

**THE THEORETICAL IMPLICATIONS OF JOB DEMANDS–  
RESOURCES MODEL: A RESEARCH STUDY ON THE  
RELATIONS OF JOB DEMANDS, SUPERVISOR SUPPORT  
AND JOB AUTONOMY WITH WORK ENGAGEMENT**

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**Abstract:** The purpose of this study is to examine how job demands (work overload, role conflict, role ambiguity, job insecurity) and job resources (supervisor support and job autonomy) are related to work engagement of nurses working in Turkish Health Organizations. The findings revealed that work overload had a negative relationship with vigor and dedication and job insecurity had significant negative relationships with vigor, dedication, and absorption. It was determined that supervisor support had significant large effect relationships with vigor, dedication, and UWES total. Job autonomy had medium effect relationships with vigour, dedication and UWES total, role ambiguity showed a medium effect relationship with vigor, dedication, and UWES total. Job insecurity and role ambiguity displayed negative relationships with vigor, dedication, and absorption. Based on the findings, the suggestions of the study were supported and it was concluded that perceived job demands as measured with work overload, role ambiguity, role conflict, and job insecurity and job resources as measured with supervisor support and job autonomy had significant relationships with work engagement of nurses.

**Keywords:** Work Engagement, Job Demands, Job Resources, Nursing.

**İŞ TALEPLERİ-KAYNAKLARI MODELİ: İŞTALEPLERİNİN,  
YÖNETİCİ DESTEĞİNİN VE OTONOMİNİN İŞE GÖNÜLDEN  
ADANMA İLE İLİŞKİLERİ ÜZERİNE BİR ARAŞTIRMA**

**Özet:** Bu çalışmanın amacı iş taleplerinin (iş yükü, rol çatışması, rol belirsizliği, iş güvencesizliği) and iş kaynaklarının (yönetici desteği ve iş otonomisi) Türkiye’de sağlık kurumlarında görev yapan hemşirelerin işe gönülden adanma düzeyi ile ilişkilerinin incelenmesidir. Elde edilen sonuçlar iş yükünün dinçlik ve adanmışlık ile negatif yönde ilişkili, iş güvencesizliğinin ise dinçlik, adanma ve yoğunlaşma ile negative yönde ilişkili olduğunu göstermiştir. Amir desteğinin işe gönülden adanmanın coşku ve adanmışlık boyutları ve toplam gönülden adanmışlık ile güçlü seviyede ilişkili olduğu, otonominin orta derecede etkiye sahip olduğu, rol belirsizliğinin ise coşku, adanmışlık ve toplam gönülden adanmışlık üzerinde orta derecede etkiye sahip olduğu belirlenmiştir. Tüm bu elde edilen sonuçlara göre, iş yükü, role belirsizliği, rol çatışması ve iş güvencesizliği algılarından olşun iş taleplerinin ve otonomi ile amir desteğinden olşun iş kaynaklarının hemşirelerin işe gönülden adanma algıları ile anlamlı bir ilişkisinin olduğu görülmüştür.

**Anahtar Kelimeler:** İşe Gönülden Adanma, İş Talepleri, İş Kaynakları, Hemşirelik.

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### **I. Introduction**

This study investigates the relationship between job demands, job resources and work engagement among nurses in private hospitals located in Istanbul city, Turkey, as well as finding out whether job demands and resources have predictive value for the nurses' work engagement levels. Since, there is insufficient research on job demands, job resources and what their relationship with work engagement is in the nursing context, the current study is aimed at contributing to this limited literature. There is also a lack of focus on particular professions, i.e. nurses. Therefore, it is recognized that gaining insight into this area with the relevant issue is necessary, especially within the Turkish nursing context.

Health services and nursing plays an important role in the development of the Turkish economy and Turkish Health Care System (Pekriz, 2008; Keskin, Gümüş and Engin, 2011). Healthcare institutions are different in size and nature, and nurses are confronted with different work tasks and working hours - nightshifts-, working conditions – understaffing and stress related situations (Malliarou, Moustaka and Konstantinidis, 2009). The most affected healthcare employees are the nurses who are required to deal with increased demands for efficiency and improved healthcare quality. However, nurses are under the pressure of time coping effectively, workplace stress, work overload, and exhaustion (Luthans, Lebsack and Lebsack, 2008; Othman and Nasurdin, 2011).

Accordingly, a large amount of Turkish research studies (e.g. Doğan, Güler and Koçak, 1999; Oflaz, 2006; Pekriz, 2008; Aytaç and Dursun, 2013) and international literature (e.g. Abderhalden, Needham, Friedli, Poelmans and Dassen, 2002; Maguire and Ryan, 2007; Jonker, Goossens, Steenhuis and Oud, 2008; Chiu, Chung, Wu and Ho, 2009; Othman and Nasurdin, 2011) posits that nursing is a stressful profession. More particularly, it has been indicated that job demands and high work overload had negative effects on hospital clinical nurses' intention to turnover (Chiu et al., 2009, p.258). It is known that medical work entails heavy workload in the form of working long hours, working under time pressures, having to handle the demands from patients, and having to work unsociable hours (Malliarou et al., 2009). The extant literature evidences on job demands, resources, job stress, and work engagement has shed light on the current study which focused on nursing context. Among these studies, work overload was revealed as a strong stressor factor in nursing (e.g., Hipwell, Tyler and Wilson, 1989; Morter, 2011); job autonomy was demonstrated as being a job resources factor influencing engagement of nurses (e.g., McLaney and Hurrell, 1988; Malliarou et al., 2009); lack of supervisor support was confirmed as factor affecting engagement of nurses negatively (e.g., Gray-Toft and Anderson, 1981; Hingley and Harris, 1986; Malliarou et al., 2009). Moreover, work engagement of nurses was investigated with its antecedents and consequences in Malesian context (Othman and Nasurdin, 2011) and the recent

study of Malliarou et al. (2009) examined the sources and effects of work-related stress in nursing.

In Turkey, nurses have the highest burnout levels compared to other staff and professionals in other human services (Pekriz, 2008; Keskin et al., 2011). In addition, it is indicated that when compared with other professions, nurses also showed high levels of exhaustion (Soljan, 2009; Othman and Nasurdin, 2011). As such, this problem has been our concern for establishing the current study within nursing context in Turkey. In the current study, using the Job Demands-Resources Model, the link between nurses' job demands, resources and work engagement is elaborated upon and insight is provided into previous literature research on the subject.

## **II. Review Of The Literature And Theoretical Background**

### *A. Definition of the Construct of Work Engagement*

Following the recent trends towards positive psychology approach (Seligman and Csikszentmihalyi, 2000; Smith, 2013), work engagement has emerged from burnout research as a "positive, fulfilling, work-related state of mind" (Schaufeli and Bakker, 2004, p. 295). The pioneering conceptualizations of engagement was presented by Kahn (1990), who defined the concept as "harnessing of organizations members' selves to their work roles: in engagement, people employ and express themselves physically, cognitively, emotionally and mentally during role performances" (p.694). In addition, Kahn (1990) conceptualized work engagement as a dynamic, dialectical relationship between the employee's personal energies (physical, cognitive, emotional, and mental) towards the work role and the freedom (or constraints) associated with the work role for the employee to enact such energies (Kahn, 1990). Later, Rothbard (2001) expanded the conceptualization of engagement and suggested a two-dimensional motivational construct encompassing attention and absorption.

Based on the views of Kahn (1990) and Rothbard (2001), engagement could be the conceptualized as a behavior, driving energy towards one's focus on a role, versus a particular mental state. Maslach and Leiter (1997) decribed engagement as the opposite of burnout, as individuals with low levels of burnout would experience high levels of engagement. Maslach and Leiter (1997) operationalized engagement by essentially renaming the three burnout dimensions; emotional exhaustion switched to high energy, depersonalization to strong involvement, and reduced sense of efficacy to sense of efficacy (Matamala, 2011, p.4). As further, a long with the background conceptualizations, Schaufeli, Salanova, Gonzalez-Roma and Bakker (2002) defined work engagement as a "positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (p.72). They further argued that the persistent state of work engagement is not directed specifically at any work place object, event, individual, or behavior (p.74). Consequently, an

engaged employee would demonstrate high levels of energy and connection with their work (Matamala, 2011).

The researchers most characterized work engagement construct by vigor, dedication, and absorption” (Schaufeli et al., 2002, p.74). “Vigor” refers to high levels of energy and mental resilience while working, the willingness to invest effort in one’s work, and persistence even in the face of difficulties. “Dedication” is characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge at work. Dedication is defined as a sense of enthusiasm, inspiration, and pride, as well as a strong involvement in work. “Absorption” consists of being fully concentrated, happy, and deeply engrossed in one’s work whereby time passes quickly, and one has difficulty detaching oneself from work. As such, when compared to burnout, vigor lies on the same “energy” continuum as would exhaustion, whereas dedication and cynicism lie on the same “identification” continuum. Thus, vigor and dedication are regarded as the core dimensions of work engagement (Schaufeli and Bakker, 2004). Absorption was added as a third dimension of work engagement on the basis of responses from in-depth interviews (Demerouti and Bakker, 2008).

When the dimensionality and measurement of work engagement are examined, it is observed that Maslach and Leiter (1997) and Schaufeli et al. (2002) had contributions to the conceptualization and operationalization of the construct. Initially, Maslach and Leiter (1997) stated that work engagement is characterised by energy, involvement and efficacy, which are considered the direct opposites of the three burnout dimensions, namely exhaustion, cynicism and lack of professional efficacy (the three dimensions of burnout according to the MBI-GS).

