

# The Relationships among Job Demands, Work Engagement, and Turnover Intentions in the Multiple Groups of Different Levels of Perceived Organizational Supports

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**Abstract** The purpose of this article was to investigate the relationships among job demands, work engagement, and turnover intention in the multiple groups of different levels of perceived organizational support. Data were collected from 890 professional nurses working in the private hospital industry of medical tourism in Thailand. The statistical methods employed were confirmatory factor analysis, multiple groups analysis, and structural equation modeling. The results revealed that there was a significant, work engagement had mediating effects on the relationship between job demand and turnover intention. Meanwhile, work engagement mediated the relationship between perceived organizational supports and turnover intentions. The second objective was to examine the moderating effects of the multiple groups of perceived organizational support levels on the relationship between job demands and work engagement. The results showed that multiple groups of different levels of perceived organizational support had no moderating influence. Therefore, it could be concluded from this study that perceived organizational support had an indirect influence on turnover intention through work engagement but had no moderating effects.

**Keywords** Job Demands, Work Engagement, Perceived Organizational Support, Turnover Intentions

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## 1. Introduction

The Thai private hospitals of medical tourism industry have high competition for service and struggled with this problem due to high professional nurse's shortage and turnover intentions. The situation of nursing shortage is caused by several factors including professional nurse's perception of the effects of job stress continuing to increase.

The importance of new era employees, acknowledgment of the technology advancement, globalization of work, and demographic trends constantly changing work roles and expectation while increasing work demands could lead to work overload, job dissatisfaction, and job stress [9](Beehr& Glazer, 2005). Some private hospitals also suffer from shortages of personnel as many of their nurses go for continuing education, resign as a result of dissatisfaction with the welfare provided or with the administration, or change to other kinds of jobs. Hospital administrators have tried to solve the problem by arranging for overtime work, hiring part-time nurses, having other hospital personnel to assist in the work, or increasing payments [68](Srisuphan, Senaratana, Kunaviktikul, Tonmukayakul, Charoenyuth, & Sirkianokwilai, 1998). Thus, managers are exploring various incentive strategies to improve retention of their workforce and support growth aspirations. This study was conducted to investigate the factors that increase work engagement and decrease turnover intention. This study was expected to have contributions to the literature about the relationships among job demands, work engagement, and turnover intentions in the multiple groups of different levels of perceived organizational supports as well as implications of strategies for managers and academicians to acknowledge the importance of employee retentions. First of all, the findings indicated job demands, which may play a job dissatisfaction role, fosters employees to be effective at engagement creating level of turnover intention or causing employees to depart from the organization. Second, the study could provide better understanding of job demands, work engagement, and turnover intentions, which were insightfully considered as the potential influences of various aspects of the multiple groups of different perceived organizational support levels moderated between job demands and work engagement which is crucial for

practices, studies, and gap of research. Huselid(1995)[32] and Bailey, Berg, and Sandy (2001)[4] supported that high performance work practices were expected for good employee retention with the organization. Finally, the study suggested new conceptual advancement in the area of the multiple groups of different levels of perceived organizational support to retention of good employees and the concepts developed which focus on how to make employees to reduce turnover intention and how to improve employee engagement.

## 2. Literature Review

### Work engagement

Engagement refers to involvement, commitment passion, enthusiasm, absorption, focused effort, and energy. In contrast, based on business and academic perspectives, no agreement exists among particular conceptualization of work engagement [7](Bakker & Lieter, 2010). Work engagement has received increased attention from both individuals (i.e. practitioners and academicians) and the organizations (i.e., financial industry, medical institutions, mine industry, service industry, and academic institutions). In addition, engagement has been a rather popular term, first in business and consultancy, and recently in academics. According to Buckingham and Coffman (1999)[12], the point of origin of the term “employee engagement” is not entirely clear, but most likely it was first used in the 1990’s by the Gallup Organization. Considering engagement in business, it exhibits that all major human resources consulting organizations are in the business to improve the level of work engagement, and they have found evidence that work engagement increases profitability through higher productivity, sales, customer satisfaction, and employee retention. Furthermore, the business management consultants (i.e., Development Dimensions International (DDI), Hewitt, Towers Perrin, and Mercer) had a brief explanation of engagement. Development Dimensions International (DDI) stated that “Engagement has three dimensions: (1) cognitive-belief in and support for the goals and values of the organization; (2) affective-sense of belonging, pride and attachment to the organization; (3) behavioral-willingness to go the extra mile intention to stay with the organization.” Besides, Hewitt’s implication is that “Engaged employees consistently demonstrate three general behaviors. They: (1) Say- consistently speak positively about the organization to co-workers, potential employees, and customers; (2) Stay- have an intense desire to be a member of the organization despite opportunities to work elsewhere; (3) Strive- exert extra time, effort, and initiative to contribute to business success.” Meanwhile, Towers Perrin’s connotation stated that employee engagement is considered as an emotional state that reflects employees’ “personal satisfaction and a sense of inspiration and affirmation they get from work and being a part of the organization,” whereas Mercer’s implication is that

“Employees engagement, also called commitment or motivation, refers to a psychological state where employees feel a vested interest in the company’s success and perform to a high standard that may exceed the stated requirements of the job.”[7](Bakker & Lieter, 2010). Moreover, Harter, Schmidt, and Hayes (2002)[28] found that the Gallup method had a slightly different conceptualization, which, instead of the organization, refers to the employee’s work. It is stated that the term employee engagement refers to an individual’s involvement and satisfaction with as well as enthusiasm for work. Regarding engagement in academic field, the first scholar who conceptualized engagement at work was Kahn (1990)[36] by describing it as the “harnessing of organization member’s selves to their work role: in engagement, people employ and express themselves physically, cognitively, emotionally, and mentally during role performance.” In other words, engaged employees put a lot of effort into their work because they identify with it. Researchers like Bakker and Leiter(2010)[7] pointed out academic conceptualization by defining engagement in its own right agree that it entails an energetic behavior (vigor), an emotional (dedication), and a cognitive (absorption) component. Saks (2006)[60] found another conceptualization of engagement that it is the role of performance of an employee’s engagement (i.e., behavior, cognitive, and emotional components). In addition, Saks pointed out that employee engagement is similar to other concepts such as organizational commitment (i.e., intention turnover, job satisfaction, and organizational citizenship behavior). Meanwhile, organizational engagement was characterized by an individual’s participation in the organization and perception of well being to be a part of the organization. The positive work experience and work engagement are similarly described in the motivational theories. Another declares that “engaged employees have a sense of energetic and effective connection with their work activities, and they see themselves as being able to deal well with the demands of their job” [66](Schaufeli, Taris, & Van Rhenen, 2008). It is also suggested that employee engagement refers to the individual’s involvement and satisfaction with as well as enthusiasm for work [28](Harter, Schmidt, & Hayes, 2002). An analysis was conducted to define the predictability of engagement on the organization’s outcomes (i.e. turnover intentions). Work engagement has been widely linked to the organizational environment. Intense relationships between engaged employees and their positive effects have been identified [28](Harter, Schmidt, & Hayes, 2002). Benchmarks of the research have focused on the models of the antecedents and the consequences of engagement. Antecedents of work engagement occur when an employee experiences the suitable blend of workload, control, reward, sense of community fairness, and value congruence [47](Maslach, 1998). Possible advantageous consequences of engagement for an organization include outcomes such as increased profit and productivity, increased customer satisfaction, decreased turnover, and a sense of well-being with a higher

job safety score [28](Harter, Schmidt, & Hayes, 2002). The consequences are organizational outcomes ranging from improving employee performance, intention turnover, and personal well-being positively impacting the organization's stability (i.e., profitability, customer satisfaction and loyalty, and low turnover). Moreover, researchers such as Schaufeli and Bakker(2004a)[63], Hallberg and Schaufeli(2006)[27], and Sak(2006)[60] supported the relationship between engagement and turnover intentions (i.e., work engagement negatively predicting an intention to leave and the relationship between job resources and turnover intentions being mediated by engagement). However, there is a relationship between engagement and turnover where employees with low engagement ("vocal in their critiques of the organization") are considered as a "threat" to the organization and have a high risk of turnover [25](Gostick & Elton, 2007). Organizations need to release the talents and motivation of their employees if they are to achieve best performance [7, 13, 42](Burke & Cooper, 2007; Leiter & Bakker, 2010; Katzenbach, 2000).

