The reliability of the scale has been well documented within previous research studies. In the study of Glissmeyer, Bishop and Fass (2008) the coefficient alpha was .81. Other empirical studies conducted in various cultural contexts also validated the scale (see, Özkan, 2008; Nicklaus, 2007; Judeh, 2011) and a recent study which has been performed among nurses in Turkey has reported the reliability coefficient of .91 (Taştan, 2014).

Organizational injustice was measured with the 22-item scale of Niehoff and Moorman (1993) which was composed of three sub facets, namely distributive, procedural, and interactional justice (with reverse items). Respondents indicated their evaluations on a scale from 1 (strongly disagree) to 5 (strongly agree). Distributive justice perceptions were measured with a 5-item scale, perceptions of procedural justice were measured with a 6-item scale, and perceptions of interactional justice were measured with 11-items scale. The Cronbach's alpha for each scale in Western studies was over .80., whereas Moorman, Blakely and Niehoff's (1998) study reported Cronbach's alpha value of .90. Al-Zubi's (2010) study has revealed the reliability coefficient alpha for distributive justice as .79. The alpha coefficient for procedural justice and interactional justice scales were also high (0.80-0.90). The reliability

Cronbach's alpha for distributive justice in Al-Zubi's (2010) study was 0.80.

5. Results
5.1. Preliminary Analyses

A Pearson product-moment correlation coefficient was computed to assess the data in order to determine the direction and the strength of linear relationship between the role overload, role conflict, organizational justice facets, and psychological strain. The interpretation of the strength of the relationship was based on (Cohen, 1988). All scales showed acceptable internal consistency of Cronbach's alphas between 0.82-0.93. The Cronbach's alpha values of each variable are presented with Table 1. Table 2 displays descriptive statistics (means and standard deviations), and intercorrelations among the variables and Table 3 shows the descriptive statistics and intercorrelation between total organizational injustice perception and psychological strain.

Table 1. Reliability values of the variables

Variables	Number of questions	α
Role overload	13	0.93
Role conflict	8	0.91
Distributive injustice	5	0.82
Procedural injustice	6	0.85
Interactional injustice	11	0.81
Total organizational injustice	22	0.83
Psychological strain	12	0.90

Table 2. Means, standard deviations, and correlations between variables

Variables	M	SD	1	2	3	4	5	6
1.Role Overload	4.12	.59	1	.325**	.311**	.336**	.342**	.515**
2.Role Conflict	3.55	.52	.325**	1	.303**	.297**	.328**	.503**
3.Distributive injustice	3.81	.72	.311**	.303**	1	.112*	.156**	.406**
4.Procedural injustice	3.62	.49	.336**	.297**	.112*	1	.204**	.341**
5.Interactional injustice	3.77	.46	.342**	.328**	.156**	.204**	1	.396**
6. Psychological Strain	3.63	.53	.515**	.503**	.406**	.341**	.396**	1

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Table 3. Means, standard deviations, and correlations between total organizational injustice and psychological strain

Variables	M	SD	1	2
1.Total organizational injustice	3.73	.41	1	.382**
2. Psychological Strain	3.63	.53	.382**	1

*Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).

According to Table 2, there is a moderate significant, positive and linear relationship between role overload and psychological strain (r=0.515, p<0.01) and there is a medium significant, positive and linear relationship between role conflict and psychological strain (r=.503, p<0.01). The Table 2 also reveals that there is a weak, significant, and positive relationship between distributive injustice (r=.406, p<0.01), procedural injustice (r=.341, p<0.01), and interactional injustice (r=.396, p<0.01) and psychological strain. In addition, as Table 3 displays, the with three sub facets, the total organizational injustice perception has a weak, significant, and positive relationship with psychological strain (r=.382, p<0.01). The correlations indicate that a lack of either form of justice and an existence of perceived role overload and role conflict are likely to increase individuals' psychological strain.

5.2. Test of hypotheses: the contributions of role overload, role conflict and organizational justice on psychological strain

For testing the hypotheses, multiple regression analysis was performed. It was seen that there were significant positive impacts of perceived role overload and role conflict on psychological strain. In addition, each facets of organizational injustice had significant positive impacts on psychological strain. Table 4 displays the ANOVA results on the overall model and the results indicate significance ($F = 43,554$, $p<0,05$).

