Moderating the Effect of Supervisor Support on Work-to-Family Conflict and Burnout Relationship

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ABSTRACT Nursing shortage is a serious problem in Taiwan. The objective of this paper is to investigate the role
of supervisor support (SS) in the work-to-family conflict (WFC) and burnout relationship that impacts the
professional commitment (PC) amongst nurses. Self-reporting data was collected from 410 nurses. A confirmed
factor analysis (CFA) was used to test the validity of dimensions. A hierarchical regression analysis (HRA) and the
correlation matrix were used to test the hypotheses. The collected data shows that SS strongly moderates WFC-
burnout relationship after HRA analysis. The moderating effects of SS suggest that through SS, WFC's impacts on
burnout diminish, and thus SS enhances PC of nurses. It avoids high turnover in the nursing profession. The results
conclude that the supervisors of nurses should take the initiative to identify which nurse under supervision is facing
a WFC problem, and support her to avoid the nurse's burnout, and thus reduce nurse turnover rate.

INTRODUCTION

Cause of Nurse Turnover: Burnout

High nurse workloads associate with burn-out, job dissatisfaction, and voluntary turnover, which contribute to understaffing of nurses and poorer patient outcomes in hospitals (Vahey et al. 2004). Beheshtifar and Omidvar's (2013) research argues that job burnout is both an occupational hazard induced by distress; job burnout is a consequence of the perceived disparity between the demands and available resources in both material and emotion. Han et al. (2015) find that increasing the nurses' compassion satisfaction and decrease compassion fatigue will reduce burnout. Yeun and Kim (2015) claim that the nurses' emotional exhaustion is the main cause of turnover; emotion exhaustion is one of

the three factors of burnout in this paper. Yang et al. (2014) also find remarkably positive effects of burnout on turnover intention. Preliminary research shows that burnout has many negative effects on organizations as well as on individuals. Cynicism, job dissatisfaction, low organizational commitment, and quitting the job can be among the most important effects on an organization (Ghorpade et al. 2007).Therefore, nursing has been considered as a risk profession for burnout, which will undoubtedly increase nurse shortages and reduce patient safety outcomes (Yang et al. 2015).

Work-to-Family Conflict (WFC) Leads to Burnout

Control of overwork time impacts more on the specific sub-groups who have a high degree of stressors and demands, for example, nurses with young children, other caring responsibilities, or single parents (Bussing 1996). The combination of work and family demands often leads to time pressure, stress and conflict (Greenhaus and Beutell 1985). Work-to-family conflict (WFC) is primarily caused by excessive work demands

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and predicts negative family outcomes (Adebola 2005). It causes the nurses to feel stressed and burnout and as a result, significant numbers of nurses were choosing to work part-time or were voluntarily leaving the profession. Robson and Robson (2015) identify the three factors of work continuation intention for nurses: work-family conflict (WFC), work attachment and importance of work for the individual. Therefore, WFC is one of the key factors of nurse turnover through the path of burnout.

Professional Commitment (PC) Can Retain Nurses to Reduce Turnover

Organizational commitment is one of the main reasons for these employees to stay; keeping employees committed to the organization is a top priority for many contemporary organizations (Hausknecht et al. 2009). According to the attitudinal approach, commitment is a positive feeling toward the organization, which depends on what employees experience on the job and how they perceive the organization (Mowday et al. 1982). Commitment contains an implicit explanation of one mechanism producing consistent human behavior (Becker 1960). Professional commitment is essential for retaining and attracting well-qualified workers, as only satisfied and committed workers will be willing to continue their association with the organization and make considerable efforts towards achieving the goals. High commitment professionals may be more responsive in making efforts to advance professional values. Lu et al.'s (2007) study suggests that professional commitment is an important factor related to work stress, and healthcare institutions should be concerned with this issue. Amna et al. (2015) find that organizational commitment was negatively related to organizational turnover intention. As mentioned, Robson and Robson (2015) identify three factors of continuation intention: work–family conflict, work attachment and importance of work to the individual. The latter two items are related to professional commitment.

Supervisor Support (SS) Moderates WFC-Burnout to Enhance PC

Priyanko et al. (2015) find that perceived supervisor support has a significant effect on the employees' intent to leave in organizations. Yang et al. (2015) report that lack of work support negatively associates with nurse turnover intention. In that, this paper has the intention of analyzing the impact of WFC, burnout and professional commitment on nursing, then presents a model for explaining the relationship between these factors, and envisions supervisor support as a moderator for the influence of burnouts in Taiwan that is facing the challenge of nursing shortage.

Based on the conducted empirical study, this paper's finding is that supervisor support moderates the effect of WFC on burnout to increase the nurses' professional commitment and thus helps in reducing the turnover rate. According to the data analysis of the empirical study, the discussion and recommendations are provided before the conclusion.

Objective

The objective of this paper is to investigate how supervisor support (SS) in the hospital context can help in reducing the nurse turnover rate in Taiwan hospitals. Nurse turnover is one of the most critical issues in healthcare sectors worldwide. Nowadays, every hospital is suffering significantly from higher turnover of nurses and is having trouble retaining nursing staffs (Yeun and Kim 2015). From the report of the Taiwan Union of Nurse Association (TUNA) in 2015, the turnover rate goes as high as sixty percent per year, which is surprisingly high and thus seriously impacts quality of nursing care. In New Zealand, the United States of America, Canada, and Australia, the nurse turnover rate reached 44.3 percent, 26.8 percent, 19.9 percent and 15.1 percent per year, respectively (Yang et al. 2015). Compared to these nations, Taiwan's turnover rate of nurses at sixty percent is much higher; it means that the nurse shortage problem in Taiwan hospitals is really serious and needs to be solved more urgently than any other place in the world.

MATERIAL AND METHODS

Work-Family Conflict (WFC)

The development of WFC results in various definitions. Work-family conflict has been defined as a form of inter-role conflict wherein the role pressures from the work and family domains

are mutually incompatible in some respects (Greenhaus and Beutell 1985). WFC refers to the quality of family life that is lowered because of the pressure from work. Attribution of high importance to both roles increases the likelihood of experiencing considerable stress that leads to work-family conflict (Cinamon and Rich 2002). Work and family issues have gained little attention in developing societies such as Taiwan. In the present paper, the researchers conceptualize WFC as a conflict that work is interfering with family.

Burnout

Burnout is defined as physical, emotional and mental exhaustion which manifests as physical depletion, feelings of helplessness, emotional drain, and the development of a negative self-concept and negative attitudes toward work, life and other people (Aronson et al. 1981). Burnout can be costly leading to increased employee tardiness, absenteeism, turnover, decreased performance, and difficulty in recruiting and retaining staff (Firth and Britton 1989; Parker and Kulike 1995; Lee and Ashforth 1996; Leiteret et al. 1998). Maslach and Jackson (1981) argued that burnout is a multidimensional construct consisting of three separate, albeit related, dimensions: emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA). Maslach (1993) has suggested that employees who are suffering from burnout, first experience exhaustion, then depersonalization and finally reduced personal accomplishment. Thus, these three dimensions of burnout are more appropriate than other measures of burnout to predict ones' perceptions of job stress.

