



JOB STRESS PREDICTION BASED ON DISTRESS TOLERANCE AND SENSE OF HUMOR IN FEMALE NURSES

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ABSTRACT

The purpose of the research is to predict job stress in female nurses based on distress tolerance and sense of humor. The research method is of a correlational type. The statistical population of this study included all nurses of Shiraz hospitals. A sample of 180 female nurses from Al-Zahra heart hospital in Shiraz was selected by convenient sampling method. The data was collected using Nursing job stress questionnaire by Toft Gary and Anderson, Distress Tolerance Scale (DTS), and Sense of Humor Questionnaire (SHQ). The findings were analyzed by statistical tests of multivariate regression analysis and Pearson correlation test. The results showed that the level of distress tolerance and sense of humor are able to negatively predict job stress in nurses.

Keywords: job stress, distress tolerance, sense of humor

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Introduction

Nursing is essentially recognized as a stressful job and it has caused that stress to be considered one of the challenging issues by the nursing profession; especially, because in addition to imposing significant financial and social costs on society, it affects physical and mental health of nurses and can also lead to mental burnout of nurses. One of the well-known nurses' job stressors is an awareness of the fact that any mistakes made by the nurse may lead to death or serious injury to the patient. In fact, mental stress is a recognized and integral part of modern nursing that causes many problems for nurses and patients [1]. Some research has been conducted to investigate the many psychological pressures that nurses encounter and they came to the conclusion that the most important job stressors include lack of rewards and encouragement, high workloads, lack of participation in critical decision making, lack of control on working conditions and lack of job promotion [2]. Exposures to stressors job stress can cause occupational stress and lower job involvement. In fact, job stress is a psychological response to chronic mental stresses [3]. Many studies have been undertaken to determine factors leading in stress in nurses and lack of adequate control over job, high occupational needs and poor support relationships, exposure to death, contact with different patients in care units, lack of resources such as nursing staff and high workloads, lack of access to physicians and unfamiliarity with the situation, concerns about the reduced occupational quality of nurses, and other personnel have been identified as important factors causing stress in nurses. According to the above, occupational characteristics of nurses are one of the most important factors that cause occupational stress among them [4]. In a study by Teison et al. (2004), workload, involvement with life and death situations and performing on tasks outside of one's capacity and power are regarded as the factors causing distress among nurses. Furthermore, another study by Sondotyr et al. (2005) found that high workloads, inadequate consultation and communication, inadequate feedback from performance, inadequate resources for work and interference between work and outside-work have been cited as the major stressors for nurses [5]. There are a range of individual, psychological and personality capacities in some individuals which contribute to experiencing problematic and stressful situations, so that they are able to get out of their crisis if they encounter a wide variety of stressors. In our everyday lives, human beings naturally face with certain conditions willingly or unwillingly which create some difficulties and challenges in such a way that their mental health may be threaten. Distress tolerance includes a set of individual and mental capacities that enable a person to withstand exposure to difficult circumstances and does not suffer any damage and even has

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the ability to promote himself while experiencing these difficult situations or the crisis [6]. Distress tolerance enables people to face with their life and occupational tribulations without suffering any damage and even benefit from these opportunities to blossom and grow their personality. Humor is a universal and positive phenomenon that people with different social and cultural backgrounds throughout the world experience it. This term refers to a "quality of action, speech, or writing, which excites amusement. The people with a sense of humor tend to think that their problems aren't significant enough and don't take themselves and their problems too seriously and believe that they are not very important. This trait in people with a sense of humor may be employed as a solution in some situations. The researchers have come to the conclusion that there is a relationship between sense of humor and optimism [7]. According to the above, nursing managers not only should create an environment that attracts more people into the nursing profession, but also should try to retain current nurses in their positions and prevent them from being displaced. To this end, the high professional quality of life of hospital staff has become an important issue in many organizations, including health organizations since the 1970s.

Method

The present research is of a correlational type. Since this research was aimed to predict occupational stress (as a predictor variable) with distress tolerance and sense of humor in nurses (as a criterion variable), the correlation method was used.

Population and Sample

The statistical population of this study included all nurses of Shiraz hospitals. A sample of 180 female nurses from Al-Zahra heart hospital in Shiraz was selected by convenient sampling method among the hospitals in Shiraz.

Procedure

In order to conduct the research, Alzahra heart hospital was selected through convenient sampling method from among the hospitals in Shiraz. After distributing questionnaires among nurses, the procedure for completing distress tolerance, job stress and sense of humor questionnaires was explained for them and the respondents finally responded to the questionnaires.

Measurement tool

The data was collected using Nursing job stress questionnaire by Toft Gary and Anderson, Distress Tolerance Scale (DTS), and Sense of Humor Questionnaire (SHQ).

