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# The Influences of Family Supportive Supervisor Behaviors on the Relationships Among Work-Family Conflict, Stress, and Turnover Intention in Saudi Arabian Registered Nurses

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THE INFLUENCES OF FAMILY SUPPORTIVE SUPERVISOR BEHAVIORS ON THE

RELATIONSHIPS AMONG WORK-FAMILY CONFLICT, STRESS, AND

TURNOVER INTENTION IN SAUDI ARABIAN

REGISTERED NURSES

by

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# ABSTRACT

## THE INFLUENCE OF FAMILY SUPPORTIVE SUPERVISOR BEHAVIORS ON THE RELATIONSHIPS AMONG WORK-FAMILY CONFLICT, STRESS, AND TURNOVER INTENTION IN SAUDI ARABIAN REGISTERED NURSES

by

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Under the Supervision of Professor Amy Coenen, PhD, RN.

Many countries around the world are struggling to maintain adequate number of nurses. Inadequate nursing staffing could compromise the quality of patient care. Among many factors that contribute to RN turnover, the influence of work–family conflict (WFC) has gained little attention. In Saudi Arabia, the turnover rate among Saudi nurses reached 50 % of the total employed nurses. Work-family conflict was found to be a reason that influence Saudi nurses to leave their workplace. In addition, WFC was found to be significantly association with increased turnover intention (TI) among employees. Furthermore, WFC has been linked to a number of negative consequences, including lower job satisfaction and organizational commitment, sleep insufficiency, insomnia symptoms, obesity, cardiovascular diseases, sleep insufficiency, and high cholesterol. In an effort to find strategies to manage the consequences of WFC, many behavioral, psychological, and career scholars have focused on the role of supervisor support. Family Supportive Supervisor Behaviors (FSSB) has been found to be a promising approach contributing to the reduction of TI in employees' experiencing WFC. Despite the importance of work–family issues and the influence of FSSB, limited studies have been conducted among the nursing population and none were found that included a sample from Saudi Arabia. Therefore, the main Purpose of this study was to evaluate the influence of FSSB on the relationship among WFC, Stress, and TI in Saudi Arabian registered nurses. Method: A cross-sectional study. Sample: Convenience sampling; 113 Saudi female nurse.

Result: Fifty percent of nurses intended to leave their workplace, 68 % of nurses reported having a conflict between work and family, and 44% reported having a high level of stress. A significant positive correlation was found between WFC and TI (r= .43, P<0.01). A negative correlation was found between FSSB and TI (r= -.53, P<0.01). Both WFC and stress were associated with TI; however, these associations were buffered (weaken), when nurses had higher FSSB. Conclusion:  Managing work and family demands is a huge challenge for many employees including nurses. FSSB could be the tool to facilitate married, female nurses in their professional role without compromising their family responsibilities. Nurses' turnover is a complex issue that may require multiple prevention strategies; however, enhancing FSSB could be a key resource for maintaining a positive workplace environment and reducing TI.

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**Chapter I.  Introduction**

The Influence of Family Supportive Supervisor Behaviors on the Relationships among Work-Family Conflict, Stress and Turnover Intention in Saudi Arabian Registered Nurses

**Introduction**

The quality of patient care is compromised by high turnover rates among nurses (Moore, 2014). Turnover adds to the worldwide nursing shortage that challenges many countries. Nevertheless, this critical issue remains unresolved worldwide. According to the National Healthcare and Registered Nurse (RN) retention report, the national average turnover rate in the United States for bedside nurses in 2015 was 17.2%, compared to 13.5% in 2011, which led to a Vacancy Rate of 7.2%; an average of 85 days is needed to fill each vacant RN position (Nursing Solutions, Inc., 2015). The next five years are poised to be more challenging for the nursing workforce since many nurses are among the baby boomer generation that will begin to retire. The Health Resources and Services Administration (HRSA) report that without serious intervention, a shortage of nearly 340,000 nurses is predicted by 2020 in the US.

Excessive RN turnover and an insufficient nurse staffing supply are often associated with deterioration in the quality of healthcare services (Price & Mueller, 1981). A considerable number of researchers have indicated that when healthcare organizations were unable to retain adequate RNs, patient outcomes were undesirably impacted (Aiken, Clarke, Sloane, Sochalski, & Siber, 2002; Buerhaus, Donelan, Ulrich, Norman, DesRoches, & Dittus, 2007; Price & Mueller, 1981). Retaining nurses in the workplace has become a priority to ensure high quality healthcare services and to reach desirable patient outcomes (Moore, 2014).

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Like many countries, Saudi Arabia continues to suffer from a shortage of nurses. Despite the increasing numbers of graduate Saudi nurses, there remains an obvious struggle to retain them in the workplace. Currently, Saudi nurses constitute only 29.1 % of the total nursing workforce in the governmental health sector (MOH, 2011) and only 4.1% in the private health sector (ALmalki, 2012). Saudi Arabia hire nurses from other countries to meet the growing needs of the population and the increasing demands of the nursing workforce. The Chairperson of the Scientific Board of Nursing in the Saudi Council for Medical Specialties, Dr. Sabah Abu Zinadah (2010), indicated that the turnover rate among Saudi nurses reached 50 % of the total employed nurses.

Nurses comprise the frontlines of any healthcare delivery system, and any instability in RN staffing can pose a huge challenge to delivering high quality healthcare services. Nurse turnover is considered one of the most significant issues in healthcare that needs to be addressed. A considerable number of scholars have examined nurse turnover and found that non-nursing responsibilities, stress, and supervision can create an uncomfortable environment that increases turnover among nurses (Chiang & Lin, 2009; Kuo, Lin, & Li, 2014).

Early recognition of the nurses' intention to leave could help nursing administration interrupt the process and prevent the actual turnover; Wagner (2010) emphasized the need to target the employees who are at risk for turnover and find ways to retain them in the workplace. Among many causes of turnover, the conflict between work and family was a serious variable documented in the literature (Crain & Hammer, 2013; Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011). According to the National Study of the Changing Workforce, 60 % of working adults reported difficulty in balancing work and family demands (Keene & Quadagno, 2004). Conflict between work and family demands was one of the variables most often

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positively associated with turnover (Amstad, Meier, Fasel, Elfering, & Semmer, 2011). Employees who perceive that their work roles are interfering with their family roles revealed higher intentions to leave (Lin Qiu, 2010).

Work family conflict was found to be associated with many negative consequences such as low job satisfaction, low organizational commitment (Hoobler, Wayne, & Lemmon, 2010), sleep insufficiency, insomnia symptoms (Crain, et al., 2014), low work performance, career dissatisfaction, poor psychological well-being, anxiety disorders, mood disorders, substance abuse (Frone, 2000), and depression (Obidoa et. al., 2011). Furthermore, work-family conflict (WFC) was found to be a major cause of stress (Choi, 2008), which in turn was found to significantly influence turnover intention (Applebaum et al., 2010; Kuo, Lin, & Li, 2014).

Family support in the workplace has been shown to ease work-family conflict (Frone, Yardley, & Markel, 1997). Studies have shown that employees who receive social support at work fared better in managing their multiple roles and experienced lower levels of work-family conflict compared with employees who perceived lower levels of support (Frone, Yardley, et al., 1997; Voydanoff, 2005). Family support from supervisors can help employees meet various work and family demands, and may serve as a valuable resource in helping to cope with their multiple roles responsibilities. It may also help employees to reduce stress levels (Madigan & Hogan, 1991) as well as work-family conflict (Anderson, Coffey, & Byerly, 2002).

## Healthcare System in Saudi Arabia

The Ministry of Health (MOH) is the main provider of health care services in Saudi Arabia. The MOH is responsible for planning, formulating and managing health care policies in the country.  In addition to its role in formulating policies, the Ministry of Health (MOH)

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supervises health programs and monitors health services in the public and private sector. It also directs governmental and private agencies to achieve the government's health objectives. In Saudi Arabia, health regulations and legislation are supported by laws that define the responsibilities of partners and the delivery of service with respect to a set of norms and standards. Importantly, 60 % of the total healthcare services in Saudi Arabia are provided by the MOH at a total of 244 hospitals (33,277 beds) and more than 2000 primary healthcare center.

The remaining 40 % of health care services are provided by other governmental and private organizations such as security forces medical services, army forces medical services, National Guard health affairs, Ministry of Higher Education hospitals (teaching hospitals), Saudi Arabian Oil Company's hospitals, Royal Commission for Jubail and Yanbu health services, school health units of the Ministry of Education and the Red Crescent Society, and King Faisal Specialist Hospital and Research Centre (Health statistical year book, 2009).

## Statement of the Problem

The quality of patient care could be compromised by the high turnover rate among nurses (Moore, 2014). Many hospitals around the world have seen a dramatic rise in turnover rates; in the United States, the turnover rate has significantly increased from 13.5 % in 2011 to 17.2% in 2015 (Nursing Solution, 2015). Rretaining an adequate number of trained nursing personnel is an essential factor to provide safe and high quality care (Moore, 2014). Yet, many countries around the globe are challenged to retain qualified nurses. Almost 40% of registered nurses intended to quit their jobs and search for new employer within the first year of employment (Kovneret al., 2007). The high rate of nursing turnover creates a disruptive, unstable work

environment that negatively impacts the retention of other nurses and other healthcare providers as will (Anderson, Corazzini & McDaniel, 2004).

Nursing turnover can lead to increased pressure and workload placed on remaining nurses which puts them at higher risk of experience stress themselves and increase their intention to leave. The result is a cycle of constant increase in the rate of turnover among RNs and other healthcare providers which can lead to a crisis in the healthcare organization if no intervention is taken. Alarming rates of nurses' turnover should force healthcare organizations, leaders, and policy makers to adopt innovative approaches to retain their current nursing workforce.

## Significance of the Problem

Nursing turnover has many consequences for hospitals and healthcare systems. Turnover results in not financial strain to the systems, but also compromises the patient outcomes and the quality of healthcare. Further, high nursing turnover can create a disruptive and unstable work environment for remaining healthcare providers.

### Financial Strains

There is direct and indirect financial cost of losing and replacing a bedside nurse. The 2015 National Healthcare & RN Retention Report revealed the average cost of turnover for a bedside RN ranges from $44,380 to $63,400. According to the RN Recruitment Difficulty Index, it may take up to three months to recruit another experienced nurse which adds more financial strains on the healthcare organizations. It was estimated that each percentage increase in the RN turnover will cost the average hospital an additional $359,650 (Nursing Solutions, Inc., 2015). More than 60 % of RN turnover costs were associated with the cost of vacant RN positions and the training and orientation of new nurses (The Lewin Group, Inc., 2009). Based

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on experts' evaluation of the Retaining Experienced Nurses Research Initiative Report (2009), it was revealed that the cost of nursing turnover rate can be 75 % higher in hospitals with more than 1000 full time RN. This discrepancy in cost is due to the considerable differences in spending on terminating, recruiting, orienting, and training between hospitals with more than 1000 full time RN and hospital with less than 1000 full time RN (The Lewin Group, Inc., 2009).

**Threat to Safety and Quality of Health Care**

Nursing turnover has many consequences for hospitals and healthcare systems (Ford, 2011). Turnover results in not only losing the knowledge and experience of an RN, but also compromising the patient outcomes and the quality of healthcare, and also potentially threating clients' lives and safety (Ford, 2011). The link between nursing turnover and patients' safety was the main topic of the Careful Nursing Conferences (Moore, 2014), where many leading health service policy-makers shared their concern. They identified that in a situation with high turnover rate among nurses, additional workload and responsibilities would be placed on those remaining. This situation would decrease time spend caring for each patient; therefore, the quality of patient care will be compromised and some patients needs will be neglected (Moore, 2014).

Inadequate nursing personal was linked with decrease in the general quality of patient care, increases in the length of patient stays within hospitals, and increase incidence of hospital-acquired diseases (Dana, 2005). Furthermore, the high rates of nursing turnover were correlated with a poor patient outcome, deep vein thrombosis, in hospitalized patients (Ford, 2011).

Inadequate number of RNs not only impacts patients' health and safety, but nurses' safety also could be compromised. Nursing shortage and high turnover rates can create a stressful

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environment that has negative impact on remaining nurses. It was found that staffing shortage has led to burnout among nurses and can increased error and absenteeism rates among remaining nurses (Glass, McKnight, & Valdimarsdottir, 1993). Researchers from Johns Hopkins Bloomberg School of Public Health revealed that higher turnover rates are associated with higher numbers of nursing injuries such as needle sticks and falls.

**Significance of the Problem in Saudi Arabia**

Despite the progress and effort in preparing nurses for the workplace, Saudi Arabia is still suffering from a shortage of Saudi nurses. The ratio of nurses to population in Saudi Arabia is only one nurse for every 473 people (1:473), which is less than the ratio in other regional countries such as Bahrain (1:61), Qatar (1:60), and other developed countries Australia (1:97), Japan (1:95) and France (1:80) (WHO, 2009). Currently the government depends on recruiting nurses from other countries to meet the growing needs of the population and the increasing demands of the nursing workforce.

The Chairperson of the Scientific Board of Nursing in the Saudi Council for Medical Specialties, Dr.Sabah Abu Zinadah, indicated that turnover among Saudi nurses reached 50%, and the main two reasons for this were social attitudes and lack of strong support (Al Riyadh Newspaper, 2010, April 10). A recent study conducted at one of the largest hospitals in Riyadh, Saudi Arabia found that almost 40% of 250 nurses who left their jobs did so due to family reasons, such as conflict between time of work and important family events (Alonazi, & Omar, 2013)**.**

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## Significance of the Study

This study has the potential to add to the knowledge about nurse retention.  The proposed study is the first of its kind conducted in Saudi Arabia, one of the biggest countries in the Middle East, in examining the relationship between work-family conflict, stress, supervisor support, and turnover intention among nurses.  In addition to advancing nursing in Saudi Arabia, this study may lend theoretical, methodological, and practical contributions to the field of nursing.

Within the current nursing shortage, nurses' retention has been a main concern for nurse managers (Galletta, Portoghese, Penna, Battistelli, & Saiani, 2011). It is an intelligent investment for healthcare organizations to adopt most effective and innovative approaches to maintain employed nurses in the workplace.  This study aims to examine the influence of supervisor support in reducing turnover intention among nurses—especially those who experience higher levels of stress and work-family conflict. The findings of this study can provide recommendations to enhance nurses' retention and decrease turnover rate.

Furthermore, study results may alert administrators and policymakers about the negative consequences of work family conflict and the importance of supervisor support. Since existing studies are very limited in this field, this study provides a starting point for scholarly work aiming at reducing nursing turnover and enhancing nursing retention.   Problems within the nursing workforce, such as turnover, have been linked to increased costs of healthcare systems and poor patient outcomes (Moore, 2014: Nursing Solutions, Inc., 2015).

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**Significance to nursing in Saudi Arabia.** Saudi Arabia is facing a chronic shortage of native nurses that is accompanied by high turnover rates. Therefore, the largest proportion of nurses in Saudi healthcare facilities are expatriate nurses from other countries (MOH 2008; WHO 2006). According to the statistics of the Ministry of Health (MOH), Saudi nurses represent less than 30% of the total population of the nursing workforce (2008). Therefore, this study is significant to nursing in Saudi Arabia as it examines factors related to Saudi nurses' turnover, and may facilitate suggestions for both recruitment and retention.

Retaining Saudi nurses in the country's workforce could help in delivery of culturally sensitive healthcare, since Saudi nurses are sharing the same culture and language as the population. In-depth interviews with six expatriate nurses working in Saudi showed the negative consequences of language, and cultural differences between nurses and population (Halligan, 2006). Non-Saudi nurses perceived their communication with patients and their families to be a constant battle. The expatriate nurses revealed that communication was primarily non-verbal and care was very difficult due to the language barrier. This language barrier or communication problem resulted in tension among the patient, their family members, and the nurse. Because of language differences, the expatriate nurses experienced stress and frustration; they believe that their patients were equally frustrated (Halligan, 2006). Increasing the rate of Saudi nurses or maintaining a balanced rate with expatriate nurses would decrease the negative consequences of language, and cultural differences. Further, retaining Saudi nurses in the workplace may help to reduce costs while also increasing quality of care.

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**Statement of Purpose**

Despite the growing importance of supervisor support in the workplace and its potential impact on turnover intention (TI); studies are very limited in this area. This study will be part of a research program aimed at improving recruitment and retention of qualified Saudi nurses to meet growing operational needs in Saudi Arabia. This study was aligned with current Saudi initiatives aimed at maximizing the number of Saudi nurses to ensure stability and balance in the nursing workforce. The purpose of this study was to investigate the influence of family-supervisor support (FSSB) on the relationships among work-family conflict (WFC), stress, and TI in Saudi Arabian registered nurses working in a tertiary teaching hospital in Saudi Arabia.

**Research questions**

Among registered nurses working in hospital settings in Saudi Arabia:

1. What are the levels of WFC, TI, stress, and FSSB?

2. What are the relationships among demographic characteristics, WFC, TI, stress, and FSSB?

3. What amount of variance in WFC can be explained by socio-demographic variables?

4. What amount of variance in TI can be explained by socio-demographic variables?

5. Controlling for socio-demographic variables, what amount of the variance of TI can be explained by WFC, stress, and FSSB?

6. Is the relationship between WFC and TI moderated by stress?

7. Is the relationship between WFC and TI mediated by the levels of FSSB?

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# Theoretical Framework

A number of social support theories advocated the important role of social support in the workplace to reduce many adverse effects. As discussed earlier, many factors could increase stress level and make employees consider leaving the workplace. Most theoretical perspectives on social support hypothesize that social support can reduce the effect of stressful events on human decisions and wellbeing. For example, the essence of the Buffer Theory of Social Support (Cohen & Wills, 1985) highlighted that individuals who do not receive social support are more likely to have adverse event. The developers of this theory, suggested that FSSB could buffer the impact of WFC and stress on TI. This theory advocates the positive influence of FSSB in the workplace and supports its potentials in reducing stress level and TI. Social theories provide a clear theoretical framework for better understanding the possible impact of support on reducing TI among nurses.

In additions to social support theories, this study was guided by the Workplace Support and Turnover Intention (WSTI) conceptual model (Alshutwi, 2016). The WSTI is a new developed model that illustrates the relationships between four main categorical influential factors, anticipated outcomes, and TI. Further the WSTI model showed the potential role of support in the workplace (Figure 1).

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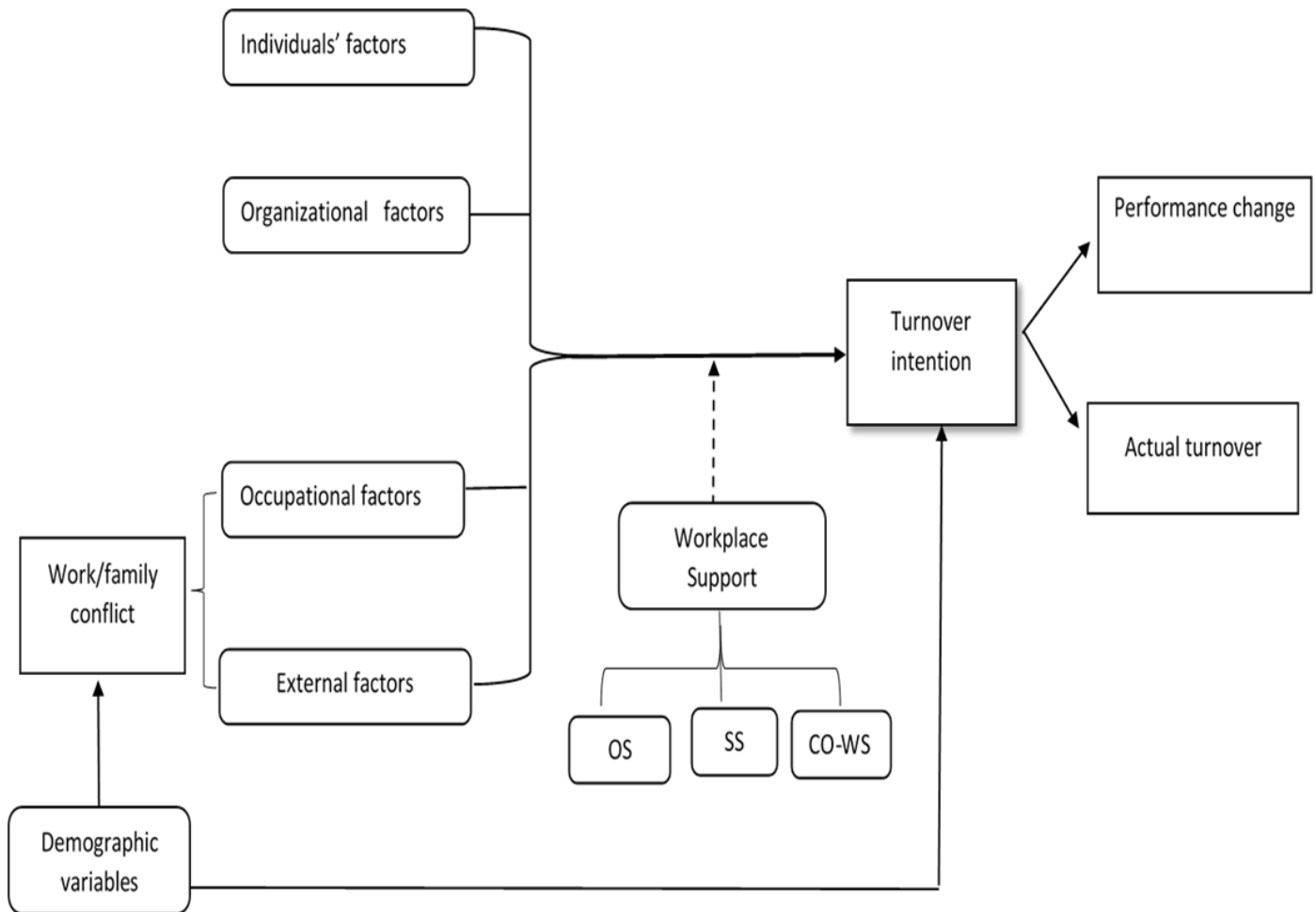
*Figure 1*. Workplace Support and Turnover Intention (WTIS) Conceptual Framework; Identifies the multiple factors influencing Turnover Intention, and the potential meditating effects of workplace support.

*Note*: OS: Organizational support; SS: Supervisors support; CO-WS: Co-workers support

 

This WSTI model identifies individual, organizational, occupational, and external factor

as influential factors that are associated with TI.  WFC was also identified as an influential

variable; demographic variables are associated with the level of WFC. The WSTI framework

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shows the role of workplace support in the relationships between the influential factors and TI. The social support in this model involved different level and type of support such as FSSB, Perceived Supervisor Support (PSS), and Perceived Organizational Support (POS). Finally, this model displayed the possible consequences of TI: actual turnover and change in the performance.

## Conceptual Model

Guided by social support theories and the WSTI framework, the following conceptual framework was developed to illustrate the proposed relationships between the study variables. This model displays the possible influence effect of the FSSB and stress on the relationship between WFC and TI (Figure 2).
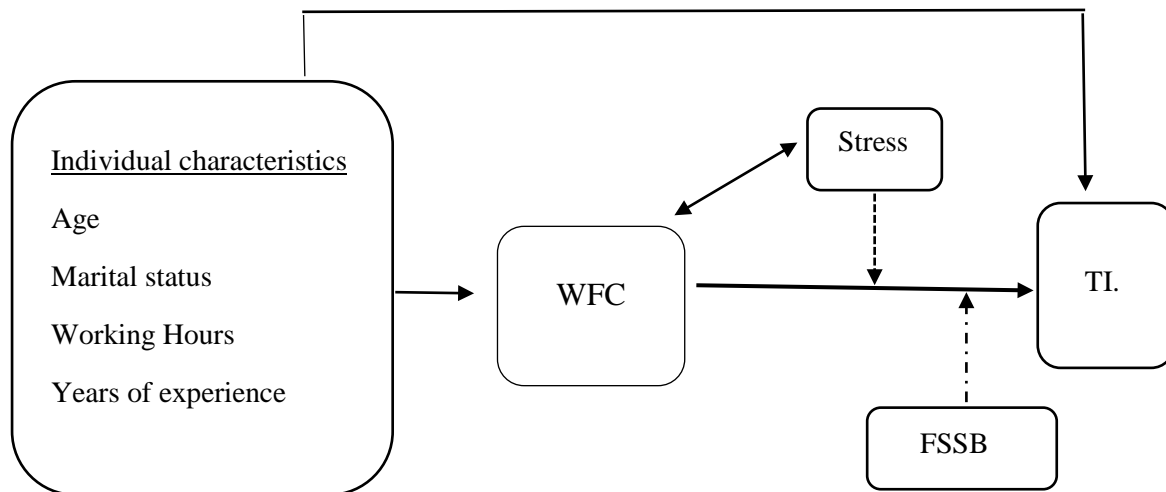


*Figure 2.* The influence of FSSB on the relationships among WFC, stress, and TI.

Note: WFC: Work-family conflict; FSSB: Family Supportive Supervisor Behaviors; TI: Turnover intention.

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In previous research, some individual characteristics such as age, marital status, having children, and years of experience were found to have significant association with WFC which in turn had a significant association with TI (Ma, Lee, Yang, & Chang, 2009; Hwang, & Chang, 2009). Further, these individual characteristics were found to have a direct association with TI (Almalki, FitzGerald, & Clark, 2012). As illustrated in the framework, the relationships between these variables and WFC will be examined as well as their relationships with the TI.