### Perceived Organizational Support

There are theories on how employee's perceptions of organizational supports are related to job demands and work engagement in the context of the different levels of perceived organizational support and turnover intention. Initially, the affective commitment is the strongest positive relationship with desirable outcomes, as long as the organization shows its commitment in turn to employees by providing a supportive work environment [20](Eisenberger, Huntington, Hutchison, & Sowa, 1986). While employees perceived that the organization is providing support, they realized that the organization cared about them and valued their contributions [3](Aselage & Eisenberger, 2003). On the other hand, employees would be committed to the organization at higher levels unless they do not perceive receiving organizational support [18](Dessler, 1999). Several previous investigations have been informative in the direction of the relationship between perceived organizational support and several variables. Perceived organizational support is supposed to mediate the relationship with favorable work conditions (i.e., fairness, supervisor support, organizational rewards, and job conditions) and should increase organizational commitment and trust or decrease turnover [22](Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002). Consequently, workers who are emotionally committed to the organization present heightened performance, decreased absenteeism, and lessened possibility of quitting their job [48,50](Meyer & Allen, 1997; Mowday, Porter, Steers, 1982). The foundation of the organizational support theory has three general forms of perceived favorable treatment (i.e., fairness, supervisor support, and organizational rewards and job conditions) with increased perceived organizational support [56](Rhoades & Eisenberger, 2002). Due to supervisor supports factor, when a supervisor acts as

an organizational agent, an employee's receipt of favorable treatment from a supervisor should contribute to perceived organizational support, which is consistent with the view of Eisenberger, Stinglhamber, Vandenberghe, Sucharski, and Rhoades (2002)[22]. The strength of this relationship depends on the degree to which an employee identifies the supervisor with an organization as opposed to viewing the supervisor's actions as idiosyncratic or peculiar to the individual. Since employees from global perceptions concern their valuation of the organization, they develop general views concerning the degree to which supervisors value their contributions and care about their well-being such as perceived supervisor support [43](Kottke & Sharafinski, 1988). According to Rhoades and Eisenberger(2002)[56], employees' understandings of the supervisor's evaluations of subordinates are frequently communicated to upper management, further contributing to worker cooperation of supervisor support with perceived organizational support. Fairness is defined by procedural justice as an instance of fairness in decisions concerning resource distribution that has a strong cumulative effect on perceived organizational support by indicating a concern for employees' welfare [67](Shore & Shore, 1995). Besides, procedural justice concerns the fairness of the ways used to determine the distribution of resources among employees [26](Greenberg, 1990). Moreover, procedural justice is as a structural determinant which involves formal rules and policies concerning decisions that affect employees including adequate notice before implementing decisions and a receipt of accurate information [56](Rhoades & Eisenberger, 2002). Associated to procedural justice is the idea of perceived organizational politics, referring to the attempts to influence others in modes which promote self-interest, frequently at the expense of rewards for an individual's merit or the improvement of the organization [16,35,54](Cropanzano, Howes, Grandey, & Toth, 1997; Kaemer & Carlson, 1997; Randall, Cropanzano, Bormann, & Birjulin, 1999). Organizational rewards and job conditions, including recognitions, pay, and promotions referring to the organizational support theory, favorable opportunities for rewards serve to communicate a positive valuation of the employee's contributions and thus contribute to perceived organizational support [56](Rhoades & Eisenberger, 2002). Allen, Shore, and Griffeth(1999)[2] found that job security defines a guarantee that the organization wishes to maintain the employee's future membership and is expected to provide a strong indication of perceived organizational support, when downsizing has been prevalent. Rhoades and Eisenberger(2002)[56] found that autonomy means employees perceived control over how they carry out their job, including scheduling, weekly procedures, and task variety. Meanwhile, Eisenberger, Rhoades, and Cameron (1999)[21] found that, with autonomy, the organization's trust in employees to decide wisely how they will carry out their job should increase perceived organizational support. Wayne, Shore, and Liden(1997)[72] found that job training is a discretionary

practice communicating an investment in the employee, thus leading to increased perceived organizational support. Lazarus and Folkman (1984) [44] found that stressors refer to context demand with which individuals feel unable to deal. Eisenberger et al. (1999) [21] found that stressors related to the aspects of employees' role in the organization had been investigated as antecedents to a lessened perceived organizational support: (1) work overload, involving demands that exceed what an employee can reasonably accomplish in a given time and (2) role ambiguity, involving the absence of clear information about one's job responsibilities.

### Job Demands

The notion of job demands obtains its influence in work stress literature that job stress tradition focused on "stressors" at work such as high workload, role ambiguity, and role conflict. In addition, Karasek (1997) [40] described job demands as a factor of all performance work, work stressors, especially "psychological stressors involved in accomplishing the work load, stressors related to unexpected tasks, and stressors of job-related personal conflict," and "the demands of modern workplaces such as the intensity of output per hour, time pressure, concentration, and social pressures." Job demands would be defined as the task requirements or quantitative workloads involved with a particular job. It consists of the quantity and time pressures of the work, including how fast one must work, how hard one must work, whether there is enough time to complete the work, and interceptions to the work [39] (Karasek & Theorell, 1990). As noted by Jones and Fletcher (1996, p. 34) [34], demands are defined as "the degree to which the environment contains stimuli that peremptorily requires attention and response." According to Schaufeli and Bakker (2004a) [63], demands are the "things that have to be done" and "in every job something has to be done." Job demands, based on the purpose of this investigation, would be theoretically defined as employment-related task requirements or workload, psychological and physical in nature, requiring cognitive arousal, mental awareness, and a static or physical exertion [39-41] (Karasek & Theorell, 1990; Karasek, 1997; Karasek, Brisson, Kawakami, Amick, Houtman, & Bongers, 1998). Job demands would also be defined as a stimulus coming from physical work environment or from the effects of another person that is imposed upon an employee and that commands the employee's attention or reaction. The stimulus was described as coming in the forms of technical, intellectual, physical, social, or financial. Cox and Griffiths (1996) [15] noted that job demands involve those characteristics of the work environment that have the potential to do physical or psychological harm. The psychological demand refers to the measurement of stress factors involved in accomplishing the workload, organizational constraints on task completion, and job-related conflicting demand [53]

