THE RELATIONSHIP BETWEEN OCCUPATIONAL STRESS AND MENTALWELL-BEING AMONGNURSES :ACROSS-SECTIONAL STUDY

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Abstract

Introduction: Occupational stress is among the most common type of mental health problems among nurses. One of the important factors in avoiding occupational stress is to improve mental well-being among nurses. This study aimed to investigate the relationship between occupational stress and mental well-being among nurses.

Methods and Materials: This cross-sectional study was conducted on 130 nurses working in the selected hospitals in the School of Medical Sciences in Iran shahr. Data collection tool included the standard HSE occupational stress questionnaire and Reef's well-being questionnaire. The obtained data were analyzed using descriptive and inferential statistics with SPSS V22.

Results: The mean age of the participants was 27 (21-56) with an average work experience of 3.9 years.

The results showed a moderate occupational stress among the majority of the studied population (74.6%), among which the highest stress was related to the role (85.4%) and then colleagues (70.8%) and finally the control (63.1%).Regarding mental well-being, the results showed that the majority of the studied population (82.3%)i.e. 107 subjects hadamoderatemental well-being. Chi-square test showed a significant relationship between occupational stress and mental well-being (P=0.01).

Conclusion: Alignment of occupational stress and mental well-being in the study results showed the importance of these items in creating a good working environment full of occupational justice, making balance shifts for all personnel and improving the quality of services caused by the increased mental well-being.

Keywords: Occupational stress, mental well-being, nurse

Introduction : Stress is anindispensable part of life. It is a pervasive phenomenon and a general experience of human which is essential for his survival and growth, and affects any individual regardless of their age, gender, race, economic conditions or educational level(1). Although some stress is normal and necessary, it can be considered a negative phenomenon leading to physical diseases and mental disorders if it is severe, continuous or repetitive; and if the individual is not able to deal with it effectively or there are little supportive resources(2). Although occupational stress exists in all jobs, it is more important and frequent in the occupations dealing with human health(3, 4).

Nursing is associated with a high degree of stress by its very nature. Nurses experience a wide range of occupational stress due to the type of their profession which requires a high level of skill, teamwork in different situations, providing 24-hour care and thereby emotional concern(5, 6).PD Tyson claims that nurses improve their patients, but get ill themselves and if this trend continues, theirstress will increase day by day (7). Nursing is a stressful job and nurses are constantly exposed to stress due to the emotional nature of their profession, so that stress has become a recognized component of modern nursing(8, 9). National Institute of Health in America, having conducted a study on the relative incidence of health disorders in stressful jobs, has announced that among the 130 studied jobs, nurses were ranked 27 once going to the doctor for their mental health problems(10).This leads to resignation, the conflict between colleagues, health disorder, job dissatisfaction,reduced creativity, reduced occupational satisfaction, feelings of inadequacy and depression, work weariness and fatigue and reduced quality of nursing care(11-13). It can also have a reverse effect on the staff health, prosperity and well-being. Thus, occupational stress threatens a person's physical and mental well-being, causes emotional stress, reduces coping strategies and mental well-being and has numerous other consequences for the employees in the workplace(14). In terms of content, mental well-being is a situation-dependent variable which can have a variety of manifestations and definitions in different professional and social situations(15).

Mental well-being is one of the factors associated with the quality of nurses' working life, Positive feelings, a feeling of satisfaction and having little negative feelings are three factors affecting mental well-being(16, 17).Mental well-being is defined as dealing withontological challenges and efforts for personal growth which is recognized by Ryff's six-component model. Ryff regards mental well-being as "striving for perfection in order to realize the individual's actual potential"(18). In this perspective, mental well-being is manifested in an effort to promote the individual's talents and abilities. The different aspects of mental well-being include self-acceptance, positive relationship with others, autonomy, purpose in Life, personal growth and environmental mastery. Mentalwell-being at workplace includes the sense of fun, pleasant issues, goal achievement, the feeling of meeting the demands and needs, having a good feeling

about them, experiencing positive emotions when carrying out the duties and responsibilities and life satisfaction (19, 20).Given the above mentioned points, and since nursing is one of the most stressful professions and considering the stress impacton mental well-being in nursing profession and the importance of nursing on the health of society and patients, this study was conducted in 2015 to investigate the effect of stress on mental well-being of nurses in Iranshahr hospitals.

Materials and methods:

Plan and Participants:

This descriptive-cross-sectional study was conducted on 130 (out of 150) nurses over 18 working in Khatam Al-Anbiya Hospital and Iranian Hospital in Iranshahr from December 2015 to July 2016. Iranshahr is a city in Sistan and Baluchestan Province located inthe Southeast Iran. Inclusion criteria are having over 18 years of age and the consent to complete the questionnaire.