Based on the operationalization of Maslach and Leiter (1997), Schaufeli et al. (2002) developed the Utrecht Work Engagement Scale (UWES) to measure work engagement and found acceptable reliability for the instrument. Confirmatory factor analysis has demonstrated the factorial validity of the UWES (Schaufeli et al., 2002; Coetzer, 2004). Doğan’s (2002) study which was conducted in Turkey by using UWES to measure work engagement yielded the three dimensions as confirming Schaufeli et al.’s (2002) results. In a recent Turkish study (Ünal and Turgut, 2013) work engagement has been measured with vigor, dedication and absorption components consistent with the international study results. In our current study, because the majority of empirical research has focused on engagement as a whole, as opposed to drawing connections between the dimensions of work engagement (i.e., vigor, dedication, absorption) and specific work outcomes (Smith, 2013), we will operationalize work engagement as the aggregate of the three underlying dimensions which are vigor, dedication, and absorption.

*B. Work Engagement as a Positive Organizational Behavior Approach*

Luthans (2002) have indicated that there has been a need for a more relevant, proactive approach to organizational research, which termed as “Positive Organizational Behavior (POB)”. As implied by Seligman (2003), positive psychology is the scientific study of human strength and optimal functioning. More specifically, Luthans (2002, p.696) defined positive organizational behavior as “the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today’s workplace”. As such, positive organizational behaviors explain the positive behaviors which contribute the aims of the organization and getting positive organizational outputs (Kanten and Yeşiltaş, 2013). Viewed from this positive perspective, work engagement, in particular, is a concept relevant to employee well-being and work behaviour (Main, 2011). Work engagement is a positive experience in itself (Schaufeli et al., 2002) and it is related to good health and positive work affect, such as low levels of depression, distress and psychosomatic complaints (Demerouti, Bakker, Janssen and Schaufeli, 2001). Besides, it helps individuals derive positive benefits from stressful work (Britt, Adler and Bartone, 2001) and also it is positively related to job satisfaction and commitment (Demerouti et al., 2001b). In Turkey, İslamoğlu (2010) has studied positive organizational behaviour approaches in her book and mainly argued on the topic of work engagement. Accordingly, considering all these positive consequences, it is suggested that work engagement has positive outcomes for individual well-being and organizational functioning (Main, 2011).

With an organizational level examination, empirical research has demonstrated that work engagement is related to critical business-unit performance outcomes such as customer satisfaction and loyalty (Harter, Schmidt and Hayes, 2002). Thus, it is indicated that organizations which attract and cultivate highly engaged employees are expected to increase their overall productivity and profitability, as well as gain a significant competitive advantage within their industry (Erickson, 2005; Smith, 2013). In addition, work engagement was linked to higher levels of positive work-related outcomes, such as job satisfaction, organizational commitment, and productivity, as well as lower levels of negative work-related outcomes, such as absenteeism and turnover (Salanova, Llorens, Cifre, Martínez and Schaufeli, 2003). Several researchers (Harter et al., 2002; Saks, 2006; Schaufeli and Bakker, 2004; Sonnentag, 2003; Main, 2011) have suggested that engaged employees produce positive work outcomes as a function of their engagement level. Schaufeli and Bakker (2004) described the experience of being engaged as a rewarding and positive work-related experience that produced positive work outcomes (as previously stated by Kahn, 1990). Positive work experiences are related to overall employee wellbeing (Harter et al., 2003; Saks, 2006) and positive work affect (Sonnentag, 2003), both

of which have been shown to result in positive work outcomes such as increased productivity, satisfaction, and reduced turnover (Kahn, 1990; Saks, 2006). In addition, job engagement was associated with positive organizational/individual outcomes such as in-role/extra role behaviors (Schaufeli and Salanova, 2007), organizational commitment (Schaufeli and Bakker, 2004), job performance (Schaufeli et al., 2002).

Moreover, there are some indications that engagement is positively related to health and well-being, that is, to lower psychosomatic complaints (Demerouti, et al., 2001; Doğan, 2002) and levels of depression and distress (Bakker, Schaufeli, Leiter and Taris, 2008). In a Turkish study (Doğan, 2002), it was revealed that the work engagement perceptions had positive impacts on positive affect of the employees. Some of the behaviors demonstrated by engaged employees include a belief in the organization, a desire to work to make things better, understanding the business context, decreased staff turnover, increased productivity, a willingness to behave altruistically organizational commitment, and increased discretionary effort (Macey and Schneider, 2008; Main, 2011).

Furthermore, as suggested by Schaufeli and Bakker (2004) and Saks (2006), engaged employees are more likely to work harder through increased levels of discretionary effort and be less likely to leave their organization than those who are disengaged. Engaged employees have high levels of self-efficacy and energy, as well as being productive and generally more positive (Kahn, 1990; Luthans and Peterson, 2002). According to the relevant literature, it is seen that work engagement has positive effects on both individual and organizational outcomes and engaged employees can be seen as being beneficial to their organizations. After the examination of consequences of work engagement with the positive organizational behavior view, the following part of the current study will investigate the relationship between work engagement and job resources, job demands, and personal resources by expanding the motivational process of Job Demands-Resources (JD-R) Model.

### **III. Theoretical Background: Job Demands-Resources (Jd-R) Model**

Building on the work of Karasek (Fox, Dwyer and Ganster, 1993) and research on the Maslach Burnout Inventory (MBI), Maslach and Jackson (1986) proposed a descriptive heuristic framework, stating that the presence of particular demands (i.e. work overload and personal conflicts) and the absence of particular resources (i.e. control coping, social support, autonomy and decision involvement) would lead to the prevalence of burnout, resulting in other expected negative outcomes, such as physical illness, turnover and absenteeism. Based on this descriptive background, the Job Demands-Resources (JD-R) model is a theoretical framework that tries to integrate two fairly independent research traditions: “the stress research tradition and the motivation research tradition”

(Demerouti and Bakker, 2011, p.1). According to the JD–R model, job demands are initiators of a health impairment process and job resources are initiators of a motivational process. In addition, the model specifies how demands and resources interact, and predict important organizational outcomes (Demerouti and Bakker, 2011). Moreover, studies have shown that the JD–R model can predict the experience of burnout and of work engagement (e.g. Demerouti et al., 2001a; Schaufeli and Bakker, 2004; Atilla Bal, 2008; Turgut, 2011). Accordingly, to date, researchers and scholars have focused on job resources and job demands as antecedents of work engagement on the basis of the model of Bakker and Demerouti (2008). This model is presented with the below Figure 1.

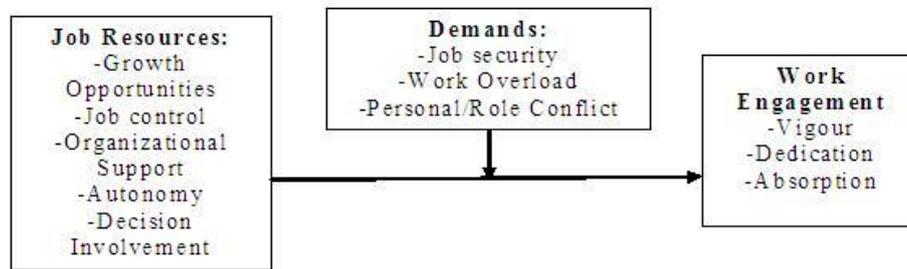


Figure 1: *Job Demands-Resources Model*

Source: Model adapted from Bakker and Demerouti (2008); Hakenen, Bakker and Schaufeli (2006) and Demerouti and Bakker (2011).

The main assumption of the Job Demands–Resources (JD–R) model (Bakker and Demerouti, 2007; Demerouti and Bakker, 2011) is that every occupation has its own specific risk factors associated with job-related stress. These factors can be classified in two general categories (i.e. job demands and job resources), thus constituting an overarching model that may be applied to various occupational settings, irrespective of the particular demands and resources involved (Demerouti and Bakker, 2011).

“Job demands” refer to those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physiological and/or psychological costs. Job demands represent characteristics of the job that potentially evoke strain, in cases where they exceed the employee’s adaptive capability (Bakker, Demerouti and Schaufeli, 2003). More specifically, job demands refer to those aspects of a job that require sustained physical and/or psychological effort and are therefore associated with certain physiological and/or psychological costs. Examples include high work pressure, an unfavourable physical environment and irregular working hours (Meijman and Mulder, 1998; Demerouti and Bakker, 2011). As

such, particularly, in the case of nursing staff, the demands focused on in this research include work overload, role ambiguity, and role conflict and job insecurity.

“Job resources” refer to those physical, psychological, social, or organizational aspects of the job that are either/or (a) lower job demands and related physiological and psychological costs; (b) play a role in accomplishing work goals; or (c) encourage personal growth, learning, and development (Bakker and Demerouti, 2007; Schaufeli and Bakker, 2004; Matamala, 2011). In terms of this definition, job characteristics, such as variety, independence, opportunities for learning and participation, opportunities to participate, role clarity, effective communication, advancement, remuneration and good relationships with supervisors and colleagues create psychological meaningfulness and safety for employees, which are needed to be engaged in one’s job (May, Gibson and Harter, 2004; Main, 2011). Previous research demonstrated that job resources were related to positive outcomes, including employee work engagement (Xanthopoulou, Bakker, Demerouti and Schaufeli, 2007).

#### *A. The Relationship between Work Engagement and Job Demands*

International literature and Turkish literature provide evidence that job demands have a negative impact on work engagement and on its sub dimensions of vigor, dedication, and absorption (e.g. Hakanen, Bakker and Schaufeli, 2006; Nicklaus, 2007; Rothmann, 2008; Atilla Bal, 2008; Vanam, 2009; Ardiç and Polatçı, 2009; Rothman, 2007; Main, 2011; Turgut, 2011; Gündüz, Çapri and Gökçakan, 2013). Maslach (1993) found that job demands such as work overload drain the employee’s energy and, in an attempt to cope with the resulting exhaustion, the employee withdraws mentally. When employees withdraw mentally, their work engagement levels will decrease (Maslach, 1993). Additionally, Schaufeli and Bakker (2004) stated that job demands lead to burnout, which in turn impacts on the work engagement of employees. According to Lee, Hourquet and MacDermid (2002) and Main (2011), reduced workload and opportunities to balance work and life lead to individuals working more effectively and creatively as a result of a rich, external life outside of work and personal fulfilment in multiple roles. Lee et al. (2002) reported that reduced-load work arrangements generally enhance employees’ well-being and lead to a decrease in stress, less fatigue and fewer health problems. Hakanen et al. (2006) have used the Job Demands–Resources Model as the basis of their study that proposed links among work-related well-being, work engagement, organizational commitment, job demands and job resources. The results of their study confirmed that burnout mediated the effect of high job demands on ill health, work engagement mediated the effects of job resources on organizational commitment, and burnout mediated the effects of lacking resources on poor engagement.