(Phakthongsuk & Apakupakul, 2008). Moreover, Briner (2005) [11] noted that work stress is a combination of the physical and psychological environment, which has been developed into two modes in which an individual's psychological environment is created. In the first mode, the psychological environment is derived from the individual's interpretation of their environment whereas the second mode is derived from the combination of key work conditions. Therefore, physical environments which could influence psychological well being in the work environment may include many hidden aspects to a working environment (i.e., heat, noise and lighting, nature and social interaction, and the physical environment and physical safety) that could decrease psychological well being as a result [11] (Briner, 2005). In fact, Schaufeli and Bakker (2004a) [63] also found that job demands such as those that are physical, psychological, social, or organizational require sustained physical and /or psychological efforts such as cognitive or emotional. Furthermore, demands refer to physical, psychological, social, and organizational aspects of the job requiring an effort by the employee. In addition, job demands would include quantitative (i.e., workload, time pressure, and working hard) and qualitative emotional demands [6] (Bakker, Demerouti, & Verbeke, 2004). Previously, Perrewé and Ganster (1989) [52] classified the attributes of job demands as quantitative (i.e., quantitative demand relevant to amount of work that an individual needs to accomplish in a timely period) and qualitative (i.e., qualitative demand relevant to the complexity of work or level of required skills, abilities, and knowledge of the individual to complete the job). Currently, the measurements of job demands include decision latitude, psychological demands, social support (i.e., supervisor support and coworkers support), and physical demands. Decision latitude is proposed to have three-subscale distinct dimensions comprising skill direction, decision authority, and participatory organization influence. Due to skill discretion, it is estimated by the level of creativity required to perform the job and is defined as the degree of creativity or flexibility and efficiency that allows the employee to decide what skills to be utilized to accomplish related tasks. For decision authority, it is determined by the workers' self-dependence such as autonomy and is defined as the degree to which the workers independently make decisions about their tasks. Regarding participatory organization influence, it is relevant to a macro-level component of decision latitude, which is the degree to which employees have opportunities to influence the organizational-level issues and decisions [41] (Karasek et al., 1998). According to psychological demands, many researchers described it as jobs that require cognitive arousal, mental alertness, and mental work. It consists of evaluation and supervision, information processing, problem solving procedures, decision-making steps, synthesis matter, and organization of information concerns and task activities. Moreover, organizational constraints (i.e., task completion deadlines requiring the individual to maintain a rapid pace of task

activities and accountability of conflicting tasks) are also the components of psychological job demands, which indicated psychological strain occurs when psychological demands are high, and control levels are low. Karasek, Brisson, Kawakami, Houtman, Bongers, and Amick(1998) [41] found that what is known as good stress is considered under the active behavior model, and it only occurs when psychological strain levels and control level are high. Regarding social support, Karasek and Theorell (1990) [39] proposed that social support is operationally defined as an equally weighed combination of coworkers and supervisor support. Support is considered to reduce strain through several methods (i.e., acting as a buffer between stressor and health outcomes, and simplify active coping practice). Furthermore, social support tasks (i.e., supervisor social support, coworker social support) are also theorized to have a direct negative effect on job stress [70] (Theorell & Karasek, 1996). Baker, Israel, and Schurman(1996) [5] found that social support from the supervisor has more influence on employee job satisfaction and mental health than social support from coworkers. Social support is proved to be important for the employee's job satisfaction, anxiety level while lower support (i.e., supervisor support or coworkers) is associated with a higher level of psychosomatic complaints and lower job satisfaction [71] (van der Doef & Maes, 2002). Social support at work refers to helpful social interactions available on tasks from supervisors and coworkers (i.e., friendliness and competence) [19] (Dwyer & Ganster, 1991). Coworker support has been shown to have an impact on job satisfaction [1] (Adams & Bond, 2000). In addition, previous reports in literature suggested that supervisory support considers the matters related to concerns for the worker, the employee, and the supervisor's attention to the worker as being helpful to the work performance, being done and creating a teamwork environment (a part of dynamics of organizational behavior), and contributing to motivation and retention. Besides, support from supervisor has also been linked to organizational commitment [8] (Bartram, Joiner, & Stanton, 2004).

### Turnover Intentions

The importance of employee's turnover intentions has been recognized as the demand for good employees wanting to leave. However, in the current investigation, the assumption is that turnover is analogous and describes the construct referring to a person's considering leaving job behaviors. The case is made that the investigation of turnover intentions is able to indicate an employee's plans to leave but would be informative about whether employees who feel true work engagement, job demand, and perceived organizational support. Contrary to traditional notions, the necessity to address turnover is not just the result of an economically prosperous situation. During economical prosperous situations with high demand for employees, turnover becomes significant because it is easy for good

employees to leave an organization to acquire jobs elsewhere. Nevertheless, during recessions, with a shortage of skilled individuals in the job market (e.g., professional nurses), the demand for good employees is even greater. Regardless of the economy situation, the demand for good employees (high-performing individuals) remains relatively constant. According to Huselid, Jackson, and Schuler (1997) [33], a resource-based view of an organization indicates that human resource capital typically provides a very important source of competitive advantage. Successful organizations win with a skilled and knowledgeable workforce that is able to create new ideas and show the innovations of products and services. If employees who possess such knowledge and skills (professional nurse) leave, an organization essentially loses its (expansively acquired) intellectual capital. The focus of the turnover research is to identify why employees quit. Bishop, Scott, and Burroughs (2000) [10] pointed out that maintaining the positive organizational support is the cause of organizational commitment and predicted turnover intentions. Moreover, Howes, Cropanzano, Grandey, and Mohler(2000) [29] demonstrated that organizational support for the individual was the best predictor of organizational commitment and turnover intentions. Today's organizational and turnover approach concentrating on how to decrease turnover is reactive in emphasis and would be incomplete in work engagement for good employees. Sager, Griffeth, and Hom(1998) [59] referred to turnover cognitions as mental decisions intervening between an individual's attitude regarding the job and decision to leave or stay. At this point, turnover intention was conceptualized as an indicator of considering leaving job behaviors. Due to Elangovan(2001) [23], an intention to leave represents an attitudinal orientation or a cognitive manifestation of the behavioral decision to leave. Thus, Mitchell, Holtom, Lee, Sablinski, and Erez(2001) [49] found that job embedment was associated with low intention to leave and actual voluntary turnover.

Based on the literature review, there is an abundance of research, which aims to explain the relationships among constructs of the model. Maslach and Jackson (1986) [46] conducted a study of the construct linkage with the hypothesis stating that the presence of specific demand (work overload and personal conflicts) predicts burnout dissatisfaction, which in turn is expected to lead to negative outcome as turnover. In addition, Hu, Schaufeli, and Tavis(2011) [31] as well as Llorens, Bakker, Schaufeli, and Salanova (2006) [45] found that job demands were negatively associated with work engagement, and low imposed demand may have a positive effect on engagement. Thus, these situations caused employees to depart the organization. Demerouti and Cropanzano(2001) [17] as well as Schaufeli and Salanova(2007) [65] supported that engagement is associated with employees' positive attitude, proactive job behaviors, higher levels of psychological well-being, and increased individual job and organizational performance lead to decreasing turnover intention. Based on these ideas, the hypothesis 1 (H1) was conducted as