Professional Commitment (PC)

Organizational commitments is an attitude suggesting that employees identify with organizational goals, and are willing to devote themselves to an organization (Mowday et al.1979). Job commitment is another important variable that has frequently been examined in the literature since it has been found to be positively correlated with various organizational goals. Organizational commitment has been conceptualized in terms of the strength of an employee's involvement in and identification with an organization (Mowday et al. 1982). Professional commitment (PC) indicates: (1) the belief in, and acceptance of, professional goals and values, (2)

willingness to exert considerable effort on behalf of the profession, and (3) a strong desire to maintain professional membership (Lachman and Aranya 1986). Professional commitment describes the loyalty of nurses to the nursing profession. Both professional and organizational commitment contributed to the managerial success of health professionals (Hoff and Mandell 2001). High commitment professionals may be more responsive in making efforts to advance professional value (Lu et al. 2007).

Supervisor Support (SS)

Supervisor support (SS) is one kind of social support as well as a resource (Selvarajan et al. 2013). A leader with high supervisor support is one that makes employees feel like they're being heard, valued and cared about. Most occupational stress studies consider supervisors and/or colleagues to be the two major sources of support for employees; and propose that in dealing with stressors at the workplace, organizational sources will provide more support than family and friends outside of the workplace (Ellis and Miller 1994). In specific terms, organizational research has identified a myriad of positive outcomes associated with high supervisor support, including increased job satisfaction, increased organizational citizenship behaviors (OCB), stronger person-organization fit (degree to which the personality, beliefs or values match the organizational culture), reduced work-family conflict, and reduced turnover. Undoubtedly, supervisor support is one of the key behaviors that effective leaders develop as soon as they move from individual contributors to managers.

Correlation between WFC and Burnout

Work demands often conflict with an employee's responsibilities in the family role (for example, caring for child or ill family member), and in turn cause work-family conflict. Current research indicates that while work-family conflicts had a positive main effect on leaving work early, gender and kinship responsibility interacts with WFC to predict nonattendance behavior (Boyar et al. 2005). An important consequence of work-family conflict is burnout (Jenkins and Elliott 2004). Their relation is very close. Work-family conflict has been viewed as an important antecedent of burnout among employees (Montgomery et al. 2003), associated with a number of undesirable organizational and individual conse-

quences both, at work and at home (Chandola et al. 2004).

Adam et al.'s (2008) findings suggest that work-family conflict as a stressor may function as a predisposing condition for the development of burnout among female and male physicians. Work-family conflict has a positive relationship with job burnout and is often associated with a higher propensity to leave the organization (Maslach 1993; Lee and Ashforth 1996; Hangyue and Loi 2005). In the context of close WFC–burnout relationships, nurses may demonstrate their WFC by acting as advocates to the organization, taking individual initiatives to improve burnout. Based on the above discussion, WFC is seen as the cause and burnout as the consequence, and the first hypotheses are as follows:

H1: Nurses reporting higher levels of WFC will have a significant positive correlation with their burnout.

H1a: Nurses reporting higher levels of WFC will have a significant positive correlation with high levels of emotional exhaustion.

H1b: Nurses reporting higher levels of WFC will have a significant positive correlation with high levels of depersonalization.

H1c: Nurses reporting higher levels of WFC will have a significant negative correlation with high levels of personal accomplishment.

Correlation between Burnout and Professional Commitment

The extension of burnout in nursing is high and is receiving worldwide attention (Schulz et al. 2009). Those people who continue with their work despite burnout are facing a decrease in productivity and effectiveness. The studies in the literature demonstrate that burnout negatively relates to performance, but positively relates to the variables including absenteeism and leaving the job (Swider and Zimmerman 2010). Accordingly, burnout is accompanied with a decrease in job satisfaction as well as job or organizational commitment mitigation. In terms of health, burnout can cause mental dysfunctions, which lead to anxiety, depression and self-esteem decrease (Beheshtifar and Omidvar 2013). Studies found that burnout has been linked to a number of negative workplace outcomes, including intention to turnover, decreased levels of employee commitment, and job dissatisfaction (Lee and Ashforth 1996). Burnout does not only affect job satisfaction negatively, but also brings about low organizational commitment (Ashil and

Rod 2011). On the basis of this logic, burnout can be seen as the cause of PC and the following hypotheses are suggested:

H2: Nurses with high levels of burnout have a significant correlation with professional commitment.

H2a: Nurses reporting higher levels of emotional exhaustion will have a significant negative correlation with high levels of professional commitment.

H2b: Nurses reporting higher levels of depersonalization will have a significant negative correlation with high levels of professional commitment.

H2c: Nurses reporting higher levels of personal accomplishment will have a significant positive correlation with high levels of professional commitment.

Relation between WFC and Professional Commitment

Work-family conflict causes an imbalance between work and family life such that work affects family life or family life interferes with outcomes of organizational commitment, job satisfaction, and turnover. When individuals face an increase in workload, organizational commitment leads to employees having less time for their families (Akintayo 2010). Work interference with family was related to higher continuance commitment (Casper et al. 2011). Rehman and Waheed's (2012) study revealed that WFC has a negative impact on the commitment of faculty members to their workplaces. Based on the above discussion, the researchers propose that there will be a negative correlation between WFC and professional commitment. On the basis of the above logic, WFC is seen as the cause and PC as the consequence, and the following hypothesis is suggested:

H3: Nurses with high levels of WFC have a significant negative correlation with professional commitment.

The Moderating Role of Supervisor Support

SS is defined as the extent to which leaders value their employees' contributions and care about their well-being. SS is a strong predictor of numerous positive outcomes. As individuals perceive more social support, their emotional and psychological supplies for coping with daily stressors increase and perceptual appraisals of stressors decrease (Jex 1998).

The nursing stress literature identifies social support as a useful resource in managing stressful situations within the workplace, and reducing the harmful consequences of stress on well-being (Joiner and Bartram 2004). Studies found that SS was an important source of social support in coping with problems associated with WFC (Duxbury et al. 1994; Thomas and Ganster 1995; Burke and Greenglas 1999; Anderson et al. 2002). General SS focuses on that for personal effectiveness at work; supervisor work–family support facilitates the employee's ability to jointly manage work and family relationships (Hammer et al. 2009). The role played by a supervisor to support in reducing the amount of burnout experienced by the individuals refers to the extent to which these individuals feel they are supported in their careers. When individuals have more SS in general and in work-family issues, these positive dynamics may spill over into the family role and thereby reduce burnout. As mentioned, supervisor support is one kind of social support as well as resource (Selvarajan et al. 2013). Kobasa and Puccetti (1983) examine social support as moderators of the effects of stressful life events. Therefore, in this paper, supervisor support is expected to moderate the relationship between WFC and burnout. On the basis of this logic, the following hypotheses are suggested:

H4: Nurses with high levels of WFC would be positively correlated with their burnout, and this relationship is moderated by supervisor support.

H4a: Nurses with high levels of WFC would be positively correlated with their emotional exhaustion, and this relationship is moderated by supervisor support.

H4b: Nurses with high levels of WFC would be positively correlated with their depersonalization, and this relationship is moderated by supervisor support.

H4c: Nurses with high levels of WFC would be negatively correlated with their personal accomplishment, and this relationship is moderated by supervisor support.