Moreover, Turgut (2011) has conducted a research study in Turkey to examine the relation of job demands/resources to work engagement and the findings reported that work overload and time flexibility had impact on work engagement.

*B. The Relationship between Work Engagement and Job Resources*

The literature has shown positive relationships between work engagement and a variety of job resources, such as social support from colleagues and supervisors, performance feedback, skill variety, autonomy, and learning opportunities (Halbesleben, 2010; Rothmann, 2007; Schaufeli and Salanova, 2007). According to researchers, job resources either stimulate employees' growth, learning, and development as an intrinsic motivational force, or are functional in achieving work goals, thus serving as extrinsic motivation (Bakker et al., 2008). Whether job resources serve to satisfy a basic need or assist in achieving work goals, both lead to positive organizational outcomes such that engagement is likely to take place (Schaufeli and Bakker, 2004; Schaufeli and Salanova, 2007; Matamala, 2011).

Common job resources that have been studied in work engagement literature involve social support (i.e., from supervisors, coworkers, friends, and family), performance feedback, rewards, autonomy supervisor coaching, and opportunities for professional development (Schaufeli and Bakker, 2004). Thereby, the motivational role of job resources has been supported by several studies that show a positive relationship between job resources and work engagement. The research study of Schaufeli and Bakker (2004) reported a positive relationship between engagement and three distinct job resources: performance feedback, social support, and supervisory coaching. Hakanen et al. (2006) have conducted a research with a sample of over 2000 Finnish teachers and the results showed a positive correlation between engagement and job control, information, supervisory support, innovative climate, and social climate. A study which was conducted with a sample of women managers in a Turkish bank has reported that engagement was positively predicted by job control, reward and recognition, and value fit (Koyuncu, Burkeand Fiksenbaum, 2006). Another study was performed among white-collar employees in Turkey and revealed similar results which demonstrated a positive relationship between job resources and work engagement (Atilla Bal, 2008). The positive relationship between job resources and work engagement was also confirmed with a research study in Turkey, reporting that supervisor support influenced work engagement positively (Turgut, 2011). In a recent study conducted in Turkey, person-job fit was also found to be a positive significant antecedent of work engagement (Ünal and Turgut, 2013). In addition, the relationship between job resources and engagement was confirmed through longitudinal research using both Finnish and Dutch working samples (Mauno, Kinnunenand Ruokolainen, 2007; Matamala, 2011). Furthermore, Hakanen, Perhoniemi and Toppinen-Tanner (2008) found that job resources are important antecedents of work engagement and Mauno,

Kinnunen and Ruokolainen (2007) found that job control was a strong predictor of the three dimensions of work engagement.

#### IV. Theoretical Framework And Hypotheses

From the above literature review, it is suggested that job demands and job resources affect work engagement of employees. In sum, previous literature research in the burnout and engagement constructs recognizes the importance of especially four such resources; job autonomy, supervisor support, performance feedback and rewards that deserve attention for the work-related well-being of most employees (Hackman and Oldham, 1980; Johnson and Hall, 1988; Lee and Ashforth, 1996). Thus, in our study, we have decided to particularly include work overload and role conflict as being job demand factors and supervisor support, autonomy and meaningfulness as being job resource factors as the possible job demands/resources antecedents of work engagement.

##### *A. Job Demand Factors: Work Overload, Role Ambiguity, Role Conflict, Job Insecurity*

In the previous literature studies, major job demands are mentioned as role ambiguity, work pressure, workload, job insecurity, and role conflict (e.g. Morter, 2011; Demerouti and Bakker, 2011; Turgut, 2011; Gündüz et al., 2013). In the current study, along with the previous studies, we focused on investigating these job demands factors.

“Work overload” is defined as the perception that available resources such as time and energy are inadequate to meet the work demands and expectations of work senders (Kahn, Wolfe, Quinn, Snoek and Rosenthal 1964; Brown, Jones and Leigh, 2005). Work overload describes a perception that one has too much to do (Leiter and Schaufeli 1996). This construct is given attention over other role stressors and job demands (e.g., role ambiguity, role conflict, emotional demands, and physical demands) (Chung-Yan, 2010; Razak, Yunus and Nasurdin, 2011). Work overload has been cited as a major strain on employees’ physical and mental health and on organizations’ overall profitability (Jones, Chonko, Rangarajan and Roberts 2007; Idris, 2011). It was also mentioned that the impact of work overload tends to be subsumed under job demands and role stressors (Chung-Yan, 2010). Therefore, we found essential to examine the effect of work overload on work engagement. The work overload literature indicates that the perception of high job demands that never seem to diminish, that include tight deadlines and that people have a hard time in keeping up with (Main, 2011). The previous literature studies offer evidences that work overload has impacts on several organization and employee related outcomes. It was demonstrated that work overload had negative impact on employee job performance (Tahir, Yusoff, Azam, Khan and Kaleem, 2012; Ashfaq, Mahmood and Ahmad, 2013). Work overload is found as one of the major work domain predictors of exhaustion and fatigue (Aryee et al., 2005; Razak, Yunus and Nasurdin, 2011). In addition, the results of a study which was conducted among

nurses have indicated significant negative correlation between work overload and job satisfaction and a significant positive correlation between work overload and intent to leave (Morter, 2011). Furthermore, it has been confirmed that work overload has influences on various counter-productive problems in the workplace, including worker dissatisfaction, emotional exhaustion (Knudsen, Ducharme and Roman, 2009), job burnout (Bakker et al., 2004).

In the literature, there are also implications about the relationship between work overload and work engagement. As explained in the model of Demerouti et al. (2001), as being a job demand factor, work overload is negatively related to work engagement. In their multi-sample study, Schaufeli and Bakker (2004) mentioned that work overload is closely related to psychological and physiological strains, including burnout which is the contrary of work engagement. Main (2011) has examined the relationship between job demands and work engagement and the results showed that work overload was a significant predictors of poor work engagement. A recent study conducted in Turkey has revealed that work overload had a significant moderating impact on the relationship between organizational trust and work engagement (Arabacı, 2012). In addition, Smith (2013) has examined the relationship between burnout and work engagement and found that work overload had negative impact on work engagement of employees.

“Role conflict” literature also indicates that the perception of role conflict might be a predictor of several employee outcomes including burnout, job stress, absenteeism, job performance, citizenship behaviors, and work engagement. A review of the previous literature on role conflict and ambiguity (Rizzo, House and Lirtzman, 1970) supported the Kahn et al.’s (1964) theory, and found both conflict and ambiguity to be clearly associated with low job satisfaction and dysfunctional behavior due to the stress and anxiety of role pressures (Keller, 1975). Kahn et al. (1964)’s theory of role dynamics saw stress resulting from conflicting or incompatible expectations and unclear or vague expectations. Expectations which are in conflict may result in role conflict for the individual, while unclear or vague expectations may cause role ambiguity. Then, Rizzo et al. (1970) developed a questionnaire to measure these role variables, and found that role conflict and ambiguity emerged as separate dimensions when a factor analysis was performed. Separate scales for conflict and ambiguity were then developed and validated, and correlations were obtained with other variables. Therefore, in this study, definitions from Rizzo et al. (1970) are used as the main source to come to the following descriptions of role conflict. Based on the conceptualizations of Kahn et al. (1964) and Rizzo et al. (1970), role conflict is defined as the simultaneous occurrence of two or more role pressures so that the compliance with one makes it more difficult to comply with the other. Role conflict and role ambiguity are the two specific occupational stressors that employees experience with regard to the multiple roles they assume within organizations (Bryant and Constantine, 2006). It is mentioned that employees

experiencing role conflict may come to believe that they cannot successfully perform the job and therefore, they may be forced to invest additional resources into their work role for fear of losing their job status (Jawahar, Stone and Kisamore, 2007). Since “role conflict” and “role ambiguity” pose problems of adjustment for the individuals, Kahn et al. (1964) found that employees who had high role conflict and role ambiguity also had lower levels of job satisfaction (Keller, 1975, p.57). In the study of Wilkerson and Bellini (2006), role conflict, role ambiguity, and job overload have been identified as organizational factors associated with burnout (conceptually the opposite of job satisfaction) in school counselors. Jawahar et al. (2007) and Turgut (2011) addressed that as a result of perceived role conflict, an additional investment of resources into the work role could lead to negative states including dissatisfaction and psychological strain.

Basen on this discussion, it is expected that work overload, role ambiguity and role conflict will have significant relationship with the employees’ work engagement. Thus, it is hypothesized that:

H1: There is a negative relationship between perceived work overload and work engagement of employees.

H2: There is a negative relationship between perceived role ambiguity and work engagement of employees.

H3: There is a negative relationship between perceived role conflict and work engagement of employees.

“Job Security/Insecurity”: Rothmann and Jordaan (2006, p.88) indicated that “job resources are those physical, psychological, social or organisational aspects of the job that may be functional in achieving work goals, reducing job demands, and stimulating personal growth and development”. Demerouti and Bakker (2011, p.2) have addressed that job resources may be located at the level of the organisation (e.g. salary, career opportunities, job security). Based on these statements, in this study, we seek to examine the relationship between perceived job security and work engagement of employees.