follows:H1: The relationship between job demands (JD) expressing negative turnover intention (TI) would be mediated by work engagement (WE). Some investigators have proposed that perceived organizational support to heighten performance, decrease absenteeism, and lessen the possibility of employees in quitting their jobs [20, 50](Eisenberger et al., 1986; Mowday et al., 1982). According to Kahn (1990) [36], supportive environment allows employees to experiment and try new things even fail without fear of the consequences. Bishop, Scott, and Burroughs (2000)[10] supported the notion that organizational support can positively influence organizational commitment and thus reduce turnover intention. Positive effect of employee, on the other hand, stimulates approach behavior, which motivates individuals to engage in particular activities and leads to work engagement [61](Salanova, Llorens, &Schaufeli, 2010).Moreover, Rhoades, Eisenberger, and Armeli (2001) [55] stated that perceived organizational support and affective organizational commitment are associated with significantly important reductions of voluntary turnover. In addition, Stinglhamber and Vandenberghe(2003)[69] described that perceived organizational support is able to reduce turnover. As a result, the hypothesis 2 (H2) was formulated as follows: H2: The relationship between perceived organizational supports (POS) expressing negative turnover intention (TI) would be mediated by work engagement (WE). Moreover, perceived organizational support might lead to positive consequences through employee engagement [60] (Sak, 2006). On the other hand, employees would be committed to the organization at high levels when they perceive receiving organizational support [18] (Dessler, 1999). Kahn (1992) [37] described the support for latent variable related to or constructs linkage with the hypothesis 3 by stating that perceived organizational support as moderator variable will be generalized from psychological safety involving a sense of being able to exhibit and employ the self without negative consequences. Hence, the hypothesis 3 (H3) was conducted as follows: H3: Perceived organizational support (POS) would moderate the relationship between job demands (JD) and work engagement (WE) such that both relationship transformational and transactional behaviors are related

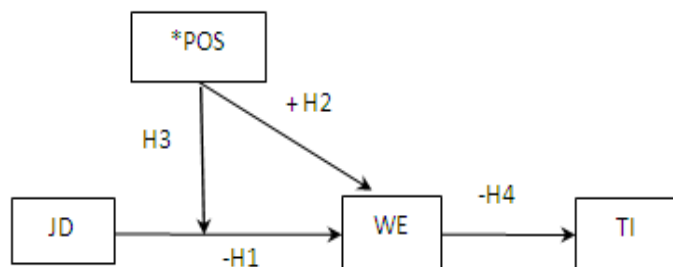
from job demands (JD) to work engagement (WE).Benchmarks of the research have focused on the models of the antecedents of work engagement occurring when an employer experiences the suitable blend of workload, control, reward, sense of community fairness, and value congruence [47] (Maslach, 1998). Possible advantageous consequences of engagement for an organization include outcomes such as decreased turnover, and a sense of well-being with a higher job score[28] (Harter, Schmidt, & Hayes, 2002). Furthermore, the researches of Schaufeli and Bakker (2004b) [64], Hallberg and Schaufeli (2006) [27] andSak (2006) [60] supported the relationship between engagement and turnover intentions (i.e. work engagement negatively predicted an intention to leave). Moreover, work engagement is cognitive-affective and positive affect as state of mind and state of feeling an employee might feel general enthusiasm regarding his job [73] (Wijhe, Peeters, &Schaufeli, 2011). Thus, the hypothesis 4 (H4) was conducted as follows: H4: Work engagement (WE) would have a significant negative relationship to the outcome variables of turnover intention (TI).

### 3. Methodology

Specifically, this study examined the associated hypotheses for the variables, the moderating effects in the multiple groups of different levels of perceived organizational support, and the impact of work schedule flexibility on turnover intentions. Figure1 illustrated the conceptual framework of the study.

#### 3.1. Research Design

The data used to test the hypotheses were collected from a sample of 890 professional nurses who had worked in the private health care service sector (44 medium and large size hospitals in Bangkok and Metropolitan Area (BMA) and its vicinity) of medical tourism in Thailand. In order to ensure valid and reliable research procedures, on site interviews were conducted from 40 volunteers by participating in the pre-test phase.



Note 1:\* A Comparison of Perceived Organizational Support (POS) of Professional Nurses Group (low level and high level of POS groups)

Figure 1. The Conceptual Framework.

### 3.2. Measurement of Variable (Exogenous, Endogenous, and Moderate Variables)

Data were collected through the questionnaire comprising eight sections, which included personal demographics and work status, job demands, work engagement, perceived organizational supports, and turnover intention. The 9-item scale in the perceived organizational support section was based on unidimensionality of Eisenberger et al.'s (1986) [20] scale. Cronbach's alpha coefficient of this scale was .90 [56] (Rhoades & Eisenberger, 2002). The 26-item scale in the job demands section was adopted from the job content questionnaire (JCQ) of Karasek's (1985) [38] scale. Cronbach's alpha coefficients of this scale were estimates ranging from .61 to .71 [41] (Karasek et al., 1998). The 17-item scale in the work engagement scale was adopted from the Utrecht Work Engagement Scale (UWES) developed by Schaufeli, Martinez, Marques, Salanova, Bakker, (2002) [62]. Cronbach's alpha coefficients of this scale were estimates ranging from .90 to .92 [63] (Schaufeli & Bakker, 2004a). Finally, turnover intentions refer to considering leaving job behaviors scale and were measured by a questionnaire developed by Roodt (2004) [57]. The questionnaire consisted of 14 items, and previous research has demonstrated the reliability of Cronbach's alpha coefficient of .91 [58] (Roodt & Jacobs, 2008).

### 3.3. Sequence of Analysis

Part 1: To test the three proposed hypotheses (H1, H2, and H4), descriptive analysis, confirmatory factor analysis (CFA), and structural equation modeling (SEM) were performed, and the results were reported in the result section.

Part 2: To test the last proposed hypothesis (H3), conceptual model illustration of moderation was considered. In order to conceptualize the model, multiple groups' analysis was conducted to examine whether the different level of perceived organizational support plays a role as a moderator between job demands and work engagement. To assess the moderating influence of perceived organizational support, the data were divided into two groups including the low levels of perceived organizational support and the high levels of perceived organizational support based on the median of perceived organizational support. If the measurement model is different, it could be concluded that the two groups are different. Finally, the standardized coefficients in the paths of job demands and work engagement were compared between the two groups when the two models were found to be different.

## 4. Results

### 4.1. Respondent Profile and Descriptive analysis

A total of 890 questionnaires from 44 private hospitals were returned. The results showed that most of respondents were females, accounted for 875 participants (98.31%). The respondents with ages under 30 years old were accounted for 439 participants (55.39%) whereas those with ages between 30 - 40 years old were accounted for 330 participants (37.1%). Moreover, most of respondents were single, accounted for 609 participants (68.43%), and the other 263 participants (29.58%) were classified into married status. Besides, the education level was mostly Bachelor's degree, accounted for 840 participants (94.38%). All respondents were formal professional nurses and had previously served in the private hospital industry for more than two years but less than five years. These professional nurses mainly worked in the five departments including intensive care unit (ICU), emergency room (ER), pediatrics or mother and child, internal medicine, and other where 356 professional nurses (40%) were from the internal medicine department. The mean scores for each measurement item, which indicated the extent to which each measurement item were presented in Table 1.