The conceptual framework for the test is presented in Figure 1. It is expected that WFC is positively related to burnout, and WFC and burnout are negatively related to professional commitment. It is also proposed that supervisor support moderates the relationship between WFC and burnout.
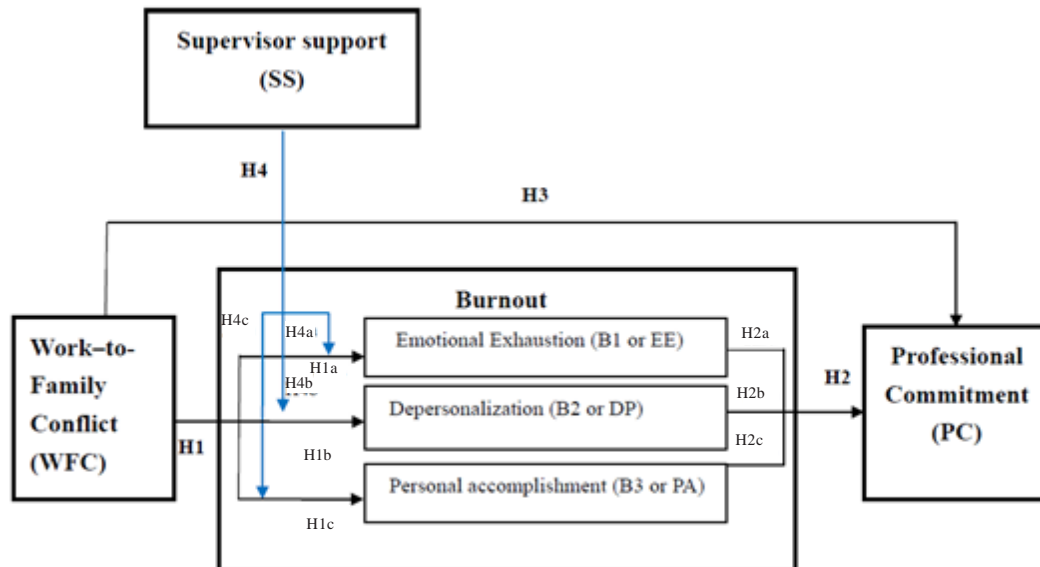

Fig. 1. Proposed test model

METHODOLOGY

Data Collection

The research model is presented in Figure 1. Existing field-proven instruments were used to measure the nurse work-to-family conflict, burnout, supervisor support, and professional commitment in the Taiwanese nurse industry. Data for this paper was collected from ten most popular hospitals in Taiwan via self-administered questionnaires. These questionnaires were completed by the contact nurses, and reflected their perceptions of the current work environment. The anonymity of respondents was ensured. Systematic sampling was conducted based on the available name list of 4,512 nurses.

Due to the unfair nursing system in Taiwan, quite a few times nurses went out to streets and protested for their own interests. Most nurses are concerned about their own interests very much. Thus, for the survey questionnaires, the researchers expect a high return rate.

First, the researchers decide the sample size by using the sampling formula:

$n = Z^2 P(1-P)/e^2$

Where,

Z= 1.96 for ninety-five percent confidence level,

P = 0.5 is the probability of success,

e = Five percent is the tolerable error.

Therefore, n = 385 after calculation. To be safe, the researchers chosen=410 as there would always be some invalid samples. To conduct systematic sampling for a sample size of 410, k=4512/410=11, that is, k=11 is selected as the sampling interval. From the random generator, "3" is selected between "1" to "11" as the starting figure. Then from the list of 4,512 nurses, in sequence, the 2nd, 3rd… 14th (11 x 1+3), 25th (11 x 2+3)… and 4502th (11 x 409+3) nurses are selected on the list as the respondents of the survey.

In total, 410 full-time nurses were selected to respond to the questionnaire that contained items related to personal characteristics, including burnout, work-family conflict, supervisor support, and professional commitment. Among 410 selected samples with a return rate of about ninety-five percent, 385 valid questionnaires were received (valid rate = 94%). In Taiwan, conducting such research does not need the approval of the IRB (Institutional Review Board). But in the questionnaire, the researchers stated that: (1) the responders need not answer the items that they thought are too personal; (2) the research purpose is to identify problems to be solved for the benefits of nurses; (3) the survey is anonymous. Therefore, the survey fully respects the willingness of responders and thus there should be no ethical problems.

Measurement

WFC

WFC was measured by adapting the scale of seventeen items developed by Carlson et al. (2000) to evaluate the extent of WFC experienced by the participating nurses via a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree).The Cronbach's alpha for the whole scale was 0.93.

The measurement tool is designed specifically for the WFC survey. During the development if the tool, the measurement items were assessed with data from 500 college students who were engaged in work and family responsibilities; the results indicate that conflict between work, family, and school are effectively measured by 12 factors assessing the direction of conflict.

Burnout

The researchers adapted a 22-item MBI-HSS scale developed and validated by Maslach et al. (1996) to evaluate the extent of burnout experienced by the participating nurses via a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). MBI stands for the Maslach Burnout Inventory (MBI) that has been conducted for more than 25 years since its initial publication. The MBI Scale addresses specifically the measures of Emotional Exhaustion, Depersonalization and Personal Accomplishment. The MBI-Human Services Survey (MBI-HSS) is the original measure that was designed for professionals in the human services.

The burnout scale has three dimensions: 1) nine items for EE, 2) five items for DP, and 3) eight items for PA. The results of confirmatory factor analysis (CFA) indicated that a three-factor model ($\chi^2 = 373.33$, p < 0.01, SRMR = 0.026, RMSEA = 0.056; NNFI = 0.96, CFI =0.97) fit the data well. Consequently, the three dimensions

of burnout were utilized to conduct subsequent analyses. The Cronbach's α values for EE, DP, and PA were 0.83, 0.73, and 0.69, respectively.

Supervisor Support

SS was measured using a scale of six items developed by Anderson et al. (2002). The scale was used to investigate the impact of formal and informal work-family practices on both work-to-family and family-to-work conflict and a broad set of job-related outcomes.

Responses to the SS items were elicited on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores indicated a higher SS. The Cronbach's α value for the whole scale was 0.91.

Professional Commitment

PC was measured by the Professional Commitment Questionnaire (PCQ) of Lachman and Aranya (1986) with four items using a 7-point scale, from 1 (completely disagree) to 7 (completely agree). PCQ means Professional Commitment Questionnaire. It was used initially to measure the professional and organizational commitments of Certified Public Accountants (CPAs) employed in professional organizations. Nurse and CPA are both professionals with special skills that PCQ can apply. The PCQ has good reliability (Cronbach's α=.87), supporting its adoption in this paper.

Control Variables

Attitudes and behavior at work can be influenced by demographic characteristics (Van Dyne and Ang 1998). Accordingly, several control variables were concluded in the statistical analysis to reduce the possibility of spurious relationships based on unmeasured variables. Participating contact nurses reported gender (0 = female, 1 = male), age, hospital tenure (number of years), marital status (1 = married, 0=unmarried) and number of children.

RESULTS

A Profile of the Nurses

Females represented ninety-six point one percent of the nurse samples. Forty point five percent of the samples were married. Most (70.4%) were aged to be equal or lesser than 35 years. The average working year at hospital is 8.86 years. Most had >3 years of work experience (57.1%), and 31.7 percent of them had greater than or equal to 7 years of experience. The samples of the nurses in this paper are all registered nurses. The mean age of the respondents was 32.57 years (S.D. = 7.65). Approximately 40.5 percent of the nurses were married, and 33.5 percent of married respondents had at least one child. Among the nurses, 69.9 percent of them had completed a bachelor's degree in nursing.