Firstly, Greenlagh and Rosenblatt (1984) examined job insecurity in a large conceptual framework and their theoretical model involved the definitions of job insecurity and showed the potential causes, effects and organisational consequences of the concept. According to Greenlagh and Rosenblatt’s (1984, p.438) definition, job insecurity is a “perceived powerlessness to maintain desired continuity in a threatened job situation”. Heaney, Israel and House (1994, p.1431) defined job insecurity as “an employee’s perception of a potential threat to continuity in his or her current job”. Moreover, as implied by Pearce (1998) perceived job security is a mind state in which employee views his/her job stability with the firm in near future. Greenhalgh and Rosenblatt (1984) defined job security as a subjective view that is based on the individual’s perceptions and interpretations of the work environment. The opposite form of job security is termed as job insecurity and it refers to the anticipation of a stressful event in

such a way that the nature and continued existence of an employee's job are perceived to be at risk (Chipunza and Samuel, 2012).

As further, many researchers have studied on personal, organizational and contextual factors as being the potential determinants of job insecurity (e.g., Rousseau and Tijoriwala, 1998; Blackmore and Kuntz, 2011; Chipunza and Samuel, 2012) and potential consequences such as job satisfaction, organizational commitment, intention to turnover, OCBs, job performance, work engagement, etc. (Silla, De Cuyper, Gracia, Peiró and De Witte, 2009). Generally, the literature findings show that work attitudes and behaviours are adversely influenced by job insecurity. Ruvio and Rosenblatt (1999) added that the job insecurity decreased the perceived organisational support and Blackmore and Kuntz (2011) confirmed that job insecurity affected work performance. As further, it is indicated that job insecurity is a chronic job stressor and has negative influence on employee well-being (Mauno, Leskinen and Kinnunen, 2001).

In particular, there are studies which have investigated the effects of job insecurity on employee work engagement. It was indicated that work engagement of the employee was affected by perceived job security as being a job resource factor (e.g., Smithson and Lewis, 2000; Main, 2011). Rothmann and Jordaan (2006) implied that job insecurity lead to disengagement of the employees while indicating that all the job resources (i.e. growth opportunities in the job, organisational support, advancement, social support and job security) were related to work engagement of employees positively. Van Schalkwyk et al. (2010) also implied that job insecurity was positively related to employee turnover intention and negatively related to work engagement. Moreover, Main (2011) have found that job insecurity has negative relationship with employees' work engagement and job insecurity yielded strong negative relationship with vigor and dedication dimensions of work engagement.

Based on the background literature, although limited research on the relationship between job insecurity and work engagement is available, it is suggested that negative job security perceptions could have negative relationship with employees' work engagement. Thereby, in this study we have constructed the model of job resources and work engagement by suggesting that perceived job insecurity and work engagement (vigor, absorption, and dedication) are negatively related. With that respect, it is hypothesized that:

H4: There is a negative relationship between perceived job insecurity and work engagement of employees.

#### *B. Job Resources Factors: Supervisor Support and Job Autonomy*

As we have mentioned in the previous part, job resources are important in their own right it is emphasized that job resources have motivational potential at the task level, including autonomy, feedback, and task significance (see Hackman and Oldham, 1980). Demerouti and Bakker (2011, p.2) have indicated that "job resources may be located at the macro, organisational level (e.g. salary or wages,

career opportunities), the interpersonal level (e.g. supervisor and coworker support, team climate), the specific job position (e.g. role clarity, participation in decision making), and at the level of the task (e.g. skill variety, task identity, task significance, autonomy, and performance feedback)". Therefore, in the current study, based on the literature evidences, we attempted to investigate the relations of "supervisor support" (interpersonal level), "job security" perception (organizational level), "autonomy" (task level), and "meaningfulness" (task level) with employees' work engagement.

"Supervisor Support": Organizational support theory (Hutchison, Sowa, Eisenberger and Huntington, 1986; Eisenberger, Stinglhamber, Vandenberghe, Sucharski and Rhoades, 2002) suggests that to meet socioemotional needs and to determine the organization's readiness to reward increased work effort, employees develop global beliefs concerning the extent to which the organization values their contributions and cares about their well-being (perceived organizational support, or POS) (Eisenberger et al., 2002, p.565). "Perceived supervisor support" (PSS) is defined as it is general view of employees that how much supervisor give importance to the employee's contribution, take care of employee's well-being, interest and benefits (Kottke and Sharafinski, 1988). Eisenberger et al. (2002) have emphasized that supervisor support can be defined with the global view point of employees about how much the organization give importance to the their contributions and how much consider their well-being. A number of studies confirmed that supervisor support is an antecedent of employee welfare, well-being, commitment, and positive attitudes towards work and organization (e.g. Thomas and Ganster 1995; Stamper and Johlke, 2003; Sluss, Klimchak and Holmes, 2008). All forms of support are supposed to be important and there are evidences suggesting that "supervisory support" is particularly important in terms of employee and organizational outcomes in occupational settings (Leather, Lawrence, Beale, Cox and Dickson, 1998; Atilla Bal, 2008).

It is also indicated that supervisors' appreciation and support may help the employees in coping with the job demands and performing better in the workplace (Bakker, Demerouti and Euwema, 2005). Deci and Ryan (1987) implied that supervisors who foster a supportive environment and have concern for employees' needs and feelings also can encourage them to solve work-related problems. Edmonson (1999) supported this argument and implied that these individuals are likely to feel safer to engage themselves more fully when they receive supervisor support in supportive environments. Moreover, May, Gilson and Harter (2004) found that individuals who had a sense of supportive relationships with coworkers and supervisors experienced a stronger sense of psychological safety. In addition, on the basis of the Job Demands-Resources Model, Bakker, Hakanen, Jari, Demerouti and Xanthopoulou (2007) predicted that job resources act as buffers and diminish the negative relationship between job demands and work engagement. Further, supervisor support is an important

job resource that helps employees to cope with demanding interactions with work environment (Bakker et al., 2007). As further, a recent study of Swanberg, McKechnie, Ojha and James (2011) revealed that the relationship between schedule control and work engagement was mediated by perceived supervisor support. As such, based on the previous literature evidences, it is expected that positive supervisor support perceptions will have positive relationship with employees' work engagement. Thus, in this study, with the suggestion of supervisor support as a job resource factor will be positively related to work engagement (vigor, absorption, dedication), we propose the following hypothesis:

H5: There is a positive relationship between perceived supervisor support and work engagement of employees.

“Job Autonomy”: As it has been indicated in the previous part of this study, according to the JD-R model, the development of work engagement follows along two processes which as demanding aspects of work (e.g., work overload, physical job demands, role conflict) and a lack of resources (e.g., autonomy, performance feedback) that may lead to low work engagement and high frustration and burnout (Rothmann and Jordaan, 2006). Therefore, in the current study, a long with this model, job autonomy is suggested to be a potential job resource factor influencing the work engagement of employees. Job autonomy is defined as “the degree to which the job provides substantial freedom, independence and discretion in scheduling the work and in determining the procedures to be used in carrying it out” (Hackman and Oldham, 1975, p.162). Autonomy has been identified as a crucial determinant of intrinsic motivation (e.g., Hackman and Oldham, 1975) and it affects employees' perceptions of their authority to initiate, perform, and complete the tasks at work (Xie and Johns 1995). The extant literature reveals that autonomy is an important element in all theoretical models concerning the relationship between individual task characteristics and work engagement. Job Characteristics Model of Hackman and Oldham (1975), the Demand-Control-Support (DCS) Model of Karasek (1985), and Warr's (1994) Vitamin Model predict positive relationships between job autonomy and employee outcomes of psychological well-being and work engagement. Supporting these Models, Richer and Vallerand (1995) mentioned that providing employees with autonomy enables them to make certain choices and decisions about their work. A number of researcher demonstrated that low job control caused high burnout and low work engagement of employees (e.g., De Jonge and Schaufeli, 1998; Saks, 2006; Mauno et al., 2007). In addition, it was implied that psychologically, when employees have certain kinds of work to do (e.g., the work has challenge, variety, and job autonomy) and when they work under certain kinds of managers (e.g., the managers make expectations clear, are fair, and supportive), they feel more engaged to their work (Macey and Schneider, 2008). Schaufeli and Bakker (2004) found that work engagement was strongly predicted by job autonomy and specifically, Coetzer and Rothmann (2007)

showed that job resources (organisational support) and growth opportunities (including variety, opportunities to learn and job autonomy) were positively related to work engagement. The studies of Hakanen et al. (2006), and Bakker and Demerouti (2008) have demonstrated that job autonomy as a job resource factor has impact on the work engagement levels of employees in general. It was also implied that as job autonomy increases, employees feel more personal responsibility on the job they do and are more willing to contribute to the outcomes of their work (Atilla Bal, 2008). On the basis of the above-mentioned statements and literature evidences, in this study, it is expected that job autonomy as a job resource will have a positive relationship with work engagement and thus, the following hypothesis emerged:

H6: There is a positive relationship between perceived job autonomy and work engagement of employees.

## **V. Research Methodology**

### *A. The Aim and Theoretical Research Model*

Based on the fact that there is still insufficient research on job demands, job resources and their relationship with work engagement in the Turkish context, the current study aimed to fill this gap throughout a structured research design in Turkey. It is also recognized that there are lack of empirical studies focusing on particular professions such as nursing. Therefore, it is found necessary to have an insight into the subjects' job demands, job resources and work engagement especially within the context of Turkish health organizations. Due to the previous literature findings and discussion, it is expected that work overload, role conflict, and job insecurity would be negatively related to work engagement and supervisor support and job autonomy would be positively related to work engagement of nurses. In sum, on the basis of Job Demands-Resources Model of Bakker and Demerouti (2008); Hakanen et al. (2006) and Demerouti and Bakker (2011), the purpose of this study is to explore the relations of job demand and job resources factors of supervisor support, job insecurity, and job autonomy to work engagement of nurses in Turkey. The proposed theoretical research model of the study can be presented in Figure 2.