### 4.2. Confirmation Factor Analysis

The confirmatory factor analysis was performed to confirm the validity and reliability. Regarding the testing of the model, five latent variables were included representing the full hypothesized model. All of them were tested by using AMOS program. The results revealed that all factor loadings were significant ( $p < .05$ ). The results of adaptability were  $\chi^2 = 424.047$ ,  $df = 156$ ,  $\chi^2 / df = 2.718$ ,  $RMSEA = .044$ ,  $NFI = .971$ ,  $SRMR = .079$ , and  $CFI = .982$ . The values were below the model adaptability suggested referring to  $\chi^2 / df \leq 3$ ,  $RMSEA \leq .070$ ,  $NFI \geq .090$ ,  $SRMR \leq .080$ , and  $CFI > .90$ , which indicated better fit [14] (Byrne, 2001). The study removed items with factor loading lower than 0.7 [24] (Fornell & Larcker, 1981). It indicated that the modified model achieved an acceptable standard as shown that the composite reliability ranged from .844 to .953, which was higher than the standard of .70. In terms of the convergent and discriminant validity of the questionnaire, the average variance extracted (AVE) values ranged from .56 to .77, which were higher than .50 was shown in Table 2. Therefore, the convergent validity of the measurement scale was acceptable. The results showed in Table 3, that all average variance extracted (AVE) estimates were greater than the corresponding interconstructs squared correlation estimate. In conclusion, the measurement scale had discriminant validity [24] (Fornell & Larcker, 1981).

**Table 1.** Means, Standard Deviations, and Reliabilities of Major Study Variables (N=890)

Variable	Case Processing Summary		Reliability Statistics Cronbach's Alpha based on Standardized Item	Scale Statistics			
	N	%		Mean	Variance	Std. Deviation	N of Item
Perceived organizational support (POS)	890	100	.903	3.823	.015	1.226	9
Job demands (JD)	890	100	.829	4.596	.171	.580	26
Work engagement (WE)	890	100	.920	4.784	.058	.855	17
Turnover intentions (TI)	890	100	.908	3.305	.213	.949	14

**Table 2.** Results of confirmation factor analysis

Construct	Standardized Factor Loadings	Composite Construct Reliability	Average Variance Extracted
<i>1. Job demands: social support</i>		.933	.77
- My supervisor is concerned about the welfare of those under him	.938		
- My supervisor pays attention to what I am saying	.844		
- My supervisor is helpful in getting the job done	.841		
- My supervisor is successful in getting people to work together	.904		
<i>2. Perceived organizational supports</i>		.953	.77
- Help is available from the organization when I have a problem	.881		
- The organization really cares about my well-being	.879		
- The organization is willing to exert itself to help me perform my job to the best of my ability	.900		
- The organization cares about my general satisfaction at work	.882		
- The organization cares about my opinions	.866		
- The organization takes pride in my accomplishments at work	.870		
<i>3. Work Engagement</i>		.887	.56
- At my job, I feel strong and vigorous	.748		
- I am enthusiastic about my job	.750		
- My job inspired me	.742		
- I feel happily when I am working intensely	.791		
- I am proud on the work that I do	.750		
<i>4. Turnover Intentions</i>		.844	.60
- Sent copies of your resume to prospective employer	.706		
- Contracted an employment agency or executive search firm to obtain a job with another organization	.753		
- Gone on a job interview	.780		
- Talked to co-workers about getting a job in another organization	.761		
- Made any telephone inquiries to prospective employers	.880		

**Table 3.** Constructs Correlation Matrix (Standardized)

	JD	POS	TI	WE
JD	1.00			
POS	-0.550**	1.00		
TI	0.085**	-0.044	1.00	
WE	-0.429**	-0.440**	-0.077*	1.00

Significance level: \* = .05, \*\* = .01, \*\*\* = .001



### 4.3. Structural Equation Model

The study utilized structural equation modeling to investigate the relationships among constructs. The results of adaptability were  $\chi^2 = 392.845$ ,  $df = 170$ ,  $\chi^2/df = 2.848$ ,  $RMSEA = .038$ ,  $NFI = .976$ ,  $SRMR = .081$ , and  $CFI = .960$ . The model adaptability was determined as the best fitting structural equation model and in accordance with the study's theoretical framework. The relationship between key variables produced a unstandardized coefficient, standard error, and critical ratio, which is significant at  $p < .001$ . The summary of the regression weights for the model was presented in Table 4.

### 4.4. The Moderation Effect Test

The moderation effect for the latent variable of perceived organizational supports was tested. To examine whether perceived organizational support moderates between job demands (JD) and work engagement (WE), the multiple group structural equation model was conducted. If the measurement models are different, it could be concluded that two models are different. By testing the multiple group invariance, the initial step (the configural model) requires that the same number of factor and the factors loading pattern shall be the same across the groups. Thus, the same parameters estimated in the baseline model for each group separately were estimated in the multiple group models [14] (Byrne, 2010). This model was tested as a multiple group representation of the baseline models. Accordingly, it incorporated the baseline models for the high level of perceived organizational support and the low level of perceived organizational support within the same file. Considering the model assessment, the goodness of fit statistics for this multiple group model was reported.

#### 4.4.1. Multiple Group Models Of CFA For Testing Moderation Effect Analysis Of Multiple Groups Invariance

**Step 1:** Testing for the validity of the hypothesized model across the high and low levels of perceived organizational support.

Model assessment of step 1

Goodness-of-fit statistics related to the two unconstrained groups model (Model 1) were reported in Table 5. The Chi-square values of 614.684, with 342 degree of freedom, provided the baseline values with which the subsequent tests for invariance may be compared. The values of Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA) were .971 and .030, respectively. As recommended by Hu and Benter (1999)

[30], the result still represented a relatively good fit across the two panels of perceived organizational support.

**Step 2:** Testing for invariance of the fit for the full constrained model across the high and low levels of perceived organizational support.

Model assessment of step 2

Goodness-of-fit statistics related to the two constrained groups model (Model 2) were presented as the second entry in Table 5. By testing the invariance of this constrained model, the results of Chi-square values of 663.256, with 365 degree of freedom, were compared with that of the initial model (Model 1) in which no equality constrained was imposed. Meanwhile, Chi-square difference values of 48.581 with 23 degree of freedom were greater than 35.172, indicating a statistically significant difference ( $p < .05$ ) where some equality constraints did not hold across the two groups.

**Step 3:** Testing for invariance of factor loadings across the high and low levels of perceived organizational support.

Model assessment of step 3

As indicated in Table 5, the results revealed that all factor loadings shall be equivalent across the high and low levels of perceived organizational support, as reflected in a Chi-square difference between the model test (Model 3) and Model 1, which was statistically significant. The results of Chi-square values of 643.814, with 359 degree of freedom, were compared with the Chi-square of the initial model (Model 1) in which no equality constraints was imposed. The comparison result which revealed Chi-square difference values of 29.13 with 17 degree of freedom was more than 27.587, indicating a statistically significant difference ( $p < .05$ ). Based on this result, some equality constraints did not hold across the two groups.

**Step 4:** Testing for invariance of factor variance and covariance across the high and low levels of perceived organizational support.

Model assessment of step 4

As shown in Table 5, the results from the estimation of Model 4 yielded a Chi-square of 936.435 with 402 degree of freedom. Therefore, the difference of Chi-square values between this model and Model 1 was statistically significant ( $p < .05$ ). The comparison result which revealed Chi-square difference values of 321.751 with 60 degree of freedom was more than 79.082, indicating a statistically significant difference ( $p < .05$ ). Overall, the testing results of the group invariance across the four models had shown that multiple groups were statically significant. This difference value was distributed as Chi-square with degree of freedom. Evidence of not invariance is claimed if this Chi-square difference value is statistically significant [14] (Byrne, 2010).