Although many social support theories suggested the direction of the relationship between WFC and stress, there is a potential of opposite temporal sequences of the direction of this relationship. Experiencing high levels of WFC could increase stress levels and vice versa as high level of stress could increase levels of WFC. Therefore, the relationship between Stress and WFC was exemplified by left right arrow in the framework (Figure 2).

FSSB plays an influential role on the relationships among WFC, stress, and TI. With increased FSSB, the relationship between WFC and TI would be insignificantly reduced (Research Question 7). Further, with increased FSSB, the relationships among WFC, stress, and TI would be weaken (Research Question 8). As shown by figure 2, the possible moderating and moderating effect were illustrated by doted arrows in the framework.

## Key Terms Definitions

### Work-Family Conflict (WFC)

The WFC is a form of inter-role conflict, in which there is an incompatibility between the role demands of work and family domains (Parasuraman & Greenhaus, 2002). Work-family conflicts can occur when demands of one role— either work or family—intervene in meeting

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other role demands.  It is nearly impossible for employees to completely separate their work and family domains from each other (Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011).

In early work-family literature during the 1980s, WFC was conceptualized as a unidimensional concept (e.g. Kopelman, Greenhaus, & Connolly, 1983).  However, currently WFC is viewed and studied as a two-dimensional concept (Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011; Kelloway, Gottlieb, & Barham, 1999).  The two dimensions are the two directions in which WFC occurred: work interference with family (WIF) and family interference with work (FIW).  WFC has been defined as "a form of inter-role conflict in which the role pressures from work and family domains are mutually incompatible is some respect" (Greenhaus & Beutell, 1985, p. 77).

In this study WFC is measured by the Work and Family Conflict Scale which was developed by Netemeyer, Boles, & McMurrian (1996). It is a 10-item scale in which each dimension of WFC is measured by 5 items.

**Stress**

Although stress could be assumed as an accepted part of any work environment, its consequences can be harmful (Hong, Kim, Yoshihama, & Byoun, 2010). Stress experienced at work has undesirable outcomes—both on the workers and the organization.  Employee stress has been linked to many undesirable outcomes such as anxiety, job insecurity, absenteeism, and negative work performance, as well as the development of depressive symptoms.  With lack of insufficient coping recourses, stressful events can increase the risk of mental and physical diseases (Hong, Kim, Yoshihama, & Byoun, 2010).

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Stress has been defined from psychological perspective as the extent to which persons perceive that their demands exceed their ability to cope (Cohen, et al, 1995). In this study, stress was measured by the Perceived Stress Scale (PSS-10) which was developed in 1983 by Cohen, Kamarck, and Mermelstein. In previous studies, the PSS-10 showed a good reliability; coefficient alphas were 0.84, 0.85 and 0.86, and it has been used in the nursing population (Laranjeira, 2012).

**Turnover Intention (TI)**

The term TI is not a new concept in nursing. It has been used to describe employees' willingness to leave their organizations (Tett, & Meyer, 1993). Despite the recognition of the importance of TI and the extent to which it is used, no one definition of the concept was found to clearly articulate its meaning and distinguish it from other concepts. The meaning of the concept was defined in some studies as employees' readiness or attempts to voluntarily quit their current jobs (Karsh, Booske, & Sainfort, 2005). The TI may refer only to thoughts of leaving the organization (Tsai, &Wu, 2010). Most of the studies in the literature did not specify the time when employees formulated intent to leave the institution. Other studies specify the leaving time within the next two years of employment (Lansiquot, Tullai-McGuinness, & Madigan, 2012) or three years (Aryee, Wyatt, & Min, 2001).

A review of the literature indicated that TI occurs in the context of cognitive, psychological and behavioral factors (Lum, Kervin, Clark, Reid, & Sirola, 1998). Blau, & Boal (1989) explained that an intention to quit means a psychological withdrawal from the institution. Others define TI as only the thoughts of willingness to leave the organization (Tsai, & Wu, 2010). Recently, TI was defined as a multi-stage process involving employees' voluntarily leaving their current workplace (Takase, 2010).

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In this study, TI was measured by the Turnover Intention Scale (TIS) developed by Cammann, Fichman, Jenkins, and Klesh (1979). The TIS is a 3-item scale that has substantial validity and reliability, and was used in different professions, including nursing (Ayamolowo, Irinoye, & Oladoyin, 2013).

**Family Supportive Supervisor Behaviors (FSSB)**

A supervisor who demonstrates FSSB behaviors was defined as "one who empathizes with the employee's desire to seek balance between work and family responsibilities" (Thomas and Ganster (1995, p. 7). A group of scholars described FSSB as support provided by a supervisor who recognizes "the dual agenda of working families housed within organizations" (Hammer, Kossek, Zimmerman, and Daniels (2007, p. 182). This supervisor is a supporter and advocate of employees' family roles (Hammer et al., 2009). FSSB is about showing care for employees' wellbeing by making effort to help them maintain the balance between their work and family demands and resolving any conflicts (Hammer et al, 2009). Hammer et al. (2009) described FSSB as a multidimensional paradigm consisting of four types of behaviors. These behaviors involve emotional support, instrumental support, role model behaviors, and recognition of the strategic importance of work-family issues, also called proactive creative work-family management (Hammer et al, 2009).

In this study, the FSSB was measured using the Family Supervisors Support Behavior scale (FSSB). It is a 14-item scale developed by Hammer et al. (2009). The FSSB scale was developed to measure four dimensions: emotional support (4 items), role modeling behaviors (3 items), instrumental support (3 items), and creative work-family management (4 items).

**Emotional support**. Emotional support is about making employees feel that they are being cared for; their feelings are being deliberated. Employees need to feel comfortable discussing their work-family issues and concerns with their supervisors. Supervisor may show their emotional support by being aware and concerned about employees' family and personal life commitments. Further, emotional support can be shown by demonstrate respect, understanding, and sympathy in regard to employees' family responsibilities. Supervisor emotional support involves the ability to make employees feel comfortable talking about family-related issues, and express their concern for the way that work may affect family responsibilities. Other terms have been used in the literature to describe the emotional support such as sensitivity (Warren & Johnson, 1995) and interactional support (Winfield & Rushing, 2005).

**Instrumental support.** Instrumental support is type of a responsive behavioral in which the supervisor can create a flexible work schedule or flexible task assignments. In this kind of support, the supervisor responds to employee's work and family needs in a form of daily management transactions. These may include responding to scheduling requests for flexibility, or managing routine work duties to ensure that employees' work tasks get done. The key element of instrumental support is to provide day-to-day resources or services to assist employees in their efforts to manage their dual roles in work and with family. This support is generally perceived in the supervisors' routine reactions to manage day-to-day employee work-family conflicts (Hammer et al., 2009).

**Role modeling.** Role modeling behaviors refer to supervisors demonstrating the ability to balance work and family demands and how to integrate those domains without being stressed. Role modeling can be defined as the extent to which supervisors provide real examples of strategies and behaviors that employees can adopted to maintain the balance between work and

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family responsibilities. Furthermore, role modeling support may involve discussing different career path that work better for one's family responsibilities (Greenhaus, & Singh, 2007), or sharing ideas about strategies that have helped someone successfully manage work and family demands (Hammer et al., 2009).

**Proactive creative work-family management.** This type of management involves being innovative and proactive in taking action at an organizational level, such as investigating ways to redesign the work environment to reduce conflict and enhance organizational outcomes (Hammer et al., 2009). Such supervisors' behaviors require big-picture thinking that involve thinking about policies and practices that help employees maintain the balance between work and family responsibilities.

### Individual Characteristics

In the literature many individual characteristics and demographic factors linked to TI were discussed. These characteristics and demographic factors included the number of dependents (Almalki, FitzGerald, & Clark, 2012) and skin color (Karsh, Booske, & Sainfort, 2005). Additional factors were found to have associated with either TI or WFC such as tenure, age, marital status, and parental demands.

Due to culture of Saudi Arabia, some of individual characteristics were excluded. For example, it was not culturally acceptable to ask participants about their skin color. Therefore, in this study the included individual characteristics were include age, marital status, number of children, years of experience, and working hours.

## Literature Review

**Work-Family Conflict (WFC)**

As many as 60% of working adults reported having difficulty in balancing work and family (Keene & Quadagno, 2004). Workers reported that working long hours interferes with the time they spend with family or friends. The WFC is defined as "a form of inter-role conflict in which the role pressures from work and family domains are mutually incompatible in some respect. That is, participation in the work (family) role is made more difficult by virtue of participation in the family (work) role" (Greenhaus & Beutell, 1985, p. 77). The WFC can take two domains: The work role can interfere with the family role, or the family role can interfere with the work role (Frone, 2000). Although a few researchers have examined these domains separately, many researchers have found some similarities between WIF and FIW (Amstad, Meir, Fasel, Elfering, & Semmer, 2011).

A considerable body of research has examined the potential negative consequences of WFC. It was found that WFC is associated with lower job satisfaction, lower organizational commitment (Hoobler et al., 2010), and was significantly related to sleep insufficiency ($\beta$ = .24, $p < .001$) and insomnia symptoms ($\beta$ = .13, $p < .001$) (Crain, et al., 2014). Furthermore, FWC was found to be negatively associated with work performance, career satisfaction, psychological well-being, and positively associated with anxiety disorders, mood disorders, and substance abuse (Frone, 2000). In a study assessing the impact of WFC on depression among a sample of 220 correctional officers from two prisons in the northeastern United States, Obidoa et. al., (2011) found 31% of their participants to have depression ratings above the cutoff for serious psychological distress. According to a meta-analysis WFC was one of the variables most often positively associated with TI (Amstad, Meier, Fasel, Elfering, & Semmer, 2011).

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Researchers found that WFC was a strong predictor of TI (Carr, Boyar, & Gregory, 2008). Individuals who perceive that their work roles are interfering with their family roles revealed higher TI (Lin Qiu, 2010). In a study by Haar (2004), WFC was positively associated with TI ($\beta$=.49, p<.001) and accounted for 22% of the TI variance (n=100). Consistently, other results showed significant association between WFC and turnover intention ($\beta$ = .247, p < .0001) (Ahmad & Omar, 2013).

Hammer and co-authors (2013) conducted multiple studies evaluating the FSSB. Using data from a sample of 823 information technology professionals, researchers found a significant association between WFC and TI ($\beta$=.46; $\beta$=.45; $\beta$= .35). Employees who work with supportive supervisors have reported less WFC (Lapierre et al., 2008). Although common perception found that women are more likely to have WFC, the research generally indicates there were no gender differences. However, having children did increase the probability of having FWC (Whiston & Cinamon, 2015).

A number of career scholars have emphasized paying more attention on the interface between work and family (Blustein, 2011; Richardson, 2012). There is an evidence that WFC is associated with harmful outcomes such as job exhaustion (Rantanen et al., 2013), while work-family facilitation is positively correlated with enhanced mental and physical well-being (Whiston & Cinamon, 2015).

**Stress**

Stress is the psychological, behavioral, and physiological reaction to environmental demands, threats, and challenges. Reactions may involve responses such as irritation, depression, and headache (Ganster & Rosen, 2013). Although there is an approved association

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between stress and WFC, the direction of effect between WFC and stress is still unclear. Due to their cross-sectional designs, most studies and meta-analyses cannot provide insights into the direction of this relationship. However, the assumption that WFC predicts stress is a core component of many work-family models (Allen, Herst, Bruck, & Sutton, 2000). The Conservation of Resources Theory provides support for this directional assumption. Therefore, it was widely reported that employees who have higher levels of WFC also reported higher levels of stress (Kreiner, 2006). Nevertheless, fewer researchers argue that higher level of stress can produce WFC (Li, Shaffer, & Bagger, 2015).

In a number of studies, stress was one of the factors that had direct and indirect influence on TI. Employees experienced stress when there was a difference between work demands and the abilities and resources needed to meet those demands (Yin-Fah, Foon, Chee-Leong, Osman, 2010). A positive relationship was found between stress and TI (Ryan, Ghazali, & Mohsin, 2011; Siong, Ming, Mellor, Moore, & Firth, 2006). Applebaum et al. (2010) found significant positive relationships between perceived stress and TI ($r = 0.34$). Another study indicated the same conclusion—that stress is positively correlated to participants' TI ($r = 0.60$, $P < 0.001$) (Kuo, Lin, & Li, 2014).

Further, it was reported in the literature that stress had a negative correlation with job satisfaction. Applebaum et al. (2010) found significant negative relationship between perceived stress and job satisfaction ($r = -0.55$). Similarly, Kuo and co-authors (2014) reported a significant negative association between job satisfaction and stress ($r = -0.65$, $P < 0.001$). Stressed employees were less satisfied and more intent to leave (Ryan, Ghazali, & Mohsin, 2011). A study involving more than 300 hotel employees showed a positive correlation between stress and burnout ($r=0.56$), and TI ($r=30$). (Jung, Yoon, & Kim, 2012).

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Stress was also a significant factor affecting employees' commitment to their job and organizations, and their intention to remain employed (Yin-Fah, Foon, Chee-Leong, Osman, 2010; Siong, Ming, Mellor, Moore, & Firth, 2006). Reducing employees' stress levels was recommended as an effective approach to increase their commitment and intention to stay (Lee, Shiou-Yu, Saint-Hei, & Dadura, 2010).

**Turnover Intention (TI)**

The TI has been widely researched by organizational behavior scholars. In general, TI referred to one's thoughts about leaving the workplace. The literature review indicated that TI occurs in the context of psychological, cognitive, and behavioral factors. Some authors attempted to define TI as a form of psychological withdrawal from the organization; TI has been described as an individual's mental decision about remaining or leaving the job (Jacobs and Roodt, 2007). A cognitive component was found as the essential part of TI where individuals start thinking about quitting and begin searching for alternative jobs (Mohamad, & Abdul Rahman, 2011). The term "withdrawal cognition" was used in the literature to describe TI (Mohamad, & Abdul Rahman, 2011). Gregory et al. (2007) described TI as employees' thoughts and thinking about quitting their organizations. Freund (2005) argued that TI is mainly the thoughts and thinking about leaving. Further, TI was conceptualized as a final cognitive indicator of the decision to quit (Chang, Chou, & Cheng, 2007).

Behaviors have been recognized as a key element in demonstrating TI (Benjamin, 2012). Withdrawal behavior was the main component that formed the process of TI. This withdrawal behavior may include deterioration in employees' performance (Becker, & Cropanzano, 2011). In a large sample of 1,413 employees, researchers found that descending trends in performance were significantly linked to TI (Sturman, & Trevor, 2001). TI behavioral signs could include

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lower enthusiasm at work (Chen & Francesco, 2000), lateness, and lack of punctuality (Harris, Kacmar, & Witt, 2005), and/or absenteeism (Krausz, Koslowsky, & Eiser, 1998). Employees who are intent to leave may verbalize their desire and express their intention in words (Gregory et al., 2007). In addition to verbalizing their intention, they may start actually searching for other jobs (Takase, Maude, & Manias, 2005).

It was found in the literature that TI was empirically and theoretically supported as a significant predictor of actual turnover (Ma, Lee, Yang, & Chang, 2009; Benjamin, 2012). Therefore, identifying nurses who experience TI can be a tool for nursing management to intervene and attempt to retain employees to prevent their actual turnover.

In nursing literature, TI was related to some variables that were unique to the nursing profession and were not found in other professions. Variables such as lack of autonomy, work load, non-nursing duties, staffing, supervision, and low wages were found to be characteristics of an uncomfortable environment that increases TI among nurses (Chiang & Lin, 2009; Kuo, Lin, & Li, 2014). Estryn-Behar et al. (2007) indicated that when better working conditions were perceived by the nurses, they had a lower TI at the hospital.

In nursing profession, researchers attempted to differentiate between intention to leave the organization and intention to leave the profession (Simon, Muller & Hasselhorn, 2010; Parry, 2008). Reviewing the literature in nursing revealed that nurses not only considered leaving their organization, but they considered leaving the nursing profession. A number of studies attempted to distinguish between intention to leave the employers and intention to leave the nursing profession (Parry, 2008). Yang and co-authors (2009) were able to study TI in the form of leaving the organization or leaving the nursing career. Although the intention to leave the profession was found to be significantly and positively associated with intention to leave the

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organization (Parry, 2008), professional commitment and job satisfaction were associated with nurses' intention to leave both the profession and organization (Simon, Muller, & Hasselhorn, 2010).

**Family Supportive Supervisor Behaviors (FSSB)**

The FSSB can help enhance employees' abilities to maintain the balance between work and family, and reduce the negative consequences that can results from the conflicts between theses domains (Kossek, Pichler, Bodner, & Hammer, 2011). Work-family researchers have distinguished between general and specific support related to the work-family issue. The FSSB refers to the degree to which employees perceive that supervisors "care about their ability to experience positive work-family relationships, and demonstrate this care by providing helpful social interaction and resources" (Kossek, Pichler, Bodner, & Hammer, 2011, p. 292). Support from supervisors had a more significant effect than the effect of support from family and friends (Nohe, & Sonntag, 2014) or colleagues and coworkers (Mayo, Sanchez, Pastor, & Rodriguez, 2012).

Numerous scholars from social and organizational behavior departments have examined the buffering effect of FSSB. This kind of support from supervisors may function as protective and buffered factors that prevent maladaptive coping strategies when experiencing WFC (Wang, Liu, Zhan, & Shi, 2010). Longitudinal study concluded that the relationship between WFC and TI is weaker when FSSB is high. The WFC is significantly associated with increases in TI when the levels of FSSB are low ($\beta = .13$, $p < .001$), but not significant at high levels of FSSB ($\beta = .03$). In the same study, researchers concluded that FSSB buffered the relationship between WFC and TI (Nohe & Sonntag, 2014).

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Similarly, Mayo and co-authors (2012) found a significant buffering effect of FSSB on the relationship between physical stressors and medical symptoms. Furthermore, the FSSB was found to buffer the relationship between WFC, job satisfaction, and life satisfaction. It was found that FWC was associated with decreases in job satisfaction and life satisfaction only for those who reported low levels of FSSB (Li, Shaffer, & Bagger, 2015). The same study concluded that with low levels of FSSB, employees who experienced FWC reported more symptoms of depression (Li, Shaffer, & Bagger, 2015).

A considerable body of research supports the role of FSSB in reducing many adverse effects that may occur for employees. Mayo and co-authors (2012) conducted a study using a sample of 768 employees from 45 organizations in North America. They found that FSSB had negative and statistically significant correlations with job tension (r =- .27) and physical symptoms (r =- .27). Further, in a study involving 623 information technology workers, FSSB was found to be positively related to sleep quality and quantity (Crain et al., 2014), employees' well-being, and engagement (Matthews, Mills, Trout, & English, 2014). Hammer and coauthors (2011) found a negative correlation between FSSB and TI (r -.29, p<.01). Further, employees who receive support from their direct supervisors reported lower levels of job stress (Bozo, Toksabay, & Kürüm, 2009).

The presence of supervisors who are supportive of an employee's work-family issues was associated with lower levels of WFC (Anderson, Coffey, & Byerly, 2002). Further research also provided evidence for the importance of FSSB in reducing WFC (Kossek, Pichler, Bodner, & Hammer, 2011). Family-work scholars claimed that FSSB appeared to be an important predictor of TI; nurses who experienced FSSB tended to stay in their job (van Dam, Meewis, & Heijden, 2013).

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**Individual Characteristics**

Although individual demographic variables play a limited, but important role in turnover research (Price 1995), research on the influence of these variables is lacking. Age, marital status, education, number of children, years of nursing and working hours been associated with nurse turnover intent and level of WFC (Shields & Ward 2001, Hayes et al. 2006, Tourangeau & Cranley 2006).

**Age**. Literature showed that age had direct and indirect influence on employees' TI (Hayes et al. 2006). Age had a direct negative relationship to TI, as older employees were less intent to leave. A number of studies concluded that younger employees were more likely to have higher TI compared with older employees (Almalki, FitzGerald, & Clark, 2012). A study conducted on newly graduated nurses concluded that younger employees were more likely to indicate TI (Beecroft, Dorey & Wenten, 2007). It was suggested that younger employees had less experience and needed more time to adjust to their job (Beecroft, Dorey & Wenten, 2007). Krash, Booske, and Sainfort, (2005), also suggested that as individuals age it may be more difficult to leave their job, since they may have more financial obligations such as a mortgage.

Some studies reported that age was negatively correlated with the probability of TI through job satisfaction. Younger people were less satisfied with their jobs. As a result, they had more TI because they were not satisfied (Tsai, & Wu, 2010; Lansiquot, Tullai-McGuinness, & Madigan, 2012; Carraher, 2011; Simon, Muller & Hasselhorn, 2010; Yin-Fah, Foon, Chee-Leong, Osman, 2010; Mohamad, & Abdul Rahman, 2011).

Literature review revealed a negative correlation between age and WFC. A study involved 243 nurses revealed a weak but significant correlation ($r=-0.15$, $p <.05$) between age

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and WFC (Yildirim, Dilek, Aycan, & Zeynep. 2008).  Recently Mache and coauthors (2015) conducted a study involved 727 physicians revealed the same result that the age was associated with WFC ($\beta=-0.12$, $p=0.03$).

**Marital status.**  A numbers of studies were able to connect marital status with TI. Researchers concluded that single employees were more likely to leave their jobs (Almalki, FitzGerald, & Clark, 2012; Ma, Lee, Yang, & Chang, 2009; Hwang, & Chang, 2009).  Ma and colleagues (2009) found that more than 70% of nurses in their study who revealed TI were single.  These findings match the results of McCarthy and colleagues (2007) who found that 60% of nurses who displayed high TI were single.

In regard to the relationship between marital status and WFC, it was found that single individuals reported less WFC than married ones (Herman and Gyllstrom, 1977). Steyl and Koekemoer (2011) conducted a study involved 245 of mining employees found statistically significant differences in the WFC level ($p <0.05$) between married group and unmarried group.

However, Oldfield and Mostert (2007) reported no significant differences between married and unmarried people there was an inconstantly in the literature. Few authors found that marital status is not significantly related to WFC ($r=-0.08$, $p = 0.42$) (Mjoli, Dywili, & Dodd, 2013).

**Number of children.**  A positive relationship was found linking parental demands such as taking care of children, and the level of work-family conflict experienced (Greenhaus & Kopelman, 1981). Increased family responsibilities may consume greater time and energy in the family domain (Greenhaus, Parasuraman, Granrose, Rabinowitz, & Beutell, 1989) and may leave employees with insufficient resources to meet their work requirements. The presence of children

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in the household places more responsibilities on working parents and can create even greater WFC (Hill et al., 2008). Employees with no children reported the least amount of work-family conflict. Mjoli, Dywili, and Dodd (2013) conducted a study involved a 100 female factory worker, revealed that the number of children is significantly positively related to work-family conflict (r = 0.32, p < 0.01).

The ages of children in the household often determine the level of care and needs, and significantly contributes to the experiences of WFC.  Parents of infants and preschool children experience higher family responsibilities than parents of children who are of school-going age, and WFC is found to be lowest in parents of adult children not living at home (Osherson & Dill, 1983).  A significantly positive correlation was found between the age of last-born child and the level of WFC (r = 0.27, p = 0.01) (Mjoli, Dywili, & Dodd, 2013).

**Years of experience.** Tuner or years of experience was linked with employees' turnover intention, WFC, and satisfaction with supervision (Tourangeau & Cranley 2006). In a large study among American nurses (Nogueras 2006), years of experience significantly predicted nurses' turnover intent. Similarly, Delobelle et al., (2011) conducted a study among nurses in South Africa (n = 143), and found that turnover intention was significantly and inversely correlated with years of nursing and tenure (r = -0.32, p<.001).

**Working hours.** The role theory suggested that longer work hours were associated with increased WFC and that longer work hours could also increase FWC by making less family time available to employees. Previous empirical investigations into the relationship between hours worked and WFC, have found a positive relationship between hours worked and WFC (Byron, 2005; Ebay et al., 2005). For example, Adkins, & Premeaux. (2012) conducted a study (n= 544) and found that hours worked was significantly and positively related to WFC (r= .69, p< .01).

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Consistently, Fu and Shaffer (2001) also found similar result that the amount of hours spent on work could increase the level WFC among employees.

## Literature in Saudi Arabia

Although the nursing turnover rate in Saudi Arabia is alarming, the number of scholars who examine this phenomenon is very limited. A study was conducted in Saudi Arabia in 2011 where the authors examined the relationship between quality of work life and TI of primary healthcare nurses (Almalke, FitzGerald & Clark, 2011). They found that almost 40% of nurses reported high intention to leave their current primary health centers. Using multiple regressions, authors of this study found that 26% of the variance in TI was explained by quality of work life. Al-Ahmadi (2014) found in his study that 27.5% of 971 Saudi nurses were seriously considering turnover. Another study conducted in Saudi Arabia showed that 40% of the total sample (n=508), were thinking about leaving their jobs (Almalki, FitzGerald, & Clark, 2012).

Among many reasons behind nurses' turnover in Saudi Arabia, family related reasons were the main motive. A study conducted in 1995, revealed that more than half of the nurses (n=488) expressed their intention to leave and 66% of those who wanted to leave indicated family reasons as the most important reasons (Bin Saeed). Similarly, a recent study conducted in one of the largest hospitals in Saudi Arabia found that family reasons were the main reasons behind nurses' turnover (Alonazi, & Omar, 2013). Another qualitative study conducted in Saudi Arabia highlighted family reasons as a main factor influencing Saudi nurses' turnover (Mebrouk, 2008).