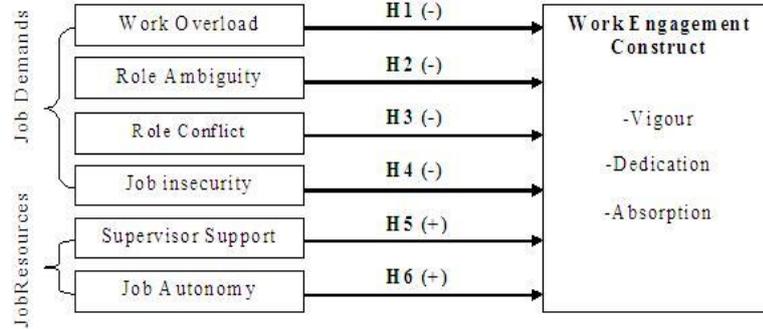


Figure 2: Proposed Theoretical Model for the Present Study

### B. The Research Design

The research design provides a framework for a high quality, academically appropriate and precise research which is based on primary data and it is essential for the collection, measurement, and analysis of data. For achieving an accurate research study, various decisions concerning research type, sampling, and data collection procedure should be made. Based on that rationality, a quantitative research design was used and a cross-sectional survey design was made use of to achieve the objectives of the study. As Burns and Grove (1993) indicated, the survey technique of data collection gathers information from the target population through questionnaires. Questionnaires are usable instruments which are quick and easy to administer and are convenient when gathering lots of data from large samples (Main, 2011). In this research study, a short demographic data sheet and six psychological scales were used for the collection of primary data. In addition, a cross-sectional design was used as the specific design, whereby the sample was identified from the population at any one time and place (Shaughnessy and Zechmeister, 1997).

### C. Research Participants

The sample consisted of 460 nurses from 18 different private hospitals in Istanbul and Izmir cities of Turkey. Participants were selected using the method of convenience sampling and was selected on the basis of the hospitals being willing to participate. A convenience sample was used involving the sample being drawn from part of the population, which was readily available and convenient. 18 hospitals in Istanbul and Izmir were contacted and questionnaires were distributed to the ones willing to participate. The sample was made up of approximately 720 nurses from 18 hospitals, however the total sample comprised of 460 nurses from 18 hospitals. Most of the participants were female (86.9%). 38% of the nurses were over the age of 30 and 35% of nurses had 0-10 years nursing experience and reported having work experience in the current hospital

of between 0-5 years (81%). The demographic composition of participants of this research study is presented in Table 1 below.

#### *D. Research Instruments*

In order to measure the main variables of the research model, sound measurement instruments should be chosen. Measurement instruments can either be created and developed by the researcher originally or adopted from prior researches. This research study utilizes both of the methods and uses existing measurement instruments in the literature, but adapts them to the circumstances of the research and translates them into Turkish, which will be described in more detail in this section. With that respect, in this study, the data collection method took the form of six scales, plus a demographic data sheet that was used for statistical purposes. The scales used included the Work Overload Scale, Role Conflict Scale, Supervisor Support Scale, Job Insecurity Scale, Job Autonomy Scale and the Utrecht Work Engagement scale (UWES). The biographical data sheet was developed to collect demographic information about the participants. Information collected included the gender, age, marital status, years of total nursing experience, years of total work experience in the current hospital, their clinic/department, working shift/hours at the hospital. Questions in the demographic information section were asked in categorical and interval forms.

The scales involving the independent and dependent variables are explained as follows:

##### *D.1. The Independent Variables*

“The Work Overload Scale (PWOS)”: As being one of the Job demands factors, work overload refers to those physical, psychological, or social aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort, high pressure and are therefore associated with certain physiological and/or psychological costs (Bakker et al., 2004). Based on this conceptualization, 4 items of Moore’s (2000) Perceived Work Overload Scale were designed to measure work overload perceptions of the participants. The scale was translated to Turkish by the researcher. The examples of item of this 4-item scale are “I feel that the number of requests, problems, or complaints I deal with is more than expected” and “I feel busy or rushed”. The items were rated on a four-point scale ranging from 1 (never) to 4 (always). The scale has a reported Cronbach’s alpha reliability of .88 in the present study.

“The Role Ambiguity and Role Conflict Scale”: Based on the conceptualization of Rizzo et al. (1970), role conflict refers to two or more role pressures at work so that the compliance with one makes it more difficult to comply with the other. The concepts of role ambiguity and conflict have been researched extensively since the early 1950’s. Rizzo et al. (1970) identified six items for “role ambiguity” and eight items which measure the four types of “role

conflict". In their research, each item had a Cronbach's alpha above .83, which indicates internal consistency of the scales. It can be mentioned that the alpha level is extremely low and therefore reliability can be doubted (Nicklaus, 2011). However, various academic researches have used the measurement instrument and later assessment of scale reliability confirmed the internal consistency of the measurement. The majority of researches both in Turkey and other countries have used the validated measurement instrument developed by Rizzo et al. (1970) (e.g., Topuz, 2006; Özkan, 2008; Nicklaus, 2007; Cervoni and Waack, 2011; Judeh, 2011) and this instrument is also used in the current study.

It has to be noted that all items were adapted to the specific research interest of this study. In order to ensure content validity of the adapted items, a group consisting of five nursing administrators of large size hospitals was contacted. They were asked to judge how well the instruments for role conflict meet the standards when applied in the context of nursing since nursing roles represent particular. They all judged each item to be essential, useful or not necessary. Furthermore, they checked for understandability, clarity, and ambiguity of the questions. After several refinements, all 14 items were adapted. In the survey, respondents were requested to respond to each role item, indicating the degree to which the condition existed for him/her, ranging from totally disagree to totally agree, measured on a 5 point numerical scale. This scale has a reported Cronbach's alpha reliability of .73 in the present study.

"Supervisor Support Scale": While all forms of support are believed to be important, there is evidence to suggest that supervisory support is particularly important in terms of detrimental strain in occupational settings (Leather et al., 1998; Winnubst and Schabracq, 1996; Eisenberger et al., 2002). For that rationality, the present study differentiated social support as a job resource into two categories -supervisor support and coworker support- and drew supervisor support within the research model for work engagement. Since the two forms of support may have unique contributions to work engagement, particularly considering the context and design of work in the in the nursing context. Based on the conceptualizations of Kottke and Sharafinski (1988), supervisor support refers to the support provided by the employee's supervisor or immediate manager. As it has been argued in the previous section of the present study, the appreciation and support from the supervisor may aid the employee in coping with the job demands, facilitate performance, and act as a stimulant for the engagement (see also, Atilla Bal, 2008; Swanberg, McKechnie, Ojha and James, 2011; Demerouti and Bakker, 2011). Based on that argument, in the present study supervisor support was assessed by averaging 10 items developed by May et al. (2004) such as "My supervisor helps me solve work-related problems". The items were measuring using a 5 point Likert Scale ranging from (1) strongly disagree to (5) strongly agree. This scale has a good reported Cronbach's alpha reliability ( $\alpha = .95$ ).

“The Job Insecurity Scale”: Based on the conceptualization of Greenhalgh and Rosenblatt (1984), De Witte (2000), and Mauno et al. (2001) and Van Wyk (2007), job insecurity refers to the overall concern about the future of an employee’s job and this perception comprises two components, named as the recognition of threats to job security and the concern about these threats which lead to various individual and organizational outcomes. As we have argued, the association between job insecurity and work engagement has been well established in previous studies (e.g., Mauno et al., 2001; Schaufeli and Bakker, 2004; Saks, 2006; Van Schalkwyk et al., 2010). On the basis of review of the previous empirical research, The Job Insecurity Inventory (JII) of De Witte (2000) was used to measure job insecurity in the present study. Although the JII consists of 11 items, a factor analysis, which was conducted for the objective of this study, showed that 10 items loaded significantly on two factors. These factors were labelled as “Job Insecurity of future” consisting of 7 items and “Job Insecurity of job environment” consisting of 3 items. This result is different from the factor analysis result of Van Schalkwyk et al. (2010, p.3), which showed that 9 items loaded significantly on only one factor. The items are rated on a Likert scale varying from 1 (strongly disagree) to 5 (strongly agree). Examples of items included: “I fear that I might get fired”; “I feel uncertain about the future of my job”; and “I am certain/sure of my job environment” (reverse coded). A Cronbach alpha coefficient of 0.92 was revealed by De Witte (2000), Reynders (2005) reported an alpha coefficient of 0.82, and recently Van Schalkwyk et al. (2010) obtained alpha coefficient of 0.88 for the scale. Thereby, these results confirm the reliability of the The Job Insecurity Scale used in the present study.

“The Job Autonomy Scale”: In the present study, job autonomy is examined as an important job resource in the research model for work engagement. Based on the conceptualization of job autonomy (e.g., Hackman and Oldham, 1980; Deci and Ryan, 1985; Kaldenberg and Becker, 1992), it is referred that autonomy is the perception that there is choice in deciding how and when to accomplish activities. As we have discussed in the previous section, autonomy enables the individual to become involved and attached to their work as taking ownership of accomplishing task requires more self direction and responsibility (Prouse, 2010). For this reason, autonomy has been well established as a key resource for work engagement (e.g., Rothmann and Jordaan, 2006; Atilla Bal, 2008; Xanthopoulou et al., 2009; Prouse, 2010; Main, 2011; Demerouti and Bakker, 2011). In order to measure individuals’ job autonomy perception, the previous empirical researches were reviewed and it was seen that job autonomy has been measured by a number of authors throughout well established instruments (for example Deci and Ryan, 1985; Spreitzer, 1995; Bakker et al., 2004; Bakker et al., 2010). In Turkey, Atilla Bal (2008) executed a research concerning job autonomy and engagement by utilizing a four-item scale from the Job Content Instrument developed by Karasek (1985). In Atilla Bal’s (2008)

study, the scale reported an alpha coefficient of .79. Moreover, Taştan (2011) has gone through a qualitative study for developing a Psychological Empowerment Perception (PEP) Scale. The study was conducted in nursing context through a qualitative research method and with the use of data triangulation (Taştan, 2011). Within the pilot survey's exploratory factor analysis results, the autonomy dimension was explained %12,038 of the variance and reported an alpha coefficient of .89. After a series of exploratory factor analyses and pilot studies, the results of the final study which was again performed in nursing context revealed that four items were loaded on job autonomy (self-determination) component of the scale and reported a good Cronbach's alpha reliability ( $\alpha = .88$ ) explaining the %15,557 of variance (see Taştan, 2011). Moreover, the four item autonomy scale of Taştan (2011) has been used in a research study which was conducted in Turkish Universities involving the Academic staff (Taştan and Serinkan, 2013). That study also reported an Cronbach's alpha coefficient of .89 for the autonomy scale (Taştan and Serinkan, 2013, p.110). For that reason, it is suggested that the results indicate that four items autonomy scale in this study is reliable. Examples of items included: "I have the freedom of determining the processes while I am executing my work" and "While I am executing my work, I give the decision of which method or process to use".