**Table 4.** Regression Weight and Estimates for Key Variable with Variable: Full Structural Equation Model

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

	Relationship		Unstandardized Regression Weight	Standard Error	Critical Ratio	Significance
WE	<-----	JD	-.195	.027	-7.155	***
WE	<-----	POS	.242	.030	8.061	***
TI	<-----	WE	-.144	.047	-3.065	**

**Table 5.** Multiple Group Models of CFA for Testing the Moderation Effect Analysis of the High and Low Perceived Organizational Supports.

		Model fit measures						Model difference		
	Model description	Comparative of model	Chi-square	Df	RMSEA	CFI	p-value	Diff. in Chi-square	Diff. in df.	Sig.
	High level of POS	-	275.212	170	.039	.977	.000	-	-	-
	Low level of POS	-	323.063	170	.043	.969	.000	-	-	-
1	Unconstrained model(baseline model 1)	-	614.684	342	.030	.971	.000	-	-	-
2	Structural covariance model (factor loading, variance, covariance, model 2)	1-2	663.265	365	.030	.968	.000	48.581	23	Sig.
3	Measurement weights model (factor loading, model 3)	1-3	643.814	359	.030	.970	.000	29.13	17	Sig.
4	Measurement residuals model (invariance uniqueness)	1-4	936.435	402	.039	.943	.000	321.751	60	Sig.

NS: No Significant, Sig.: Significant\*  $p < .05$

#### 4.4.2. Analysis of the Full Measurement Multiple Groups

To assess the difference between the low and high levels of perceived organizational support groups, parameter constrained path, as the relationship between job demands and work engagement constructs were constraints, was tested, and the multiple sample model was estimated. Thus, a constrained model was estimated this relationship (job demand and work engagement path) comparing between the low and high perceived organizational supports. A significant interaction effect exists if the change in the Chi-square value is significant. Regarding the high and low perceived organizational support groups, the unconstrained model provided a Chi-square value of 614.684 with 342 df. Then, this indicated that the Chi-square value and degree of freedom are equal to the respective sums for the structural model estimated separately for the two groups [14](Byrne, 2010). The model with equality constrains on the one common relationship provided a Chi-square value of 616.245 with 343 df, and the result was the rejection of the hypotheses that these relationships were invariant across the two sample groups ( $\Delta\chi^2 = 1.561, 1 \text{ df}$ ). According to the table of the critical value of Chi-square, a critical value at the alpha of 0.05 and a degree of freedom of 1 was equal to 3.84, ( $1.561 < 3.84$ ), which was not statistically significant. Thus, the difference is statistically significant at a

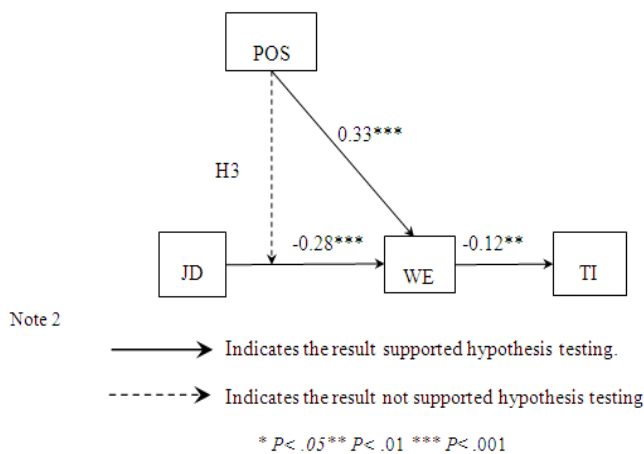
significance level greater than .05, and the result revealed that all measurements of perceived organizational support operated in the same direction for both groups. This means perceived organizational support has no moderating impact on the relationships of the hypothesis 3(H3).

## 5. Discussion of the Findings across the Hypotheses

Figure 2 showed the research findings and summarized the results of the hypothesis testing. Hence, all of the findings were synthesized across the hypotheses as follows. The hypothesis 1 was supported, indicating that job demands did have an influence on turnover intention through work engagement. This suggested that the effect of work engagement outcomes was potential and adequately fit the hypothesis model. In addition, the result of the study did confirm an argument that employees' high job demands could be meaningful if it could provide an expected level of work engagement well-being of employees [31,45] (Hu & Schaufeli, 2011; Llorens et al., 2006). As the hypothesis 2 was supported, perceived organizational support was found to have an influence on turnover intention through work engagement whereas the path expressed that perceived

organizational support indirectly affecting turnover intention through work engagement was a negative value and significant. Meanwhile, the hypothesis 3 was not supported, revealing that the high and low levels of perceived organizational support were not moderators between job demands and work engagement. This may occur because employees positively express perceived organizational support construct via work engagement as they regard that the different levels of perceived organizational supports are not as strong as they would like. Unlike the expectation of the moderating of perceived organizational support, moderation exists between job demands and work engagement. Thus, the finding did not confirm the contingency approach, which emphasized that the organization with the high level of perceived organizational support was expected to have superior work engagement and subsequently reduced turnover intention rather than those with the low level of perceived organizational support. Finally, the result revealed that the path showed a negative effect on turnover intention and was significant with a standardized coefficient of  $-0.12$ , ( $p < .01$ ), meaning that the hypothesis 4 was supported. Hence, the finding of the study implied that work engagement could be a strong predictor for turnover intention since the relationship between them is significant. Work engagement could result in improved turnover intention only when those organizations meet the expectations of the needs, which did confirm the findings in previous literature [27, 60, 63]

situation of negative feelings and reinforce to strain and reduce engagement. On the other hand, employers could decrease turnover intention of their employees by decreasing job demands. The current research finding suggested that the high-level perceived organizational support on work engagement and job demands could not ensure the reductive level of turnover intention of professional nurses. The study demonstrated that an employee's high level of perceived organizational support could not assure better work engagement results of the hospitals. The findings of this study are important because they highlight that conflict in not only outcome of participation but also the relationship among job demands, work engagement, and turnover intentions in the multiple groups of the different levels of perceived organizational support. The construct perceived organizational support enrichment examined in this paper reflects and understanding of the multiple groups of different level of perceived organization supports interface from a newer lens and is certainly of great concern to individuals and organizations. The study indicates that an organizational involvement in perceived organizational support roles should not be viewed as a hindrance since it could also be a benefit of employee engagement at work. Involvement in the level of perceived organizational support role provides opportunities to acquire supervision supports, fairness, and organizational rewards and job conditions to perform better at work. Hence, an organization should make its efforts to stimulate an experience of enrichment. This could be improved by designing job to provide more recognition, pay and promotion, jobs security, autonomy variety and providing training to effectively deal with employees' role stressors integration issues by rendering perceived organizational supports. Therefore, organizations should introduce such initiatives. Considering the crucial role of supportive perceived organizational supports in enhancing the level of perceived organizational support enrichment, organizations should take initiative to develop a perceived organizational support which is reflected in supportive leadership, lower time demands and little negative career consequences of avail increasing work engagement and decreasing turnover intention. Finally, based on the recommendation of Murrells, Robinson, and Griffiths (2008) [51], professional nurses may need to place a greater emphasis on the recruitment and selection process to ensure a greater organizational fit to help address the issue of turnover among professional nurses in the industry.



(Sak, 2006; Hallberg&Schaufeli, 2006; Schaufeli& Bakker, 2004a).

Figure 2. Path Results of the Research Model.

## 6. Implication for Practice

There is the holistic picture on the importance of job demands, perceived organizational support, and work engagement as a mechanism to help the workplaces (hospitals) maintain turnover intentions based on their human resources. However, in fact, job demand activities of the hospitals have relatively high negative effects on work engagement. Employees' willingness has to show a

## 7. Limitation of the Study and Future Research

### 7.1. Limitation of the Study

The respondents may overstate feelings in order to make their situation seem worse, or they may under-report the severity of attitudes in order to minimize the problem.