Due to the limitation of scholarly work in Saudi, the literature review has been expanded to include other countries in the Middle East that have a culture similar to Saudi, such as Jordan,

Turkey, Egypt, and Iran. Ahmad & Omar (2013) found that support related to family issues in the workplace has a significant correlation with decreased TI ($\beta$= -.131, p < .0001). Similarly, Abu AlRub (2009) found a strong correlation between FSSB and nurses' TI(r= -.77). Another study finding revealed a moderately positive correlation between intent to stay at work and support from supervisors (r = 0.26) (AbuAlRub, 2010).

Overall, in the Middle East region, supervisor support was found to be negatively associated with TI (Ishihara, Ishibashi, Takahashi, Nakashima, 2014) and negatively associated with WFC (r= -0.16, p <.05) (Farhadi, Sharifian, Feili, & Shokrpour, 2013). Nevertheless, stress was found to be significantly associated with TI (r= 0.46, p<.05) and WFC (r = .56, p<.05) (Farhadi, Sharifian, Feili, & Shokrpour, 2013). Regarding individual differences, Farhadi and co-authors (2013) found that number of children negatively correlated with TI (r = -0.138, P < .01), and females were more intent to leave their jobs (Hamaideh, 2011).

**Gaps in the Literature**

Despite the significant findings associated with FSSB in the workplace, especially with the present of WFC, no researcher has examined the relationships between FSSB, WFC, and TI with nurses' population. Most of the studies that examine these variables were conducted with different populations, such as government employees (Harr, 2004). Most of studies that examined TI and its relationship to WFC, stress, and FSSB were conducted in Western countries. To date, no published study has examined these variables among nurses in Saudi Arabia. Despite the importance and outcomes FSSB in the workplace especially with the present of WFC, no researchers have examined the influence of FSSB on the relationships among WFC, stress, and TI among nurses' population. From the few studies that conducted in Saudi Arabia,

WFC was one of main antecedents of nurses' turnover intention, yet there is no single study examines the influence of FSSB on the relationships among WFC, stress, and TI.

Since there is a limitation of research reported in nursing literature in this area, this study will bridge this gap by examining the influence of FSSB on the relationships among WFC, stress, and TI in Saudi registered nurses. The proposed study has the potential to raise the awareness about the negative consequences of WFC and stress, and draw more attention toward the role of supervisors in reducing nurses TI.

## Summary

Within the current nursing shortage, nurses' retention has become a main concern for nurse leaders and policy makers.  Retaining qualified nurses has been linked to the high quality of care, yet many countries including Saudi Arabia are facing shortage in nursing human resources.  Despite the increasing numbers of Saudi nurses graduating from nursing education programs, there is still a struggle to retain Saudi nurses in the workplace.  One of the factors discussed in this paper that could contribute in increased TI was related to the conflict between family and work demands. This issue is gaining more attention in the literature due to its influence on work stability and productivity. Research indicated that individuals with high WFC are more likely to have higher intentions to leave their job.  Although turnover is a complex issue that may require multiple prevention strategies, FSSB has been advocated by many scholars as an effective approach that can manage this issue.  The positive impact of FSSB has many promising potentials in reducing TI.  Examine the influance of FSSB on the relationship between WFC, stress, and TI in Saudi Arabian nurses can provide insights about innovative approaches for recruiting and retaining nurses.

# Chapter II.   Literature Review

The Influences of Family Supportive Supervisor Behaviors on the Relationships Among Work-Family Conflict, Stress, and Turnover Intention in Saudi Arabian Registered Nurses

## Introduction

This chapter includes two manuscripts. The first manuscript was titled: Supervisor Support and Turnover Intention: A Systematic Review of the Literature. This systematic review of literature provides a review and critique of published research that discuss supervisor support as an approach to reduce turnover intention. In this manuscript a synthesise of the findings across studies was provided. Further, nursing implications and recommendations for further research were discussed in this manuscript. The second manuscript was titled: workplace support and turnover intention: a preliminary conceptual framework to inform practice and research. The purpose of this study was to develop a framework that highlighted the impact of workplace support on TI.  Further, this framework was developed to identify the relationships among TI, influential factors or antecedents of TI, and possible consequences of TI.

**Manuscript 1:** Supervisor Support and Turnover Intention: A Systematic Review of the

Literature

## Abstract

Maintaining adequate nursing staff is a real challenge that many healthcare organizations

are facing. Many factors have been identified to positively influence the reduction of Turnover

Intention (TI) among employees. One significant factor recently discussed in the literature that

requires more attention is supervisor support in the workplace. **Aim.** This systematic review of

the literature aims to: (a) review and critique the published research on supervisor support in the

workplace as an approach to reduce TI, (b) synthesize the findings across studies, and (c)

identify the gaps in the literature and make recommendations for further research.  **Methods.**

Five steps to conducting a systematic review were adopted (Khan, et. al, 2003). These steps

included (a) framing the question as "What is the relationship between supervisor support and

TI" (b) identifying relevant work, (c) assessing the quality of studies, (d) summarizing the

evidence, and (e) interpreting the findings. Electronic literature databases CINAHL, Academic

Search Complete, Business Source Premier, Education Research Complete, Health Source, and

PsycINFO were searched for review using a combination of keywords. **Results**. In total, 318

unique publications were located. After reading titles and abstracts, a total of 14 studies were

selected for initial review.  Examination of the reference lists of these 14 studies revealed eight

more studies to be included in the initial review.  After screening, a total of 12 articles were

included in this systematic review.  All 12 studies reported a negative association between

supervisor support and TI. However, there were variations in the strength of this association.

**Nursing Implications.**  Support in the workplace could be a viable resource for reducing nursing turnover. Nursing supervisor and managers are encouraged to improve their supportive behaviors. Nursing administrators are encouraged to educate nursing supervisors about the importance of support for the benefit of the nurses, supervisors, patients and the organizations. The concept of supervisor support can be introduced to nursing students early in their education, as a part of the nursing leadership and management curriculum.

**Conclusion.** This systematic review points to the potential of decreasing TI by improving supervisors' support behaviours.  Although there are discrepancies within the literature regarding the strength of the association between supervisor support and TI, evidence suggests that supervisor support could impact employees' TI and thus actual turnover. However, further research to evaluate the effectiveness of supervisor support on TI is recommended, including interventional studies.  Further studies that examine the influence of different types of supervisors' behaviors perceived as supervisor support are encouraged. Such studied would help supervisors to identify most influential behaviors to enhance the perceived supervisor support among employees.

**Key words:** *Turnover intention, support, supervisor support, retention.*

## Introduction

Maintaining adequate nursing staff is a challenge that many healthcare organizations are facing. This challenge may worsen in the near future. By the year 2020, more than 46 million baby boomers will be over the age of 57 years, resulting in a probable labor shortage of millions of skilled workers (Carnevale, 2005). Organizations that can be proactive by retaining their skilled employees and reducing unwanted turnover will be better prepared to meet these challenges in the future (Dawley, Houghton, & Bucklew, 2010). Turnover intention (TI) is the cognitive stage that precedes actual turnover. TI refers to one's mental decision or thought about remaining at or leaving a job (Jacobs & Roodt, 2007). TI is a significant predictor of actual employee turnover (Ma, Lee, Yang, & Chang, 2009; Benjamin, 2012). Therefore, employees' TI represent a crucial area of research in career and organizational literature.

Many factors have been studied to evaluate their potential impact on reducing TI, such as the presence of career development programs and training (Chang, Chou, & Cheng, 2007), satisfaction, implementation of fair salary raise, (Kudo,et, al., 2006), and payment and rewards (Cao, Chen, & Song, 2013). One additional factor that has been discussed in literature and requires more attention is supervisor support in the workplace.

## Background and Purpose

The purpose of this systematic review of the literature was to: (a) review and critique the published empirical research on supervisor support as an approach to reduce TI, (b) synthesize the findings across studies, (c) identify gap in the literature and, (d) make recommendations for further research.

Support in the workplace can be categorized into two main areas: proximal and distal. Proximal support focuses on the ways in which employees perceive support from their immediate supervisors. Distal support occurs at the organizational level and focuses on availability of policies and programs that promote support to employees generally (McCarthy, Clevelandb, Hunterb, Darcyc and Grad, 2013).

This review will focus on proximal support or supervisor support. Supervisor support, refers to the degree to which employees perceived that supervisors value their contributions and care about their well-being (Rhoades & Eisenberger, 2002). Supervisor support, which is more commonly referred to as "Perceived Supervisor Support (PSS)" in the literature, is related, negatively, to employee turnover (Eisenberger, Stinglhamber, Vandenberge, Sucharski, & Rhoades, 2002).

In addition to the direct effect on turnover, the PSS has an indirect effect on the TI. Researchers have suggested that the relationship between PSS and TI is mediated through other factors such as job satisfaction (Tourangeau & Cranley, 2006), and perceived organizational support (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002).

## Method

The five steps for conducting a systematic review was adopted (Khan, et. al, 2003). These steps include (a) framing questions, (b) identifying relevant studies, (c) assessing the quality of studies, (d) summarizing the evidence, and (e) interpreting the findings. Electronic databases CINAHL, Academic Search Complete, Business Source Premier, Education Research Complete, Health Source, and PsycINFO were searched using a combination of keywords; Supervisor

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Support OR Supportive supervisions, AND Turnover Intention OR Intention to quit.  References of all included studies were searched manually for additional studies.

**Inclusion Criteria**

The inclusion criteria for the studies were: (a) published in English language, (b) published between 1995 and 2015, (c) investigated the relationship between supervisor support and TI (d) reported direct measures of supervisor support and TI and (e) peer reviewed research.

To assure the quality of the systematic review, the Effective Public Health Practice Project (EPHPP) Quality Assessment Tool for Quantitative Studies (National Collaborating Centre for Methods and Tools, 2008) was used to assess each of the studies. This tool includes six components for quality review: (a) selection, (b) the study design, (c) confounding variables, (d) the blinding, (e) the data collection (validity and reliability of measurements), and (f) the withdrawals and dropouts.  Based on the tool's standard criteria, each component was rated as 'strong', 'moderate' or 'weak'. Each study was evaluated separately using this tool. An overall quality rating was determined based on review of all the component ratings as follows: 'strong' when there were no weak component ratings, 'moderate' when there was only one weak component rating, and 'weak' when there were more than one weak component ratings. Studies with an overall rating of strong and moderate were included. Studies with an overall rating of weak were excluded from this review

<div align="center">

**Results**

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The question addressed by this literature review was:  What is the relationship between supervisor support and TI?  The results of the literature search and synthesis are presented here.

**Search Results**

In total, 531 publications were located using the search strategy and identified databases. Articles were exported into a reference manager software tool, Refworks, for easy removal of duplicates; 318 unique publications remained after de-duplication. After reading titles and abstracts, a total of 14 articles were selected to be read in full text. Examination of the reference lists of these 14 articles revealed eight more articles to be included in the review. Therefore, a total of 22 articles were selected for full paper examination. Each study were assessed using EPHPP quality assessment tool and those with 'weak" overall score were excluded. A final total of 12 articles were included in this systematic review.  The steps for screening and selection are illustrated in the PRISMA flow diagram in Figure. 1.

The sample studies were published between 1995 and 2015 and were mainly conducted in the USA (n = 7) and Europe. The European countries included Italy, France, Ireland, and Norway; each with one study. Only one study was conducted in Asia (Malaysia).  With regard to the designs of the studies, only one employed a randomized, controlled trial (RCT) design using a pretest-posttest approach, whereas the rest of the studies adopted a cross-sectional, quantitative approach. All studies involved adult workers and used a sample size ranging from 239-1240. Only one study involved registered nurses (Galletta, et al. 2011).  The characteristics of participants are presented in Table 1.

## Synthesis of Literature

**Types of Supervisor Supportive Behaviors**

Across the studies were two main types of supervisor support: general supervisor support and family-related supervisor support. Eight studies examined the general supervisor support, which commonly was called Perceived Supervisor Support (PSS). Examples of general PSS behaviors included: recognition, encouragement, and positive feedback (Galletta, et al. 2011). Two studies examined the family-related supervisor support, including behaviors such as listening and showing care for employees' work–family demands, and responding to an employee's work and family needs in the form of day-to-day management transactions (Hammer et al, 2009). Two studies examined both PSS and family-related support (Hammer et al, 2009; Hammer et al, 2013). However, only one of these two studies (Hammer et al, 2013) reported the correlation between family-related supports and TI. Types of supervisor support by study are presented in Table 2.

Six studies adopted the Kottke & Sharafinski (1988) definition of supervisory support and defined PSS as an employee's perception of support that is offered by an immediate supervisor, in terms of both valuing their contributions and caring about their well-being and work-related interests (McCarthy et al, 2013; Maertz et al, 2007; Kuvaas et al, 2010; Eisenberger et al, 2002; DeConinck, & Johnson, 2009; Dawley, 2010). In regard to the measurement of PSS, eight studies used the Survey of Perceived Organizational Support, (SPOS). The SPOS was used by the researchers after replacing the word "organization" with the term "supervisor" but with no changes to the instrument items or scoring.

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Family-related support was defined as a set of behaviors, exhibited by supervisors that are supportive of employees' family roles (Hammer, 2009). This type of support was described as a multidimensional concept consisting of four types of behaviors: emotional support, instrumental support, role model behaviors, and proactive creative work-family management (Hammer et al, 2009). In fact, Hammer and coauthors (2009) used three different scales to measure family-related supervisor support throughout the development and validation of their scale, Family Supportive Supervisor Behaviors (FSSB). The FSSB scale was developed to measure all four aspects of family-related supervisor support behaviors. Among the four studies examining family-related support, three studies used the FSSB scale (Hammer et al, 2011; Hammer et al, 2013; Hammer et al, 2009) while the fourth study (Bagger, 2014) used the Clark (2001) scale, which measure only the emotional aspects of support.

**Supervisor Support and TI**

All 12 studies included in the review reported a negative correlation between supervisor support and TI. There were variations in the strength of the relationships among the studies. Adopting Evans (1996) guideline, the strength of the correlation between supervisor support (PSS and FSSB) and TI ranged from weak to moderate, (Table 2).

Kalidass and Bahron (2015) found that 16.1% variances in TI could be explained by PSS ($R2 = 16.1$, $p < 0.01$). Kalidass and Bahron (2015) used Beta value to report the negative relationship between PSS and TI, as indicated by the value of ($\beta = -.402$, $p < 0.01$), which proved similar to the findings by Kuvaas and Dysvik (2010) ($\beta=-0.51$, $p <0.001$). In a randomized controlled study, Hammer, Kossek, Anger, Bodner, and Zimmerman (2011) developed and evaluated an FSSB training intervention in which supervisors received both face-to face and

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computer-based training. After the FSSB training, there was a decreased TI among the employees of those supervisors who participated in the training.

Three studies (Eisenberger et al., 2002; Maertz Jr., et al, 2007; Dawley et al., 2010) revealed that the relationship between PSS and TI was mediated by Perceived Organization Support (POS). Kuvaas and Dysvik (2010) also found the relationship between PSS and TI was mediated by the Perceived Investment in Employee Development (PIED), which is a form of POS. Despite these findings regarding mediating variables there was an inconsistency regarding whether the mediation was complete or partial. Only Eisenberger et al., 2002, claimed that POS fully mediates the relationships between PSS and TI. Findings from other studies argued that POS was a partial mediator (Maertz Jr., et al, 2007; Dawley et al., 2010; Kuvaas and Dysvik, 2010). Finally, additional variables, such as normative commitment, leader–member exchange, also were found to serve as mediators for relationship between PSS and TI (Maertz Jr. et al., 2007; Bagger and Li, 2014).

In summary, a total of 12 studies were reviewed to synthesize findings about the relationship between supervisor support, either PSS or FSSB, and TI. All studies identified a negative association between supervisor support and TI. Employees who perceived that their supervisors cared about them and valued their contributions reported lower levels of TI (Eisenberger et al., 2002; Maertz Jr., et al, 2007; Dawley et al., 2010).

## Discussion

Many factors have been discussed in the literature to improve the retention of nurse workforce such as career development programs and training, job satisfaction, pay and benefits (Chang, Chou, & Cheng, 2007: Kudo,et, al., 2006; Cao, Chen, & Song, 2013). In addition,

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positive workplace environments have been well recognized as a positive influence on nurse retention and improved quality of patient care (Aiken et al., 2011; Aiken et al., 2008). Nurse supervisors and managers play a substantial role in developing and maintaining a positive workplace environment. Therefore, nurse mangers need to identify strategies that enhance nurse retention by creating more positive workplace environments (Twigg & McCullough, 2013). Showing support in the form of respect, care, and recognition by the nurse manger can help in creating a positive environment that reduces TI and enhances nursing retention (Feather, Ebright, and Bakas, 2015).

The result of this systemic review adds to the growing body of research about the significant impact of supervisor behaviors and attitudes on their followers. Supervisor support could influence employee decision to not leave their current positions. Receiving support in the form of respect, care, and recognition by the nurse supervisor may will be more essential than pay and benefits (McGuire, Houser, Jarrar, Moy, & Wall, 2003). One nurse participating in a qualitative study revealed that she made a decision to leave her workplace because she did not feel cared for by the nurse supervisor (Feather, Ebright, and Bakas, 2015).

This systematic review of the literature identified studies used to exploring the impact of supervisor support on employees' TI. Upon review across studies, findings indicated a negative association between supervisor support and TI. Employees who believed that their supervisors cared about their well-being and valued their contributions showed decreased TI (Eisenberger et al., 2002; Maertz , et al, 2007; Dawley et al., 2010). However, there were inconsistencies reported regarding the strength of this relationship.

Another area with inconsistencies across studies involved mediators of the PSS and TI relationship. POS was identified as an important variable in understanding the relationship

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between PSS and TI (Eisenberger, et. al, 2002; .Maertz et al., 2007). As explained by Eisenberger et al., (2002) supervisor support can be interpreted as representative of POS. Therefore, support from a supervisor could influences TI by affecting the employee's perceptions regarding organization support. Day-to-day contact with employees allots supervisors more opportunities to demonstrate support than does the organization itself. Thereby, PSS is more obvious to employees than POS levels (Maertz Jr. et al., 2007) and thus also easier to measure.

Supervisors support was measured by researchers using different scales. The FSSB scale was the only scale used that measured the four dimensions of family-related supervisor support: emotional support, instrumental support, role modeling behaviors, and creative work-family management. Although this scale showed excellent reliability (α.94), there were limited studies in which this scale was used (n =3). Scholars are encouraged to use the FSSB scale to measure different dimensions of support beyond the emotional support. This scale included different behaviours under each type of family support, which could facilitate further knowledge development; especially potential training and development programs including interventions.

Although all the tools used to measure the supervisor support behavior included some examples of supportive behaviours, there was a lack of discussion by researchers about specific types of behaviors. Supportive behaviours need further identification and evaluation not only through quantitative research but also by adopting qualitative methods such as focus group. This type of research may help in developing a list of discrete example of supportive behaviors that can be used in intervention/ education programs for supervisors.

Among the studies reviewed, only one study used an interventional approach to assess the impact of supervisor training programs on staff TI. More interventional studies are needed to

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validate the effectiveness of training programs in order to clarify what behaviors have better outcomes by various groups or types of employees. More interventional studies could reduce the ambiguity about how to develop and implement FSSB programs.

## Nursing Implications

Support in the workplace could be viewed as an important resource for reducing nursing turnover. Nursing supervisor and managers should be encouraged to improve their supportive behaviors since they are representing their organizations. Nursing administration should be encouraged to educate and train nursing supervisors about the importance of support and the relationship between PSS and TI for the benefit of the nurses, supervisors, and the organizations. The indirect impact of PSS on patient outcomes may also be an area for further research. In nursing education, the concept of supervisor support can be introduced to nursing students early in the nursing leadership and management curricula.

It is essential to know the circumstances under which supervisory support will yield the most impact on TI. Thereby, further studies are recommended to evaluate the influence of other factors on the relationships between supervisor supports and TI. Identifying these variables may allow supervisors to appropriately demonstrate more appealing support to their employees.

One factor identified as a positive influence on reducing TI was POS (Dawley et al 2010; Eisenberger et al, 2002). Since the supervisors represent their organization, the PSS can be interpreted by employees as POS (Eisenberger et al., 2002). Organizations should not assume that supervisors always represent them favorably (Maertz Jr. et al., 2007). Therefore, one approach to improve POS could be through job descriptions and performance reviews of supervisors. Nurse Managers and supervisors need tangible examples of behaviors to adopt in

order to meet the changing needs of the workforce.  Therefore, a list of most influential supportive behaviors could be included in the job descriptions of nurse supervisors.

Although positive effects of support are promising in reducing nursing TI, there are limited studies examine the impact of supervisor support among nurses' population.  As noted above, more research in this area is strongly recommended to identify implications for nursing especially with the shortage of registered nurses in the workforce.  Understanding what registered nurses perceive as specific supportive behaviors as demonstrated by their supervisors can inform future plans designed to promote nurse manager behaviors that lead to nursing retention.

## Conclusions

This systematic review points to the potential of decreasing TI by improving supervisors' support behaviours.  Although there are discrepancies within the literature regarding the strength of the association between supervisor support and TI, evidence suggests that supervisor support could impact employees' intention to leave.   For nurses, receiving support by expressions of respect and recognition by the nurse manager can be more important than financial rewards (McGuire, Houser, Jarrar, Moy, & Wall, 2003).

This systematic review of the literature revealed a lack of adequate measures of supervisor support in general.  Most of the studies used the Survey of Perceived Organizational Support to measure supervisors support after replacing the word organization with the term supervisor.  Supervisor support also has been measured based on the measures of emotional support. Further testing and use of more specific measures such as FSSB is recommended.

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Supervisor support is an innovative approach with promising potentials; though, this systematic literature review suggests that there is much to be learned regarding how supervisory support can function as a tool to reduce TI.  This is especially an area for further research in nursing to reduce the likelihood of unwanted turnover by creating a better work environment that support nursing practice and the life demands of nurses.