#### *D.2. The Dependent Variable*

The Utrecht Work Engagement Scale (UWES) was developed with the operational definition that work engagement is, "a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption" (Schaufeli et al., 2002:74). UWES is the most often used instrument to measure work engagement (e.g., Schaufeli et al., 2002; Rice, 2009; Main, 2011). It is made up of three subscales: vigour, dedication, and absorption. The UWES has been validated in several countries, including China (Yi-Wen and Yi-Qun, 2005), Finland (Hakanen, 2002), Japan (Shimazu et al., 2008), South Africa (Storm and Rothmann, 2003), Spain (Schaufeli et al., 2002), the Netherlands (Schaufeli and Bakker, 2003; Schaufeli et al., 2002), and Turkey (Atilla Bal, 2008; Turgut, 2011; Gündüz et al., 2013). Originally, the UWES included 24 items, but after psychometric evaluation, 7 unsound items were eliminated so that three scales, totalling 17 items, remained (Schaufeli et al., 2002).

"Vigor" is measured by six items that refer to high levels of energy and resilience, the willingness to invest effort, not being easily fatigued, and persistence in the face of difficulties (Schaufeli and Bakker, 2003). A vigor item is "At my job, I am very mentally resilient". "Dedication" is measured by five items that refer to deriving a sense of significance from one's work, feeling enthusiastic and proud about one's job, and feeling inspired. Dedication is evaluated with items such as "My job inspires me". "Absorption" is measured by six items that refer to being totally and happily immersed in one's work and having difficulties detaching oneself from it so that time passes quickly and one

forgets everything else that is around and it is measured using items such as “Time flies when I am working”. In this study, all items were scored on a five-point likert type scale ranging from 1 (never) to 5 (always). The original UWES-17 has encouraging psychometric features for its internal consistency values. For instance, internal consistencies (Cronbach’s alpha) typically range between .80 and .90 (e.g. Demerouti et al., 2001; Schaufeli and Bakker, 2004). Schaufeli et al. (2002), reported an internal consistency reliability of  $\alpha = .79$  for the vigor subscale,  $\alpha = .89$  for the dedication subscale and  $\alpha = .72$  for the absorption subscale. With a research study in Turkish context, Turgut (2011) has reported an internal consistency reliability (Cronbach’s alpha) of  $\alpha = .89$  for the Turkish version of the UWES Scale ( $\alpha = .81$  for vigor subscale,  $\alpha = .87$  for the dedication subscale, and  $\alpha = .86$  for the absorption subscale). Moreover, in a recent study in Turkey, Gündüz et al. (2013) have reported high internal consistency reliability (Cronbach’s alpha) for the subscales of UWES-17 ( $\alpha = .81$  for vigor subscale,  $\alpha = .82$  for the dedication subscale, and  $\alpha = .77$  for the absorption subscale).

### *D.3. Translation and Inter-Judge Controlling*

The items of the scales (except job autonomy scale) were all translated by the researcher from English to Turkish. After the translation and completion of the instruments for each of the variables in the study, the draft questionnaire was distributed to a committee of four people to assess the Turkish wording and statements. The committee included one PhD Lecturer, one Associate Professor, one nurse and one nursing administrator working in a private hospital. These people independently evaluated all the items and they have taken extra notes if they had to add some remarks. After the inter-judge reliability controlling process, the reports were reviewed by the researcher in order to gain a concrete result. A pilot study was performed among 60 individuals working in various sectors including education, banking, insurance, and health.

### *E. Research Procedure*

The nursing administrators and clinic managers were told about the focus of the study and were given a brief letter describing what was required of them and what the context of the questionnaire study was. Thus, participation was voluntary and participants were told that the forms would be kept by the researcher confidentially. The clinic managers and administrators were asked to inform the researcher about when to return for the collection of the fulfilled forms. The overall research period took totally 38 work days.

### *F. Data Analysis*

The data were analysed using Statistical Package for the Social Sciences (SPSS) Version 18. Descriptive statistics were used to analyse the data consisting of means, medians, standard deviations, skewness and kurtosis (Sipahi et al.,

2012). For each of the scales, Exploratory Factor Analysis was conducted to see if similar factors are obtained and to eliminate the items with low loadings and factors with eigenvalues of 1,0 or more were taken into consideration. Kaiser Meyer Olkin Measure of Sampling Adequacy scores and the significance of Bartlett Test were considered for the adequacy of the factor analysis.

Moreover, Cronbach alpha coefficients ( $\alpha$ ) were used to evaluate the internal consistency of the measuring instruments (Gregory, 2007; Serper, 2010; Sipahi et al., 2012). The alpha coefficient is a useful measure of reliability since it provides important information regarding the proportion of error variance contained in a scale, a test with high internal consistency will also tend to show stability of scores (Gregory, 2007; Main, 2011; Büyüköztürk, 2007). It has been indicated that when Likert-type scales were used, such as in this study that it is imperative to calculate the Cronbach alpha in order to determine the internal consistency reliability for each of the scales or sub-scales (Gregory, 2007; Sipahi et al., 2012). In addition, it has been addressed that at least a Cronbach alpha coefficient of about 0.70 as being an acceptable level of internal consistency for a scale (e.g., Nunnally and Bernstein, 1994; Sharma, 1996, Büyüköztürk, 2007). After the descriptive statistics and factor analysis, the Pearson product-momentum correlation coefficients were used to specify the relationship between the variables in the study. The level of statistical significance was set up as  $p \leq 0,05$ . Effect sizes were used in addition to statistical significance to determine the significance of the relationships since the effect sizes indicate whether obtained results are important (Cohen, 1988; Main, 2011). In the next step, stepwise regression analysis was conducted to determine whether the independent variables (work overload, role conflict, role ambiguity, job insecurity, job autonomy, supervisor support) held predictive value for work engagement as being the dependent variable. Büyüköztürk (2007) indicated that regression was used as an efficient tool to test whether two or more predictors (independent variables) will predict a criterion (dependent variable).

## **VI. Findings and Evaluation**

This section will include the presentation and interpretation of the research results.

### *A.Descriptive Statistics*

Descriptive statistics for all measures used in the study are shown in Table 1. According to Table 1, the scores of six independent variables (work overload, role conflict, role ambiguity, job insecurity, job autonomy, supervisor support) and the UWES are distributed normally. The Cronbach alpha coefficients of all measuring instruments are considered to be acceptable according to the guidelines of  $\alpha > 0.70$  (Nunnally and Bernstein, 1994; Sharma, 1996, Büyüköztürk, 2007).

Table 1: *Descriptive Statistics*

	Minimum	Maximum	Mean	Std.Deviation	Skewness	Kurtosis	Alpha
Work Overload	14.00	29.00	31.667	2.970	-0.144	-0.185	0.790
Role Conflict	3.00	12.00	5.445	2.726	0.705	-0.543	0.912
Role Ambiguity	13.00	28.00	24.725	2.784	-0.156	-0.188	0.776
Supervisor Support	4.00	10.00	8.0516	1.105	-1.121	0.977	0.822
Job Insecurity	4.00	13.00	5.986	2.872	0.795	-0.546	0.942
Job Autonomy	8.00	27.00	16.266	3.755	0.521	0.288	0.891
UWES Vigor	11.00	46.00	33.027	5.120	-1.166	1.527	0.852
UWES Dedication	11.00	44.00	25.218	4.282	-1.215	1.628	0.812
UWES Absorption	12.00	42.00	30.833	5.175	-0.922	0.917	0.784
UWES Total	42.00	122.00	83.622	12.888	-1.143	1.383	0.916

### B. Factor Analysis

The factor analysis was performed for all scales used in this study. Principal Component's analysis was primarily used followed by confirmatory Principal Axis Factoring analysis. In both analyses, orthogonal Varimax rotation was used, whilst only factors with eigenvalue greater than 1 were taken into consideration. Factor loadings (less than .50), equal factor loadings, and single item under one factor aspects were considered for extracting the items. The sampling adequacy was tested by Kaiser- Meyer Olkin (KMO) coefficient (>.60) and by Bartlett's test of sphericity to be meaningful. As a result, one item from work overload scale and one item from role ambiguity scale were excluded and none of the items were excluded from role conflict, job insecurity, job autonomy, and supervisor support scales and the remained items of the scales were assessed as the total construct. Following those assessments, factor analyses was performed for work engagement scale and consistent with previous studies (e.g., Schaufeli et al., 2002; Schaufeli and Bakker, 2003; Schaufeli et al., 2006; Rothmann, 2007; Turgut, 2011; Smith, 2013), three factors were found as a result of the analysis. The detailed factor analysis report of the Work Engagement Scale (UWES) is presented in Table 2.