Table 4. Model summary of regression analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,693(a)	,624	,648	,45572

Predictors: (Constant), Role overload, Role conflict, Distributive injustice, Procedural injustice, Interactional injustice

Table 5. Regression analysis of psychological strain

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	73,552	24	5,442	43,554	,000(a)
	Residual	44,157	227	,256		
	Total	117,709	251			

a. Predictors: (Constant), Role overload, Role conflict, Distributive injustice, Procedural injustice, Interactional injustice
b. Dependent Variable: Psychological strain

Table 6. Summary results of coefficients of regression analysis

Dependent Variable: Psychological strain			
Independent Variables	**Beta**	**t Value**	**P Value**
Constant		1,776	0,020
Role overload	0,542	3,725	0,000
Role conflict	0,514	2,198	0,000
Distributive injustice	0,348	4,248	0,000
Procedural injustice	0,355	4,144	0,000
Interactional injustice	0,308	4,183	0,000
R=0,693; R²=0,624; F Value=43,554; p<0,05			

The overall R^2 is .624 suggesting that role overload, role conflict, and organizational injustice facets combine to explain approximately 62% of the variance in psychological strain among the nursing staff. While this figure may seem high, being able to explain this much variance in psychological strain construct measured on individuals can be very important. Hypothesis 1 stated that role overload contributes to perceived psychological strain. The results of Table 6 show that role overload statistically significantly contribute to psychological strain ($\beta = 0.542$, $t = 3.725$, $p < 0,05$) suggesting hypothesis 1 is supported. Hypothesis 2 stated that role conflict contributes to perceived psychological strain and this construct also showed statistical significance ($\beta = 0.514$, $t = 2.198$, $p < 0,05$) supporting hypothesis 2. In addition, according to the beta coefficients and p-values, each of the facets of organizational injustice contributed to psychological strain significantly (Distributive injustice: $\beta = 0.348$, $t = 4.248$, $p < 0,05$; Procedural injustice: $\beta = 0.355$, $t = 4.144$, $p < 0,05$; Interactional injustice: $\beta = 0.308$, $t = 4.183$, $p < 0,05$).
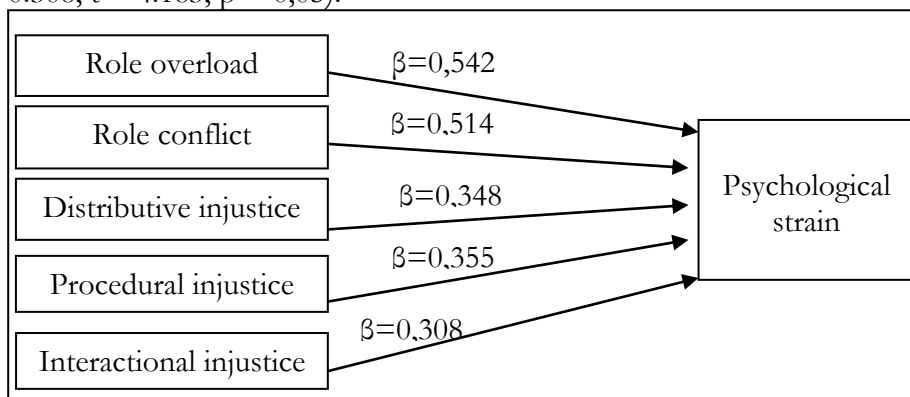
Figure 2. The Final Research Model after Multiple Regressions

Therefore, such results supported hypothesis 3 and sub hypotheses of H3a,H3b,H3c. In sum, due to the regression analysis results, the final model of the research variables is displayed with the above Figure 2.