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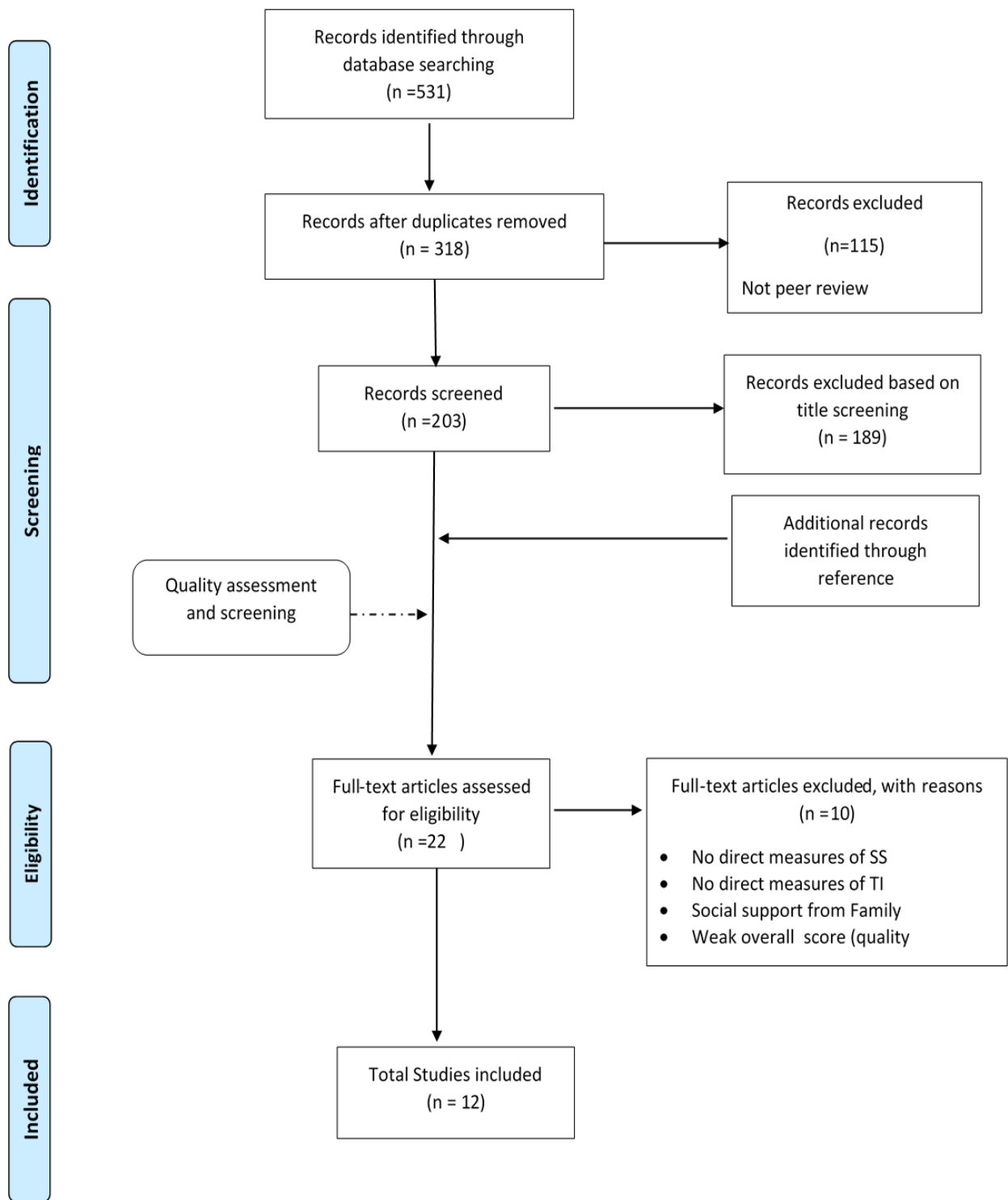
*Figure 3.* The process of screening and selecting. *Adopted from:* Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *P*referred *R*eporting *I*tems for *S*ystematic Reviews and *M*eta-*A*nalyses: The PRISMA Statement. PLoS Med 6(6): e1000097. doi:10.1371/journal.pmed1000097

Table 1

*The Characteristics of Participants*

| Study | Profession | Sample size (%Male/%female) |
|---|---|---|
| Dawley et al. 2010 | Employees in a manufacturing facility | 346 (90/10) |
| Hammer et al. 2013 | Employees at information technology division | 823(61/39) |
| Eisenberger et al. 2002 | Employees of a Belgium university | 521(72/28) |
| Galletta, et al. 2011 | Nurses | 1240 (19/82) |
| McCarthya et al. 2013 | Employees from 15 organizations. | 729 (47/52) |
| Kuvaas  et al. 2010 | Employees at telecommunications org. | 331 (70/30) |
| Hammer et al. 2011 | Employees at grocery stores | 239 (22/77) |
| DeConinck  et al. 2009 | Salespeople | 384 (78/23) |
| Hammer et al 2009 | Employees at grocery store | 360 (27/73) |
| Bagger et al. 2014 | Employees at institution of higher education | 82 (53/47) |
| Kalidass rt al. 2015 | Employees  from eight  hotels | 260 (NA) |
| Maertz et al 2007 | Social workers | 375 (18/82) |

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Table 2

*Summary of Included Studies*

| Authors/ year | Country | Type of support | Theory | Association |
|---|---|---|---|---|
| Dawley et al 2010 | USA | PSS | social exchange theory | Correlation between PSS and TI<br><br> r=−.227, p<.001<br><br>PSS is a predictor of POS, and POS is a predictor of TI |
| Hammer et al, 2013 | USA | PSS and FSSB | social support theory | Association between FSSB and TI<br><br>Using FSSB scale) β=-.24, p < .001)<br><br>FSSB-SF scale ( β=-.35, p < .001)<br><br>Study 2,  FSSB-SF  ( r-0.31, p < .05) |
| Eisenberger et al, 2002. | France | PSS | organizational support theory | Correlation between PSS and TI (r=-.11, P<.05)<br><br>Correlation between POS and TI (r=-24, p<.001)<br><br>PSS was positively related to POS and negatively related to TI |
| Galletta et al, 2011 | Italy | PSS | Person Environment Fit Theory | Correlation between PSS and TI<br><br>(r-0.18, P < 0.01) |
| McCarthya et al 2013 | Ireland | PSS | social support theory | Correlation between PSS and TI<br><br>(r=-.36, p<0.05) |
| Kuvaas and Dysvik, (2010). | Norway | PSS | social exchange theory Organization | Correlation between PSS and TI<br><br> (r=-0.51, p <0.001) |

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| | | | al support theory | |
|---|---|---|---|---|
| Hammer et al, 2011 | USA | FSSB | social support theory<br><br>organizational support theory | No significate change in TI post FSSB intervention<br><br>(r=-.34, p<.01). |
| DeConinck et al, 2009) | USA | PSS | social exchange theory and Organizational Justice | Correlation between PSS and TI<br><br>(r=-.24, p < 0.01) |
| Bagger et al, 2014 | USA | FSSB | social exchange theory | Correlation between PSS and TI<br><br>(r = –.34, p < .01) |
| Kalidass, 2015 | Malaysia | PSS | social exchange theory | Association between PSS and TI<br><br>(β = -.402, p < 0.01), ( R2 = 16.1, p < 0.01) |
| Maertz et al., 2007 | USA | PSS | theory of organizational equilibrium | Correlation between PSS and TI<br><br>(R=-.35 , p < .05) |
| Hammer et al., 2009 | USA | PSS and FSSB | Social support theory | Correlation between FSSB and TI<br><br>(r-.24, p <.05) |

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**Manuscript 2**

Workplace Support and Turnover Intention: A Preliminary Conceptual Framework to Inform

Practice and Research

**Abstract**

**Background:** More than 40 million baby boomers are expected to leave the workplace by 2020 (Carnevale, 2005). Based on data from nearly 30,000 organizations in the US, the voluntary turnover rate has increased from 9.2% in 2010 to 11% in 2014. The situation is worse for healthcare professionals, including nurses, as the turnover rate has dramatically increased from 13.5% in 2011 to 17.2% in 2015 (Nursing Solution, 2015). Resignation is not a sudden decision; it is preceded by an intention to leave the workplace. Turnover Intention (TI) occurs during the period preceding the actual turnover and was defined as an individual's thoughts about quitting their current positions (Gregory et al., 2007). During this critical period, some factors were found to have promising potentials in reducing TI such as workplace support.

**Aim:** The purpose of this project was to develop a framework that highlight the impact of workplace support on TI. Further, this framework was developed to identify the relationships among TI, influential factors or antecedents of TI, and possible consequences of TI.

**Methods**: The proposed framework was developed in two stages. A systematic literature review and concept analysis were completed during stage one. In the second stage, relevant theories were reviewed to further guide the development of the proposed conceptual framework.

**Results:** Using concept analysis, systematic literature review, and a review of relevant theories, the Workplace Support and Turnover Intention (WSTI) conceptual framework was developed.

The framework illustrates antecedents to TI, and the anticipated consequences of TI. Workplace support was identified as a potential moderating factor between antecedents and TI in the framework.

**Discussion** This conceptual framework can be useful in understanding the influence of workplace support on TI. Although all the variables identified in the WSTI framework were grounded in prior research and theories, this framework needs further empirically testing. The application of this framework could potentially help improve the quality of the workplace by creating a more supportive environment for employees, including nurses and potentially reducing TI.

**Implications for nursing.** The WSTI framework could provide a resource for healthcare organizations and nursing administration to visualize the relationships between TI and antecedent factors, as well as the influence of workplace support. Further studies involving registered nurses in hospitals and other healthcare organizations are encouraged. Further research could provide insight about relationships among identified concepts and identification of unique variables that are related to the nursing professions and hospitals work environment.

**Conclusions:** In order to ensure the continuity of high quality patient care, healthcare organizations, nursing leaders, and policy makers need to make every effort to sustain an adequate nursing workforce. Many factors discussed in this paper have been identified as antecedents to TI. Many scholars have identified that enhancing workplace support could be a key resource for maintaining a positive environment and reducing TI.

## Introduction

In the next five years, more than 40 million baby boomers are expecting to leave the workplace (Carnevale, 2005). Organizations will be better prepared to face this challenge if they were able to maintain adequate staffing by reducing unwanted turnover (Dawley, Houghton, & Bucklew, 2010). According to the CompData's 2014 edition of their annual Benchmark Pro Survey, which draws data from nearly 30,000 organizations in the United States (US) the voluntary turnover rate has increased from 9.2% in 2010 to 11% in 2014 (Compensation Force, 2014). The situation is worse for healthcare professionals, especially nurses, as the turnover rate has dramatically increased from 13.5% in 2011 to 17.2% in 2015 (Nursing Solution, Inc., 2015). A shortage of 340,000 nurses is projected by 2020 and a half million by 2025 (Buerhaus, 2008).

The decision to leave employment, is not a sudden decision, it is preceded by an intention to leave the workplace. Turnover Intention (TI) occurs during the period preceding the actual turnover and was defined as someone's thoughts about quitting their current positions (Gregory et al., 2007). TI was empirically and theoretically supported in the literature as a significant predictor of actual turnover (Ma, Lee, Yang, & Chang, 2009; Benjamin, 2012). TI is a multidimensional issue that can be influenced by many factors: both work and non-work related variables.

Most researchers focused on a few factors associated with TI and used simple conceptual models to illustrate the relationships between these factors and TI. Workplace support was studied as a strategy to reduce TI; yet, support was not a concept or factor incorporated into any conceptual models or framework representing TI. Therefore, the purpose of this project was to develop a conceptual framework that identified the relationships among factors influencing TI, including the role of workplace support.

## Methods

The proposed conceptual framework was developed in different stages. First, a concept analysis of TI, influenced by Rodger's (2000) Evolutionary Method, was conducted. However, only some aspects of Roger's method of concept analysis were used. The concept analysis mainly focused on Roger's steps of identifying the antecedents and consequences of TI. A review of literature from three databases: CINAHL, PsycINFO, and ABI/INFORMS was used to identify antecedents and consequences of TI.

In the second stage, a systematic review of the literature was conducted to evaluate the relationship between workplace support and TI. Six electronic databases were used to retrieve literature for the systematic review: CINAHL, Academic Search Complete, Business Source Premier, Education Research Complete, Health Source, and PsycINFO. Key words used for the search included: Supervisor support, perceived support, Family supportive supervisor behaviors, support AND turnover intention. Peer reviewed studies that were (a) published in English language, (b) published between 1995 and 2015, (c) investigated the impact of supervisor support on TI, and (d) reported direct measures of supervisor support and TI were included in the review.

In addition to the concept analysis and systematic review of the literature, relevant theories were reviewed to guide the development of the proposed conceptual framework. Both the Social Exchange theory (Blau, 1964) and the Perceived Organizational Support theory (Eisenberger et al., 1986) were examined, as they were often adopted by career and organizational behavior scholars as a theoretical approach for their studies. These two theories helped guided the development of the proposed conceptual framework.

**Results**

Based on the concept analysis, many factors were identified as either antecedents or consequences of TI.  The antecedents of TI were categorized into four main groups: individual factors, organizational factors, occupational factors, and external factors.  The main consequences of TI included two outcomes: actual turnover or change in job performance.

In the second stage, a total of 12 studies were included in the systematic review to evaluate the relationship between support workplace Support and TI.  All the studies included in the systematic review of the literature revealed a negative association between wworkplace support and TI.

**Concept Analysis: Antecedents of TI**

Based on the literature review, the antecedents for TI can be organized into four main categories: individual variables, organizational factors, occupational factors, and external factors. A short discussion of each four categories if provided here.

**Individual variables.**  There were a number of variations between individuals that influenced their intention to leave workplace.  For example, it was found that employees with higher education levels were more likely to leave their jobs and have high intention to quit (Tsai, & Wu, 2010; Ma, Lee, Yang, & Chang, 2009; Labatmediene, Endriulaitiene, & Gustainiene, 2007).  Labatmediene and colleagues (2007) found that employees with vocational education were the most committed to their work, while, the employees with graduate and postgraduate who had the lowest commitment.

Another example of individual variables was tenure.  A strong relationship was found between TI and positional tenure and many studies included tenure as an important predictor of

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TI (Almalki, FitzGerald, & Clark, 2012; Krash, Booske, Sainfort, 2005). Further, the length of employment was found to have association with the TI. Ma et al (2009) concluded that nurses with more than six years of experience, were less likely to report TI.

**Organizational factors.** Many factors at the organizational level were found to have an impact on TI such as organizational commitment, career plan and development, and pay and benefits (Labatmediene, Endriulaitiene, & Gustainiene, 2007; Yin-Fah et al., 2010). For example, the significant negative correlation between organizational commitment and TI was widely supported in the literature. It was found that employees with high levels of organizational commitment were less likely to have TI (Parry, 2008; Gregory et al., 2007; Benjamin, 2012).

Career plan and development was another factor that had an association with TI (Long, Perumal, Ajagbe, 2012). Career development and opportunities were suggested in the literature as an effective strategy to reduce employees TI (Ma, Lee, Yang, & Chang, 2009; McCarthy, Tyrrell, & Lehane, 2007). Employees, who had promotion opportunities were found to be less intent to leave their organizations (Mohamad, & Abdul Rahman, 2011).

Pay and benefits was also another organizational factor that impacted employees TI. Yin-Fah et al. (2010) suggested that any increase in salary could decrease TI. Employees with a higher salary were less likely to report an intention to leave (Almalki, FitzGerald, & Clark, 2012; Ma, Lee, Yang, & Chang, 2009; Mohamad, & Abdul Rahman, 2011).

**Occupational factors.** Many occupational factors influenced employees TI such as job autonomy, staffing, (Cowden et al. 2014), perceptions of work group (Hwang, & Chang, 2009), empowerment (Beecroft, Dorey & Wenten, 2007; Yang, & Lee, 2009), incivility (Griffin, 2010), and ethical climates (Hart, 2005). Furthermore, it was found that Person-Job Fit had a

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considerable impact on TI.  Employees with high sense of Person-Job Fit felt connected with their organizations and had the abilities, knowledge, and skills to meet their job requirements; therefore, these employees had lower TI (Chen, & Cheng, 2012; Liu, Liu, & Hu, 2010; Dawley, Houghton, & Bucklew, 2010).

Job satisfaction was another occupational factor that impacted TI.  A considerable amount of studies revealed the negative association between job satisfaction and TI (Yin-Fah, Foon, Chee-Leong, Osman, 2010; Ma, Lee, Yang, & Chang, 2009; Ryan, Ghazali, & Mohsin, 2011).  Role stress was another occupational factor association with TI.  Employees who experienced higher levels of role stress were more likely to have higher TI (Ryan, Ghazali, & Mohsin, 2011).

**External factors.** External factors refer to any variables outside the work environment such as other employment opportunities*.* The labor market can play an important role in TI (Hui, 1988).  Rainayee, (2013) found a positive correlation between perceived alternative job opportunities and TI among information technology workers.  Employees with higher TI, would actively start searching for an alternative of their current positions based upon the perceived opportunities in external market (Negrin & Tzafrir, 2004).

**Work-family conflict.** Work-family conflict occurs when there is an incompatibility between the role demands of work and family domains (Parasuraman & Greenhaus, 2002).  In the WSTI framework, the work-family conflict was linked to Occupational Factors and External Factors because WFC occur when there is a conflict between these two factors.  Researchers found that work-family conflict was a strong predictor of TI: individuals who perceive that their work roles are interfering with their family roles revealed higher TI (Lin Qiu, 2010; Carr, Boyar,

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& Gregory, 2008).  In a study by Haar (2004), work-family conflict was positively associated with TI ($\beta$=.49, p<.001) and accounted for 22% of the TI variance.

**Demographic variables.** A number of demographic variables were found to have an association with work-family conflict and TI.  These variables include age, gender, marital status, and parental demand (Almalki, FitzGerald, & Clark, 2012; Beecroft).  It was found that younger employees faced more work-family conflict than older employees: a study involved 243 nurses revealed a weak but significant correlation (r=-0.15, p <.05) between age and work-family conflict (Yildirim, Dilek, & Aycan, Zeynep. 2008).  Similar result was found in another involved 727 physicians (Mache et al., 2015).  Age was also found to be correlated with TI; younger employees were more likely to have higher TI than older employees (Almalki, FitzGerald, & Clark, 2012; Beecroft, Dorey & Wenten, 2007; Labatmediene, Endriulaitiene, & Gustainiene, 2007).

Difference in marital status impacted work-family conflict and TI.  It was found that married employees were more disposed to work-family conflict than single employees (Choudhary, Ojha, & Singh, 2015).  Further, researchers concluded that single employees were more likely to leave their jobs (Almalki, FitzGerald, & Clark, 2012; Ma, Lee, Yang, & Chang, 2009; Hwang, & Chang, 2009).  Ma and colleagues (2009) found that more than 70% of nurses in their study who revealed higher TI were singles. These findings match the result of McCarthy and colleagues (2007) who found that 60% of nurses who had high TI were single.

Moreover, a positive relationship was found linking parental demands such as taking care of children and work-family conflict (Greenhaus & Kopelman, 1981).  Increased family responsibilities may consume greater time and energy in the family domain (Greenhaus, Parasuraman, Granrose, Rabinowitz, & Beutell, 1989) and may leave employees with

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insufficient resources to meet their work requirements.  The presence of children in the household places more responsibilities on working parents and can create even greater work-family conflict (Hill et al., 2008).  The ages of children in the household often determine the level of care and needs, and significantly contributed to the experience of work-family conflict. Mjoli et al (2013) found that parents with children under the age of six years had the highest levels of work-family conflict, followed by parents with children at school age children.  Work-family conflict is found to be lowest in parents of adult children not living at home (Osherson & Dill, 1983).  Further, the number of young children who live at home also was found to have an influence on the level of work-family conflict (Choudhary, Ojha, & Singh, 2015).

## Support in the Workplace

Numerous advantages of workplace support were found on the literature. Workplace support was a key resources for maintain a positive environment that has a good influence on fostering satisfaction (Humphrey, Nahrgang, & Morgeson, 2007, and reducing turnover (Aiken et al., 2011; Aiken et al., 2008).  Workplace support helped employees enhance their sense of wellbeing and belonging (Vischer, 2007), this is important especially for those who have left their countries and families for a better job and income.  Based on the review of the literature, workplace support was referred to organizational, supervisors, or co-workers support.

### Organizational Support

Employees perceived organizational support when they believed their organizations valued their contributions and cared about their well-being. This opinion was based on a perception of how the organization rewarded their performance and responded to their socio-emotional needs (Rhoades & Eisenberger, 2002).  Perceived organizational support (POS) was

found as key predictor of employees TI (Maertz, Griffeth, Campbell & Allen, 2007). Kalidass and Bahron (2015) found that POS had a negative association with TI ($\beta$ = -.525, p < 0.01), and they found that 33% variance in TI could be explained by POS ($R^2$ = 33.0, p < 0.01). Dawley, Houghton, and Bucklew (2010) conducted a study involving 346 workers in a manufacturing firm found a significant correlation between POS and TI (r= −.412, P<.001). Nevertheless, Rhoades and Eisenberger (2002) reported in their meta-analysis a significant negative relationship between POS and TI of (r= −.51, p < .001).

**Supervisor Support**

Employees perceived supervisor support by forming general beliefs in which their supervisors value their contributions and are concerned about their wellbeing (Kottke & Sharafinski, 1988). Supervisors may show their support in different forms such as recognition, encouragement, or positive feedback (Galletta, et al. 2013). The negative correlation between supervisor support, including both perceived supervisor support (PSS) and Family Supportive Supervisor Behaviors (FSSB) and TI was strongly supported in the literature (Hammer et al, 2013; Bagger, 2014). For example, Kalidass and Bahron (2015) found that supervisor support had a negative association with TI ($\beta$ = -.402, p < 0.01), and that 16.1% variances in TI can be explained by PSS (R2 = 16.1, p < 0.01).

Likewise, Kuvaas and Dysvik (2010) conducted a study including 331 employees from a Norwegian telecommunications organisation reported a negative association between PSS and TI ($\beta$=-0.51, p <0.001). Furthermore, Bagger et al, (2014) and Hammer et al, (2013) found negative correlation between FSSB and TI (r = −.34, p < .01; $\beta$=-.35, p < .001). Supervisor support found to be a very important form of workplace support since it is not only influence employee TI but

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does it affect the employees' perception about organizational support (Maertz et al., 2007; Dawley et al., 2010; Kuvaas & Dysvik, 2010).

**Co-Worker Support**

Little literature was found on co-worker support (Cole et al, 2002), unlike the POS and supervisor support, which were well researched.  Co-workers support was found to be a predictor of TI (Cole et al, 2002).  Kahumuza and Schlechter (2008) conducted a study included 187 employees of a major retail bank, and reported a significant correlation between co-worker support and TI ($r = -0.349$; $p = 0.00$).

Overall, workplace support is an essential factor to help employees maintain their sense of belonging and wellbeing (Kalidass & Bahron, 2015).  Kahumuza and Schlechter (2008) found a strong negative correlation between workplace support and TI ($r = -0.521$, $p = 0.00$). Therefore, workplace support could be adopted as a promising approach to reduce TI.  Laine et al. (2009) conducted a study across ten European countries to determine factors affecting nurses' TI ($n=39,893$), and suggested that workplace support could be a buffering factor in reducing the effects of many antecedents on TI.

## Theoretical Background

A number of theories advocate for the important role of the workplace support.  Most influential theoretical perspectives on social support theories hypothesize that social support can reduce the effect of stressful events on human wellbeing.  The Social Exchange Theory (Blau 1964), and the Perceived Organizational Support Theory (Eisenberger, Huntington, Hutchinson, & Sowa, 1986) have been used as a theoretical background for many organizational studies

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(Hammer, Kossek, Anger, Bodner and Zimmerman, 2011; DeConinck and Johnson, 2009; Bagger, 2014; Kalidass, and Bahron, 2015).

The assumptions from The Social Exchange Theory, and the Perceived Organizational Support Theory provide strong theoretical support for the proposed WSTI model. By suggesting that employees who perceived a high level of support in the workplace felt an obligation to give back to the organization by having less intention to leave (Eisenberger, Fasolo, Davis-LaMastro, 1986). When organizations offered organizational encouragement in the form of career developmental opportunities, employees become obligated and motivated to expend effort to benefit their organization. Perceive support resulted in employees developing global beliefs that organization valued their contributions and cared about their well-being (Rhoades and Eisenberger, 2002).

Grounded in concept analysis, literature review, and informed by the social support theories, the Workplace Support and Turnover Intention (WSTI) conceptual framework was developed (Figure. 1). A further discussion of the model is presented in the next section.
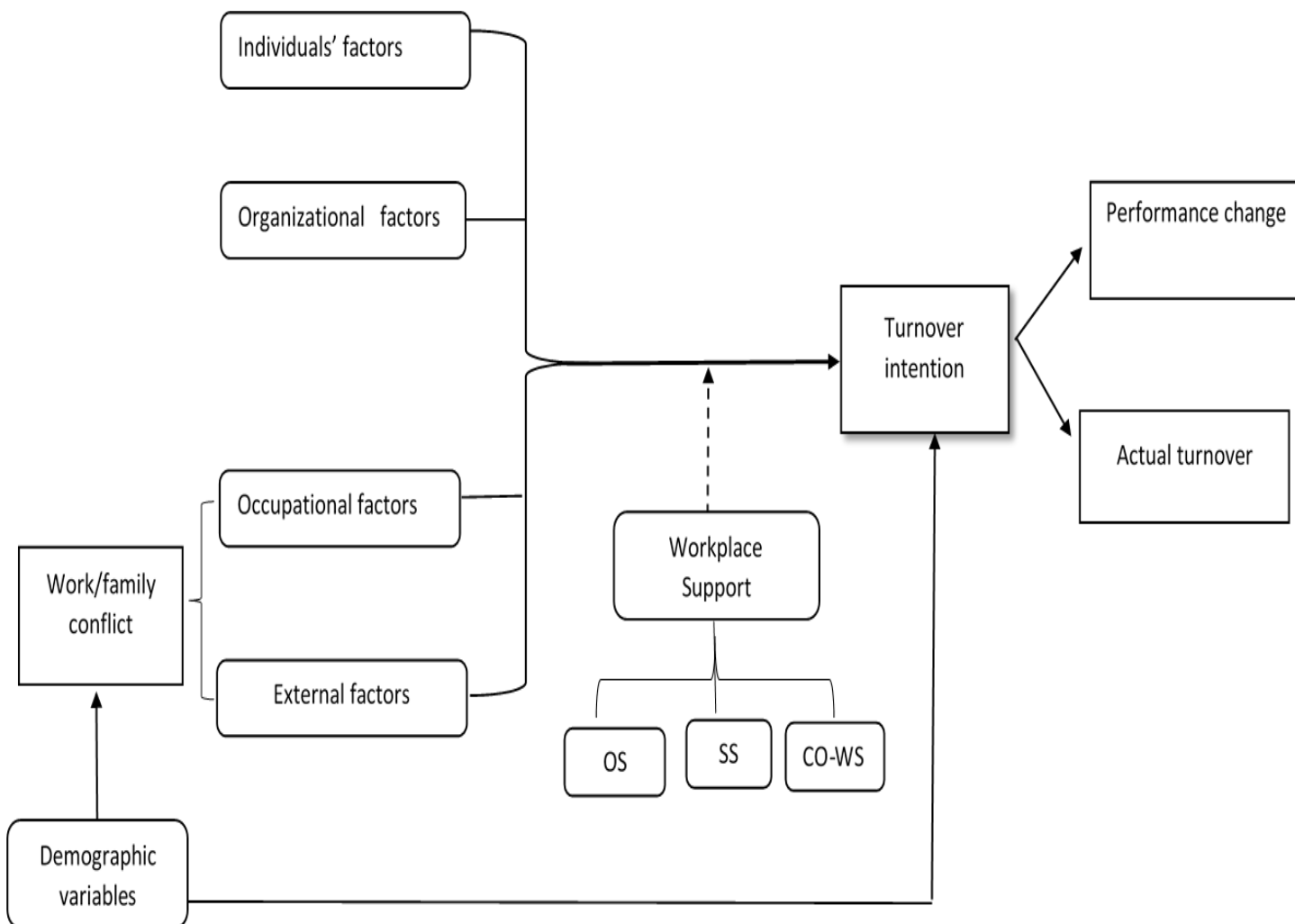
*Figure 4.* Workplace Support and Turnover Intention and (WSTI) Conceptual Framework identifies the multiple factors influencing Turnover Intention, and the potential mediating effects of workplace support

*Note:* OS: Organizational support; SS: Supervisors support; CO-WS: Co-workers support

## Discussion

The WSTI framework (figure 1) included four main categorical factors that can influence TI: individual, organizational, occupational, and external factors. Work-family conflict was considered as a variable that involve both occupational and external factors; therefore, it was placed between these two factors. Demographic factors can influence the level of work-family conflict as well as have direct influence on the TI.

Based on the review of the literature, employees can perceive workplace support from organizations, supervisors, or co-workers. Therefore, in the WSTI framework, workplace support can be referred to Organizational Support (OS), Supervisors Support (SS), and Co-workers Support (CO-WS). In this framework, workplace support has an influential effect on the relationships between antecedents and TI. Many social support theories advocated this influence. For example, the Buffer Theory of Social Support (Cohen & Wills, 1985) emphasized that individuals who do not receive social support are more likely to have adverse event and that workplace support could buffer the impact of many antecedents on TI.