However, each of the participating organizations had a policy that disallowed researchers to inquire information due to corporate confidentiality policies.

## 7.2. Future Research

Future research, due to the real work of the organization, the levels of job demands of employees which have different conditions in a boundary of the industry, the quality of work life balance, work schedule flexibility, and financial rewards and their influence on outcomes should be investigated.

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## REFERENCES

- [1] Adams, A., & Bond, S. Hospital nurses job satisfaction, individual and organizational characteristics. *Journal of Nursing Administration*, Vol.32, No.3, 536-543, 2000.
- [2] Allen, D., Shore, L., &Griffeth, R. A model of perceived organizational support. Unpublished manuscript, University of Memphis and Georgia State University, 1999.
- [3] Aselage, J., &Eisenberger, R. Perceived organizational support and psychological contracts: A theoretical integration. *Journal of Organizational Behavior*, Vol.24, 491–509, 2003.
- [4] Bailey, T., Berg, P., & Sandy, C. The effect of high performance work practices on employee earnings in the steel, apparel, and medical electronics and imaging industries. *Industrial and Labor Relations Review*, Vol.54, No.2A, 525-543, 2001.
- [5] Baker, E., Israel, B., &Schurman, S. Role of control and support in occupational stress: An integrated model. *Social Science and Medicine*, Vol.43, 1145-1159, 1996.
- [6] Bakker, A.B., Demerouti, E., &Verbeke, W. Using the job demands-resources model to predict burnout and performance. *Human Resource Management*, Vol.43, No.1, 83-104, 2004.
- [7] Bakker, A. B., &Leiter, M. P. *Work engagement: A handbook of essential theory and research*. Psychology Press, New York, 2010.
- [8] Bartram, T., Joiner, T., & Stanton, P. Factors affecting job stress and job satisfaction of Australian nurses: Implications for recruitment and retention. *Contemporary Nurse*, Vol.17, No.3, 293-304, 2004.
- [9] Beehr, T. A., & Glazer, S. Organizational role stress. In J. Barling, E. K. Kelloway, and M. Frone (Eds.), *Handbook of work stress*, Sage, Thousand Oaks, CA, 2005.
- [10] Bishop, J. W., Scott, K. D., & Burroughs, S. M. Support, commitment, and employee outcomes in a team environment. *Journal of Management*, Vol.26, 1113-1132, 2000.
- [11] Briner, R. B. What can research into emotion at work tell us about researching well-being at work? *International Journal of Work Organisation and Emotion*, Vol.1, 67-73, 2005.
- [12] Buckingham, M., & Coffman, C. *First, break all the rules: What the world's greatest managers do differently*. Simon & Schuster New York, NY, 1999.
- [13] Burke, R. J., & Cooper, C. L. *Building more effective organizations*. Cambridge University Press, UK, 2007.
- [14] Byrne, B.M. *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd Ed.).Routledge, New York, 2010.
- [15] Cox, T., & Griffiths, A. J. The assessment of psychosocial hazards at work. In M. J. Schabracq, J. A. M. Winnubst, & C. L. Cooper (Eds.), *Handbook of work and health psychology*, John Wiley & Sons, Chichester, UK, 1996.
- [16] Cropanzano, R., Howes, J. C., Grandey, A. A., &Toth, P. The relationship of organizational politics and support to work behaviors, attitudes, and stress. *Journal of Organizational Behavior*, Vol.22, 159-180, 1997.
- [17] Demerouti, E., Bakker, A.B., Nachreiner, F., &Schaufeli, W.B. The job demands resources model of burnout. *Journal of Applied Psychology*, Vol.86, No.3, 499-512, 2001.
- [18] Dessler, G. How to earn your employees' commitment. *Academy of Management Executive*, Vol.13, 58-67, 1999.
- [19] Dwyer, D. J., &Ganster, D. C. The effects of job demands and control on employee attendance and satisfaction. *Journal of Organizational Behavior*, Vol.12, 595-608, 1991.
- [20] Eisenberger, R., Hungtington, R., Hutchison, S., & Sowa, D. Perceived organizational support. *Journal of Applied Psychology*, Vol.71, 500-507, 1986.
- [21] Eisenberger, R., Rhoades, L., & Cameron, J. Does pay for performance increase or decrease perceived self-determination and intrinsic motivation? *Journal of Personality and Social Psychology*, Vol. 77, 1026-1040, 1999.
- [22] Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I., & Rhoades, L. Perceived supervisor support: Contributions to perceived organizational support and employee retention. *Journal of Applied Psychology*, Vol.87, 565-573, 2002.
- [23] Elangovan, A.R. Causal ordering of stress, satisfaction and commitment, and intention to quit a structural equations analysis. *Leadership & Organization Development Journal*, Vol.22, No.4, 159-165, 2001.
- [24] Fornell, C., &Lacker, D.F. Evaluating structural equation models with unobservable variables and measurement errors. *Journal of Marketing Research*, Vol.18, No.2, 39-50, 1981.
- [25] Gostick, A. R., & Elton, C. *The carrot principle: How the best managers use recognition to engage their people, retain talent, and accelerate performance*. Free Press, New York, 2007.
- [26] Greenberg, J. Organizational justice: Yesterday, today, and tomorrow. *Journal of Management*, Vol.16, 399-432, 1990.
- [27] Hallberg, U., &Schaufeli, W. B. Same same but different: Can work engagement be discriminated from job involvement and organizational commitment? *European Psychologist*, Vol.11, 119-127, 2006.
- [28] Harter, J. K., Schmidt, F. L., & Hayes, T. L. Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis.