Table 1: Descriptive statistics and correlations

	M	SD	1	2	3	4	5	WFC	SS	EE	DP	PA
1. Gender												
2. Age	32.57	7.65	-0.98									
3. Marital status	0.41	0.49	-0.03	0.54**								
4. Number of child	0.58	0.91	-0.07	0.56**	0.67**							
5. Organizational tenure	8.86	7.34	-0.12*	0.86**	0.44**	0.49**						
6. WFC	4.11	0.88	-0.01	-0.07	-0.06	-0.03	-0.07					
7. Supervisor support	4.11	1.04	0.06	0.18**	0.11*	0.16**	0.13*	-0.23**				
8. Emotional exhaustion	4.13	0.91	0.02	-0.23**	-0.21**	-0.14**	-0.16**	0.70**	-0.29**			
9. Depersonalization	3.66	0.92	0.09	-0.31**	-0.18**	-0.17**	-0.25**	0.48**	-0.16**	0.63**		
10. Personal accomplishment	4.62	0.60	-0.08	0.28**	0.23**	0.19*	0.23**	-0.17**	0.32**	-0.22**	-0.33**	
11. Professional commitment	4.55	1.13	-0.02	0.28**	0.24**	0.23**	0.24**	-0.17**	0.34**	-0.22**	-0.31**	0.55**

Note: Alphas along main diagonal, n = 385.
* $p< .05$. ** $p< .01$.

Descriptive Statistics and Correlation Analysis

Descriptive statistics and correlations for contract nurses are summarized in Table 1. It can be seen that all the correlations in the matrix between the variables in the hypothesized model are significant. Table 1 contains the means and standard deviations for the variables as well as their correlations and internal reliabilities where appropriate. The following findings are evident in Table 1: (1) PC has a non-significant correlation with gender. (2) PC has a significant positive correlation with age, marital status, hospital tenure (number of years) and number of children. (3) WFC has a significant positive correlation with burnout and a significant negative correlation with SS and PC. (4) EE has a significant negative correlation with PC; DP has a significant negative correlation with PC; and PA has a significant positive correlation with PC.

As shown in Table 1, hypothesis 1 was initially supported in terms of the relationship between the dimensions of WFC and three dimensions of burnout(r= 0.70, 0.48 and -0.17, respectively; p<0.01). Similarly, a significant relationship was found for PC and three dimensions of burnout (r= -0.22, -0.31 and 0.55, respectively; p<0.01). Thus, hypothesis 2 was also initially supported. Also, a significant relationship was found for the dimensions of WFC and PC (r= -0.17; p<0.01). Thus, hypothesis 3 was also initially supported.

From the correlation coefficients of variables in Table 1, hypotheses 1 to 3 are preliminarily supported. But correlation cannot indicate the causality. Therefore, the hierarchical regression analysis (HRA) was used to further test the hypotheses that contain the directions of causalities. The hierarchical regression analysis (HRA) is used when there is, for example, a dependent variable Y and three independent variables a, b, c; if the effect of an individual variable to Y is to be checked separately, three models (that is, Y-a, Y-b and Y-c regressions, respectively) can be used. Therefore, in the case of this paper, the following models are used in Table 2:

Table 2: Results of hierarchical regression analysis and Moderation

Predictor variables	Model 1				Model 2		Model 3	
	EE	DP	PA		Professional commitment		Professional commitment	
Control Variable								
Gender	0.02	0.7	-0.06	0.01	0.01	0.02	0.04	0.01
Age	-0.28**	-0.35**	0.27**	0.18	0.13	0.09	0.04	0.17
Marital status	-0.10*	-0.01	0.12	0.11	0.08	0.10	0.04	0.10
Number of child	0.02	0.01	-0.02	0.06	0.06	0.06	0.07	0.06
Organizational tenure	0.17*	0.09	-0.07	0.02	0.04	0.03	0.05	0.01
WFC	0.69**	0.46**	-0.15**					-0.15**
EE					-0.16**			
DP						-0.25**		
PA							0.51**	
R²	0.54	0.31	0.12	0.09	0.12	0.15	0.33	0.11
ÄR²	0.53	0.30	0.10	0.08	0.10	0.13	0.32	0.10
F	73.48**	28.16**	8.15**	7.60**	8.26*	10.71**	30.56**	7.94**

Predictor Variables	Model ʻI		Model a II		Model b III	
	EE	EE	DP	DP	PA	PA
Direct variable						
WFC	0.69**	0.75**	0.46**	0.44**	-0.15**	-0.29**
Interaction variable						
WFC*SS		-0.12**		0.04		0.27**
R²	0.54	0.55	0.31	0.31	0.12	0.17
ÄR²	0.53	0.54	0.30	0.30	0.10	0.15
F	73.48**	65.56**	28.16**	24.17**	8.15**	10.78**

Notes: EE, Emotional exhaustion; DP, Depersonalization; PA, Personal accomplishment
SS, Supervisor support; PC, Professional commitment

(1) Model 1: To calculate EE-WFC, DP-WFC, PA-WFC regression coefficients to test H1.
(2) Model 2: To calculate PC-EE, PC-DP, PC-PA regression coefficients to test H2.
(3) Model 3: To calculate PC-WFC regression coefficient to test H3.
(4) Model I: To calculate the regression coefficients of EE-WFC (without SS) and EE-WFC*SS (with SS) to test H4. If the calculated regression coefficients change significantly, it means SS is moderating EE-WFC relationship.
(5) Model II: To calculate the regression coefficients of DP-WFC (without SS) and DP-WFC*SS (with SS) to test H4. If the calculated regression coefficients change significantly, it means SS is moderating DP-WFC relationship.
(6) Model III: To calculate the regression coefficients of PA-WFC (without SS) and PA-WFC*SS (with SS) to test H4. If the calculated regression coefficients change significantly, it means SS is moderating EE-WFC relationship.

The upper part of Table 2 summarizes the results of the HRA. Three models, that is, Model 1, Model 2 and Model 3, were used to test H1, H2 and H3, respectively.

As presented in Model 1, WFC had a significant effect on the three dimensions of burnout (standardized regression coefficients β= 0.69, 0.46, -0.15; p<0.01). The gender, age, tenure, marital status, number of children and organizational tenure were controlled. Hence, hypothesis 1 was supported. Results of hierarchical regression revealed also in Model 1, EE is most significantly predicted by WFC (R²=0.54).

Model 2 suggests that EE and DP dimensions of burnout have significant negative effects on PC (β= -0.16, p<0.01; -0.25, p<0.01). The PA dimensions of burnout have positive effects on PC (β= 0.51, p<0.01), and thus it supports hypothesis 2.

Model 3 showed that WFC had a significant predictor on PC (β= -0.15, p<0.01), supporting hypothesis 3.

Moderating Effect of Supervisor Support

The lower part of Table 2 summarizes the results of the HRA for the moderation analyses. Three models, that is, Model I, Model II, and Model III are used to test H4a, H4b, and H4c, respectively.