Further, a number of scholars found buffering effect of workplace support between many adverse events and outcomes; for example, workplace support was found to have a significant buffering effect on the relationship between physical stressors and medical symptoms (Mayo et al., 2012). Additionally, a recent study found the same buffering effect of workplace support on the relationship between work-family conflict and job satisfaction (Li, Shaffer, & Bagger, 2015). Therefore, workplace support was placed in the WSTI framework, as a buffering factor that influenced the relationships between antecedents and TI.

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This influential effect of workplace support is represented by a doted arrow in the WSTI framework diagram.  Workplace support has promising potentials in reducing the negative impact of antecedents on TI.

The WSTI framework identifies that TI can lead to a change in employee behaviors and can lead to actual turnover.  According to the literature, performance, as a form of employee behavior, was significantly related to TI (Long, Perumal, & Ajagbe, 2012).  Employees with high TI performed less than others (Tzong-Ru, Shiou-Yu, Saint-Hei, & Dadura, 2010). Further, TI has empirical and theoretical support as a significant predictor of actual turnover (Ma, Lee, Yang, & Chang, 2009; Benjamin, 2012; Galletta, et al, 2011; Huffman, Adler, Dolan, & Castro, 2005).

## Nursing Implications

Within the context of the current nursing shortage and high turnover rate (Nursing Solutions, Inc., 2015), it is essential to understand and investigate nurses TI.  The WSTI framework could provide a valuable help for healthcare organizations and nursing administration to visualize the relationships between TI and antecedents' factors, and the influence of workplace support.  Further this framework provides a useful tool for researchers to identify key research questions.  Therefore, the WSTI can be used as a framework to guide further research to advance the nursing knowledge about turnover management and nursing retention.

Across studies, higher levels of workplace support were associated with decreased TI (Bagger and Li, 2011; Hammer et al., 2011) and support was effective in reducing the impact of many adverse events (Mayo et al., 2; Li, Shaffer, & Bagger, 2015).  As proposed in the WSTI framework, workplace support could be effective in reducing the impact of many influential

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factors on nurses TI. Therefore, promote workplace support could be an operative strategy to retain nurses and reduce unwanted turnover.

Supervisor support was an essential form of workplace support that has a strong association with reduced TI ($\beta$=-0.51, p <0.001) (Kuvaas & Dysvik, 2010). Therefore, promoting supervisor support can be a relatively easy strategy to be adopted by healthcare organizations in order to reduce nurses TI. Unlike other complex structural and political interventions, increasing the level of supervisor support may only require time for training to enhance awareness and use of supportive behaviors (Hammer et al., 2011).

The WSTI identifies the main antecedent factors: organizational, occupational, individuals, and external. Although many variables have already been examined in the literature, TI is a complex process and more variables may need to be consider for study. Further research involving nurses is encouraged, to provide insight about unique variables related to the nursing profession and hospital work environment.

Change in employee performance was found to be associated with TI (Long, Perumal, & Ajagbe, 2012). Therefore, evaluating and monitoring nurses' performance trends could be a potential tool to predict nurses who have TI (Sturman, & Trevor, 2001). Providing additional support and attention to those nurses with problems in performance could potentially help in not only improving performance, but also in preventing actual turnover.

**Conclusion**

Based on a review of the literature and social support theories, the WSTI framework was developed. This framework identifies four main categories of antecedents for TI: organizational, occupational, individual, and external factors. The WSTI also depicts the possible consequences

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of TI: change in performance and actual turnover.  Workplace support was included in the WSTI framework as an influential factor in the relationship between antecedents and TI.

In order to ensure the continuity of high quality patient care, healthcare organizations, nursing leaders, and policy makers need to make every effort to sustain an adequate nursing workforce.  Many factors were discussed in this paper that can lead to an increase in TI. Fortunately, strategies to reduce TI have also been studies, including workplace support (Aiken et al., 2011; Humphrey, Nahrgang, & Morgeson, 2007).  The WSTI framework is a helpful tool to guide further research and to advance the knowledge about nursing retention.

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# Chapter III. Methodology

The Influences of Family Supportive Supervisor Behaviors on The Relationships Among Work-Family Conflict, Stress, and Turnover Intention in Saudi Arabian Registered Nurses

## Introduction

The primary purpose of this study was to evaluate the influence of Family Supportive Supervisor Behaviors (FSSB) on the relationships among work-family conflicts (WFC), stress and turnover Intention (TI) in Saudi registered nurses working in a hospital setting. This study aimed to advance nursing science by providing a better understanding of the impact of FSSB on nurses' intention to leave their workplace. This chapter includes a description of the study design, target population, sample size, setting, procedure, eligibility criteria, and measurement tools. Furthermore, this chapter includes a discussion of data management and analysis plan, study limitations, and human subjects' protection plan.

## Study Design

A cross-sectional design was used to study the relationships among work family conflict, Family Supportive Supervisor Behaviors, stress, and turnover intention.  Pen and paper self-report questionnaires were used to gather the data. The designed allowed for examination of the relationships among select variables within an identified population, at one point in time, without manipulating the variables or manipulating the environment. The independent variables (IVs) in this study are inherently not able to be assigned but represent individual's perceptions and states. The main question was whether one or more variables were associated with another variable rather than claiming the causality.  Therefore, cross-sectional design was the most appropriate design to answer the study questions.  The rational for each study variable is presented in the

discussion of the literature and the conceptual framework sections in chapters 1 and 2. In this chapter, the method for the study is discussed including, sampling, data collection and data analyses.

## Target Population

The target population for this study was Saudi registered nurses (RNs) who are working in a hospital setting in Saudi Arabia. Despite the launch of Saudization initiatives in Saudi Arabia to ensure better employment rates, there remains a deficiency in the nursing labor market. In support of the Saudization initiative aimed at increasing the rate of Saudi nurses, the target population of this study was Saudi nurses. With the current high turnover rate among Saudi nurses it is beneficial to focus on this group to have a better understanding about their high turnover, and provide insights that can help in retaining Saudi nurses to ensure stability and balance in the workforce. Further, increasing the rate of Saudi nurses or maintaining a balanced rate with expatriate nurses may decrease the negative consequences of religious, language, and cultural differences, and may reduce the stress and frustration of expatriate nurses, patients, and families.

## Sample Size

Convenience sampling was used in this study. Sample size was determined through power analysis using other studies effect sizes. Power analysis was used to determine the sample size needed to protect against Type II error. Literature yielded a small to medium effect size, therefore, an effect size of 0.2 was used to determine that sample size. Using an alpha of .05, a medium effect size of 0.2 and a power of .80, the estimated sample size was101. Some studies

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have suggested about a 40% response rate for professionals (Fowler, 2009).  Thus, a total of 250 participants were invited to participate in the study.

## Setting

This study was conducted at King Abdulaziz Medical City (KAMC), National Guard Health Affairs (NGHA) in Saudi Arabia, Riyadh. The KAMC has a capacity of 690 beds, in addition to 25 beds allocated for expected surgical operations in Ward 19, and 132 beds for admission of emergency cases.  This study included one locations of KAMC in Riyadh.  Riyadh City is the capital city of Saudi Arabia where most of Saudi nurses are located. Further, this location was chosen by convenience for geographic closeness to the PI.

## Procedure

After obtaining the IRB approval from both the University of Wisconsin-Milwaukee and the National Guard Health Affairs (NGHA), a list of Saudi nurses was obtained from the nursing services department; this list included contact information and assigned departments/units.  The nurse manager in each department was contacted by email with the introductory letter about the study and the IRB approval number.  The working schedule of Saudi nurses was obtained from nurse managers.  Based on nurses' work schedule and with the help of the nurse manager, meeting time were arranged using the department conference room or coffee room.  To ensure higher response rate, the PI met with a small group of anticipated participants (2-5) and distributed the survey along with the informed consent (See Appendix B).  A brief oral description about the study was provided to participants.  Participants were assured that participation was voluntary and anonymous.  Also, they were assured that the information they provide will be kept confidential and only the research team can access them. The surveys took approximately 10 to 15 minutes to complete.  The PI remained with participants and collected

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completed surveys.  Refreshing drinks and snacks were served as a compensation for

participants' time.

**Eligibility criteria**

1. Female Saudi nurses working at KAMC for at least six months. Rationale: This study

targeted Saudi nurses and the six months would limit the other factors due to adjusting to the

new environment.

2. Able to speak and write in English. Rationale: To be able to complete the survey,

which was in English.

## Measurement Tools

For this study, four measurement tool with a total of 37 items was used along with

demographic questions. The time required to complete the survey was estimated to be 15-20

minutes. (See appendix C).

1. **Demographic data** collected for this study included age, marital status, number of children,

    and the age of youngest child.  More information also was obtained from participants such as

    the level of education, number of working hours, and years of experience. Confidential

    information such as name, and employee number was not collected.

2. **Stress.** The Perceived Stress Scale (PSS-10) developed in 1983 by Cohen, Kamarck &

    Mermelstein was used to measure nurses' stress.  It is a 10-item inventory using the Likert

    Scale, a 5-point scale ranging from 0 (Never) to 4 (Very Often).  Item responses for each

    participant were summed up after reverse-scoring four items (4, 5, 7 and 8), yielding a total

    score of perceived stress ranging from 0 to 40.  Higher scores indicate higher levels of

    perceived stress (Cuneo et al., 2011).  The coefficient alphas were 0.84, 0.85 and 0.86

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(Cohen et al., 1983).  The PSS-10 was a brief and easy-to use measurement of the degree of stress in one's life during the last month. Further, it was easy to administer and widely used to measure stress among nurses.

3. **Turnover Intention.** The TI was measured using the Turnover Intention Scale developed by Cammann, Fichman, Jenkins, & Klesh (1979).  The Turnover Intention Scale is a 3-item inventory scale with one reversed item.  The scale has an internal consistency coefficient alpha of 78.  Respondents were asked to indicate how accurately each statement described them.  Response options range from (1) "Extremely disagree" to (5) "Extremely agree. This scale has substantial validity and reliability and was used in different professions, including nursing (Ayamolowo, Irinoye, & Oladoyin, 2013).

4. **The Work-Family Conflict.** The WFC was measured using the work and family conflict scale which was developed by Netemeyer, Boles, & McMurrian (1996).  The construct of work-family conflict was measured in two directions (work-to-family and family-to-work) with a total of 10 items.  A sample item of work-to-family conflict is, "The demands of my work interfere with my home and family life." A sample item of family-to-work conflict is "Do the demands of my work interfere with my family life and home?".  Reliability for work-to-family conflict was estimated at .87, and at .85 for family-to-work conflict. The scale did not include any reversed items.  Items were rated on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree).  Higher scores indicate higher levels of conflict and lower scores indicate less conflict. The scale showed a good validity and was used with nurse populations and showed a good reliability score of .89 (Camerino, Sandri, Sartori, Conway, Campanini, & Costa, 2010).

5. **Family Supportive Supervisor Behaviors.** The FSSB was measured using the Family Supportive Supervisor Behavior (FSSB). It is a 14-item scale developed by Hammer et al. (2009). The FSSB scale included four dimensions: emotional support (4 items), role modeling behaviors (3 items), instrumental support (3 items), and creative work-family management (4 items). Items were identified to represent the four dimensions of FSSB identified through inductive (qualitative data) and deductive (literature and theory review) processes. Items were then reviewed by subject-matter-experts from the human resources department. All 14 items were positive statements; there were no reversed items on the scale. Participates were asked to rate each statement between 1 (Strongly Disagree) to 5 (Strongly Agree). A higher score indicates positive perceptions about FSSB, whereas a lower score indicated negative perception. Cronbach's alpha was above .88 for all dimensions in the FSSB scale. This scale is considerably new and has not yet been used with the nurse population, but it was used widely in other professions and showed good reliability (>.80). the FSSB has substantial validity and reliability. This is the best scale for the purpose of this study as it includes more than one dimension to measure family supportive supervisor behaviors. There are other valid and reliable scales to measure supportive supervisor; however, all of them include only the emotional support aspect.

<div align="center">

**Data management**

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The biostatistician and the PI were work to implement the data management plan. All forms were kept in locked file cabinets. The PI entered data into a password protected database. The data management plan included the following steps:

- To ensure data accuracy, before presentation of the analysis files the PI cleaned the data using double data-entry or a two-person, cross-checking technique. As an additional

safeguard, the frequency distributions of all variables were checked before proceeding with the analysis.

- Data was checked for sufficient variability in the dependent measures.
- When 25% of the data was collected, the researcher checked the resident criteria with the responding sample demographics for any problems/skew.

## Data Analysis Plan

Data cleaning was the first step to help detect and correct inaccurate values that can result from the data entry process.  Data cleaning involved identify invalid entries, recode missing values, and check for outliers. Scales with missing values that have at least 80% of the questions answered was calculated using a person mean substitution.  Missing data in the scales was substituted with the mean of the person's responses to the other questions in the scale.  Pairwise deletion of missing values was used when calculating the partial correlation coefficients.  List wise deletion was used in the multiple regression analysis

Data analysis was conducted using the latest version of SPSS software.  For all inferential tests, an alpha level of 0.05 was used to determine statistical significance.  The distributions of each process and outcome variable were analyzed using frequency distributions, means, and standard deviations.  Descriptive statistics was used to describe and summarize sample characteristics.  Continuous variables, such as age, were described using the mean and standard deviation.  Categorical variables such as gender and department were described using frequencies, frequency distributions and percentages. The scatterplots between each IVs and DV for possible nonlinear relationships and any multicollinearity between IVs were checked.

Inferential statistical tests were used to answer the research questions such as correlation, multivariate regression, hierarchal regression, and Partial correlation coefficients (See appendix

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A).  Correlation is a technique for investigating the relationship between two continuous variables without claiming causality.  In this study, the Pearson's correlation coefficient (r) was used to measure of the strength of the association between the two variables.

The mediation effect of FSSB on the relationship between WFC and TI was evaluated using multiple regression. The moderation effect of stress on the relationship between WFC and TI was tested by using hierarchical regression.

## Study Limitations

There are many limitations associated with the study design, sampling method, and measurement.  Adopting correlational and cross-sectional design was a limitation to this study.  Correlational research cannot claim causality between variables.  Although another design would not be applicable at this point, the researcher is planning to use other designs in further studies.  Using a convenience sample can threat the generalizability of findings.  Using a non-probability convenience sampling method may introduce selection bias to the internal validity of the study (Polit & Beck, 2012).  This method of sampling was chosen for convenience and feasibility reasons, as the random sampling would be not feasible for this study.

Another limitation was using the self-report tool; participants may respond in a manner they perceive is desirable.  For the variables in this study there were no other tools but self-report that can be used to gather information about participants' perception.  However, participants were assured that their answers would not be linked to their identity, and they were encouraged to respond honestly.

Due to the busy schedule of nurses, low response rate or incomplete surveys are possible limitations to this study.  To address this limitation, the PI reviewed surveys to ensure

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completion. To address the low response rate, the PI allowed more time to participate and provided refreshing drinks and snacks. Further, other variables that can contribute to the nurses' turnover intention and the difficulty in controlling all of these variables was a limitation of this study. These confounding variables included social support, personality, or professional image (how they perceived themselves as nurses).

## Human Subjects Protection

Prior to the start of data collection, the study was approved by the IRB for the Protection of Human Subjects at the University of Wisconsin-Milwaukee and the IRB at King Abdullah International Research center. The participation in this study was voluntary and did not affect the employment status of the participants. The Informed Consent included the following: (a) purpose of the study, (b) risks and benefits ratio, (c) measures to ensure confidentiality, (d) statements regarding the voluntary nature of participation, the right to refuse participation without recrimination, and contact information of the investigator if further information is needed. Confidentiality was maintained by using identification number on all questionnaires. All completed questionnaires were secured in a locked file drawer.

## Chapter IV.    Results

The Influences of Family Supportive Supervisor Behaviors on the Relationships Among Work-Family Conflict, Stress, and Turnover Intention in Saudi Arabian Registered Nurses

### Introduction

The primary purpose of this study was to investigate the influence of Family Supportive Supervisor Behaviors (FSSB) on the relationships among work-family conflicts (WFC), stress and turnover Intention (TI) in Saudi nurses working in a hospital setting. This study aimed to advance nursing science by providing a better understanding of the impact of FSSB on nurses' intention to leave their workplace. This chapter includes a description of the sample characteristics, and findings from the descriptive and inferential data analysis for the proposed research questions.  This chapter includes the presentation of further analysis of the data evaluating the interactions among FSSB, WFC, and Stress.  Based on the initial study findings, this additional analysis was completed and described in the manuscript: The influence of family supportive supervisor behaviors on the relationships among work-family conflict, stress, and turnover intention within Saudi Arabian registered nurses.

### Data Management

The data analysis phases of this study started with data management to ensure the integrity of the data.  A total of 200 surveys were distributed during the data collection period and 116 were returned and 113 were eligible resulting in a response rate of 56%.  All of the study materials, including any data, were kept in a locked file cabinet at the investigator's home office. A codebook was developed to further guide analysis and identified each variable, its definition, and its level of measurement.  Each survey was examined for completeness, and reviewed by the

investigator to ensure each nurse respondent met the study inclusion criteria. Surveys that were found ineligible per inclusion criteria were excluded from the sample.  Any nurse respondents employed less than six months were excluded (n= 3).

Useable surveys were scanned into TeleForm© v10.5.1 to transform data from paper format into an electronic format by using recognition technologies. Using the TeleForm Verifier module the investigator was able to correct and validate questionable data values by comparing the computerized values with the raw data.  Data were exported into an SPSS®, a Statistical Package for the Social Sciences software program. SPSS version 23 was used for statistical analysis and data storage on the investigator's non-networked password protected computer.

<div align="center">

**Instruments Reliability**

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Internal reliability of each instrument was computed using Cronbach's Alpha reliability statistics (Table 1).  For this study the minimum criterion for determining an acceptable value for Cronbach's Alpha was higher than 0.70 (Field, 2011).  The Cronbach's alpha for WFC and FSSB scales (0.88 and 0.97 respectively) indicated a high level of internal consistency for use of these scales with this study sample.  The Cronbach's alpha for Stress scale was acceptable (0.72).

Reliability was lower than the acceptable level for the TI scale (0.65).  The Item-Total Statistics table, which presented the Cronbach's Alpha if item deleted, indicated that removing item three (Item 3: if I could choose again, I would choose to work for the current organization) would increase Cronbach's Alpha reliability to (0.76).  However, there was no major difference in analysis when using the original three item TI scale or the TI scale with item three deleted. Therefore, the original TI scale was used for all the statistical analysis is this study.

Table 3

*Instruments Reliability*

| Instrument | Number of Items | Cronbach's Alpha | M | SD |
|---|---|---|---|---|
| TI | 3 | .65* | 3.02 | 1.07 |
| WFC | 10 | .88 | 3.42 | .81 |
| Stress | 10 | .72 | 2.97 | .48 |
| FSSB | 14 | .97 | 3.36 | .97 |

N=113; *after removing one item the Cronbach`s alpha was 0.76

## Descriptive Data Analysis

Instrument scores were computed in SPSS as required per individual instrument guidelines. Descriptive statistics was performed to examine measures of central tendency and distribution of all study variables. Frequency distributions of all variables were examined for data entry errors and outliers. Study variables were examined for skewness and kurtosis. The results identified that the variables were normally distributed. Descriptive statistics of means, standard deviation and percentages were generated to describe the characteristics of the sample. Categorical data from the individual nurse characteristics were analyzed using percentages.

**Characteristics of the Study Sample.**

The sample was limited to registered nurses (n = 113) currently providing direct patient care in the hospital setting and employed for at least six months. This sample size allowed to

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detect a small-to-moderate effect of job satisfaction on turnover intent with an alpha of .05 and a power of .8 (Polit, 1996).

In this sample, the average nurse's age was 28 years old (*SD 3.8*), 47 % of the total sample were married, and only 28 % had children.  The average age of children was three years old (SD 1.9). The majority of nurses in this sample had a Bachelor Degree in nursing (96%), and 61 % were working for 12 hours a day, four days a week.

Descriptive statistics for continuous variables describing the sample are presented in Table 2. Descriptive statistics about the categorical variables of the nurses' characteristics are presented in Table 2 and 3.

Table 4

*Mean, Standard Deviation, Minimum, and Maximum for Participants Demographics (n=113).*

| Variables | n | Mean | SD | Minimum | Maximum |
|---|---|---|---|---|---|
| Age | 105 | 27.95 | 3.8 | 22 | 40 |
| Number of Children | 32 | 1.97 | 1.17 | 0 | 5 |
| Age of youngest child | 32 | 2.41 | 1.94 | 1 | 9 |
| Years of RN experience | 111 | 3.86 | 2.48 | 1 | 12 |
| Years of RN in current unit | 111 | 2.98 | 2.23 | 1 | 14 |
| Years of RN at current organization | 111 | 3.84 | 2.46 | 1 | 15 |

Table 5

*Number and Percentage for Participants' Categorical Variables (n = 113).*

| Variables | | n | Valid Percent |
|---|---|---|---|
| Marital Status: | Married | 52 | 46.8 |
| | Not-married | 59 | 53.2 |
| Having Children: | No | 66 | 66.7 |
| | yes | 33 | 33.3 |
| *Number of children | 1-2 Children | 24 | 75 |
| | 3 or more children | 8 | 25 |
| *Age of youngest child | <3 | 27 | 84.4 |
| | 3-6 | 2 | 6.3 |
| | >6 | 3 | 9.4 |
| Education level: | Diploma | 1 | .9 |
| | BSN | 105 | 96.3 |
| | MSN | 3 | 2.8 |
| Working Hours: | 12-hours | 65 | 60.7 |
| | 8-hours | 33 | 30.8 |
| | Other (9 hours) | 9 | 8.4 |
| Units: | ER | 4 | 4.1 |
| | OR | 3 | 3.1 |
| | Clinics** | 41 | 42.3 |
| | ICU | 27 | 27.8 |
| | Words | 22 | 22.7 |

*Percentages for age of youngest child and number of children are for parents only

** Clinics involved outpatient clinics for follow-up treatment

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As many as 68 % of the sample reported having a high level of WFC, and 44% reported having a high level of stress. Fifty percent of the total sample intent to leave and 34% perceived that they received low support from their direct supervisors. Sixty -one percent (n=35) of those who intent to leave also perceived that they received low support from their direct supervisors as compared to seven percent of those reporting low intent to leave $X^2$ (1) =36.79, p<.001.

Based on the TI scale, a total of 46 % of the total sample were often thinking about quitting (Table 4; Figure 1), and 52 % of nurses were intent to actively look for a new job in the next year (Table 5, Figure 2)

Table 6

*Frequency and Percentages of Nurses Often Think About Quitting*

|  | Frequency | Valid Percent |
| --- | --- | --- |
| Extremely Disagree | 29 | 25.7 |
| Slightly Disagree | 20 | 17.7 |
| Neither | 12 | 10.6 |
| Slightly Agree | 29 | 25.7 |
| Extremely Agree | 23 | 20.4 |
| Total | 113 | 100 |



*Figure 5:* Nurse often think about quitting
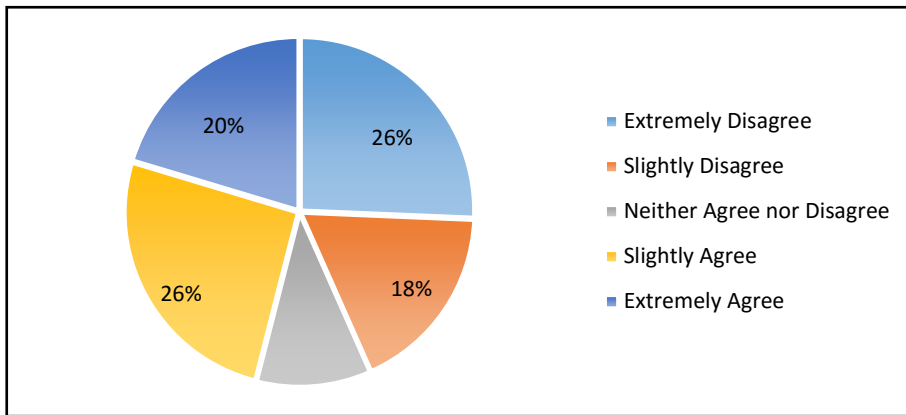
92

Table 7

*Nurse Intent to Actively Look for a New job in the Next Year*

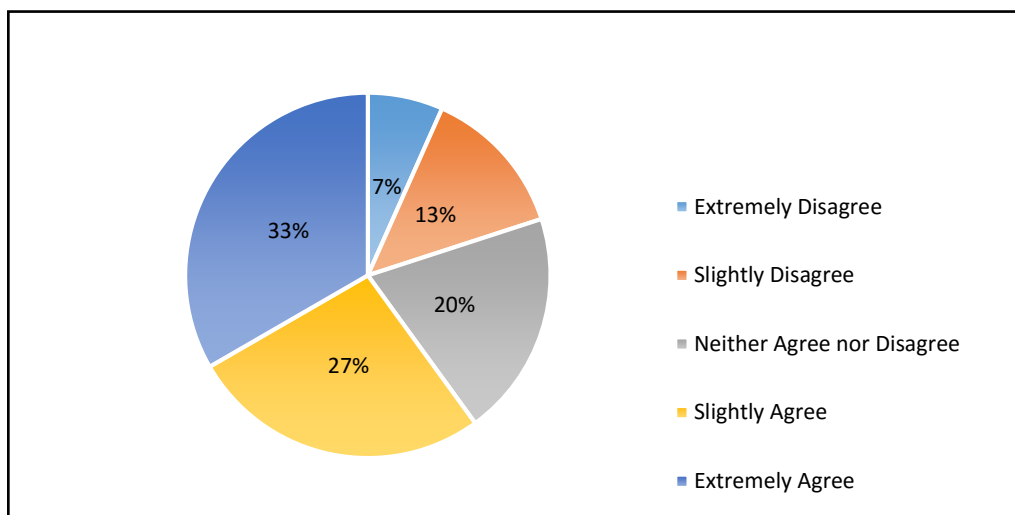|  | Frequency | Valid Percent |
|---|---|---|
| Extremely Disagree | 17 | 15 |
| Slightly Disagree | 19 | 16.8 |
| Neither | 18 | 15.9 |
| Slightly Agree | 30 | 26.5 |
| Extremely Agree | 9 | 25.7 |
| total | 113 | 100 |



*Figure 6.* Nurse intent to actively look for a new job in the next year

**Findings of Research Questions**

This section will describe the findings for each of the research questions**.**

**Research Question 1: What are the relationships among demographic characteristics, WFC, TI, stress, and FSSB?**

As expected, age was significantly correlated with the number of years as a RN, number of years at the organization and the number of children. Nurses in their 20s had more children under age of three, whereas nurses in their 30s had more children older than age of three.

