RESEARCH ARTICLE

Can work-related stress and job satisfaction affect job commitment among nurses? A cross-sectional study [version 1; referees: awaiting peer review]

Mahdi Eskandari¹, Mohammad Ali Heidari Gorji²

¹Shahid Beheshti University of Medical Sciences, Tehran, Iran
²Mazandaran University of Medical Sciences, Sari, Iran

Abstract

Background: Considering the significant role of nurses in health care and the importance of commitment in public health, the aim of this study was to examine the association between work-related stress, and job satisfaction and commitment among nurses.

Methods: This cross-sectional study has been performed among 100 nurses working in a teaching hospital affiliated to Mazandaran University of Medical Sciences, northern Iran, in 2015. The participants were assessed by standard questionnaires on work-related stress, and job satisfaction and commitment. Descriptive indexes were analysed via regression and correlation.

Results: The participants were aged between 25 and 45 years. In total, 85% of nurses held a bachelor degree and the rest were postgraduates. Most of the nurses (77%) had experience in their job for more than 10 years. Total score of mean job commitment showed a high score among nurses (102.9±8.9); job satisfaction also showed a mean of (261.6±27.44). Total score of work-related stress was (112.0±11.99). The results indicated that job satisfaction and work-related stress explained 54% of variance in job commitment. The overall job satisfaction (Beta = 0.471, p<0.05) and overall work stress (Beta = -0.635, p<0.102) influenced job commitment.

Conclusion: The results of the present study showed that work stress and job satisfaction affects job commitment among nurses. Therefore, it is advisable to pay more attention to job satisfaction and stress in these sensitive occupations, to promote commitment and job efficacy.
Corresponding author: Mohammad Ali Heidari Gorji (heydarigorji@yahoo.com)

Author roles: Eskandari M: Data Curation, Formal Analysis, Funding Acquisition, Methodology, Resources, Validation, Writing – Original Draft Preparation, Writing – Review & Editing; Heidari Gorji MA: Conceptualization, Data Curation, Formal Analysis, Investigation, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing

Competing interests: No competing interests were disclosed.


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Grant information: The author(s) declared that no grants were involved in supporting this work.

Introduction

Hospital units are the most stressful places in hospitals and hospital successful management depends on multiple collaboration of disciplines, such as nurses. Job performance and outcomes are inter-related to some psychological and social factors, such as job environment and leadership, positive attitude and efficacy, satisfaction, and commitment. A strong relationship between job satisfaction and job commitment has been previously revealed. Moreover, a relationship between job commitment, job satisfaction, work experience, organizational collaboration and organizational justice has also been found. For example, Hoogendoorn et al. believed workers undertake duties with higher responsibility when they have committed to the job.

Job commitment, its determinants and consequences have received significant attention in the literature, since commitment is related to many organizational indicators. Wang et al. pointed out that organizational commitment is “the comparative power of a person’s identification with and participation in a specific organization”. Organizational commitment can be found in the literature very frequently, with three fundamental components related to its definition: affective (employees are emotionally attached to organization), continuance (employees’ commitment), and normative (employees’ feeling to remain in the organization). Some studies showed that mortality and morbidity of most fire fighters are related both directly or indirectly to their stressful work condition. Moreover, according to Moran, emergency service organizations workers, including the ambulance service and rescue squads as well as the fire brigade, are exposed to both everyday stressors common to many work environments and extreme stressors of emergency events, including traumatic accidents or disasters. Results from Bennett et al. on 78 United Kingdom fire fighters indicated a considerable amount of job stress. Bowron also found similar results among emergency service workers.

Lusa and colleagues assessed male rescue workers and firefighters and from fire brigades of Finland. They have reported high stress among these workers. Murphy et al. indicated a relationship between work-based morale and job satisfaction of fire-fighters and paramedics. Conflict with managers was the job stressor that powerfully related to reports of poor work morale. It has been revealed that low commitment among emergency working women was related with income, marital status, age, education and job satisfaction; singles, highly educated and low job experience were related with low job commitments. A low mental health and higher job burnout among emergency workers than the general population has been revealed. Cicei found a relationship between work stress and job satisfaction. It was invented to measure job satisfaction by many studies. It was invented to evaluate satisfaction through 6 aspects: the work itself, pay, promotion, supervision, environment and co-workers. Participants were asked to describe a particular aspect of their job with a word or phrase. The validity of the above mentioned questionnaire was proved through content validity and factor analysis, which showed an acceptable level of validity. Reliability also was high r=0.93 (p<0.01).