As presented in Model I that nurses with high levels of WFC would be positively associated with their EE, and this relationship is moderated by supervisor support (β = 0.75 for WFC, -0.12 for WFC*SS; p<0.01). Comparing to β = 0.69 without SS, the β value changes after adding the SS effect. Hence, hypothesis H4a was supported.

Model II showed that nurses with high levels of WFC would be positively associated with their DP, and SS moderate this relationship (β = 0.44, 0.04; p<0.01, p>0.05). Although comparing to β = 0.46 without SS, the β value changes after adding the SS effect, β for WFC*SS is not statistically significant (p>0.05). H4b was not supported.

Model III showed that nurses with high levels of WFC would be negatively associated with their personal accomplishment, and this relationship is moderated by supervisor support (β = -0.29, 0.27; p<0.01). Comparing to β = -0.15 without SS, the β value changes after adding the SS effect, H4c was supported.

Thus, hypothesis 4 was partially supported in terms of the relationship that WFC would be positively associated with burnout, and this relationship is moderated by the supervisor support.

For H1, the figures of "correlation coefficient/regression coefficient without SS/regression coefficient with SS" corresponding to H1a, H1b and H1c are inserted to show the change of regression coefficients β under the conditions with SS and without SS. For H2 and H3, "correlation/regression coefficients" are inserted for H2a, H2b, H2c and H3. For H4, values of "correlation/regression coefficient of WFC*SS" are inserted for H4a, H4b and H4c. It shows that H4b is not supported because of non–significant regression coefficient of WFC*SS, which means that SS does not affect DP. Table 3 summarizes the test result of each hypothesis, its hypothetical content, the tools used and its conclusion.

DISCUSSION

This paper presents a model for the relationship between variables of WFC, burnout, PC and SS, and then uses mainly correlation and HRA approaches to investigate the validity of the model. Based on the analytical results, hypotheses H1, H2, H3, H4a, and H4c are supported, but H4b is not supported.

Table 3: Summary of tests

Test item	Test contents	Test tools	Test results	Conclusion
Burnout Construct Validity	The model that single Burnout factor represents 3 sub-dimensions fits data	Reliability	Cronbach's alpha = 0.83, 0.73,and 0.69, respectively for 3 sub-dimensions	Supported
		CFA	χ^2 = 373.33, p < 0.01, SRMR = 0.026, RMSEA = 0.056; NNFI = 0.96, CFI =0.97	
WFC	Scale Reliability of the 17-item scale	Reliability	Cronbach's alpha = 0.93	High Reliability
Supervisor support (SS)	Scale Reliability of the 6-item scale	Reliability	Cronbach's alpha = 0.91	High Reliability
Professional commitment	Scale Reliability of the 4-item scale	Reliability	Cronbach's alpha = 0.87	Supported
(PC) Construct validity	Convergent validity	CFA	Indicator loadings >0.5	
	Discriminant validity	CFA	Maximal squared correlation less than the minimal average variance extracted	
H1	H1a: Nurses reporting higher levels of WFC will have a significant positive correlation with high levels of emotional exhaustion.	1. Correlation Matrix 2.HRA for Model 1	Correlation Coefficient r=0.70**, p< 0.01 (Table 1) Standardized regression Coefficient β=0.69**, p< 0.01 (Table 2)	Supported,
	H1b: Nurses reporting higher levels of WFC will have a significant positive correlation with high levels of depersona-lization.		Correlation Coefficient r=0.48**, p< 0.01 (Table 1) Standardized regression Coefficient β=0.46**, p< 0.01 (Table 2)	Supported
	H1c: Nurses reporting higher levels of WFC will have a significant negative correlation with high levels of accomplishment.		Correlation Coefficient r=-0.17**, p< 0.01 (Table 1) Standardized regression Coefficient β=-0.15**, p< 0.01 (Table 2)	Supported
H2	H2a: Nurses reporting higher levels of emotional exhaustion will have a significant negative correlation with high levels of professional commitment.	1. Correlation Matrix 2. HRA for Model 2	Correlation Coefficient r=-0.22**, p< 0.01 (Table 1) Standardized regression Coefficient β=-0.16**, p< 0.01 (Table 2)	Supported
	H2b: Nurses reporting higher levels of deperso-nalization will have a significant negative correlation with high levels of professional commitment.		Correlation Coefficient r=-0.31**, p< 0.01 (Table 1) Standardized regression Coefficient β=-0.43**, p< 0.01 (Table 2)	Supported
	H2c: Nurses reporting higher levels of personal accomplishment will have a significant positive correlation with high levels of professional commitment.		Correlation Coefficient r=0.55** Standardized regression Coefficient β= 0.51**, p< 0.01 (Table)	Supported
H3	Nurses with high levels of WFC have a significant negative correlation with professional commitment.	1. Correlation Matrix 2.HRA for Model 3	Correlation Coefficient r=-0.17**, p< 0.01 (Table 1) Standardized regression Coefficient β= -0.15**, p< 0.01 (Table 2)	Supported

Table 3: Summary of tests

Test item	Test contents	Test tools	Test results	Conclusion
H4	H4a: Nurses with high levels of WFC would be positively correlated with their emotional exhaustion, and this relationship is moderated by supervisor support.	1. Correlation Matrix 2.HRA for Model I	SS's presence (WFC*SS-EE's β = -0.12**) affects WFC-EE Standardized regression Coefficient β change from 0.69** to 0.75** , p< 0.01 (Table 3)	Supported
	H4b: Nurses with high levels of WFC would be positively correlated with their depersonali-zation, and this relationship is moderated by supervisor	1. Correlation Matrix 2.HRA for Model II	SS's presence (WFC*SS-DP's β = 0.04) affects WFC-DP Standardized regression Coefficient β change from 0.46** to 0.44**, p< 0.01 (Table 3)	Not supported WFC*SS-EE's B=0.04 not significant
	H4c: Nurses with high levels of WFC would be negatively correlated with their personal accomplishment, and this relationship is moderated by supervisor support.	1. Correlation Matrix 2.HRA for Model III	SS's presence (WFC*SS-PA's β = 0.27**) affects WFC-PA Standardized regression oefficient β change from -0.15** to 0.29**, p<0.01 (Table 3)	Supported

HRA means Hierarchical regression analysis

Cause and Consequence Relationship

Before discussing further, the cause and consequence relationship has to be clarified first. During the development of the hypotheses in the foregoing section of this paper, the roles of the cause (independent variable) and consequence (independent variable) have been intensively discussed. For H1, WFC is the causal variable and burnout the consequential variable. For H2, burnout is the causal variable and PC the consequential variable. For H3, WFC is the causal variable and PC the consequential variable. For H4, moderator SS is the causal variable by its natural and burnout the consequential variable; for the convenience of comparison, new variable WFC*SS is used to check the interactive effect of WFC and SS to check the moderating effect of SS. These relationships are more clearly exhibited in Table 2. For model 1, the regression result is in the form of WFC = β_1 (burnout attribute). For model 2, the regression result is in the form of (burnout attribute) = β_2 PC. For model 3, the regression result is in the form of PC = β_3 WFC. For model 4, the regression result is in the form of PC = β_4 WFC. Â means regression coefficient, and burnout attributes include EE, DP and PA.