To examine the relationship between marital status and TI, an independent-samples t-test was conducted. There was a significant difference in the level of TI between those who were married (M=3.24, SD=1.04) and those who were not married (M=2.80, SD=1.07); t (109) =2.0, p = 0.047. Married nurses were more inclined to leave the workplace than not married nurses.

Married nurses who were working 12 hours shift (M=3.7, SD=.63), had more WFC that married nurses who working 8 hours shifts (M=3.14, SD=.95), t (44) =2.359, P<.05. Further, married nurses who were working 12 hours shift reported more WFC (M=3.7, SD=.63) than unmarried nurses who were working the same shifts (M=3.32, SD=.737), t (4) =2.818, P<.05. These results suggested that working hours had a significant association with WFC, specifically for married nurses.

An independent-samples t-test showed a significant difference in the levels of WFC, stress, and FSSB among nurses who were thinking about quitting compared with those not intending to leave. The split of WFC, Stress, and FSSB were based on the instructions of all

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three instruments "A score of above or equal three is considered high and a score of below three is considered low".   Nurses with high level of WFC (M=3.6, SD=.79), thought about quitting significantly more than nurses with low WFC (M=3.2, SD=0.77); t (111) =2.9, p = 0.004. Similarly, the nurses who reported higher level of stress (M=3.0, SD=.5), were thinking about quitting significantly more than nurses who reported lower level of stress (M=2.8, SD=0.4); t (111) =2.45, p = 0.015.  However, nurses who reported higher levels of FSSB (M=3.7, SD=.82), thought less about quitting than nurses who reported lower level of FSSB (M=3.0, SD=0.82); t (111) =-3.9, p = 0.00.

There were significant correlations among WFC, FSSB, Stress, and TI.  The correlation was positive among WFC, Stress, and TI; meaning as WFC or Stress increase, the TI would increase significantly. The correlation was negative between FSSB and WFC, Stress, or TI.  Any increase in the FSSB would be correlated with decrease in the level WFC, Stress, and TI. The correlations among all variables are presented in Table 6: Correlation matrix among study variables.

Table 8

*Correlation Matrix Among Study Variables.*

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| **1-Age** | 1 | | | | | | | | |
| **2-Number of children** | .451* | 1 | | | | | | | |
| **3-Age of youngest child** | .146 | .150 | 1 | | | | | | |
| **4- Years of RN experience** | .678** | .128 | .085 | 1 | | | | | |
| **5- Yrs. of RN at the org.** | .745** | .513** | .267 | .708** | 1 | | | | |
| **6- Years of RN in the unit** | .416** | .263 | .127 | .127 | .511** | 1 | | | |
| **7-WFC** | .163 | -.154 | .066 | -.011 | .096 | .005 | 1 | | |
| **8-STRESS** | -.068 | -.262 | -.176 | -.173 | -.189* | -.108 | .475** | 1 | |
| **9-FSSB** | -.031 | .438* | .151 | -.017 | .066 | -.006 | -.312** | -.320** | 1 |
| **10-TI** | .119 | -.307 | .071 | .121 | .050 | .135 | .439** | .373** | -.531** |

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

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

**Research Question 2: What amount of variance in WFC can be explained by socio-demographic variables?**

A liner regression was conducted to determine the amount of variance in WFC that could be explained by the socio-demographic variable of age, marital status, years of experience in the unit, and working hours per day. WFC was the dependent variable and socio-demographic variables were entered as independent variables. None of the variables were significant in explaining the variance in WFC in the model tested; $F_{(4, 90)}$ =1.238, 281 p=.300. The total variation in the dependent variable was $R^2$ was 0.052, which meant that only 5.2 % of the total variance in WFC has been explained by the socio-demographic variables.

**Research Question 3: What amount of variance in TI can be explained by socio-demographic variables?**

A liner regression was conducted to determine the amount of variance in TI that could be explained by socio-demographic variable of age, marital status, years of experience in the unit, and working hours per day. WFC was the dependent variable and the socio-demographic variables were entered into the model as independent variables. None of the variables were significant in explaining the variance in TI, in the model; $F_{(4, 90)}$ =1.197, p=.318. The total variation in the dependent variable resulted in $R^2$ is 0.051, which meant that only 5.1 % of the total variance in TI has been explained by socio-demographic variables.

**Research Question 4: Controlling for socio-demographic variables, what is the amount of the variance in TI that can be explained by WFC, stress, and FSSB?**

Partial correlation coefficients were computed to determine the amount of the variance of TI that could be explained by WFC, stress, and FSSB. After controlling for socio-demographic variables (age, marital status, years of experience in the unit, and working hours per day), the resulting bivariate relationships resulted in 19 % of TI variance being explained by WFC, 16 % by stress, and 26 % by FSSB. A total of 61% of the variance of the TI was explained by WFC, Stress, and FSSB; the control variables did not alter the relationships of TI with WFC, Stress and FSSB. More WFC and stress were associated with increase in TI; while more FSSB was associated with decrease in TI (see Table 7).

Table 9

*Partial correlation Coefficients of WFC, Stress, FSSB with TI Adjusted for Socio-Demographic Variables\*.*

|  | Correlation | $R^2$ |
| --- | --- | --- |
| TI & WFC | .432** | .186 |
| TI & Stress | .399** | .159 |
| TI & FSSB | -.512** | .262 |

  * Socio-demographic: age, marital status, years of experience in the unit, working hours per day
  * *Significance (2-tailed), p =.000

**Research Question 5: Is the relationship between WFC and TI moderated by stress?**

To determine if stress moderated the relationship between WFC and TI, a hierarchical multiple regression analysis was conducted. Both WFC and Stress were centralized to avoid

potentially problematic multicollinearity with the interaction term (Aiken & West, 1991). Then, an interaction term between centralized WFC and Stress was created. In the first step of the hierarchical regression, centralized WFC and stress were entered into the model. In step 2, the interaction term between WFC and stress level was entered into the regression model.

Although the results indicated that the model including the interaction was significant $F$ $(1, 109) = 10.80$, P<.001, the model with the interaction between stress and WFC did not account for significantly more variance than just WFC and stress level by themselves, $R^2$ change = .001, p = .677 . Therefor there was no significant moderation between WFC and stress level on nurses TI.

Table 10

*Summary of Hierarchical Regression Analysis with the WFC, Stress, and TI (n=113)*

| Step and Predictor Variable | $R^2$ | Adjusted $R^2$ | $\Delta R^2$ | β | t | p |
|---|---|---|---|---|---|---|
| **Step 1** | | | | | | |
| WFC | .193 | .186 | .193 | .439 | 5.151 | .000* |
| **Step 2** | | | | | | |
| WFC | | | | .338 | 3.55 | .001* |
| Stress | .228 | .214 | .035 | .213 | 2.23 | .027* |
| **Step 3** | .229 | .208 | .001 | | | |
| WFC | | | | .346 | 3.55 | .001* |
| Stress | | | | .210 | 2.19 | .030* |
| WFC * Stress | | | | .036 | .417 | .677 |

Statistically significant p < .05

F (3, 109) =10.80, p <.001

The plots of the simple slopes for the interaction showed that the association between the level of WFC and TI was not significantly affected by differences in the level of stress (see Figure 3). To conclude, in this study stress did not moderate the relationship between WFC and TI. This result was inconsistent with the findings of Armstrong et. al. (2007).
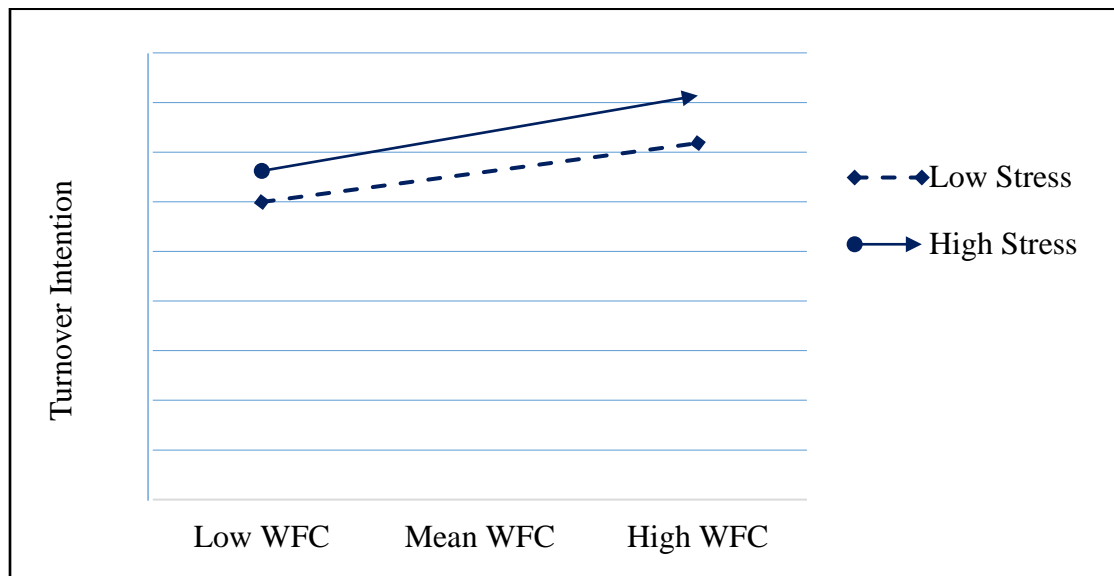


*Figure 7.* Slopes for the two-way interaction effects of stress on the relationship between WFC and TI (n = 113)

**Research Question 6: Is the relationship between WFC and TI mediated by the levels of FSSB?**

Specific conditions must be met to establish mediation a) The independent variable (WFC) must be significantly correlated to the dependent variable (TI) b) The mediator (FSSB) must be significantly correlated to both the independent variable (WFC) and the dependent variable (TI). c) When the mediator (FSSB) is entered into the regression equation with the independent variable (WFC) regressed on the dependent variable (TI), the independent variable (WFC) is no longer significant.

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Hierarchal regression was conducted to determine the mediation effect of FSSB on the relationship between WFC and TI. In block 1, WFC was entered and FSSB was entered in block 2. The result indicated that the WFC did not lose its significant (p=.000) after entering FSSB into the model (see Table 9). Therefore, FSSB did not mediate the relationship between WFC and TI.

Table 11

*Hierarchal Regression Results of FSSB, WFC, and TI (n = 113)*

| Step and Predictor Variable | $R^2$ | Adjusted $R^2$ | $\Delta R^2$ | $\beta$ | t | p |
|---|---|---|---|---|---|---|
| **Step 1** | | | | | | |
| WFC | .193 | .186 | .193 | .439 | 5.151 | .000* |
| **Step 2** | | | | | | |
| WFC | | | | .303 | 3.787 | .000* |
| FSSB | .365 | .354 | .172 | -.437 | -5.465 | .000* |

F (2,112) =23.37 p<.001

**Beta is significant at the 0.001 level

## Additional Analysis

This study aimed to advance nursing science by providing a better understanding of the nurses' intention to leave the workplace. Nurses' intention to leave is a complex issue that needs further investigation to understand and multiple strategies to prevent. Among many variables associated with nurses TI, the results of this study showed that the level of WFC, stress, and FSSB had a significant association with TI and accounted of 61 % of the variance in TI. Any

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increases in the levels of WFC and stress were significantly associated with increased TI, while any increases in the level of FSSB was significantly associated with decreased TI.

Based on the results of the initial research questions, further analysis was pursued examining the interaction relationships among FSSB, WFC, stress and TI. The aim of this further analysis was to examine the influence of FSSB on the relationships among WFC, stress, and TI using three-way interaction FSSB*WFC*Stress.  The result of this analysis was described in the following manuscript 3: the influence of FSSB on the relationships among WFC, stress, and TI in Saudi Arabian registered nurses.

**Manuscript 3**

The Influence of Family Supportive Supervisor Behaviors on the Relationships Among Work-

Family Conflict, Stress and Turnover Intention in Saudi Arabian Registered Nurses

**Abstract**

The shortage of registered nurses (RNs) is a worldwide concern; with many countries struggling to maintain adequate numbers of nurses (WHO, 2010). In Saudi Arabia, the ratio of nurses to population is only one nurse for every 473 people (1:473) which is less than the ratio in other regional countries such as Bahrain (1:61) and other developed countries such as Australia (1:97) (WHO, 2009).  Many factors that contribute to the RN shortage have been studied, but the influence of work–family conflict (WFC) has received little attention (Leineweber, et al., 2014). Managing work and family demands is challenging for many employees including nurses (Kelly et al., 2014). WFC has been linked to a number of work-related consequences, including lower job satisfaction and organizational commitment (Hoobler & Wilson, 2010) and turnover intention among employees (Amstad, Meier, Fasel, Elfering, Semmer, 2011).  WFC also was significantly related to sleep insufficiency and insomnia symptoms (Crain, et al., 2014).  In an effort to find strategies to manage the consequences of WFC, many behavioral, psychological, and career scholars have focused on the role of supervisor support (Kossek et al., 2011; Shockley &Allen, 2013). Family supportive supervisor behaviors (FSSB) has been found to be a promising approach contributing to the reduction of turnover intention in employees' experiencing WFC (Kalidass & Bahron , 2015; Nohe &Sonntag, 2014). Despite the importance of work–family issues and the influence of FSSB, limited studies have been conducted among the nursing population and none were found that included a sample from Saudi Arabia. Therefore**, the Purpose** of this study was to evaluate the influence of FSSB on the relationship among WFC,

Stress, and turnover intention in Saudi Arabian registered nurses.   **Method:** A cross-sectional study. **Sample:** Convenience sampling; 113 Saudi female nurse **Result:** Fifty percent of nurses intended to leave their workplace, 68 % of nurses reported having a conflict between work and family, and 44% reported having a high level of stress. A significant positive correlation was found between WFC and turnover intention (r= .43, P<0.01). A negative correlation was found between FSSB and turnover intention (r= -.531, P<0.01).  Both WFC and stress were associated with turnover intention; however, these associations were buffered (weaken), when nurses perceived higher FSSB.

**Conclusion:**  Managing work and family demands is a huge challenge for many employees including nurses. FSSB could be the tool to facilitate married, female nurses in their professional role without compromising their family responsibilities. Nurses' turnover is a complex issue that may require multiple prevention strategies; however, enhancing family supportive supervisor behaviors could be a key resource for maintaining a positive workplace environment and reducing turnover intention.

## Introduction

Many countries around the world are struggling to maintain adequate number of nurses (WHO, 2010). Inadequate nursing staffing could compromise the quality of patient care (Moore, 2014). Among many factors that contribute to RN turnover, the influence of work–family conflict (WFC) has gained little attention (Leineweber, et al., 2014). In Saudi Arabia, the turnover rate among Saudi nurses reached 50 % of the total employed nurses (Abu Zinadah, 2010). Work-family conflict was found to be a reason that influence Saudi nurses to leave their workplace (Alonazi, & Omar, 2013).

In addition, WFC was found to be significantly association with increased turnover intention among employees (Amstad, Meier, Fasel, Elfering, Semmer, 2011). Furthermore, WFC has been linked to a number of negative consequences, including lower job satisfaction and organizational commitment (Hoobler & Wilson, 2010), sleep insufficiency, insomnia symptoms (Crain, et al., 2014), obesity (Grzywacz, 2000), cardiovascular diseases (Shockley & Allen, 2013), sleep insufficiency (Berkman, Buxton, Ertel, & Okechukwu, 2010), and high cholesterol (Greenhaus et al., 2006).

Many behavioral, psychological, and career scholars have studied the role of supervisor support on reducing the consequences of WFC (Kossek et al., 2011; Shockley &Allen, 2013). family supportive supervisor behaviors (FSSB) defined as a set of behaviors exhibited by supervisors that are supportive of employees' family roles, has been found to be a promising approach contributing to the reduction of turnover intention in employees' with WFC (Kalidass & Bahron , 2015; Nohe &Sonntag, 2014). However, limited studies were conducted among the nursing population. Further, it was found that 75% the samples used in work–family studies are exclusively US workers (Eby, Casper, Lockwood, Bordeaux, Brinley, 2005). No studies were

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found that included a sample from Saudi Arabia.  Therefore, the purpose of this study was to evaluate the influence of FSSB on the relationship among WFC, Stress, and turnover intention in Saudi Arabian registered nurses.

## Background

Managing work and family demands is a challenge for many employees including nurses (Kelly et al., 2014). Researchers have moved beyond examining the causes of WFC to study the effects of WFC (Almeida, et al., 2016). Stress has been presented as a reaction of exposure to higher WFC.  Individuals who are more reactive are more subject to negative sequences than individuals who are less reactive (Piazza, Charle, Sliwinski, Mogel, Almeida, 2013; Mroczek et al., 2015).  Therefore, Almeida, et al, (2016) recommended measuring the level of stress when studying WFC.  Employees who experienced higher WFC, also reported higher level of stress (Almeida, et al., 2016; Li, Shaffer, & Bagger, 2015). Stress, in turn, has been linked to longitudinal negative consequences such as depression and anxiety (Charles et al., 2013), chronic diseases (Piazza, Charles, Sliwinski, Mogle, & Almeida, 2013), and even mortality (Mroczek et al., 2015).

Although stress has been presented as a reaction or consequence to WFC, there is a potential of opposite temporal sequences of the direction of the relationship between WFC and stress.  Due to the use of cross-sectional designs by many researchers, insight into the direction of this relationship could not be provided.  Many authors argue that experiencing higher WFC could increase the level of stress (Buxton, Klein, Whinnery, Williams, & McDade, 2013; Kreiner, 2006), other argue that being stressed could increase the level of WFC (Li, Shaffer, & Bagger, 2015).

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Employees may try to reduce the conflict or stress by quitting their job (Nohe, & Sonntag, 2014).  In an effort to efficiently manage WFC and reduce employee turnover, many behavioral, psychological, and career scholars have focused on the role of supervisors (Kossek et al., 2011; Shockley &Allen, 2013).  A growing body of researchers have documented the benefits of FSSB on employee health (Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011).

FSSB facilitate an employee's desire to effectively balance and manage work and family responsibilities.  Supervisor behaviors include engaging in emotional support, instrumental support, role-modeling behaviors, and exploring creative work–family management practices (Hammer, Kossek, Yragui, Bodner, & Hanson, 2009). This set of supervisor behaviors that were supportive of employees' family roles was identified as a promising approach to reduce employees' turnover intention (TI) (Kalidass & Bahron, 2015; Nohe &Sonntag, 2014).

Few studies have examined the buffering effect of FSSB on turnover intention.  Nohe and Sonntag (2014), in a study of 665 employees concluded that FSSB buffered the relationship between WFC and turnover intention. This finding suggests that FSSB need further examination as a potential effective strategy to reduce turnover intention for those who are experience high WFC.  According to social support theories and the buffering hypothesis (House, 1981), individuals who perceive high levels of support are more able to manage stressful situation such as WFC and reduce its negative consequences such as turnover intention (Cohen, Gottlieb, & Underwood, 2000).

Despite the importance of work–family issues and the influence of FSSB, limited studies were conducted among nurses and limited studies examined the influence of FSSB on the relationships among WFC, stress and turnover intention. Further, it was found that 75% of work–family studies that have been conducted used samples of only US workers (Eby, Casper,

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Lockwood, Bordeaux, Brinley, 2005). No published studies were found that included a sample from Saudi Arabia. Therefore, this study was conducted in one of the major hospitals in Riyadh city, the capital of Saudi Arabia.

## Culture Context of Saudi Arabia

Women in Saudi Arabia, as many women in the Gulf regions countries, have high levels of education and many work opportunities; yet they are expected, according to cultural norms, to perform traditional domestic responsibilities, bear children and look after their family needs (Bahudhailah, 2015; Shallal, 2011). According to customs and mores in the Saudi society, marriage and motherhood are highly valued (Mobaraki & Söderfeldt, 2010), and women are not expected to prioritize work over family and children. For working women, these expectations can create conflict between work and family demands (Sha'aban, 1996).

Unlike men in Western countries who currently are expected to perform a larger domestic role (Parker &Wang, 2013; Coyle, Van Leer, Schroeder, & Fulcher, 2015), most men in Gulf regions, especially in Saudi Arabia, do not participate in domestic responsibilities. Due to their culture, they heavily relay on their wives who are expected to takes care of almost all domestic house work and responsibilities regardless whether they are working outside the home or not (Shallal, 2011; Alyaemni, et al., 2013). For many married women, this situation is a serious burden, it is hard to meet the needs of both work and family roles without facing a conflict and experiencing stress (Shallal, 2011).

Many married women in the Gulf region countries, especially in Saudi Arabia, were found to be significantly dissatisfied with their employment (Shallal, 2011). The difficulty of balancing family and work responsibilities was a serious factor that influenced women's

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participation in the general workforce (Aryee et al., 1999). There is a common understanding that work could diminish the quality of family life (Nazzah, 2004), therefore, it is not surprising to find that the rates of single women were higher than married women in general workforce in Arab countries including Saudi Arabia (Fargues, 2005).

According to the Saudi society, emphasized by both norms and cultural traditions, while a married woman is required to fulfill her family obligations at home, the man's responsibility is to financially support the wife and the family (Metcalfe, 2008). Men have traditionally and culturally been the family providers and with the current oil revenues in the area, the need for women to work after marriage is minimized as the family can depend on husband income alone (Shallal, 2011). However, Saudi women like many women around the world, choose to work not only to be financially independent but also to find a sense of purpose and fulfillment (Alyaemni, et al., 2013; Lal, 2012).

With the defined roles of married women and men in the Saudi society, married working women are more vulnerable to experience WFC and stress (Al-Tarrah, 2010; Krouse, and Afifi, 2007; Vanagas et al, 2004). Since the priority for women is home, husband and children, many may choose to quit their jobs to stay homes and fulfill their traditional domestic role (Alyaemni, et al., 2013). Leaving their job could be an easier option for women after marriage, especially when they start experiencing increased WFC. Women in Saudi Arabia would chose not to work if their work would compromise their obligations and responsibilities toward their families (Elamin, & Omair. 2010).

Although there is an increasing recognition of the role of culture in WFC, the majority of research on WFC has been conducted in Western countries (Aryee, Luk, Leung, & Lo, 1999; Poelmans, 2005). Little is known about the influence of culture in Gulf region countries,

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especially Saudi Arabia, on working women.  Married women in Saudi Arabia, are seeking a workplace where they can perform their professional duties without compromising their obligatory family responsibilities (Alyaemni, et al., 2013).  From this cultural perspective of women placing a strong value on family, FSSB could be expected to influence the relationships between WFC and turnover intention especially among married working women (Weisgram et al., 2011).

## Purpose

The purpose of this study was to assess the moderating effect of FSSB on the relationships among WFC, Stress, and turnover intention in Saudi Arabian female registered nurses.  In this study, it is proposed that FSSB would weaken the relationship between WFC and turnover intention especially for nurses who have a higher level of stress.  It is also proposed that this interaction is determined by marital status; since married nurses may feel more obligated to their family and spouses.  Therefore, the main hypothesis for this study was that FSSB moderate (buffer) the relationship between WFC and turnover intention, such the relationship is stronger for married nurses with high (vs. low) stress level.

<center>**Method**</center>

A cross-sectional correlational study design was employed for this study. Pen and paper self-report questionnaires was used to gather the data from female registered nurses providing direct health care in hospital sitting.

**Sample and Setting**

A total of 200 surveys were distributed to Saudi nurses working in one of the largest hospital in the capital city of Saudi Arabia, and 113 were returned for a response rate of 56%. The average age of the nurses was 28 years old (*SD 3.8*), 47 % of the total sample was married. The majority of the nurses in this sample had a Bachelor Degree in nursing (96%); and 61 % were working for 12 hours a day, four days a week.

**Instruments**

For this study, four instruments with a total of 37 items were used along with some demographic question (age, marital status, years of employment, number of children, age of youngest child, working hours, experience as RN, education, and units). The four measurement scales include:

**The perceived stress scale (PSS-10)**. (Cohen, Kamarck & Mermelstein, 1983) was used to measure nurses' stress. It is a 10-item inventory using a 5-point Likert Scale, ranging from 0 (Never) to 4 (Very Often). A total score of perceived stress (0-40) was calculated for each nurse and higher scores indicate higher levels of perceived stress (Cuneo et al., 2011). The internal consistency estimate for the scale in this study was 0.72.