6. Conclusion and discussion

The purpose of this study was to examine the relationships among the role overload, role conflict, organizational injustice facets, and psychological strain in a nursing population. In line with the first and

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second hypotheses, it was found that perceived role overload and role conflict predicted variance in overall psychological strain perceptions. Moreover, the third hypothesis claimed that distributive, procedural, and interactional injustice would each predict unique variance in overall psychological strain perception. This hypothesis was fully supported since each sub hypothesis showed significance. Distributive, procedural, and interactional injustice each accounted for variance in overall reported psychological strain. The finding that overall fairness judgements could be related to employee attitudes and behaviors has been supported in previous studies involving organizational justice and psychological strain. In addition, in line with the demands component of the model and transactional models of stress, heavy workload pressure and role related conflict (Lazarus & Folkman, 1984; Fernet, Guay, & Senécal, 2004; Karasek & Theorell, 1990; De Bruin & Taylor, 2005) predicted perceived psychological strain. Specifically, the findings of the present study are consistent with the prior literature suggesting the potential relationships between strain, an individual, and the workplace environment (French et al., 1982; Pithers & Soden, 1999; Layne, 2001). Past research suggested that overall injustice judgements could exert an influence on important employee outcomes such as perceived job satisfaction, commitment, intentions to quit, and occupational stress (Ambrose & Schminke, 2006; Jones & Martens, 2009). In line with these arguments, the findings of the present study support Francis and Barling's (2005) study which has found interactive relationships among interactional, procedural, and distributive injustice and psychological strain. At this point the connection of the workplace strain theories to fairness theory (Folger & Cropanzano, 2001; Szilas, 2011) from among the organizational justice theories seems clear. Thus, the results of this study offer support to the idea that the specific type of injustice encountered or a judgment about workplace fairness leads to the perceived strain.

The potential implications of the present findings to the nursing and organizational context relate to what many organizations encounter. Understanding that justice evaluations are linked to psychological strain and occupational stress can encourage organizations to maintain high levels of justice. It can be offered for the managers to maintain human growth and development and to enhance the well-being of the individual as implicated by the Humanist Psychology Approach. When the potential costs associated with absenteeism, turnover, health problems,

medical treatment and assistance to employees who experience psychological strain are considered, the importance of creating a healthy work environment and clear role perceptions as well as the maintenance of justice in the organizations can be better understood. Therefore, this study may provide some guidelines for managers to understand how to reduce employees' psychological strain by making better decisions about the procedures for their employees and by maintaining much more fair procedures and interactions within the organizations.

As noted earlier, this study's purpose was to highlight the collective perception related to the postmodern organization context and the unhealthy consequences of it regarding the employee well being and psychological state. Within the framework of postmodern organizational system, the experienced psychological strain is attributed to the increasing workplace corruption and stressors which have been accrued due to the postmodern organization demands. Because of the globalization, increasing competition among organizations, unhealthy employee relations, and economic crisis, the workplace strain processes and the organizational justice perceptions connected to the postmodern way of doing business received higher significance. It is suggested that the classic justice concept according to which everyone should get what she/he deserves has received an interpretation in today's organizations due to societal and economic corruptions. The problem is that the high performance and accomplishment of the works are stressed rather than the well being and human needs of the individuals. Thus, the level of experienced psychological stain –as reported in this study-, implicate the severity of the problem and may provide predictions regarding the potential consequences such as employee dissatisfaction, intention to leave, burnout, physical problems, absenteeism, etc. In sum, in both micro and macro level approaches, the experienced strain in the workplace may cause several negative employee and organizational outcomes, therefore, the requirements of postmodern organizations and postmodern industrial relations should be balanced with the requirements of individuals and their human essentialities without ignoring the quality of work life.

This study has several limitations that should be acknowledged. The first limitation is that the data collected throughout a self-reporting method, thus, it may cause common method bias. Second, this study utilized a convenience sapling method with a cross-sectional data

collection. However, future studies should go beyond this to assess the possible cause and effect of the relationship between organizational injustice and psychological strain as well as the relationships among role overload, role conflict and strain. Third, the study was performed with a research on nurses working in selected health organizations in Istanbul. For that reason, in future studies, the study variables should be measured on employees from several other health organizations, sectors or occupations, so that the findings can be generalized across the whole population of Turkey. In addition, such kind of studies should be perfomed across the profit and government organizations in Turkey.

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