Job satisfaction was evaluated using the Job Descriptive Index (JDI) introduced by Smith et al. The JDI was selected as it was proved to be reliable and a valid measure of job satisfaction by many studies. It was invented to evaluate satisfaction through 6 aspects: the work itself, pay, promotion, supervision, environment and co-workers. Participants were asked to describe a particular aspect of their job with a word or phrase. The validity of the above mentioned questionnaire was proved through content validity and factor analysis, which showed an acceptable level of validity. Reliability also was high r=0.93 (p<0.01). Please see Supplementary File 2 for a Farsi translation used in the present study.

Methods

Study design and participants

This was a cross-sectional, correlational study aimed at investigating role of job satisfaction and work-related stress in organizational commitment among nurses working in Imam Teaching Hospital affiliated to Mazandaran University of Medical Sciences, Sari, Iran in June to September 2015. Approval from the Ethics Committee of Mazandaran University of Medical Sciences for the study, as well as written informed consent from nurses for participation, was obtained (approval number: IR.Mazums. rec.95.2350).

The study population included all 138 nurses who worked in hospitals, of them 100 nurses gave consent to participate in this study and completed the questionnaires. In order to keep confidence of samples, names were not recorded and the overall results were reported to the organization without any personal information. The researcher contacted the hospital and explained the aim of study and after agreement of supervisors, nurses were invited to participate. The inclusion criteria were having at least a Bachelor of Science degree in nursing and one year job experience. The participants were insured that their results will be kept confidently and there is no need to fill their name on the questionnaires.

Questionnaires

Organizational commitment. Allen and Meyers’ Organizational Commitment scale includes sub-scales such as Affective Organizational Commitment (AOC), Contingent Organizational Commitment (COC) and Normative Organizational Commitment (NOC). This questionnaire comprises 24 items scoring in 7 options from absolutely agree to absolutely disagree. Reliability and validity of the scale has been approved in several studies in Iran. A study reported Cronbach’s alpha ranging from 0.74 to 0.83 and inter correlation for AOS is 0.49 (p<0.05), for COS is 0.22 (p<0.05) and 0.12 (p<0.05) is for NOS. The participants filled out the questionnaires themselves during their work hours when they had free time to feel comfortable in the nurse rest room. Please see Supplementary File 1 for a Farsi translation used in the present study.
Work-related stress. The HSE work-related stress questionnaire contains 35 items that enquire about ‘working conditions’ that are the potential causes of work related stress\(^2\). The working conditions relate to the 6 stressors of Management Standards. The questionnaire was developed by the Health and Safety Executive (HSE) and in China, each item has 5 options (never=1, seldom=2, sometimes=3, most of the time=4, always=5). Low scores indicate higher health and safety in aspect of stress, and higher scores means high stress. In order to survey the validity and reliability of this questionnaire, a previous study surveyed 749 military staff, selected via cluster sampling, from whole country. Please see Supplementary File 3 for a Farsi translation used in the present study.

Participants also completed the mental health questionnaire of Goldberg\(^{33}\). Reliability of this questionnaire in Cronbach alpha and split-half was 0.78 and 0.65, respectively. This result indicates appropriate reliability and validity for work stress questionnaire\(^{24}\).

Data analysis. Statistical Package for Social Sciences (SPSS; IBM, USA) version 16 was used to analyse the date. Descriptive indexes (frequencies) were analysed using ANOVA and regression with correlation applied to find out correlations between variables.

Results
The participants’ demographic characteristics are shown in Table 1.