Nursing job stress questionnaire by Toft Gary and Anderson

The questionnaire consisted of 34 questions in the realm of patient suffering and death (7 questions), conflicts with physicians (5 questions), lack of adequate preparation (3 questions), lack of support (3 questions), conflict with other nurses (5 questions), work pressure (6 questions) and uncertainty about treatment (5 questions). This tool is measured based on the Likert scale as not stressful 1 (1 point), rarely stressful (2 points), sometimes stressful (3 points) and always stressful (4 points). Total scores was between 34 -136 and how to categorize it was as: less than or equal to 68 is low stress, 69 -103 average stress and higher or equal to 104 is high stress. The validity of the above tool was confirmed by 16 professors in the faculty of nursing and midwifery, Iran University of Medical Sciences after the necessary reforms [8].

Distress Tolerance Scale (DTS)

This test was developed by Simmons and Gahar (2005). The DTS is specifically aimed at measuring the perceived capacity to tolerate distress from a multidimensional framework. There are four components to the DTS model: an individual's (1) ability to tolerate emotions (tolerance); (2) assessment of the emotional situation as acceptable (appraisal); (3) level of attention absorbed by the negative emotion and relevant interference with functioning (absorption); and (4) ability to regulate emotion (regulation). Items are rated on a 5-point Likert scale (5= strongly disagree to 1=strongly agree), with higher scores corresponding to greater levels of distress tolerance. The results suggest an overall scale factor. However, after having verified the factor analysis, four first factors were discovered: Tolerance: I can handle feeling distressed or upset; absorption: when I feel distressed or upset, all I can think about is how bad I feel; Appraisal: feeling distressed or upset is bearable to me; regulation, I'll do anything to avoid feel distressed or upset. This questionnaire has been used for the first time in Iran in the study by Alawi (2011). Therefore, after converting questions into Persian, this questionnaire was implemented in pilot study on 48 students of Mashhad Ferdowsi University of Medical Sciences (31 female and 17 males) and its internal consistency reliability (Cronbach's Alpha) was calculated. The results of this study showed a high internal consistency for the total scale ($\alpha = 0.71$) and a moderate reliability for subscales (0.54 for tolerance subscale, 0.42 for absorption subscale, 0.58 for appraisal subscale, 0.56 subscales of absorption for regulation subscale).

Sense of Humor Questionnaire (SHQ):

Sadat Khoshouei et al. (2009) developed a preliminary questionnaire with 100 questions based on valid texts and available scales. Then, a sample age range of 20 to 60 years old was randomly selected to participate in the research in two steps. So, a sample of 40 people was selected for factor analysis in the primary step. Ultimately, 25 questions were selected for the final questionnaire; they had a positive correlation with the total sample and had an appropriate factor load even on one factor. The questionnaire also uses 25 items to measure five subsamples: laughter, enjoyment of humor, verbal humor, sense of humor in social relations and sense of humor in stressful conditions.

Findings

In order to investigate the descriptive data, mean, standard deviation and minimum and maximum scores of the subjects in the present study were evaluated; the results of which are presented in Table (1).

Table (1). Descriptive data of research findings

Variable	Mean	Standard deviation	Minimum score	Maximum score
Distress tolerance	36.74	6.45	15	75
Sense of humor	54.53	8.41	25	75
Job stress	63.41	6.56	40	104

Hypothesis of normality of variables

Prior to determining the appropriate statistical method for analysis, the hypothesis of normalization of observations can be studied by inferential method using Kolmogorov-Smirnov statistics. If the observations do not follow the normal distribution, non-parametric methods were used for statistical analysis.

Table (2): Kolmogorov-Smirnov test

Variable	Test statistic	Significance level
Distress tolerance	1.177	0.125
Sense of humor	2.56	0.241
Job stress	1.86	0.074

Based on the results of Kolmogorov-Smirnov test and since the significance level of the observations pertaining to each variable is greater than 0.05, therefore, it can be said that the observations of each variable follow the normal distribution and thus, parametric tests were used.

Testing research hypotheses

Hypothesis 1: How much distress tolerance can predict occupational stress in female nurses at Al-Zahra Hospital?

The fitting of simultaneous multiple regression model was used to test the first hypothesis.

Table (3). Significance of the regression model (analysis of variance)

Coefficient of determination R ²	F statistics	Significance level
0.542	86.068	0.001

As can be seen in Table 3 (analysis of variance), F statistic and the significance level confirm the significance of the regression model (the level of significance is less than 0.05). In addition, the coefficient value is 0.542; it implies that the stress tolerance variable is able to predict occupational stress in nurses (0.542). Table (4) shows fitting the regression model of occupational stress on distress tolerance among nurses:

Table 4. Regression of occupational stress in nurses on distress tolerance variable

Predictor variable	Beta coefficient	Beta standard coefficient	T value	coefficient
Constant value	6.624	-	18.462	0.001
Distress tolerance	0.685	-0.682	-8.902	0.001

According to the values obtained in the table, we can observe that the value of the significant level of distress tolerance is less than 0.05 and also the absolute value of t is more than 1.96, so the distress tolerance in the regression model is capable to predict the occupational stress of the nurses.