Consistent with Schaufeli et al.'s (2002) methodology, factor analyses using a principle components solution with Varimax rotation was applied to the 17 items representing the components of work engagement to determine whether the three factors found by Schaufeli et al. (2002) would emerge again in this study which was conducted in Turkish context. Finally, three factors emerged while the resulting KMO yielded a value of .920 and the Bartlett's test of sphericity yielded a significant result with a  $p=.000$ . Thereby, it is seen that the data is appropriate for carrying out the factor analysis and that the factor analysis results are valid. The 15 items loaded under three factors which explained 70.105% of the total variance. These three factors were named as "vigor", "absorption", and "dedication" as consistent with the relevant literature and especially with the original work engagement scale developed by Schaufeli et al. (UWES, 2002).

Table 2: Factor and Reliability Analysis Results of the Work Engagement Scale

Item No	Work Engagement Factors	% Variance Explained	Cronbach $\alpha$
	Factor 1: Vigor	28,209	,94
1	At my work, I am very mentally resilient.	0,846	
4	At my work, I feel bursting with energy.	0,799	
3	At my work, I feel strong and vigorous.	0,722	
2	When I get up in the morning, I feel like going to work.	0,606	
5	I am proud of the work I do as a health carer.	0,553	
6	I find my work full of meaning and purpose.	0,546	
	Factor 2: Absorption	24,206	,92
13	Time flies when I am working.	0,801	
15	I feel happy when I am working intensely.	0,788	
16	I am immersed in my work.	0,733	
17	I get carried away when I am working.	0,656	
7	It is difficult to detach myself from nursing tasks.	0,583	
	Factor 3: Dedication	22,550	,89
8	My job inspires me.	0,749	
10	I am enthusiastic about my job.	0,673	
11	I am proud of the work that I do.	0,605	
12	I can continue working for very long periods of time on these tasks.	0,542	
	KMO=0,9112 Chi-Square Bartlett's Test= 1514,524 P=0,000	80,021	,91

### C. Pearson Moment Correlation

To determine the relationship between independent variables -job resources- and work engagement, the Pearson-moment correlation coefficients were performed. The results are provided in Table 3.

Table 3: Pearson Correlation Coefficients

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Work Overload										
Role Conflict	0.288**									
Role Ambiguity	0.272**	-0.141								
Supervisor Support	-0.156	-.288**	-0.545***							
Job Insecurity	0.149	0.134	0.575***	0.405**						
Job Autonomy	-0.122	-0.106	-0.477**	0.494***	-0.185					
UWES	-0.183*	-0.195	-0.466**	0.578***	-	0.418**				
Vigor						0.404**				
UWES	-0.115	-0.205*	-0.485**	0.684***	-	0.377**	0.844***			
Dedication						0.395**				
UWES	0.108	-0.104	-0.292**	0.466**	-0.201*	0.282**	0.622***	0.679***		
Absorption										
UWES	-0.102	-0.139	-0.467**	0.612***	-	0.391**	0.918***	0.973***	0.885***	
Total						0.339**				

\* $p < 0.05$  +  $r > 0.30$  - Practically significant (medium effect)

\*\* $p < 0.01$  ++  $r > 0.50$  - Practically significant (large effect)

The above Table 3 indicates that work overload displayed a statistically significant relationship ( $p < 0.01$ ) with job insecurity, a significantly negative relationship with vigor and dedication ( $p < 0.05$ ), and statistically negative relationship with UWES total. Thus, Hypothesis 1 which stated that “there is a negative relationship between perceived work overload and work engagement of employees” is supported. Moreover, role ambiguity indicates a practically (medium effect) and statistically significant relationship with job autonomy ( $p < 0.01$ ), vigor ( $p < 0.01$ ), dedication ( $p < 0.01$ ), and UWES total ( $p < 0.01$ ). This result confirmed the Hypothesis 2 which proposed that “there is a negative relationship between perceived role ambiguity and work engagement of employees”. In addition, role ambiguity shows statistically significant positive relationship with job insecurity. Furthermore, role ambiguity indicates statistically and practically significant (large effect) relationship with supervisor support and job insecurity ( $p < 0.01$ ). Role conflict also shows statistically significant positive relationship with job insecurity and work overload but statistically significant negative relationships with vigor, dedication, and absorption ( $p < 0.01$ ). The further inspection of Table 3 indicates that vigor displayed a statistically significant ( $p < 0.01$ ) as well as a practically significant relationship (large effect) with dedication, absorption and UWES total. Dedication showed a statistically significant relationship with absorption ( $p < 0.01$ ) and UWES total with practical significance (large effect) while absorption revealed a statistically significant relationship ( $p < 0.01$ ) as well as practically significant relationship (large effect) with UWES total. Therefore, Hypothesis 3 which stated that “there is a negative relationship between perceived role conflict and work engagement of employees” is accepted. It is also revealed that job insecurity has negative statistically significant relationships with vigor, dedication and absorption ( $p < 0.05$ ). It is seen that job insecurity has significant

negative moderate relationship with UWES total ( $r=-0.339$ ). This result supported Hypothesis 4 which stated that “there is a negative relationship between perceived job insecurity and work engagement of employees”. Further, the inspection of Table 3 also indicated that supervisor support, yielded statistically and practically significant (large effect) relationships with vigor ( $p < 0.01$ ), dedication ( $p < 0.01$ ), and UWES total. Further, Table 3 indicates that supervisor support has statistically and practically (medium effect) significant relationships with job autonomy and absorption. Supervisor support also shows a significant negative correlation with work overload. Work overload has a significant positive correlation with role conflict and role ambiguity ( $p < 0.01$ ). It is confirmed that the Hypothesis 5 which proposed that “there is a positive relationship between perceived supervisor support and work engagement of employees” is accepted. Job autonomy displays statistically significant and practically significant (medium effect) relationships with supervisor support and vigor, dedication and UWES total ( $p < 0.01$ ). This variable also has significant and positive relationships supervisor support, dedication, absorption, and UWES total ( $p < 0.01$ ). Hypothesis 6 stating that “there is a positive relationship between perceived job autonomy and work engagement of employees” is supported.

#### *D. Regression Analysis*

Stepwise regression analysis was conducted in order to determine whether work overload, role conflict, role ambiguity, supervisor support, job insecurity, and job autonomy could predict work engagement (UWES total). The independent variables were entered into the regression analysis in two steps. In the first step, the UWES total, Vigour, Dedication and Absorption (as measured by the UWES) were entered as dependent variables and job demands (work overload, role conflict, role ambiguity, job insecurity) were entered as independent variables. Each of the job demands have significant relationships with the UWES total, or its dimensions (Table 4). The p values therefore indicate that job demands hold predictive value for work engagement ( $F = 21.76$ ;  $R^2 = 0.44$ ;  $P = 0.000$ ). In the second step, job resources (supervisor support, job autonomy) were entered as independent variables. Job resources had predictive value for work engagement. Specifically, there are statistically significant relationships between both job resources and the UWES total ( $F = 28.64$ ;  $R^2 = 0.42$ ;  $P = 0.000$ ), as well as with the dimensions of work engagement, namely vigor ( $P = 0.000$ ), dedication ( $P = 0.000$ ), and absorption ( $P = 0.000$ ) (Table 4). It is evident that job resources are good predictors for vigor, dedication, and absorption and work engagement.

Table 4: Stepwise Regression Analysis

Variable	UWES Total					Vigour					Dedication					Absorption						
	F	B	SE	R <sup>2</sup> Adj. R <sup>2</sup>	P V I F	F	B	SE	R <sup>2</sup> Adj. R <sup>2</sup>	P V I F	F	B	SE	R <sup>2</sup> Adj. R <sup>2</sup>	P V I F	F	B	SE	R <sup>2</sup> Adj. R <sup>2</sup>	P V I F		
<b>Step 1</b>																						
<b>JOB DEMANDS</b>																						
Work Overload (WO)	-0.44	0.36			1.000		-0.14	0.16					-0.21	0.14					-0.11	0.152		
Role Conflict (RC)	-0.25	0.35			1.034		-0.27	0.13					-0.10	0.12					0.12	0.145		
Role Ambiguity (RA)	-0.28	0.31			1.034		-0.24	0.12					-0.18	0.15					-0.14	0.139		
Job Insecurity (JIS)	-0.32	0.33			1.032		-0.29	0.13					-0.22	0.17					-0.16	0.149		
WO+RC+RA+JIS	21.76			0.44 0.41	0.000	2.73		0.04 0.02		0.09	2.38		0.04 0.02	0.000	0.36				0.009 0.009		0.000	
<b>Step 2</b>																						
<b>JOB RESOURCES</b>																						
Supervisor Support (SS)	0.31	0.23			1.035		0.14	0.8			1.032		0.08	0.08					0.09	0.088		
Job Autonomy (JA)	0.44	0.28			1.041		0.27	0.9			1.038		0.07	0.06					0.06	0.121		
SS+JA	28.64			0.43* 0.39	0.000*	21.53		0.39* 0.36	0.000*	31.86		0.43* 0.41	0.000	9.55					0.192* 0.188		0.000*	

\*p > 0.05

For a concluding result, Figure 2 presents the final research model of work engagement construct after regression analysis.