Result Comparison with Other Researches

First, WFC has a significant association with three dimensions of burnout, revealing that high WFC makes nurses perceive high levels of EE, DP and low level of PA in the work. Especially, WFC is most significantly predicted by EE. The result is consistent with the argument of Thana-coody et al. (2009), indicating that WFC among cancer workers is strongly associated with burn-out. Robson and Robson (2015) claim that WFC is one of three factors that cause the nurses to leave work. The intention is caused by the burn-out driven by WFC. Yang et al. (2014) argue that burnout is mediating workload and turnover in-tention; as mentioned, heavy load is the source of WFC.

Second, perceived high levels of burnout have a significant influence on PC, higher levels of EE and DP have a significant negative effect on high levels of PC, and higher levels of PA have a significant positive effect on high levels of PC. The results are consistent with Jung and Kim's (2012) assertion that diminished commit-ment to nursing is a clear indicator that the nurs-es' feelings of the benefits of nursing no longer trump the disadvantages, and the intent to con-tinue nursing is at risk. As a result of burnout, employees reported diminished commitment to

the organization and increased turnover intention. Such findings are also consistent with other studies that show both DP and negative PA influence organizational commitment (Hollet-Haudebert et al. 2011); exhaustion and turnover intentions were more positively associated for physicians with lower commitment, and weakened for those with higher commitment (Moreno-Jimenez et al. 2012). As mentioned by Robson and Robson (2015), work attachment and importance of work to the individual are the other two factors for the nurses' intention to continue work. These two factors are actually the PA of this paper that enhances nurse's PC.

Third, the result represents that perceived high levels of WFC have a significant negative influence on PC. The finding is consistent with Akintayo's (2010) data that reported a negative impact of WFC on organizational commitment in industrial workers of Nigeria. Findings are also consistent with other studies in that WFC has a negative impact on commitment of faculty members in their workplaces (Rehman and Waheed 2012).

Fourth, hypothesis H4a was supported. It shows that nurses with high levels of WFC would be positively associated with their EE, and this relationship is moderated by SS. Nurses in Taiwan were suffering from high levels of burnout, which was strongly associated with work-related stress. The finding indicates that high levels of perceived SS were associated with reduced EE. In addition, supervisor support acted to protect personnel from EE. H4c was supported. It shows that nurses with high levels of WFC would be negatively associated with their PA, and SS moderates this relationship. The finding indicates that high levels of perceived SS were associated with increased PA. Both, Priyanko et al.'s (2015) and Yang et al.'s (2015) researches find that SS can reduce employee or nurse turnover. Even in the other industry, Stephanie et al.'s (2015) research for athletes, also find that supervisor support positively influences staff's WFC. Turgut (2014) reports high correlation between job satisfaction and PA for practitioner in the hospital context; it implies that if SS helps practitioners or nurses have high job satisfaction, the burnout level would be reduced.

Wang et al. (2015) argue that in order to reduce nurse job burnout effectively, administrators should pay more attention to the improvement of nurses' self-efficacy and professional nursing practice environment and the reduction

of stressors. Therefore, to reduce the effect of WFC over burnout, the supervisor should also help nurse enhancing self-efficacy and improving working environment.

Summary of Data Analysis

1. WFC influences PC in two ways: direct influence, and indirect influence through burnout.
2. The indirect influence of WFC over PC is moderated with SS or without SS.
3. The standardized regression coefficient β represents the relative importance of influence of variable (Hair et al. 1998).
4. The relative importance of influence of WFC-PC direct path is: $\beta = -0.15$ (Standardized Regression Coefficient).
5. The indirect relative importance of WFC through burnout to PC without moderation of SS are:
a. WFC causes EE with $\beta = 0.69$; EE influences PC with $\beta = -0.17$; hence, WFC-EE-PC's relative importance of influence is $0.69 \times -0.17 = -0.12$ without SS.
b. WFC causes DP with $\beta = 0.46$; DP influences PC with $\beta = -0.25$; hence, WFC-DP-PC's relative importance of influence is $0.46 \times -0.25 = -0.115$ without SS.
c. WFC causes PA with $\beta = -0.15$; PA influences PC with $\beta = 0.51$; hence, WFC-PA-PC's relative importance of influence is $-0.15 \times 0.51 = -0.08$ without SS.
6. The indirect influence strengths of WFC through burnout to PC with moderation of SS are:
a. WFC causes EE with $\beta = 0.75$; EE influences PC with $\beta = -0.17$; hence, WFC-EE-PC's relative importance of influence is $0.75 \times -0.17 = -0.13$ with SS.
b. WFC causes DP with $\beta = 0.44$; DP influences PC with $\beta = -0.25$; hence, WFC-DP-PC's relative importance of influence is $0.44 \times -0.25 = -0.11$ with SS. But the effect of SS moderation is insignificant.
c. WFC causes PA with $\beta = -0.29$; PA influences PC with $\beta = 0.51$; hence, WFC-PA-PC's relative importance of influence is $-0.29 \times 0.51 = -0.15$ with SS.

From the above inferences, the relative importance of influence of WFC to PC through different paths is summarized. For the path of WFC-PC, the relative importance without SS is -0.15, while that with SS is -0.15; for the path of WFC-EE-PC, the relative importance without SS

is -0.12, while that with SS is -0.13; for the path of WCF-DP-PC, the relative importance without SS is -0.115, while that with SS is -0.11(insignificant); for the path of WFC-PA-PC, the relative importance without SS is -0.08, while that with SS is -0.15.

Implications

1. The provision of SS increases the influence importance of WFC over PC in all the indirect paths except WFC-DP-PC. The WFC-DP-PC path is not significant due to its small decrease of influence importance after SS, that is, 0.11-0.115 = -0.005.
2. The influence importance of WFC-PA-PC path increases the most after having SS moderation.
3. WFC-PC and WFC-PA-PC, after SS moderation have the same highest relative importance of influence at -0.15, and WFC-EE-PC has the second, that is, -0.13.
4. SS does not affect WFC-DP-PC. Without SS, WFC can still influence PC through DP at an importance of -0.115.

CONCLUSION

The results of this paper have important management implications. Given the SS for partial moderation, there may be additional ways that healthcare institutions can leverage organizational and supervisor's supports for work-to-family issues to reduce EE and increase PA. When nurses perceive supervisor support, they generate attachment toward the healthcare organization and perform responsibly that benefits the healthcare institutions. It reveals that the healthcare institutions can adopt some measures in alleviating WFC and building a support system to make nurses undergo a lower burnout situation. That is, healthcare institutions and supervisors, who understand WFC and deal with it effectively, should be able to be benefit from higher job satisfaction, lower absenteeism and turnover; it may impact organizational productivity and performance. It is clear that WFC is an important issue for effective people management in organizations and can be managed through both organizational programs and supervisor behaviors. It will be worthwhile for the managers to be more concerned about nurse's problems of workload, work overtime, job demand

and job control that may generate WFC. Support from organizations and supervisors on solving these problems can help nurses reduce WFC and thus reduce burnout to promote nurses' PC directly and indirectly. Therefore, the researchers found that WFC was important with respect to fostering the three dimensions of burnout that subsequently impact PC. Moreover, WFC also impacts PC directly. Thus, WFC impacts PC indirectly through burnout as well as impacts PC directly.