- Journal of Applied Psychology, Vol.87, 268-279, 2002.
- [29] Howes, J. C., Cropanzano, R., Grandey, A. A., & Mohler, C. J. Who is supporting whom? *Journal of Quality Management*, Vol.5, 207-223, 2000.
- [30] Hu, L. T., & Bentler, P. M. Cutoff criteria for fit indices in covariance structure analysis: Conventional criteria versus new after natives. *Structure Equation Modeling*, Vol. 6, No.1, 1-55, 1999.
- [31] Hu, Q., Schaufeli, W. B., & Taris, T. W. The job demands-resources model: An analysis of additive and joint effects of demands and resources. *Journal of Vocational Behavior*, Vol.79, 181-190, 2011.
- [32] Huselid, M. A. The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, Vol.38, No.3, 635-672, 1995.
- [33] Huselid, M., Jackson, S., & Schuler, R. Technical and strategic human resource management effectiveness as determinants of firm performance. *Academy of Management Journal*, Vol. 40, 171-188, 1997.
- [34] Jones, F., & Fletcher, B. C. Job control and health. In M. J. Schabracq, J. A. M. Winnubst, & C. L. Cooper (Eds.), *Handbook of work and organizational psychology* (pp. 33-50), John Wiley & Sons, Chichester, UK, 1996.
- [35] Kacmar, K. M., & Carlson, D. S. Further validation of the Perceptions of Politics Scale (POPS): A multiple sample investigation. *Journal of Management*, Vol. 23, 627-658, 1997.
- [36] Kahn, W. A. Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, Vol.33, No.4, 692-724, 1990.
- [37] Kahn, W. A. To be fully there: Psychological presence at work. *Human Relations*, Vol. 45, 321-49, 1992.
- [38] Karasek, R. A. Job content questionnaire and user's guide. University of Southern California, Department of Industrial and Systems Engineering, Los Angeles, CA, 1985.
- [39] Karasek, R. A., & Theorell, T. *Healthy work: Stress, productivity, and the reconstruction of working life*. Basic Books, New York, 1990.
- [40] Karasek, R. A. Demand/control model: A social, emotional, and physiological approach to stress risk and active behavior development. In J. M. Stellman (Ed.), *Encyclopedia of occupational health and safety* (pp. 34.6-36.14), Labor Office International, Geneva, 1997.
- [41] Karasek, R. A., Brisson, C., Kawakami, N., Houtman, I., Bongers, P., & Amick, B. The Job Content Questionnaire (JCQ): An instrument for internationally comparative assessments of psychosocial job characteristics. *Journal of Occupational Health Psychology*, Vol.3, 322-355, 1998.
- [42] Katzenbach, J. R. *Peak performance: Aligning the hearts and minds of your employees*. Harvard Business School Press, Boston, MA, 2000.
- [43] Kottke, J. L., & Sharafinski, C. E. Measuring perceived supervisory and organizational support. *Educational and Psychological Measurement*, Vol.48, 1075-1079, 1988.
- [44] Lazarus, R. S., & Folkman, S. *Stress, appraisal, and coping*. Springer Publishing Company, New York, 1984.
- [45] Llorens, S., Bakker, A. B., Schaufeli, W. B., Salanova, M. Testing the robustness of the job demands-resources model. *International Journal of Stress Management*, Vol.13, 378-391, 2006.
- [46] Maslach, C., & Jackson, S. E. *Maslach burnout inventory*. Consulting Psychologists Press, Palo Alto, CA, 1986.
- [47] Maslach, C. A multidimensional theory of burnout. In C. L. Cooper (Ed.), *Theories of organizational stress*, Oxford University Press, Oxford, UK, 1998.
- [48] Meyer, J. P., & Allen, N. J. *Commitment in the workplace: Theory, research, and application*. Sage Publications, Thousand Oaks, CA, 1997.
- [49] Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablinski, C. J., & Erez, M. Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of Management Journal*, Vol.44, 1102-1121, 2001.
- [50] Mowday, R. T., Porter, L. W., & Steers, R. M. *Organizational linkages: The psychology of commitment, absenteeism, and turnover*. Academic Press, San Diego, CA, 1982.
- [51] Murrells, T., Robinson, S., & Griffiths, P. Job satisfaction trends during nurses' early career. *BMC Nursing*, Vol.7, No.7, 1-13, 2008.
- [52] Perrewé, P., & Ganster, D. C. The impact of job demands and behavioral control on experienced job stress. *Journal of Organizational Behavior*, Vol.10, 213-229, 1989.
- [53] Phakthongsuk, P., & Apakupakul, N. Psychometric properties of the Thai version of the 22-item and 45-item Karasek Job Content Questionnaire. *International Journal of Occupation Medicine and Environmental Health*, Vol.21 No.4, 331-344, 2008.
- [54] Randall, M. L., Cropanzano, R., Bormann, C. A., & Birjulin, A. Organizational politics and organizational support as predictors of work attitudes, job performance, and organizational citizenship behavior. *Journal of Organizational Behavior*, Vol.20, 159-174, 1999.
- [55] Rhoades, L., Eisenberger, R., & Armeli, S. Affective commitment to the organization: The contribution of perceived organizational support. *Journal of Applied Psychology*, Vol.86, 825-836, 2001.
- [56] Rhoades, L., & Eisenberger, R. Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, Vol.87, 698-714, 2002.
- [57] Roodt, G. Turnover Intentions. Unpublished Document, University of Johannesburg, Johannesburg, South Africa, 2004.
- [58] Roodt, G., & Jacobs, E. Organizational culture of hospitals to predict turnover intentions of professional nurses. *Health SA Gesondheid*, Vol.13, No.1, 63-78, 2008.
- [59] Sager, J. K., Griffiths, R. W., & Hom, P. W. A comparison of structural models representing turnover cognitions. *Journal of Vocational Behavior*, Vol.53, No.2, 254-273, 1998.
- [60] Sak, A. M. Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, Vol.21, No.7, 600-619, 2006.

- [61] Salanova, M., Llorens, S., & Schaufeli, W.B. Yes, I can, I feel good and I just do it! On gain cycles and spirals of efficacy beliefs, affect, and engagement. *Applied Psychology: An International Review*, Vol. 60 No. 2, 255-85, 2010.
- [62] Schaufeli, W. B., Martinez, I., Marques Pinto, A., Salanova, M., & Bakker, A. B. Burnout and engagement in university students: A cross-national study. *Journal of Cross-Cultural Psychology*, Vol.33 No.5, 464-481, 2002.
- [63] Schaufeli, W. B., & Bakker, A. B. Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, Vol.25, 293-315, 2004a.
- [64] Schaufeli, W. B., & Bakker, A. B. Work engagement and the measurement of a concept. *Gedrag-en-Organisatie*, Vol.17, 89-112, 2004b.
- [65] Schaufeli, W. B., & Salanova, M. Work engagement: An emerging psychological concept and its implications for organizations. In S. W. Gilliland, S. W. Steiner, and D. P. Skarlicki (Eds.), *Managing social and ethical issues in organizations* (pp. 135-77), Information Age, Greenwich, CT, 2007.
- [66] Schaufeli, W. B., Taris, T. W., & Van Rhenen, W. Workaholism, burnout, and work engagement: Three of a kind or three different kinds of employee wellbeing? *Applied Psychology: An International Review*, Vol. 57, No.2, 173-203, 2008.
- [67] Shore, L. M., & Shore, T. H. Perceived organizational support and organizational justice. In R. S. Cropanzano and K. M. Kacmar (Eds.), *Organizational politics, justice, and support: Managing the social climate of the workplace* (pp. 149-164). Quorum, Westport, CT, 1995.
- [68] Srisuphan, W., Senaratana, W., Kunaviktikul, W., Tonmukayakul, O., Charoenyuth, C., & Sirkianokwilai, N. Supply and requirement projection of professional nurses in Thailand over the next two decades: 1995-2015. *Human Resources for Health Development Journal*, Vol.2, No.3, 210-219, 1998. Available from <http://www.moph.go.th/ops/hrdj/>.
- [69] Stinglhamber, F., & Vandenberghe, C. Organizations and supervisors as sources of support and targets of commitment: A longitudinal study. *Journal of Organizational Behavior*, Vol.24, 251-270, 2003.
- [70] Theorell, T., & Karasek, R. A. Current issues relating to psychosocial job strain and cardiovascular disease research. *Journal of Occupational Health Psychology*, Vol.1, 9-26, 1996.
- [71] van der Doef, M., & Maes, S. Teacher-specific quality of work versus general quality of work assessment: A comparison of their validity regarding burnout, (psycho)somatic well-being and job satisfaction. *Anxiety, Stress and Coping*, Vol.15, 327-344, 2002.
- [72] Wayne, S. J., Shore, L. M., & Liden, R. C. Perceived organizational support and leader-member exchange: A social exchange perspective. *Academy of Management Journal*, Vol.40, 82-111, 1997.
- [73] Wijhe, C.V., Peeters, M., & Schaufeli, W.B. Understanding workaholism and work engagement: The role of mood and stop rule. *Career Development International*, Vol. 16, No.3, 254-270, 2011.