Total mean score of job commitment was high among nurses (102.9±8.9). Moreover, mean total score of job satisfaction and work stresses were 261.6±27.44 and 112.0±11.99, respectively. Table 2 shows the regression between job commitment, work stress and job satisfaction.

Table 3 shows the adjusted $R^2$ of our model is 0.245 with the $R^2 = 0.245$, which means that the linear regression explains 24.5% of the variances of job commitment of samples. It means that the liner relationship between the variables (in other words $R^2=0.245$), with $F = 15.745$ is significantly high, thus it can be assumed that there is a linear relationship between work stress, job satisfaction and job commitment variables in our model.

In addition, overall job satisfaction (Beta = 0.471, p<0.05) and total work stress (Beta = -0.635, p<0.102) had an influence on job commitment. Therefore, job satisfaction and work stress significantly predicts job commitment.

Discussion
Considering previous theories and study results, in an organization where employees have low job satisfaction and high work stress, levels of production and productivity will be critically low\(^{34}\). In such conditions of job commitment and job turnover\(^{35}\), less innovation and higher employee turnover rate of employees are seen frequently\(^ {34}\). Asegid et al. stated that high work stress is a predictor of job dissatisfaction and intention to low job commitment\(^ {36}\).
High job satisfaction and proper performance leads to a better work environment, higher cooperation among co-workers and commitment to the organization. Individuals who feel a of in work in line with various attitudes, such as salary or other compensation plans, may have low satisfaction and try to leave the organization.

It has been stated that there is a significant relationship between job satisfaction and the stress of medical emergency work places. High job stress and low job security in work places result in reduced job satisfaction. Job stress leads to reduced job satisfaction, increased desertion and reduction quality of nursing care. Identifying nurses’ job problems and the solutions of removing stressful situations can lead to increased job satisfaction and reduced desertion and absence in work places. In addition, the more stress leads to lower satisfaction and mental health status of nurses. The higher the nurses job stress, the more they experience work place accidents.

In our study among nurses, the employees’ commitment is high; they were more likely to remain and work with the organization rather than leave the organization. Thus, organizational commitment is negatively correlated to affect turnover intention in our study environment. It has been advocated that employees who are emotionally associated to their organization are likely to remain with the organization past the age that would benefit them the most by retiring. Although nursing is the second top stressful job position in the world, it seems satisfaction with work and commitment decreased their stress in this study. The finding of the present study is similar to the study by Seston et al., who found that job commitment is closely related to job satisfaction.

Conclusions
The findings of the present study can help rescue-related organizations, such as health care professionals, in designing and developing strategies to enhance organizational commitment of the employees, which directly links with organizational performance, effectiveness and productivity. It may become one of the tools and guidance for further actions of management. In order to increase job commitment, leaders should provide enough facilities for staff, give appropriate benefits for those who perform well, and provide friendly and close relationships with staff. The organization also needs to understand the needs of the staff to provide social and mental support.

Data availability
Dataset 1: Raw data for all variables collected in the present study, including demographic variables, and results of the job commitment, job satisfaction and work-related stress questionnaires. Coding as follows: Marital Status- 1=Single, 2=Married, 3=Divorced; Education- 1=Bachelor, 2=Post-graduate; Record (work duration in year)- 1=1–5, 2=6–10, 3= 11–15, 4=16–20, 5=21–25, 6= 26–30; Commitment (Organizational Commitment)- 1= completely disagree, 2= very disagree, 3= disagree, 4= no opinion, 5=agree, 6=very agree, 7=completely agree; JDI (Job Descriptive Index)- 1=completely agree, 2=agree, 3= no opinion, 4= disagree, 5= completely disagree; WS (Work-related Stress)- 1=never, 2= seldom, 3= sometimes, 4=often, 5= always. DOI, 10.5256/f1000research.12595.d19251

Supplementary material
Supplementary File 1: Farsi translation of Allen and Meyers’s Organizational Commitment scale used in the present study. Click here to access the data.

Supplementary File 2: Farsi translation of Job Descriptive Index used in the present study. Click here to access the data.

Supplementary File 3: Farsi translation of HSE work-related stress questionnaire used in the present study. Click here to access the data.

References
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