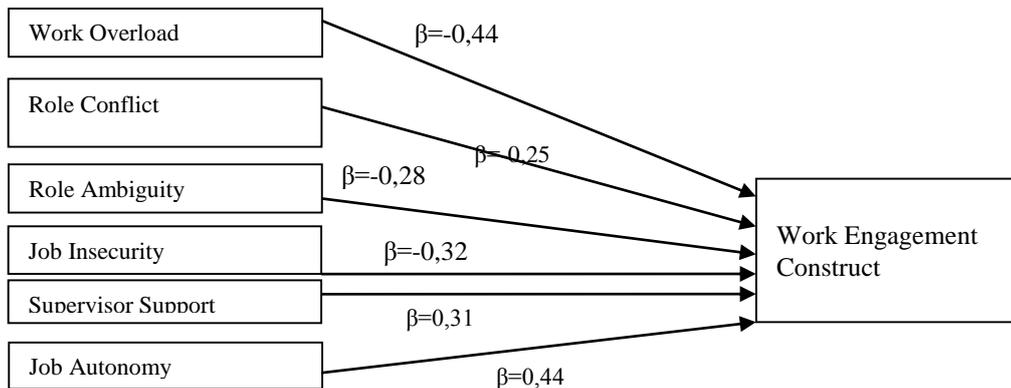


Figure 2: The Final Research Model of Work Engagement Construct after Regression Analysis

## **VII. Conclusion and Discussion**

The results of the study indicate a high internal consistency for all of the instruments used in this study. Firstly descriptive statistics were analysed and it was found that the scores of six independent variables (work overload, role conflict, role ambiguity, job insecurity, job autonomy, supervisor support) and the UWES are distributed normally. The Cronbach alpha coefficients of all measuring instruments are acceptable according to the guidelines of  $\alpha \geq 0.70$  (Nunnally and Bernstein, 1994; Büyüköztürk, 2007). Findings related to Cronbach's alpha for the UWES total was 0,916 and for independent variables were again higher than 0.70 (work overload:  $\alpha=0.790$ , role conflict:  $\alpha=0.912$ , role ambiguity:  $\alpha=0.776$ , job insecurity:  $\alpha=0.942$ , job autonomy:  $\alpha=0.891$ , supervisor support:  $\alpha=0.822$ ). These results are consistent with those of Rothmann, Mostert and Strydom's (2006), as well as Coetzer and Rothmann's (2007) and therefore indicate that there is a high level of internal consistency for the Job Demands and Job Resources Factors and the UWES.

Secondly, factor analyses was performed for work engagement scale and three factors were found as a result of the analysis which were consistent with the findings of both Turkish and foreign research studies (Schaufeli and Bakker, 2003; Schaufeli, Tans and Bakker 2006; Rothmann, 2007; Turgut, 2011; Smith, 2013). The results also showed consistency with Schaufeli et al.'s (2002) implications related to the loading of the items on three factors named as "vigor", "absorption", and "dedication". Thus, we have named the components consistent with the literature and Schaufeli et al. (UWES, 2002).

As further, Pearson Correlation Analysis were conducted to see the correlations among each of the variables in the research model. According to the correlation analysis, all variables has significant relationship with each other. The reports related with the correlation between independent and dependent variables have showed that work overload had a significant negative relationship with vigor and dedication and job insecurity had significant negative relationships with vigor, dedication, and absorption. It was determined that supervisor support had significant large effect relationships with vigor, dedication, and UWES total. Further, job autonomy displayed medium effect relationships with vigour, dedication and UWES total. Role ambiguity showed a medium effect and statistically significant relationship with vigor, dedication, and UWES total. Moreover, role ambiguity showed statistically significant positive relationship with job insecurity and work overload but statistically significant negative relationships with vigor, dedication, and absorption. Based on these findings, our primary suggestions regarding the negative relationship between perceived job demands as measured with work overload, role ambiguity, role conflict and job insecurity and work engagement of employees were supported. In addition, the findings supported our assumptions suggesting positive relationships between perceived job resources as measured with supervisor support and job autonomy and work engagement of employees.

As further, regression analysis were performed in order to see how the factors of job demands and resources effect and explain work engagement dimensions. It was revealed that each of the job demands (role ambiguity, role conflict, work overload, job insecurity) and job resources (supervisor support, job autonomy) had significant effects on dimensions of work engagement. Thus, it was seen that job demands and job resources hold predictive value for work engagement. This finding is supported by Saks' (2006) research, which revealed that employees' job engagement was positively related to the organizational and supervisor support they received. In addition, Leiter and Maslach (1988) and Schnorpfel, Noll, Wirtz, Schulze, Ehlert, Frey, and Fischer (2002) confirmed that supervisor support was associated with higher work engagement. The results of our study indicated that there is a statistically and practically significant (large effect) relationship between supervisor support and vigor, dedication, and UWES total. Being consistent with the literature findings, this finding of our study may indicate that the nurses who receive supervisor support in the workplace have higher levels of work engagement and in the organizations, -which is a health care setting in this study- supervisor support plays a motivational role by fostering the employees' intrinsic motivation, devotion and engagement in their jobs. Therefore, we suggest that supervisor support functions as a job resource and an increase in this resource may increase the nurses' overall work engagement level. A work environment that offers supervisor support will foster the willingness of the nurses to dedicate their efforts and abilities to their tasks and personal development as well.

Moreover, job autonomy displayed a positive and high significant correlation with vigour, dedication, absorption and UWES total. According to this result, we suggest that the more participation, impact and self-determination possibilities nurses feel they have at work, the more engaged they feel. This result is consistent with Hakanen et al.'s (2006) finding, which indicated that job control, supervisory support, innovative climate and social climate, as being specific job resources are positively related to work engagement. Terry and Jimmieson (1999) and Main (2011) have also confirmed that job autonomy as a job resource factor impacts employee work engagement positively. Thus, we suggest that job autonomy has a positive relationship with the work engagement of nurses and we indicate that they have good levels of autonomy in their job by considering the reported mean values of this variable. Further, we suppose that job autonomy may function as a mechanism which decreases or potentially avoids the negative effects of increased job demands (work overload, role conflict, role ambiguity, job insecurity, etc.) while enabling the individuals to adjust demands to their current potentials and situations. This finding implies that there seems to be a good level of communication and participation within the hospitals in this research survey.

On the other hand, job insecurity had a moderate negative relationship with total work engagement of the respondents as it may mean that nurses find it difficult to be dedicated to their work if they feel insecure at their works. This result is consistent with Van den Berg, Manias and Burger's (2008) findings which demonstrated that high demands or stressors stemming from job insecurity influenced the levels of vigour and dedication of the workers negatively. One a similar finding, Schaufeli and Bakker (2004) have put forwarded that the negative effects of high job demands may be reduced by job resources, such as providing feedback, social support and supervisor guidance. In addition, our results showed a significant relationship between work overload and job insecurity which suggests that when the nurses feel more work overload, they feel more insecure about their jobs. From this result, it may be suggested that it would be meaningful to investigate the antecedents of work overload and the potential relationship between occurring of work overload and job insecurity in future studies.

Furthermore, the results of the stepwise regression analysis showed findings related to the predictive values of each of the independents variables in explaining total work engagement of the employees. The first step displayed that each of the job demands had significant relationships with the UWES total, or its dimensions. Therefore, it is seen that job demands as measured with work overload, role ambiguity, role conflict, and job insecurity hold predictive value for work engagement. Secondly, the next step indicated that job resources (supervisor support, job autonomy) had predictive value for total work engagement. In particular, job resources significantly predicted each of the dimensions of work engagement, namely vigour, dedication, and absorption. It is recognized that in Main's (2011) study, namely job insecurity and work overload did not show predictive value for work engagement or any of its three dimensions. Besides, several studies have provided findings that job demands were related to burnout with the studies conducted across different sectors and countries (Bakker et al., 2003; Schaufeli and Bakker, 2004; Bakker et al., 2005; Bakker and Demerouti, 2007; Xanthopoulou et al., 2007; Hakanen et al., 2008). Even so, the findings of our study are consistent with many studies that showed empirical evidences supporting the idea that job demands and resources are responsible predictors of work engagement (Bakker and Demerouti, 2007; Rothmann, 2007; Turgut, 2011; Ünal and Turgut, 2013). Since this is the case, it can be implicated that job demands may predict work engagement and therefore our results confirm previous findings related to the impact of job demands on work engagement. At this point, we can explain our findings in accordance with the implications regarding that job demands are mostly related to strain and job resources are mostly related to motivation and positive situations. A possible explanation for this may be that the literature does not specifically focus on the fact that job demands do not predict work engagement but that it rather predicts burnout. As such, the literature mostly regards the predictive value for burnout rather than disengagement construct. However, due to different results concerning the

predictive values of job demand and resources for work engagement, we suggest that further research studies should be designed for investigating the relevant constructs.

As a concluding remark, in this study, we hypothesized that a relationship existed between job demands/job resources as measured with particular factors and work engagement. While the hypotheses of our study were supported by findings, these results are particularly meaningful within the health care and nursing environment, and specifically in Turkey, where the nursing contexts and hospitals constantly precede feelings of work overload, role conflicts, and insecurity at work. Separately, it has been recognized that the health care environments also seek ways to motivate nurses, to decrease potential stressors and to improve the quality of health care system in Turkey. Therefore, the results of this study may show a distinct connection between nurses' levels of job demands and job resources and their levels of vigour, dedication and absorption, as well as total work engagement. Consequently, the outcome of this study may lead to the answer to the question of whether job demands and resources -with the particular factors selected in this study- can be viewed as antecedents of work engagement. From the above evaluation of the results and discussion of this study, it is concluded that job demands and job resources are important antecedents of work engagement.

Within the context of this study, as part of the limitations, we identified that the questionnaire survey was conducted in a small area, namely the private hospitals in Istanbul-Turkey, and as a result, actually the study population used was small. Therefore, this situation makes it difficult to generalise the findings beyond the population such as to different sectors, professions, cultures, etc. Additionally, this study was designed as a cross-sectional survey, thus, it is found inadequate for making causal interpretations related to the variables of the study. For that reason, longitudinal studies are recommended in future studies in order to provide implications in terms of cause and effect relations between the variables. Further, only self-report method was utilized in this study and this could cause objectivity problem and accuracy for the responds. In future studies, multiple-source method can be used in order to obtain more accurate results. The sample consisted of 86.9% female, which may indicate that the results of the study pertain mostly to female employess and may not reveal the same results in a area for instance, where the sample composition would be different and dominated by males. The hospitals included in the sample are all operated within central Istanbul city and this may lead to a limitation about the location, i.e. the hospitals are not representative of all the hospitals in and around Istanbul or Turkey. Therefore, for future studies, it is recommended to overcome this problem by expanding the sample and the location of the entities.

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