Data collection:

Simple random sampling was used to collect data. The questionnaires were distributed among nurses by the researcher. Each participant had 15 minutes to complete the questionnaire. The participants' questions were answered while completing the questionnaires. Once completed, the questionnaires were collected. Data collection tool included the standard HSE occupational stress questionnaire(21) and Reef's well-being questionnaire(19).

The questionnaire consisted of three parts containing 56 items: The first part was demographic characteristics with three items including age (in years), gender (male or female) and work experience (in years). In the second part, HSE questionnaire for occupational stress by UK Institute of Health, Safety and Environment was used. HSE questionnaire contained 35 items with 7 sub-scales; demand (7 items), control (6 items), the authorities' support (5 items), colleagues' support (4 items), communication (4 items), role (5 items) and change (3 items). Likert scale was used to score items (1=never, 2=rarely, 3=sometimes, 4=often, 5=always). The questionnaire's total score was between 35 and 175. The score 35-81 indicated low occupational stress; the score 82-127 indicated moderate occupational stress and the score 128-175 represented an undesirable occupational stress. A higher score indicated a higher stress level. The reliability and validity of the questionnaire were evaluated by Azad Marzabadi et al. and its Cronbach's alpha and correlation coefficient were 0.78 and 0.65, respectively(22). The third part included Reef's mental well-being questionnaire the short form of which containing 18 items was used.

The questionnaire consisted of six subscales each consisting of three items. These sub-scales included self-acceptance, positive relationship with others, autonomy, self-control, purposeful life and personal growth. The response scale had6 degrees (1=strongly disagree, 2=somewhat disagree, 3=slightly disagree, 4=slightly agree, 5=somewhat agree, 6=strongly agree). In each sub-item, the score 4-7 presented the undesirable mental well-being; the score 8-13 reflected moderate mental well-being and the score 14-18 reflected the desirable mental well-being. Higher scores on this scale indicated higher mental well-being. Validity and reliability of this scale were confirmed by the international studies (Reef) and the national studies(23). The results of single-group confirmatory factor analysis showed that among all samples and both genders, the six-factor model of this scale (self-acceptance, environmental mastery, positive relationship with others, purposeful life, personal growth and independence) had a good fitting. The internal consistency of this scale was determined using Cronbach's alpha to be 0.51, 0.76, 0.75, 0.52, 0.73, 0.72, respectively in six factors of self-acceptance, environmental mastery; positive relationship with others, a purpose in life, personal growth and independence and 0.71 for the total scale(24) The study was approved by Ethics Committee of Zabol University of Medical Sciences. Oral and written informed consent was obtained from all the study participants. The participants could leave the study whenever they wanted.

Data analysis : Descriptive statistics (mean, frequency and percentage frequency) were used to determine the frequency of demographic characteristics and evaluate the occupational stress level and mental well-being. Chi-square test was used to examine the relationship between occupational stress and mental well-being. SPSS V22 was used for data analysis. The value of $p<0.05$ was considered significant.

Results : One hundred and thirty out of150 questionnaires were completed and returned by nurses participating in the study and response percentage was 86.6%.

Demographic characteristics of the study participants

Age information for 130 out of 150 participants was available. The participants' age range was between 21 and 56. The participants' average age was 27 years. The average work experience of the participants was 3.9 years. More than 82.3% of the participants were female. Demographic characteristics are shown in one Table (Table 1).

Table 1-Demographic characteristics of the study participants.

Demographic characteristics	Standard deviation (SD)
Age	27.4 ± 4.7
Work experience	3.9 ± 2.1
Gender	Frequency (Percentage frequency)
Female	107 (82.3%)
Male	23 (17.7%)

Occupational stress

Thirty five items evaluated the stress level in the participants. Most participants, 97 subjects (74.6%), had moderate occupational stress,83 subjects (63.1%) in control aspect, 92 subjects (70.8%) in colleague support aspect and 111 subjects (85.4%)in role aspect had severe occupational stress. The results also showed that most nurses in the aspects of demand, 87 subjects(66.9%), support from managers and supervisors,87 subjects (66.9%), communication and change, 65 subjects (50%) had a poor occupational stress (Table 2).

Table 2- Evaluation of the level of occupational stress subscales among nurses.