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**The turnover intention scale (TIS)** developed by Cammann, Fichman, Jenkins, & Klesh (1979) was used to measure nurses' intention to leave. The TIS is a 3-item scale with response options ranging from (1) "Extremely Disagree" to (5) "Extremely Agree Rationale. The internal consistencies for the TIS scale in this study was 0.65.

**The work-family conflict scale** (Netemeyer, Boles, & McMurrian, 1996) measured the nurses' level of WFC. Ten items are rated on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree). Higher scores indicate higher levels of conflict. The WFC scale had an internal consistency was 0.88 in this study sample.

**The Family supportive supervisor behavior (FSSB)** developed by Hammer et al. (2009) was used to measure nurses' perception of supervisors' behavior. It is a 14 items scale and included four dimensions: emotional support (4 items), role modeling behaviors (3 items), instrumental support (3 items), and creative work-family management (4 items). The internal consistencies for the scale in this study sample was 0.97.

## Analyses

Basic descriptive and bivariate correlations were calculated for initial data description. An independent-samples t-test was conducted to compare the level of turnover intention among married and unmarried nurses. The main analysis employed hierarchical multiple regression with turnover intention as the dependent variable and WFC, Stress, and FSSB as independent variables in order to examine the influence of FSSB on the relationships among WFC, stress, and turnover intention. Since it was proposed that the moderation effect of FSSB would be different based on the marital status of nurses, Data were stratified by marital status: married and unmarried.

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In order to reduce multicollinearity, the variables were mean-centered before computing the interaction terms (Aiken & West, 1991). In the first step, turnover intention was entered as the dependent variable, and predictors WFC, FSSB and Stress were entered as independent variables. In Step 2 of the regression analysis, the three two-way interactions (WFC*Stress; WFC*FSSB; Stress*FSSB) were entered. In the last step, the three-way interaction was entered (WFC*Stress*FSSB) into the equation. To confirm the moderation hypotheses, the coefficient for the interaction variables needed to be significant and in the direction predicted.

## Results

More than half of the nurses (68%) reported having high level of WFC, and 44% reported having high level of stress. Fifty percent of the total sample reported intentions to leave employment and 34.5% perceived that they received low support from their direct supervisors. Correlations between study variables are presented in Table 1. There was a significant difference in the level of turnover intention for married (M=3.24, SD=1.04) and unmarried nurses (M=2.8, SD=1.07), [t (109) =2.0, p = 0.047]; suggesting that married Saudi nurses had higher levels of turnover intention than unmarried.

Table 12

Mean Scores, Standard Deviations, and Correlations Between Study Variables. (n=113)

|        | Mean | SD  | TI       | WFC      | Stress   | FSSB |
|--------|------|-----|----------|----------|----------|------|
| TI     | 3.02 | 1.0 | 1        |          |          |      |
| WFC    | 3.42 | .81 | .44**    | 1        |          |      |
| Stress | 2.97 | .48 | .37**    | .475**   | 1        |      |
| FSSB   | 3.36 | .97 | -.53**   | -.31**   | -.32**   | 1    |

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

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For this study, a hierarchal regression analysis was performed using married nurses (n =51) with turnover intention as the dependent variable to examine the interaction between FSSB, WFC and stress.  In the first step, the three main variables were entered and explained 28.9% of the variance in turnover intention.  In the second step, the bivariate interaction variables were added explaining an additional 7.7% of the variance in the turnover intention.  In the third step, the three-way interaction was added and significantly explained an additional 7% of the variance in the turnover intention for a total of 43.5% of the variance of turnover intention explained (Table 2).

Table 13

Hierarchal Regression Results for Married Nurses with Turnover Intention. (n=51)

| Step and Predictor Variable | $R^2$ | Adjusted $R^2$ | $\Delta R^2$ | $\beta$ | t | p |
|---|---|---|---|---|---|---|
| **Step 1** | | | | | | |
| WFC | .289 | .244 | .289 | .174 | 1.17 | .245 |
| Stress | | | | .147 | 1.03 | .304 |
| FSSB | | | | -.381 | -2.94 | .005* |
| | | | | | | |
| **Step 2** | | | | | | |
| WFC | | | | .133 | .906 | .370 |
| Stress | .365 | .281 | .077 | .045 | .305 | .762 |
| FSSB | | | | -.534 | -3.70 | .001* |
| WFC*Stress | | | | .210 | 1.45 | .152 |
| WFC*FSSB | | | | .296 | 2.01 | .049* |
| Stress*FSSB | | | | -.066 | -.46 | .648 |
| | | | | | | |
| **Step 3** | | | | | | |
| WFC | | | | .098 | .692 | .490 |
| Stress | | | | -.284 | -1.14 | .160 |
| FSSB | .435 | .345 | .070 | -.500 | -3.61 | .001* |
| WFC*Stress | | | | .558 | 2.74 | .009* |
| WFC*FSSB | | | | .425 | 2.82 | .007* |
| Stress*FSSB | | | | .279 | 1.38 | .170 |
| WFC*Stress*FSSB | | | | -.543 | -2.33 | .024* |

F (7, 44) =4.843 p<.001

*Beta is significant at the 0.05 level

For unmarried nurses (n=58), another hierarchal regression analysis was performed with turnover intention as the dependent variable to examine the interaction between FSSB, WFC and stress.  In the first step, the main effect explained 45 % of the variance in turnover intention.  In the second step, the bivariate interaction explained an additional 9.6 % of the variance in turnover intention.  In the third step, the three-way interaction was entered and explained an additional three percent of the variance in turnover intention for a total of 59 % of the variance in the turnover intention explained (see table 3).

Table 14

Hierarchal Regression Results for Unmarried Nurses with Turnover Intention. (n=58)

| Step and Predictor Variable | $R^2$ | Adjusted $R^2$ | $\Delta R^2$ | β | t | p |
|---|---|---|---|---|---|---|
| **Step 1** | | | | | | |
| WFC | .458 | .429 | .458 | .333 | 2.96 | .004* |
| Stress | | | | .040 | .335 | .739 |
| FSSB | | | | -.475 | -4.27 | .000* |
| | | | | | | |
| **Step 2** | | | | | | |
| WFC | .554 | .503 | .096 | .299 | 2.70 | .009* |
| Stress | | | | .024 | .211 | .834 |
| FSSB | | | | -.587 | -5.24 | .000* |
| WFC*Stress | | | | .101 | .785 | .436 |
| WFC*FSSB | | | | .372 | 3.13 | .003* |
| Stress*FSSB | | | | -2.19 | -1.83 | .072 |
| | | | | | | |
| **Step 3** | | | | | | |
| WFC | .591 | .535 | .036 | .376 | 3.33 | .002* |
| Stress | | | | .099 | .853 | .298 |
| FSSB | | | | -.664 | -5.81 | .000* |
| WFC*Stress | | | | .048 | .383 | .703 |
| WFC*FSSB | | | | .325 | 2.78 | .008 |
| Stress*FSSB | | | | -.192 | -1.65 | .105 |
| WFC*Stress*FSSB | | | | .281 | 2.13 | .038* |

 F (7, 51) =10.515 p<.001

*Beta is significant at the 0.05 level

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Although in both models the relationship between the variables and the turnover intention were significant, in the findings for married women the three-way interaction was negative, whereas in the model for unmarried the three-way interaction was positive. Meaning that for married nurses, the three-way interaction significantly decreased their turnover intention. However, for unmarried women the three-way interaction did not significantly decreased turnover intention.

The three-way interaction was plotted to display the relation among the variables, examining the relationship between X and Y, at high and low values of Z and W, as discussed by Aiken & West, 1991. Building on the work of Aiken and West (1991), the straight forward way to visualize and interpret the three-way interaction is to compare and contrast the slopes of the four lines. First, the regression equation which includes a three-way interaction variable was created. In this formula, **Y** is the independent variable (Turnover Intention), **X** the predictor variable (WFC), with **Z** (STRESS) and **W** (FSSB) being the two moderator variables.

The regression equation is formed by multiplying the three variables (X, Z, and W). In this equation, the test of $b_7$ coefficient indicates whether the three-way interaction is significant (Aiken and West, 1991).

$$Y = b_0 + b_1X + b_2Z + b_3W + b_4XZ + b_5XW + b_6ZW + b_7XZW$$

Therefore, the slopes of the four lines can be represented by

| | |
|---|---|
| $b_1\ b_4Z_H\ b_5W_H\ b_7Z_HW_H$ | (High stress, High FSSB) |
| $b_1\ b_4Z_H\ b_5W_L\ b_7Z_HW_L$ | (High stress, Low FSSB) |
| $b_1\ b_4Z_L\ b_5W_H\ b_7Z_LW_H$ | (Low stress, High FSSB) |
| $b_1\ b_4Z_L\ b_5W_L\ b_7Z_LW_L$ | (Low stress, Low FSSB) |

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The influence of FSSB on the relationship among WFC, stress, and turnover intention among married nurses is illustrated by the two graphs in Figure 1. For married nurses, turnover intention decreased as the conflict increased with high support especially with higher levels of stress. With low FSSB, the turnover intention increases as the conflict increased especially with higher levels of stress (Figure 1).
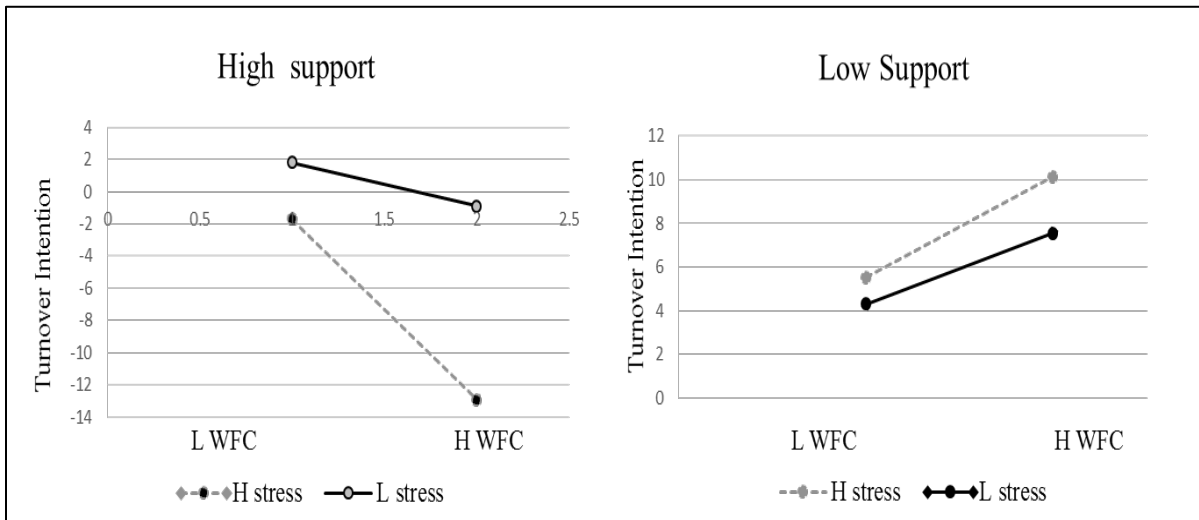


*Figure 8.* Slopes for The three-way interaction effects of FSSB and Stress on the relationship between WFC and turnover intention (Married nurses)

As displayed in Figure 2, there is a no influence of FSSB on the relationship between WFC and turnover intention among unmarried nurses. For unmarried nurses with high stress as well as with low stress, turnover intention increased as WFC increased with both high FSSB and low FSSB.

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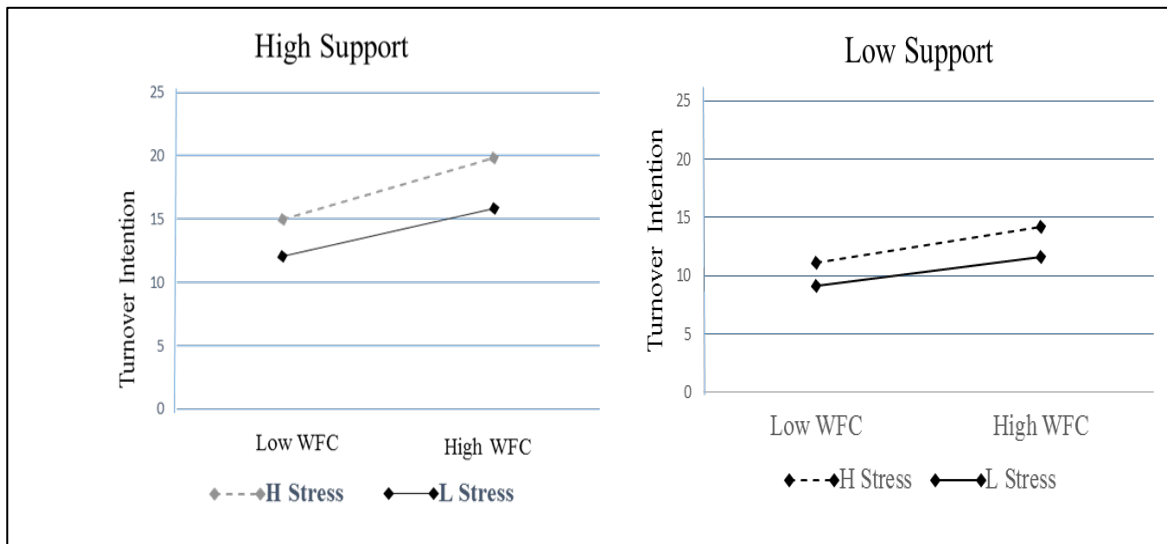
*Figure. 9.* Slopes for The three-way interaction effects of FSSB and Stress on the relationship between WFC and turnover intention (unmarried nurses).

## Discussion

The purpose of this study was to evaluate the moderating effect of FSSB on the relationship among WFC, stress and turnover intention. While considering the influence of culture in Saudi Arabia, it was proposed that the moderation effect of FSSB would be different based on the marital status of nurses. The reported main effects of WFC, Stress, and FSSB on the level of turnover intention were consistent with earlier research; WFC and Stress have positive correlation with turnover intention, while FSSB has negative correlation with turnover intention (Shockley &Allen, 2013; Li, Shaffer, & Bagger, 2015 Kalidass & Bahron, 2015; Nohe &Sonntag, 2014).

With further examination using the interactions among the independent variables, the study hypothesis was supported; the FSSB buffered the influence of WFC and stress on turnover intention among married nurses. Despite the higher levels of WFC and stress, married nurses

who reported higher FSSB had lower turnover intention. Whereas married nurses who reported high level of WFC and Stress but less FSSB were more intent to leave. These findings may be interpreted that for married women, it is essential to have FSSB in the workplace to reduce the negative influence of WFC and stress on their intention to leave. The plotted simple slopes (Fig. 1) confirmed this influence; with high FSSB the relationship between WFC and turnover intention was weakening even with high stress. The result of this study was consistent with previous research that found similar moderation effect of FSSB (Nohe & Sonntag, 2014; Almeida et al., 2016).

Considering the defined role of married women in Saudi Arabia, this study revealed that married nurses were more intent to leave that non-married nurses. Therefore, the result of this study indicated that FSSB can help reduce married nurses' intention to leave by buffering the influence of WFC and Stress. This study was the first study conducted in Saudi Arabia, so there were no other studies to compare the results. However, a growing body of literature has highlighted the importance of FSSB as a key resource for employees to balance work and family demands (Almeida et al., 2016; Crain et al., 2014; Nohe &Sonntag, 2014; Hammer et al., 2011).

**Nursing implications**

With the current shortage of nursing workforce, it is important to maintain nurses in the workplace and investigate ways to reduce turnover. Several studies describe associations between registered nurses' perception of their practice environment and nurse outcomes such as job satisfaction, RN quality of care (Moore, 2014), and turnover intention; as well as patient outcomes such as mortality and failure to rescue (Van Bogaert et al., 2010). Nursing leaders and policy makers need to investigate ways to create a more supportive work environment for nurses to enhance organizational and patients' outcomes.

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This study finding suggested important practical implications for nursing; an obvious implication is that nurses' turnover intention could be reduced by reducing their WFC. Therefore, healthcare organizations may benefit from offering formal work–family policies, such as flexible work schedules, that could help nurses in balancing work and family demands (Ryan & Kossek, 2008; Sutton & Noe, 2005). Further, it may be beneficial to offer educational programs and workshops for nurses to improve specific skills to balance the demands of work and family (Baltes & Heydens-Gahir, 2003).

Another implication is that the relationship between WFC and turnover intention could be reduced by FSSB. In this regard, healthcare organizations are advised to develop and adopt strategies to promote FSSB. For example, official guidelines for supervisors to use supportive behaviors related to employees' family issues. Furthermore, implementing training programs for supervisors to enhance their ability to address work–family issues and to be more sensitive to WFC have been shown to be beneficial for employee health outcomes (Hammer et al., 2011). Further interventional and longitudinal studies are recommended to evaluate the effectiveness of such supervisor training programs.

The study findings suggest the importance of cultural context in studying WFC. Therefore, further studies are recommended to explore the relationships between WFC and other variables that could be different from one culture to another. For example, family perception about working women, working night shifts, and the nature of workplace need further examination. In a conservative gender-segregated society such as Saudi Arabia these variables could change the level of WFC and its consequences.

Although positive effects of support are promising in reducing nursing turnover intention, there are limited studies examining the impact of FSSB among nurses' population. More

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research in this area is strongly recommended to identify implications for nursing especially with the shortage of registered nurses in the workforce. Understanding what nurses perceive as specific supportive behaviors as demonstrated by their supervisors can inform future plans designed to promote supervisors' behaviors that lead to nursing retention.

## Conclusion

Managing work and family demands is a huge challenge for many employees. With the defined domestic role and higher expectations of married women in the Saudi society, married nurses are more exposed to WFC and stress. The results of this study suggested the importance of providing FSSB to help married nurses reduce the consequences of WFC and stress. The FSSB could be the tool to facilitate married nurses perform their professional duties without compromising their family responsibilities. Nurses' turnover is a complex issue that may require multiple prevention strategies; however, enhancing FSSB could be a key resource for maintaining a positive workplace environment and reducing the turnover intention.

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The Influence of Family Supportive Supervisor Behaviors on the Relationships Among Work-Family Conflict, Stress and Turnover Intention in Saudi Arabian Registered Nurses

**Introduction**

This chapter discusses the findings of this study and considers how they relate to the results of other relevant studies on work-family conflict (WFC), Family Supportive Supervisor Behaviors (FSSB), stress, and turnover intention (TI). After a brief review of the study, I will discuss the findings, which are divided into a discussion of results of descriptive analysis and a discussion of inferential analysis results. Further, this chapter includes discussion about the research implications: theoretical, practical, political, and educational implications. The chapter concludes by the describing the limitations of the study and providing recommendations for future research.

**Brief Review of the Study**

High turnover rates among nurses can jeopardize the quality of patient care (Moore, 2014). Nurses may leave the workplace for many reasons such as lack of autonomy, workload, staffing, and low wages (Chiang & Lin, 2009; Kuo, Lin, & Li, 2014).  Recently, a number of career scholars have emphasized paying more attention to the interface between work and family as a variable that lead to turnover (Blustein, 2011; Richardson, 2012).  In a study involved 201employees in manufacturing and assembly plant located in the southeastern United States, work-family conflict (WFC) was found to be a predictor of turnover (Carr, Boyar, & Gregory, 2008); employees may leave their employment if they experience a high level of conflict (Lin Qiu, 2010; Carr, Boyar, & Gregory, 2008).

Maintaining a balance between work and family demands is not an easy task; as many as 60% of working adults reported having difficulty balancing work and family demands (Keene & Quadagno, 2004).  It is nearly impossible for employees to completely separate work and family domains from each other (Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011).  Employees who experience a high amount of WFC may need support and help to maintain a balance between the work and family demands.  Family Supportive Supervisor Behaviors (FSSB) was found to be effective for employees who experience high WFC (Nohe, & Sonntag, 2014).

FSSB can enhance employees' abilities to maintain the balance between work and family, and reduce the negative consequences that result from the conflicts between theses domains (Kossek, Pichler, Bodner, & Hammer, 2011).  Researchers have examined the influence of FSSB and found that WFC was significantly associated with increased turnover intention (TI) when the level of FSSB was low, but not significantly with high level of FSSB (Noah & Sonntag, 2014).

Despite the growing importance of the influence of FSSB in reducing the negative consequences of WFC, there are limited studies among the nursing population. Up-to-date there were no published studies evaluating the influence of FSSB among Saudi nurses. The current study assessed the influence of FSSB on the relationship between WFC and TI among nurses in Saudi Arabia. The finding of this study revealed that adopting FSSB in the workplace is a promising approach that has potential in reducing nurses' turnover intention and reducing conflicting between family and work. In this chapter, nursing implications and recommendations based on the findings of this study will be discussed.

**Discussion of the Findings**

All of the study variables appear correlated in the expected direction. Increased FSSB was negatively correlated with decreased WFC, Stress, and TI. Increased WFC was positively correlated with increased Stress and TI.  Controlling for socio-demographic variables, a total of 61 % of the variance of TI was explained by WFC, Stress, and FSSB.

**Discussion of Sample**

The average age of the Saudi nurses who participated in this study was 28 years old (*SD 3.8*), which is younger than the usual average age (M=44, SD=11) of nurses in many studies conducted in other countries such as the US (HRSA, 2013; Leineweber, et al, 2014).  The number of nurses in this study included more than half of the Saudi nurses employed in the study setting, and the oldest nurse in the sample was 40 years old, which indicated a young nursing population. The lack or limited number of older nurses has limits comparison of findings to other samples. Additionally, 60 % of the sample had less than four years of nursing experience. Studies have indicated that a limited number of older and experienced nurses in the workplace may cause a loss of valuable intellectual resources such as accumulated experience, core competencies, organizational technology relationships, and professional skills which can impact adversely on patient care (Francis, Drury, & Chapman, 2009; Andriessen, & van den Boom, 2006; Hatcher, et al., 2006).

Retention of nurses; especially older, experienced nurses in the workforce needs to be seen as a priority by organizations.  Older workers have different needs than younger ones, yet few organizations addressed this issue (Watson, Manthorpe, & Andrews, 2003).  Healthcare organizations may use strategies to retain older nurse in the workplace, including but not limited

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to flexible working hours; recognition; paid roles, such as mentor and workplace trainer; greater autonomy; and lighter (physical) duties (Editorial, 2006; Wright, 2006).

The United States (US) Institute of Medicine's report on the Future of Nursing has recommended increasing the proportion of nurses with a baccalaureate degree to 80 % by 2020. In this sample the percentage of nurses holding a Bachelor of Science in Nursing (BSN) was 96 %, which was significantly greater than the US average of 44.6 % (HRSA, 2013). The level of nursing education has a significant influence on the knowledge and competencies of the nurses. Nurses with BSN degrees are better prepared to meet today demands across a variety of inpatient and outpatient settings with their skills in critical thinking, leadership, case management, and health promotion (Rosseter, 2015). It was found that hospitals with a higher percentage of nurses with BSN or higher degrees had better patient outcomes such as shorter stay length, lower rates of postoperative deep vein thrombosis, pulmonary embolism, congestive heart failure mortality, and failure to rescue (Blegen, et al., 2013).

As many as 68 % of the nurses in this study reported having high level of WFC and 44% reported high stress. In this study, 34 % of the nurses perceived their supervisors as less supportive. Fifty percent of nurses in the sample intended to leave their workplace. Although nurses' intention to leave was significantly associated with the level of work-family conflict, stress, and family supportive supervisor behaviors; causality cannot be claimed. Many factors other than WFC, stress, and FSSB could have contributed to nurses' TI. For example, during data collection at the study site, a nurse revealed that the real reason of her intent to leave was only because her husband job relocation.

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**Discussion of Study Results**

Contrary to previous studies that found an influence of stress on the relationship between WFC and outcomes such as burnout and turnover (Chu, 2014: Armstrong et. al., 2007), the hypothesized moderating effect of stress was not found in this study. There was no significant influence of stress on the relationship between WFC and TI; as WFC increased, TI increased regardless of the level of stress.

Although FSSB was significantly correlated with decreased TI, it did not minimize the strength of the associations of the main effect of WFC. To further explain, the relationship between WFC and TI was significant even with the presence of FSSB. However, it was found that increased of FSSB experienced by married nurses did reduce their TI when experiencing high levels of WFC and stress. This result was consistent with previous studies that found the same buffering effect of FSSB (Nohe &Sonntag, 2014; Almeida et al., 2016; Cohen, Gottlieb, and Underwood, 2000).

Although there was not significant difference in the levels of WFC conflict based on marital status, married nurses were significantly more intent to leave. It was found that the buffering effect of FSSB was significant only for married nurses. This finding may be explained by the defined role of married women in Saudi society. Married women are expected to prioritize their family demands and fulfill their role as wives and mothers. They are not expected to compromise their obligations and responsibilities toward their families (Elamin, & Omair. 2010). When experiencing WFC, the norms and cultural traditions in the Saudi Arabian society put more pressure and expectation on married women to quit employment, prioritize their family and fulfill their traditional domestic role (Alyaemni, et al., 2013). Thus, the result of this study

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suggests that married nurses would benefit from FSSB in reducing TI when experiencing work family conflict.

## Implications

Potential implications of this study are provided below. These implications include theoretical, practice, political, and educational implications.