This paper sheds some light on how to foster PC via reducing burnout through decreasing WFC levels by providing supervisor support. It shows that the influence importance of WFC-PA-PC path increases the most after having SS moderation; WCF-PC and WFC-PA-PC after SS moderation, have the same highest relative importance of influence at -0.15, and WFC-EE-PC has the second, that is, -0.13; SS does not affect WFC-DP-PC. Without SS, WFC can still influence PC through DP at an importance of -0.115. It means that the supervisor's support can reduce WFC; the reduction of WFC not only increases nurse's professional commitment directly, but also reduces emotional exhaustion that subsequently increases nurse's professional commitment indirectly, and increases personal accomplishment that subsequently increases the nurse's professional commitment indirectly. But supervisor support does not affect depersonalization's influence on nurse's professional commitment. Organization and supervisor supports are part of organization resources that are always limited. Therefore, managers should focus these limited resources on reducing the impact of WFC on personal accomplishment as the first priority to increase professional commitment and thus reduce turnover rate. If resources are still available, then the support can be applied to reduce emotional exhaustion as the second priority.

But the support should not be used in reducing depersonalization, since supervisor support would not help it with increasing professional commitment. For the direct influence of WFC over professional commitment, that is, WFC-PC path, supervisor support will automatically reduce WFC and thus increase professional commitment. The more supervisor support is provided, the more professional commitment will be achieved.

RECOMMENDATIONS

The current research investigates the linkage of WFC, burnout, professional commitment, and the moderation effect of supervisor support on the linkage. The findings of this paper show that WFC has a significant positive influence on the burnout of nurses. High levels of nurses' perceived burnout have a significant negative influence on professional commitment, and high levels of perceived WFC also have a significant negative influence on professional commitment. The moderation effect of supervisor support can help mainly with the WFC-emotional exhaustion link and less effectively with WFC-personal accomplishment link, but not WFC-depersonalization link. These findings have important implications for managers within the healthcare institutions in knowing the directions of nurse's professional commitment enhancing and the best utilization of support resources in achieving it. Based on these main research findings of the SS moderating effects on WFC-burnout relationship, this paper recommends the following actions to solve the nurse shortage problem:

(1) The top management of the hospital shall provide all the necessary resources to the supervisors so that they can use the resources help the nurses with mitigating WFC-EE and enhancing WFC-PC effects.

(2) If necessary, the resources shall also be used for the nurse's family members, such as husband and children to support the subordinate nurse.

(3) To enhance WFC-PC, a long-term training plan has to be formulated for each subordinate nurse.

(4) Furthermore, the supervisor can use the resources to strengthen a nurse's self-efficacy and improve the working environment to increase the nurse's intention of work continuation.

LIMITATIONS

There are several limitations of this paper that need to be mentioned. First, the research design was cross-sectional, which precludes drawing full inferences of causality among the variables. Second, the current study only investigates WFC focusing on the work-to-family domain. Future studies can be conducted with similar patterns utilizing other dimensions of WFC. Finally, this paper is conducted for Taiwan nurses only and the results cannot be generalized to nurses in other countries. Further research can be extended to the other countries in a cross-cultural context. Moreover, WFC may include multiple issues in the organizations that include organization policies and culture, manager views with respect to work-life issues, work overload and job control.

REFERENCES

Adam S, Gyorffy Z, Susanszky E 2008. Physician burnout in Hungary-A potential role for work-family conflict. *Journal of Health Psychology,* 13(7): 847–856.

Adebola HE 2005. Emotional expression at workplace: Implications for work-family role ambiguities. *Journal of Applied Social Psychology*, 32(21): 102-115.

Amna Y, Karin S, Qaisar A 2015. Organizational/occupational commitment and organizational/occupational turnover intentions: A happy marriage? *Personnel Review*, 44(4): 470-491.

Anderson SE, Coffey BS, Byerly RT 2002. Formal organizational initiatives and informal workplace practices: Links to work-family conflict and job-related outcomes. *Journal of Management,* 28(6): 787-810.

Akintayo DI 2010.Work-family conflict and organization commitment among industrial workers in Nigeria. *Journal of Psychology and Counseling*, 2(1): 1-8.

Aronson E, Kafrey D, Pines AM 1981. *Burnout: From Tedium to Personal Growth.* New York: Free Press.

Ashil NJ, Rod M 2011. Burnout processes in non-clinical health service encounters. *Journal of Business Research,* 64: 1116–1127.

Becker HS 1960. Notes on the concept of commitment. *American Journal of Sociology,* 66: 32–60.

Beheshtifar M, Omidvar AR2013. Causes to create job burnout in organizations. *International Journal of Academic Research in Business and Social Sciences,* 3(6): 107-113.

Boyar SL, Maertz, CP, Pearson, AW 2005.The effects of work-family conflict and family-work conflict on non-attendance behaviors. *Journal of Business Research,* 58: 919-925.

Bussing A 1996. Social tolerance of working time scheduling in nursing. *Work and Stress,* 10: 238-250.

Casper WJ, Harris C, Taylor-Bianco A, Wayne, JH 2011.Work-family conflict, perceived supervisor support and organizational commitment among Brazilian professionals. *Journal of Vocational Behavior,* 79(3): 640-652.

Carlson DS, Kacmar KM, Williams, LJ 2000. Construction and initial validation of a multi-dimensional measure of work-family conflict. *Journal of Vocational Behavior,* 56: 249-276.

Chandola T, Martikainen P, Bartley M, Lahelma E, Marmot M, Michikazu S 2004. Does conflict between home and work explain the effect of multiple roles on mental health? A comparative study of Finland, Japan and the UK. *International Journal of Epidemiology,* 33(4): 884-893.

Cinamon RG, Rich Y 2002. Profiles of attribution of importance to life roles and their implicationswork-family conflict. *Journal of Counseling Psychology,* 49: 212–220.

Creenglass E, Burke R 1999. Social Support and Burnout in Nurses: /Implications for Intervention. *Paper presented at the Annual Meeting of the American Psychological Association*, Boston, August 20-24.

Duxbury L, Higgins C, Lee, C 1994. Work-family conflict: A comparison by gender, family type, and perceived control. *Journal of Family Issues*, 15*:* 449–466.

Ellis BH, Miller KI 1994. Supportive communication among nurses: Effects on commitment, burnout and retention. *Health Communication,* 62: 77-96.

Firth H, Britton P 1989. Burnout, absence and turnover amongst British nursing staff. *Journal of Occupational Psychology,* 62: 55–59.

Greenhaus JH, Beutell, NJ 1985. Sources of conflict between work and family roles. *The Academy of Management Review,* 10: 76–88.

Hammer L, Kossek E, Yragui N, Bodner T, Hansen, G 2009. Development and validation of a multi-dimensional scale of family supportive supervisor behaviors (FSSB). *Journal of Management,* 35: 837–856.

Hair JE Jr, Anderson RE, Tatham RL, Black WC 1998. *Multivariate Data Analysis.* 5th Edition. New Jersey: Prentice Hall.

Han YH, Lee MS, Bae JY, Kim YS 2015. Effects of nursing practice environment, compassion fatigue and compassion satisfaction on burnout in clinical nurses. *Journal of Korean Academy of Nursing Administration,* 21(2): 193-202.