	Poor	Moderate	Severe	Mean±SD
Demand	7(5.4)	87(66.9)	36(27.7)	21.3(5.04)
Control	3(2.3)	45(34.6)	83(63.1)	21.2(4.08)
Colleague support	13(10)	25(19.2)	92(70.8)	13.6(3.43)
Support from managers and supervisors	9(6.9)	70(53.8)	51(39.2)	16.1(4.07)
Communication	2(1.5)	65(50)	63(48.5)	10.7(3.63)
Role	3(2.3)	16(12.3)	111(85.4)	20.5(3.84)
Change	7(5.4)	65(50)	58(44.6)	10.1(2.47)

Independent t-test results showed that there was no significant relationship between occupational stress, age (P=0.73) and work experience (P=0.91).Chi-square test showed that there was no statistically significant relationship between occupational stress and gender (P=0.96). Statistical test results showed that there was no significant relationship between mental well-being and demographic characteristics (age, gender and work experience)(Table 3).

Table 3: Evaluation of the relationship between demographic characteristics and occupational stress level and mental well-being among nurses.

Demographic characteristic Variables	Age	Gender	work experience
occupational stress	0.73	0.96	0.91
mental well-being	0.31	0.1	0.15

Mental well-being

Eighteen items evaluated the participants' level of mental well-being. Most participants, 107 subjects (82.3%), had moderate mental well-being. Most participants in the aspect of independence, 75 subjects (57.7%), had moderate mental well-being and most participants in the dimension of environmental mastery, 87 subjects (66.9%), personal growth, 95 subjects (73.1%), positive relationship with others, 75 subjects (57.7%), purposeful life, 96 subjects (73.8%) and self-acceptance 99 subjects (76.2%) had moderate mental well-being (Table 4).

Table 4: Evaluation of different aspects of mental well-being among nurses.

Level / Subscales	Low	Moderate	Good	Mean±SD
Independence	4(3.1)	51(39.2)	75(57.7)	13.7±3.13
Environmental mastery	5(3.8)	87(66.9)	38(29.2)	12.2±2.47
Personal Growth	2(1.5)	95(73.1)	33(25.4)	12.4±2.38
Positive relationship with other	39(30)	75(57.7)	16(12.3)	9.4±3.06
Purpose in life	15(11.5)	96(73.8)	19(14.6)	10.9±2.83
Self-acceptance	7(5.4)	99(76.2)	24(18.5)	11.8±2.19

Chi-square test results showed a significant relationship between occupational stress and mental well-being (P=0.01).

Table 5: Evaluation of the relationship between the overall level of occupational stress and mental well-being among nurses.

Level / Variables	Undesirable	Moderate	desirable	Mean±SD	P Value
Occupational Stress	5(3.8)	97(74.6)	28(21.5)	117.4±16.29	0.01
Mental Well-Being	2(1.5)	107(82.3)	21(16.2)	70.6±9.69	

Discussion:

This study was conducted to investigate the relationship between occupational stress and mental well-being among nurses and it showed that the majority of participants (74%) experience a moderate occupational stress which is mostly related to role insufficiency (85.4%). The results of this study are inconsistent with some studies conducted in Iran and other countries. Abdi et al. in their study on the ICU nurses in Yazd hospitals reported their occupational stress levels to be within the normal range (25). In the study of Khaghanizade et al., 90% of nurses were at a normal level, and only 10% were in the mild and moderate stress levels(26). However, the studies conducted by Shahsavari et al. reported a variety of symptoms of stress in nurses(27).The results of Lee and Wong, suggesting that nurses had normal stress, are inconsistent with the results of this study(28). Shahraki et al. in their study reported stress level to be mild, moderate and severe with frequency of 1.7%, 46.7% and 50.7%, respectively, showing a higher level of stress in the the research population(29). The results showed a statistically significant relationship between occupational stress and mental well-being (p=0.01). The obtained results in this regard are consistent with the studies of Aqdar who had examined the relationship between occupational stress and mental well-being in male and female nurses in public hospitals of Ahvaz.

This study showed that mental well-being was negatively correlated with occupational stress and confirmed the fact that the higher the occupational stress is, the more it will reduce mental well-being among nurses (30). Sotoodehet al. also examined the relationship between the spiritual and moral intelligence with mental well-being among nurses and concluded that there was a significant positive relationship between these items and mental well-being (p<0.01)(31). On the other hand, the study oh Rahimian also showed that job burnout, work environment, income, high willingness to work and working hours per week will significantly predict the changes related to mental well-being in nurses(32). The study of Khodabakhsh et al.is another study on mental well-being which reviewed the relationship between adaptive and non-adaptive styles of joking with the nurses' mental well-being the results of which confirmed that mental well-being is among the factors reducing job burnout(33).

Conclusion:

According to the study objective to determine the relationship between occupational stress and mental well-being, the results showed that occupational stress caused by nursing profession can directly affect mental well-being; influence the professional performance of this group and have adverse effects on the quality of public health services. Therefore, consideration of this point and providing the conditions promoting various aspects of mental well-being can increase the employee's satisfaction level in this profession and indirectly improve the level of health services in the society.

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