Second hypothesis: How much sense of humor can predict the occupational stress of female nurses at Al-Zahra Hospital?

The fitting of simultaneous multiple regression model was used to test the second hypothesis.

Coefficient of determination R ²	F statistics	Significance level
0.352	63.045	0.001

As can be seen in Table 5 (analysis of variance), F statistic and the significance level confirm the significance of the regression model (the level of significance is less than 0.05). In addition, the coefficient value is 0.352; it implies that the sense of humor variable is able to predict occupational stress in nurses (0.352). Table (6) shows fitting the regression model of occupational stress on sense of humor among nurses.

Table 6. Regression of occupational stress in nurses on sense of humor variable

Predictor variable	Beta coefficient	Beta standard coefficient	T value	coefficient
Constant value	5.325	-	14.362	0.001
Sense of humor	0.721	-0.720	-9.635	0.001

According to the values obtained in the table, we can observe that the value of the significant level of sense of humor is less than 0.05 and also the absolute value of t is greater than 1.96, so the sense of humor in the regression model is capable to predict the occupational stress of the nurses.

Discussion and conclusion

The first question: How much distress tolerance can predict occupational stress in nurses?

The results of the research on the first question indicate that according to the values obtained in the table, it can be observed that the value of the significant level of distress tolerance is less than 0.05 and also the absolute value of t is more than 1.96. Therefore, distress tolerance in the regression model is able to predict the occupational stress of nurses. This result is consistent with the results of the studies by [9, 10, 11, 10, 12], Chen (2009), Vikilman (2008). In explaining this hypothesis, it can be said that nursing is considered as one of the professions whose employees are more likely to suffer from occupational stress (about four times), which reduces the quality of services provided to patients and as a result, leads to decreased distress tolerance. The nursing workplace and the lack of human resources (shortage of nurse) in the nursing profession have been associated with heavy workloads for nurses. Many studies have showed that there are several reasons for the emergence of occupational stress in nurses, including exposure to severe illness, death of patients, high workload and role ambiguity, frequent encounter with daily stressful situations and low tolerance of tolerance. The high level of occupational stress leads to psychological changes, such as the reduction of distress tolerance and empathy in the person which often negatively affect the performance of individuals in life and causes dissatisfaction with life. The results of the research show that increased distress tolerance, as one of the essential components of health services, plays a crucial role in creating positive outcomes such as increasing stress relief, empathy with patients, and satisfaction with life. Therefore, it can be said that in reviewing the structure of different departments of hospitals, the focus of force on the protection of human health is also of importance so that the basic psychological needs related to the work of the employees are provided as much as possible. As a result, nurses

with the ability to tolerate distress are recruited in special wards; these people show more empathy with patients and thus experience less stress in their work because of their interest in their job.

The second hypothesis: How much sense of humor can predict the occupational stress of nurses?

The results of the study on the second question indicate that according to the values obtained in the table, it can be observed that the value of the significant level of distress tolerance is less than 0.05 and also the absolute value of t is more than 1.96. Therefore, sense of humor in the regression model is able to predict the occupational stress of nurses. This result is consistent with the results of the study by [13,14] Gerand 13 (2005) and Cooper (2004). In explaining this hypothesis, it can be said that nursing jobs are subject to the law of hard and harmful occupations. Nurses tolerate so much distress among people working in health centers. In fact, mental stress is a recognized and integral part of modern nursing that causes many problems for nurses and patients. Some research has been conducted to investigate the many psychological pressures that nurses encounter and came to the conclusion that the most important job stressors include lack of rewards and encouragement, high workloads, lack of participation in critical decision making, lack of control on working conditions and lack of job promotion. Exposures to stressors job stress can cause occupational stress and lower job involvement. In fact, job stress is a psychological response to chronic mental stress. Due to the negative consequences of this syndrome and its multi-dimensional impact on the healthcare environment, as well as nurses and patients, the discovery of factors associated with occupational stress can facilitate the proper planning. It should be noted that from the viewpoint of many researchers, sense of humor is seen as constructs that are associated with a reduction in occupational stress. Humor is a multidimensional construct, intimately connected with occupational stress. Nurses and therapists with a sense of humor are better able to communicate with colleagues and patients, thus they experience less stress in their work; in urgent situations, a sense of humor can be a great stress reliever as long as it is timely and appropriate for patients and colleagues and this may help accelerate the healing process from painful conditions for patients.

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