Hang-yue FS, Loi R 2005.Work role stressors and turnover intentions: A study of professional clergy in Hong Kong. *International Journal of Human Resource Management,* 16(11): 2133-2146.

Hausknecht JP, Rodda J, Howard MJ 2009. Targeted employee retention: Performance-based and job-related differences in reported reasons for staying. *Human Resource Management,* 48: 269-288.

Hoff TJ, Mandell J 2001. Exploring dual commitment among physician executives in managed care. *Journal of Healthcare Management,* 46(2): 91–111.

Hollet-Haudebert S, Mulki JP, Fournier C 2011. Neglected burnout dimensions: Effect of depersonalization and personal non-accomplishment on organizational commitment of salespeople. *Journal of Personal Selling and Sales Management,* 31(4): 411-428.

Jenkins R, Elliott P 2004. Stressors, burnout and social support: Nurses in acute mental health settings. *Nursing and Health Care Management and Policy,* 48(6): 622-631.

Jex SM 1998. *Stress and Job Performance: Theory, Research, and Implications for Managerial Practice.* Thousand Oaks, CA: Sage.

Jung J, Kim Y 2012. Causes of newspaper firm employee burnout in Korea and its impact on organizational commitment and turnover intention. *The International Journal of Human Resource Management,* 23(17): 3636-3651.

Joiner TA, Bartram T 2004. How empowerment and social support affect Australian nurses' work stressors. *Australian Health Review,* 28(1): 56-64.

Kobasa SC, Puccetti MC 1983.Personality and social resources in stress resistance. *Journal of Personality and Social Psychology,* 45(4): 839-850.

Lachman R, Aranya N 1986. Job attitudes and turnover intentions among professionals in different work settings. *Organizational Studies,* 7: 279–293.

Lee RT, Ashforth BE 1996.A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology,* 81:123-133.

Leiter M, Harvie P, Frizzell C 1998.The correspondence of patient satisfaction and nurse burnout. *Social Science and Medicine,* 47: 1611–1617.

Lu KY, Chang LC, Wu, HL 2007. Relationships between professional commitment, job satisfaction, and work stress in public health nurses in Taiwan. *Journal of Professional Nursing,* 23(2): 110–116.

Maslach C, Jackson SE 1981.The measurement of experienced burnout. *Journal of Occupational Behavior,* 2: 99–113.

Maslach C 1993. Burnout: A multidimensional perspective. In: W Schaufeli, C Maslach, T Marek (Eds.): *Professional Burnout: Recent Developments in Theory and Research.* New York: Taylor & Francis, pp. 19-32.

Maslach C, Jackson SE, Leiter MP 1996. *The Maslach Burnout Inventory.* 3rd Edition. Palo Alto, CA: Consulting Psychologists Press.

Montgomery AJ, Peeters MCW, Schaufeli, WB, Den Oude M 2003. Work-home interference among newspaper managers: Its relationship with burnout and engagement. *Anxiety, Stress and Coping,* 16: 195-211.

Moreno-Jimenez B, Galvez-Herrer M, Rodriguez-Carvajal R, SanzVergel AI 2012. A study of physicians' intention to quit: The role of burnout, commitment and difficult doctor-patient interactions. *Psicothema,* 24(2): 263-270.

Mowday RT, Porter LW, Steers RM 1982. *Employee-Organization Linkages: The Psychology of Commitment, Absenteeism, and Turnover*. New York: Academic Press

Mowday RT, Steers RM, Porter LW 1979. The measurement of organizational commitment. *Journal of Vocational Behavior,* 14: 224-247.

Parker PA, Kulik JA 1995. Burnout, self- and supervisor-rater job performance and absenteeism among nurses. *Journal of Behavioral Medicine,* 18: 581–599.

Priyanko G, Seonghee C, James AM 2015. Psychological contracts, perceived organizational and supervisor support: Investigating the impact on intent to leave among hospitality employees in India. *Journal of Human Resources in Hospitality and Tourism*, 14(3): 290-315.

Rehman RR, Waheed A 2012. Work-family conflict and organizational commitment: Study of faculty members in Pakistani Universities. *Pakistan Journal of Social and Clinical Psychology,* 9(2): 23-26.

Robson A, Robson F 2015. Do nurses wish to continue working for the UK National Health Service? A comparative study of three generations of nurses. *Journal of Advanced Nursing*, 71(1): 65–77.

Schulz M, Damkroger A, Heinz C, Wehlitz L, Lohr M, Driessen M, Behrens J, Wingenfeld K 2009. Effort-reward imbalance and burnout among German nurses in medical compared with psychiatric hospital set-

tings. *Journal of Psychiatric and Mental Health Nursing,* 16(3): 225–233.

Selvarajan TT, Cloninger PA, Singh, B 2013. Social support and work-family conflict: A test of an indirect effects model. *Journal of Vocational Behavior,* 83: 486–499.

Stephanie MM, William AP, Christianne ME 2015. Experiences of work-life conflict for the athletic trainer employed outside the national collegiate athletic association Division-I Clinical Setting. *Journal of Athletic Training* (in press).

Swider WB, Zimmerman DR 2010. Born to burnout: A meta-analytic path model of personality, job burnout, and work outcomes. *Journal of Vocational Behavior,* 76: 487–506.

Teng CI, Shyu YL, Chang HY 2007. Moderating effects of professional commitment on hospital nurses in Taiwan. *Journal of Professional Nursing,* 23: 47-54.

Thanacoody PR, Bartram T, Casimir G 2009. The effects of burnout and supervisory social support on the relationship between work-family conflict and intention to leave a study of Australian cancer workers. *Journal of Health Organization and Management,* 23(1): 53-69.

Thomas LT, Ganster DC 1995. Impact of family-supportive work variables on work-family conflict and strain: A control perspective. *Journal of Applied Psychology*, 80(1): 6-15.

TUNA (Taiwan Union of Nurse Association) 2015.Statistic Data of Healthcare Personnel. From <http://wwwnurseorgtw/DataSearch/Manpoweraspx> (Retrieved on 18 January 2014).

Turgut K 2014. An evaluation of the relationship between general practitioners' job satisfaction and burnout levels. *Studies on Ethno Medicine*, 8(3): 239-244.

Vahey DC, Aiken LH, Sloane DM, Clarke SP, Vargas, D 2004. *Nurse Burnout and Patient Satisfaction Medical Care,* 42: II-57–II-66.

Van Dyne L, Ang S 1998.Organizational citizenship behavior of contingent workers in Singapore. *Academy of Management Journal,* 41(6): 692-703.

Wang S, Liu Y, Wang L 2015. Nurse burnout: Personal and environmental factors as predictors. *International Journal of Nursing Practice,* 21: 78–86.

Yang X, Ma BJ, Chang CL, Shieh CJ 2014.Effects of workload on burnout and turnover intention of medical staff: A study. *Studies on Ethno Medicine*, 8(3): 229-237.

Yang Y, Liu YH, Liu JY, Zhang HF 2015.The impact of work support and organizational career growth on nurse turnover intention in China. *International Journal of Nursing Science*, (in press).

Yeun E, Kim H 2015. The effects of supervisor support, emotional exhaustion, and sense of personal accomplishment on hospital nurse turnover intentions. *Indian Journal of Science and Technology*, 8(S5): 63-68.