### Theoretical Implication

The majority of research on WFC and FSSB has been conducted in Western countries (Aryee, Luk, Leung, & Lo, 1999; Poelmans, 2005). Therefore, this study added to the literature by incorporating data gathered in one Middle Eastern country where little is known about the study variables. The findings of this study highlighted the influence of culture; it was found that cultural context could lead to essential distinctions. For example, in this study, FSSB operated differently based on marital status. It was found that FSSB is most effective in buffering the relationship of WFC to TI among married nurses. Within Saudi Arabia culture context, married nurses were vulnerable for TI turnover when experiencing WFC. This study contributes to the literature by highlighting the influence of society culture, norms, and believes in regard to marital status. The cultural impact on the individual values can shape their behaviors; and as noted married nurses in Saudi society often experience higher domestic expectations and obligations.

Another theoretical contribution of this study was testing the Workplace Support and Turnover Intention (WSTI) conceptual model (Alshutwi, 2016). The WSTI is a newly developed model that illustrates the moderation effect of workplace support. More specifically, this study tested the influence of FSSB on the relationship between WFC and TI. Compatible with the WSTI model, FSSB was found to moderate the relationship among WFC, stress, and TI.

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**Practice implications**

The most obvious implication is that healthcare organizations could reduce the relationship between WFC and TI by promoting FSSB. Healthcare organizations may want to foster FSSB behaviors through well-developed guidelines that help supervisors to provide specific support when their nurses experience WFC. Healthcare organization could provide work–family supportive training for supervisors (Hammer, Kossek, Bodner, Anger, & Zimmerman, 2011). This study demonstrated the potential importance of healthcare organizations selecting and developing nurses' supervisors who are able to identify WFC and provide positive workplace support for work- family-related stress (Kossek, Pichler, Bodner, & Hammer, 2011). Assessment of the supervisors' supportive skills could be considered a part of the supervisors' hiring and promotion process. Many tools could be used to evaluate and facilitate supervisors' supportive skills such as interview questions, case scenarios, or situational judgment test (Matthews, Mills, Trout, & English, 2014).

Researched showed that human resource policies at organizational level such as the subsidized services for child and elder care have limited implications in supporting employees who experience WFC (Kossek & Lambert, 2005). Therefore, these services should be accompanied by increased FSSB. Healthcare organizations may want to increase the FSSB and offer formal work–family policies to support employees; such on-site child care to help nurses juggling their work and family demands (Ryan &Kissek, 2008; Nohe, & Sonntag, 2014).

The study findings suggest implications for healthcare organizations. Along with previous studies, this study suggested that healthcare organizations may want to offer formal work–family policies to support employees; such on-site child care to help nurses juggling their work and family demands (Ryan &Kissek, 2008; Nohe, & Sonntag, 2014). Working fewer hours

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was associated with lower WFC, therefore, healthcare administrators may want to investigate adopting eight hours shifts system instead of 12 hours shifts or offer some flexibility for nurses to choose between working 12 or eight hours shifts.  In addition, nurses may benefit from educational programs such as time-management skills, multitasking, and task prioritizing to improve skills for balancing work and family demands.

Many factors contribute to nurses' turnover; health care organizations should investigate seriously why each nurse would leave or stay. Conducting exit and stay interviews could be a good strategy to gain valuable information and insight from talking with nurses- who are leaving and those who are staying.

**Political implications**

**Health policy in Saudi Arabia.** The Minister of Health (MOH) in Saudi Arabia plays a central role in influencing the policy initiatives that aim to promote the quality of health services. Although developing specific operational policy is a decentralized process, these policies should be aligned with the objectives of MOH and be beneficial for patients, families, employees, and the community society. Currently, Saudi Arabia is working on the four strategic priorities that were identified by the World Health Organization (WHO) for healthcare. These strategic priorities include strengthening health promotion and control of non-communicable diseases; strengthening communicable disease control and health security; strengthening the health care delivery systems; and improving the partnership for health development.

To address the priority of strengthening the health care system, a set of strategic approaches and recommendations were framed. One of these recommendations was developing long-term planning for human resource development, including gradual replacement of the expatriate healthcare providers. The results of this study can be used by health care

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administration and policy makers to facilitate policy decisions aimed toward retaining qualified

Saudi nurses.  In long term, retaining more Saudi nurses would help in replacing expatriate

nurses.

Many policymakers have advocated for formal human resource policies such as the

subsidized services for child and elder care, benefits, and leaves.  However, these policies may

fail to reduce WFC as they are not tailored to individual needs (Kossek & Distelberg, 2009).

Researchers have concluded that human resource policies at a macro-level have limited

implications in supporting employees who experience WFC (Kossek & Lambert, 2005).  Other

researchers see these policies as ineffective in reducing WFC and in improving employees'

wellbeing (Kossek, 2005).  Surprisingly, a longitudinal study revealed that the use of some

macro-level policies was linked to high WFC, which was the opposite direction of the expected

response (Hammer, Neal, Newsom, Brockwood, & Colton, 2005).  Therefore, researchers have

been focusing more on informal work-family support policies at an individual level, such as

FSSB, rather than organizational level (Hammer, Kossek, Zimmerman, & Daniels, 2007;

Kreiner, Hollensbe, & Sheep, 2009).

The results of this study showed that policies related to family issues are necessary to

help employees effectively manage work and family demands; however, it need to be

accompanied by increased FSSB to maximize nurses' benefits from these policies

Examples of these policies could include subsidized services for child and elder care. Further,

policies to promote FSSB could be essential in retaining nurses in the workplace. Different

policies could be used to promote FSSB such as supervisor education, training programs and

workshops.

Increased attention to work–family-specific support could enhance effectiveness of human resource systems and help attract and retain nurses. With absence of such policies, nurses may fail to balance family- work demands and choose to leave employment. Therefore, using formal policies to promote family-supportive workplace could be a strategy to reduce the negative consequences of FWC.

**Educational implications**

The FSSB should be viewed as a serious resource for reducing nursing turnover and managing stress especially when nurses are experiencing work family conflict. The findings of this study can add to existing evidence suggesting that supervisor and managers should be educated and trained on how to interact in supportive ways (Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011; Matthews, Mills, Trout, & English, 2014).

Developing educational programs is recommended to provide nurse supervisors and managers the knowledge and skills to demonstrate family-specific support. In a randomized controlled study, Hammer, Kossek, Anger, Bodner, and Zimmerman (2011) developed and evaluated a FSSB training program including face-to-face and computer-based training. They found that the program was effective in improving physical health, job satisfaction, and decreasing turnover intention. Although this program was effective, healthcare organizations are encouraged to develop their educational programs, instead of adopting excited ones. Thus allowing healthcare organizations to develop a cultural sensitive program that is acceptable and supportive in their culture setting.

The last educational implication is that the concepts of family work conflict and family supportive supervisor behaviors can be introduced to nursing student. Such a topic could be added to the nursing leadership and management curriculum. Educating nursing students about

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strategies to balance work family demands and how to be supportive and ask for supervisor support when experience work family conflict could help in fostering and maintaining a healthier work environment.

## Limitations and Recommendations for Further Research

This study has limitations that provide some suggestions for future research. First, in this study TI was measured rather than actual turnover behaviors. Although TI is considered as one of the strong predictors of actual turnover (Griffeth et al., 2000), a study of actual turnover in nurses should be considered. Further, it is important to differentiate between intention to leave the organization and intention to leave the profession (Simon, Muller & Hasselhorn, 2010; Parry, 2008).  Reviewing the literature in nursing revealed that nurses not only considered leaving their organization, but they considered leaving the nursing profession.  Therefore, further studies are encouraged to measure nurses TI in both forms of leaving the organization and leaving the nursing profession.

Work-family conflict can occur in two different directions: work interferes with family and family interferes with work (Carlson, Kacmar and Williams, 2000). In the current study, the focus was on the WFC as an inter-role conflict without concern about the direction of this conflict.  Evaluating WFC as a directional variable may lead to additional findings. Further, other variables can contribute to the nurses' turnover intention and the all of these variables were not included in this study. An example of a confounding variable not included is family specific support at organizational level; in this study only the perceived support at the supervisory level was included. Another example of variables not included is the present of the family policies in the workplace that may influence nurses' perception about the family-specific support.

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Other limitations of this study were due to the methodology. All of measures in this study were based on self-reports; participants may have responded in a manner they perceive is the desirable. Therefore, common method bias may have influenced measured variables and the observed relationships. Further, using non-probability convenience sample limited generalizability of findings and produced some selection bias that affect the internal validity of the study (Polit & Beck, 2012).

The cross-sectional design of the study may yield some limitations and direct implications for further research. First, correlational research cannot claim causality between variables. Second, this research design captured data at only one point of time for each participant. Therefore, the data could be influenced by certain events that occurred at the data collection time. The investigator was aware that during the data collection phase, the site was in the process for a Joint Commission International (JCI) Accreditation review. This process could have increase the workload on the nurses and could influence their stress and WFC levels.

Lastly, generalizability was a limitation of this study. This study's data were collected from one health system in in Saudi Arabia, which limited the cross-cultural generalizability of its findings. Therefore, the term applicability rather than generalizability may be more appropriate to use with other settings.

Although TI in this study was significantly associated with the level of WFC, stress and FSSB; many other factors could contribute to nurses' turnover. Nurses may leave for good reasons such as education or they may leave for reasons such as spouse's job relocation. Therefore, for future research it may be helpful to add a question or add a checklist in the survey about the reason of leaving. This could help researchers to consider and address other factors that may be associated with TI.

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Although the work-family literature has emphasized the importance of increasing supervisor support for family, and implementing training for supervisors to address work-family issues; limited studies demonstrate *how* to increase this support (Hammer et al., 2011). Interventional studies are encouraged to develop and evaluate training programs to ensure transfer of training to practice. Furthermore, ssupportive behaviours need further identification and evaluation not only through quantitative research but also by adopting qualitative methods such as focus group.

Most studies in the area of work-family conflict and family supportive supervisor behaviors have used samples from Western societies. More studies with samples from Middle Eastern societies are encouraged. More studies from similar culture could help in support the culture-specific findings of this study. Furthermore, there were limited studies among nurse populations; therefore, due to the uniqueness of nursing more studies with nurses as subjects are highly encouraged. These studies could yield more specific information to retain nurses and improve their work environment.

## Conclusion

With the acknowledgement that there are the multiple roles and reasons that can play a factor in nurses' intent to leave, this study focused on WFC. Increased attention to the influence of WFC could help in understanding and preventing nurses' TI. Given that WFC is associated with many health, well-being, and organizational outcomes (Kossek et al., 2010); it is recommended to change workplaces to be more socially supportive of positive work–family relationships. FSSB could help in creating a better work environment for nurses. A healthy work environment is imperative for ensuring high quality of health care, enhancing nurses' retention,

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and maintaining the financial viability of health care organizations (Chiang & Lin, 2009; Kuo, Lin, & Li, 2014).

Although there were limited studies examining the WFC and the FSSB among nurses' population, the findings of this study along with the empirical evidence from other research can provide valuable strategies to reduce nurses' turnover. Promoting FSSB in the workplace is an approach utilizing existing resources that have potential in reducing the influence of WFC on nurses' TI.

Nurses' turnover is a complex issue that may require multiple strategies to prevent. Supervisor training to increase support for family is currently among the most frequently advocated interventions by work–life experts (Hammer et al., 2011) therefore, more consideration should be given to train supervisor to embrace their family supportive behaviors. Based on this study, further research is recommended to examine the promising potentials of FSSB on retaining qualified nurses in the workplace.

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## Appendix A

## Analysis plan

| Research Questions | Level of variables | Statistical Test |
|---|---|---|
| 1. What are the levels of WFC, TI, stress, FSSB among Saudi nurses | WFC- TI- FSSB- Stress- Interval | **Descriptive statistics** Reporting of mean, median, standard deviation, percentage, maximum, and minimum. |
| 2. What are the relationships among demographic characteristics, WFC, TI, stress, and FSSB? | WFC- TI- FSSB- Stress- Interval Age- Age of youngest child - ordinal # Children- Marital Status categorical | **Correlation** |
| 3. What amount of variance in WFC can be explained by socio-demographic variables? | WFC-Interval Age-ordinal # Children- Marital Status categorical Age of youngest child – ordinal | **Multivariate regression** |
| 4. What amount of variance in TI can be explained by socio-demographic variables? | TI-Interval Age-ordinal # Children- categorical Age of youngest child – ordinal | **Multivariate regression** |

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| | Marital Status categorical | |
|---|---|---|
| 5. Controlling for socio-demographic variables, What amount of the variance of TI can be explained by WFC, stress, and FSSB? | WFC- TI- Stress - FSSB Interval Age- Age of youngest child ordinal # Children- categorical Marital Status categorical | **Partial correlation** |
| 6. Is the relationship between WFC and TI <u>moderated</u> by stress | WFC- TI -stress- Interval | Centralize the IV(WFC) Centralize the Moderator (Stress) Create and Interaction variable (Centralized WFC * Centralized Stress) **<u>Hierarchal Regression</u>** Step 1:  Enter DV (TI). Step 2: enter predictor variables (Centralized WFC) Step 3: Enter Moderator (Centralized Stress) Step 4: Enter Interaction variable (Centralized WFC * Centralized Stress) If the interaction variable Beta is <u>Positive</u> and significant above the centralized WFC and centralized Stress, the Stress moderating effect (enhancing) is supported. To create scatter plot graph for the interaction, the Stress will be categorized into 2groups: low Stress, and high stress. |

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| 7. Is the relationship between WFC and TI <u>mediated</u> by the levels of FSSB | WFC- TI -FSSB- Interval | **<u>Hierarchal Regression</u>**<br><br>If the significance correlation between WFC and TI become insignificant with presence of the mediator variable (FSSB), then the mediation effect of FSSB will be confirmed<br><br>A variable function as a mediator when it meets the following conditions:<br><br>(a)  Variations in levels of the independent variable (WFC) significantly account for variations in the presumed mediator (FSSB) *(group is correlated to assessment)*<br><br>(b)  Variations in the mediator(FSSB) significantly account for variations in the dependent variable(TI) *(assessment is correlated to the outcome variable)*<br><br>(c)  When (a) and (b) are controlled, a previously significant relation between the independent (WFC) and dependent variable (TI) is no longer significant *(group and assessment are in the equation, group is no longer significant)* |
| --- | --- | --- |

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# Informed Consent

| Kingdom of Saudi Arabia | | المملكة العربية السعودية |
|---|---|---|
| Ministry of National Guard - Health Affairs | | وزارة الحرس الوطني – الشؤون الصحية |

| Informed Consent for Cross Sectional Surveys | إقرار موافقة للمشاركة بدراسة مقطعية |
|---|---|

| Study Title : : | The Influence of Family Supportive Supervisor Behaviors (FSSB) on the Relationships among Work-Family Conflicts, stress, and turnover intention in Saudi Arabian nurses |
|---|---|
| Principal Investigator : | Dr. Adel Almutairi; co-investigator: Sitah Alshutwi, MSN, RN(PhD candidate) |

| | |
|---|---|
| You are invited to participate in research that will be supervised by Dr. Ahmed Al Askar in This study is about to The Influence of Family Supportive Supervisor Behaviors (FSSB)<br><br>Your participation is voluntary and you<br>You do not have to sign this information sheet only you can choose to agree/disagree; your | أنت مدعو للانضمام طواعية لدارسة بحثية سوف *يشرف عليها/الدكتور عادل المطيري)* في (مدينة الملك هذه الدراسة تهدف إلى استكشاف تأثير الدعم الإداري على مستوى الضغوظات النفسية للممرض الناتجة عن إن مشاركتك في هذه الدراسة طوعية ولك الحق التام في عدم قبول تعبئة الاستمارة أو الانسحاب في أي وقت تشاء لا يجب عليك التوقيع على ورقة المعلومات هذه ، فقط عليك الاختيار موافق / غير موافق فمجرد قبولك تعبئة هذا |

| | |
|---|---|
| Your responses will be kept anonymous. However, whenever one works with email/the internet there is always the risk of compromising | ستبقى الردود على الأسئلة سرية ومع ذلك ، فإن العمل عن طريق البريد الالكتروني والانترنت يبقى هناك احتمال الاختراق خصوصية البيانات وسرية المعلومات ولكن بالرغم |
| If you have any questions about the research, please contact Dr. Adel Almutairi by | إذا كان لديك أي اسئلة حول هذا البحث ، يرجى الاتصال على *الدكتور عادل المطيري* |
| In case you have any enquiries related to your rights as a research subject you can contact the | في حال كان لديك الاستفسارات المتعلقة بحقوقك كموضوع بحث يمكنك الاتصال بمجلس المراجعة المؤسسية |
| ☐ Agree to participate<br>☐ Disagree to participate | موافق على المشاركة☐<br>غير موافق على المشاركة☐ |

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**Appendix C:**

**Study survey**

Filling out this Survey indicates that I am giving my informed consent to be a subject in this study. This research project has been approved by the University of Wisconsin Internal Review Board and by King Abdullah International Medical Research Center.

*Part A: Please answer the following questions about yourself.*

1. What is your Nationality? _____

2. What is your age? ☐☐

3. What is your marital status?  O Married  O Not- married

4. Do you have children ? if yes, how many? O No  O Yes ☐☐

           if yes, what is the age of your youngest child? ☐☐ years

5. What is your gender? O Male  O Female

6. What is your educational background? O Diploma  O BSN  O MSN  O Doctoral  O Other

7. What unit are you working on?_____

8. How many hours do you work per day? O 12 Hours  O 8 Hours  O Other_____

9. Please indicate the number of years you have worked as a Registered Nurse: ☐☐ years

10. Please indicate the number of years you have worked at this hospital: ☐☐ years

11. Please indicate the number of years you have worked on this unit: ☐☐ years

*Part B: In the relation to the conflict between your work and family demands, please rate your agreement by filling that circle that best fits your agreement with each statement.*

| | Extremely Disagree | Slightly Disagree | Neither Agree nor Disagree | Slightly Agree | Extremely Agree |
|---|---|---|---|---|---|
| 1. The demands of my work interfere with my home and family. | O | O | O | O | O |
| 2. The amount of time my job takes up makes it difficult to fulfill family responsibilities. | O | O | O | O | O |
| 3. Things I want to do at home do not get done because of the demands my job puts on me. | O | O | O | O | O |
| 4. My job produces strain that makes it difficult to fulfill family duties. | O | O | O | O | O |
| 5. Due to work-related duties, I have to make changes to my plans for family activities. | O | O | O | O | O |
| 6. The demands of my family or spouse/partner interfere with work-related activities. | O | O | O | O | O |
| 7. I have to put off doing things at work because of demands on my time at home. | O | O | O | O | O |
| 8. Things I want to do at home do not get done because of the demands of my family or Spouse/partner. | O | O | O | O | O |
| 9. My home life interferes with my responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime. | O | O | O | O | O |
| 10. Family-related strain interferes with my ability to perform job-related duties. | O | O | O | O | O |

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**Part C:** *During the last 30-days, how often you felt or thought a certain way, Please rate your agreement by filling the circle that describe your agreement with each statement.*

|  | Never | Almost Never | Sometimes | Fairly Often | Often |
|---|---|---|---|---|---|
| 1. In the last month, how often have you been upset because of something that happened unexpectedly? | ○ | ○ | ○ | ○ | ○ |
| 2. In the last month, how often have you felt that you were unable to control the important things in your life? | ○ | ○ | ○ | ○ | ○ |
| 3. In the last month, how often have you felt nervous and "stressed"? | ○ | ○ | ○ | ○ | ○ |
| 4. In the last month, how often have you felt confident about yourability to handle your personal problems? | ○ | ○ | ○ | ○ | ○ |
| 5. In the last month, how often have you felt that things were going your way? | ○ | ○ | ○ | ○ | ○ |
| 6. In the last month, how often have you found that you could not cope with all the things that you had to do? | ○ | ○ | ○ | ○ | ○ |
| 7. In the last month, how often have you been able to control irritations in your life? | ○ | ○ | ○ | ○ | ○ |
| 8. In the last month, how often have you felt that you were on top of things? | ○ | ○ | ○ | ○ | ○ |
| 9. In the last month, how often have you been angered because of things that were outside your control? | ○ | ○ | ○ | ○ | ○ |
| 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? | ○ | ○ | ○ | ○ | ○ |

**Part D:** *In the relation to staying in your current job, please rate your agreement by filling that circle that best fits your agreement with each statement*

|  | Extremely Disagree | Slightly Disagree | Neither Agree nor Disagree | Slightly Agree | Extremely Agree |
|---|---|---|---|---|---|
| 1. I often think about quitting. | ○ | ○ | ○ | ○ | ○ |
| 2. It is very likely that I will actively look for a new job in the next year. | ○ | ○ | ○ | ○ | ○ |
| 3. If I could choose again, I would choose to work for the current | ○ | ○ | ○ | ○ | ○ |

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*Part E: In the relation to your current supervisor, please rate your agreement by filling that circle that best fits your agreement with each statment.*

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. My supervisor is willing to listen to my problems in juggling work and non-work life. | O | O | O | O | O |
| 2. My supervisor takes the time to learn about my personal needs. | O | O | O | O | O |
| 3. My supervisor makes me feel comfortable talking to him/her about my conflicts between work and non-work | O | O | O | O | O |
| 4. My supervisor and I can talk effectively to solve conflicts between work and non-work issues. | O | O | O | O | O |
| 5. I can depend on my supervisor to help me with scheduling conflicts if I need it. | O | O | O | O | O |
| 6. I can rely on my supervisor to make sure my work responsibilities are handled when I have unanticipated non work demands. | O | O | O | O | O |
| 7. My supervisor works effectively with workers to creatively solve conflicts between work and non- work. | O | O | O | O | O |
| 8. My supervisor is a good role model for work and non-work balance. | O | O | O | O | O |
| 9. My supervisor demonstrates effective behaviors in how to juggle work and non-work balance. | O | O | O | O | O |
| 10. My supervisor demonstrates how a person can jointly be successful on and off the job. | O | O | O | O | O |
| 11. My supervisor thinks about how the work in my department can be organized to jointly benefit employees and the company. | O | O | O | O | O |
| 12. My supervisor asks for suggestions to make it easier for employees to balance work and non-work demands. | O | O | O | O | O |
| 13. My supervisor is creative in reallocating job duties to help my department work well as a team. | O | O | O | O | O |
| 14. My supervisor is able to manage the department as a whole team to enable everyone's needs to be met. | O | O | O | O | O |

**Thank you for filling out this survey**

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CURRICULUM VITA

Sitah Sulaiman S Alshutwi

Education

Organizational development certificate program (ODCP), University of Wisconsin Milwaukee, 2016

Master of Nursing Science, Kramer School of Nursing, Oklahoma City University, May, 2012

Bachelor of Science in Nursing, School of Nursing, King Saud University, Saudi Arabia, Riyadh, December, 2007

Dissertation Title: The Influences of Family Supportive Supervisor Behaviors on The Relationships Among Work-Family Conflict, Stress, And Turnover Intention in Saudi Arabian Registered Nurses

Academic awards or honors

Doctoral Student Poster Award, the Eta Nu Chapter of Sigma Theta Tau International, 2016.

Doctoral student poster award, Society of Nursing, Sigma Theta Tau International, 2015.

Graduate student scholarship award, Society of Nursing, Sigma Theta Tau International, 2014.

Honor, Society of Nursing, Sigma Theta Tau International, 2012.

Honor, who's Who among Student in American Universities and Colleges, 2012

Honor, King Saud University, School of Nursing, Saudi Arabia, Riyadh, 2007.

Publications and Presentations

Influence of Shared Governance on the Level of Engagement, and Turnover Intention among Nurses.
Aldhafeeri, RN**; Sitah Alshutwi, MSN, RN.** Leadership Connection; Influencing Change through Leadership; September 17-20, 2016, Indianapolis, IN, USA.

Supervisor Support Behaviors and Turnover Intention: Nursing implications
**Sitah Alshutwi**, MSN, RN. Leadership Connection; Influencing Change through Leadership; September 17-20, 2016, Indianapolis, IN, USA.

Workplace Support and Turnover Intention (WSTI): A preliminary Conceptual framework to inform practice and research

**Sitah Alshutwi**, MSN, RN. 5th World Congress of Clinical Safety (5WCCS); Smart Hospitals and Healthcare; September 21-23, 2016; Harvard Medical School, Boston, USA

**Sitah Alshutwi**, & Adel F Almutairi. (2016). Work-Family Conflict and the Role of Family Supportive Supervisor Behaviors as a Promising Approach to Retain Qualified Nurses. Nursing and Care, 5. (1).

The Influence of Culture on Maternal-Child Health Care Education.
**Sitah Alshutwi, MSN, RN***;* Julia Snethen, PhD, Nuananong, PhD and Albargawi MSN.
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Global cultural Perception of Children who are Overweight
**Sitah Alshutwi, MSN, RN***;* Julia Snethen, PhD, April Yerges, BSN, RN and Albargawi MSN
17th annual Building Bridges to Research Based Nursing Practice Conference: Improving Quality and Safety through Research, Milwaukee, Wisconsin: May 8, 2015

Global Perspectives of Childhood Obesity: Exploring Thai Nurses' Knowledge and Attitudes.
Albargawi, M. S., Snethen, J. A., **Sitah, Alshutwi,** Yerges, A., Sakunsuntiporn, W., Seal, L., Kelber, S.
Children's Hospital of Wisconsin Pediatric Nursing Conference, Milwaukee, Wisconsin: November 5, 2014

Global cultural Perception of Children who are Overweight
**Sitah Alshutwi, MSN, RN***;* Julia Snethen, PhD, April Yerges, BSN, RN and Albargawi MSN, Children's Hospital of Wisconsin Pediatric Nursing Conference, Milwaukee, Wisconsin: November 5, 2014