

## Association of Job Stress with Locus of Control in Nurses

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**Background:** Locus of control (LOC) is one of the most important factors with a significant role in stress management and increase or decrease negative emotions, notably in the work environment with many occupational consequences. This effect is more prominent in those working in more stressful environments such as medical professionals including nurses.

**Objectives:** This study examined the association of job stress and perceived LOC considering covariates variables.

**Patients and Methods:** Subjects were female nurses working in public hospitals in Shiraz during 2011. A total of 270 nurses were selected according to stratified sampling with proportional allocation. They were asked to complete the Rotter's internal-external LOC scale and Occupational Stress Questionnaire.

**Results:** The results showed that the LOC has significant positive association with the occupational stress ( $P < 0.001$ ).

**Conclusions:** The result supported the significant association of LOC with occupational stress in nurses. With regard to the impact of internal LOC, organizing educational programs in this field may promote the nurses' health in workplaces.

**Keywords:** Locus of Control; Stress; Negative Affect; Occupations; Nurses

### 1. Background

Stress in nursing is one of the universal problems of nurses. Medical Professions such as nursing are known as stressful professions in either developing or developed countries (1-4). Several studies have shown that nurses experience high levels of stress (5), which is associated with mental and physical problems (6). Beehr defines occupational stress as a work situation that undermines the psychological or physical health or causes factors that are likely to lead in a weakened health (7). According to the presented definition, occupational stress is a destructive emotional and physical response that occurs when the demands of work is inconsistent with the resources and needs of the worker (8). The employees who have high occupational stress may show symptoms such as low self-esteem, feelings of being overwhelmed, inability to concentrate, fatigue, more negative self-criticism, more defensive judgment, and unpredictable emotional thoughts and behavior (9). Therefore, occupational stress is a serious health-related problem for the organizations and their employees (10). Researchers suggest that certain personality traits, such as locus of control (LOC), largely determine how people are coping with their stress (2, 11). The LOC along with self-esteem, general self-efficacy, and emotional stability constructs core

self-evaluation. The core self-evaluation refers to people's self-assessment about themselves and their competence (12). LOC refers to factors that contribute to the individuals' success or failure (13). Rotter divides it into internal and external LOC. People who have an internal LOC believe that they have control over their destiny; therefore, they are often safe, sober, and director in trying to control their external environment. On the other hand, people with external LOC believe that they have no direct control over their own destiny. They perceive themselves passive to the external environment (14). Hence, these people tend to relate personal consequences to external factors or luck (14). LOC is related to successful coping with stressful situations as well as work-related stress (15, 16) and has an important role in job performance (17). LOC shows what the people's behavior in their jobs, social environment, and generally in their lives is. People with internal LOC try more actively to control their work environment than those with external LOC. Actually, the sense of control over the environment and their attempt to maintain this sense helps them to have a better performance and minimizes their negative work experience. In comparison with those with external LOC, they actively seek solutions to reduce surrounding stresses such as job

pressure and stress. Therefore, they are much healthier than those with an external LOC (18). In contrary, people with external LOC estimate situations beyond their coping abilities and consequently, experience a lot of stress (2). The job demand-control Model displays the association between occupational stress and control (19). This model has two dimensions: demand and control. The job demands contain pressures, work overloads, conflicts, ambition about job responsibilities, and skills required for the workplace (15). According to this model, the amount of control a person has over his environment is a basic dimension of health (19). The amount of stress increases when a person is experiencing high stress and demands but has low control for adapting to stressful circumstances (20). Therefore, the combination of low job control and high job demands leads to the highest levels of stress. Several studies have pointed the LOC as a predictor of mental health (17, 21-23). These studies have indicated that external LOC leads in higher risk of developing mental health problems such as anxiety and depression. In fact, people with internal LOC perceive job stress more manageable and less threatening than those with external LOC (24). Many positive psychologists believe that mental health and subjective well-being are similar. According to Keyes (25), mental health is a syndrome of subjective well-being symptoms (25). In fact, mental health is a syndrome consisting of emotional well-being symptoms and symptoms of mental and social health. Mental health is a collection of positive effects, negative effects, and life satisfaction (26).

## 2. Objectives

Considering the increasing interest in health and mental illness in healthcare professions, particularly in the nursing profession, our aim is to examine the association between occupational stress and LOC in nurses.

## 3. Patients and Methods

The subjects were female nurses working in Shiraz City State Hospitals during 2011. Based on the results of previous studies ( $r = 0.19$ ), considering the type I error ( $\beta = 0.05$ ), and test power ( $1 - \beta = 0.08$ ), the sample size was calculated at 250. Although the study was planned for 250 subjects, 270 questionnaires were distributed and only 213 of them were fully completed and returned.

### 3.1. Instrument

#### 3.1.1. Occupational Stress

Eliot's (1995) Job Stress Questionnaire, which has enough validity and reliability, was used to measure job-related mental pressure. A four-choice Likert scale ranging from "never" to "often" was applied. Its reliability was proved by Eliot and its validity was measured by Cronbach's alpha. In a study of the personnel of petrochemi-

cal company in Isfahan City, Jahanbakhsh Ganjeh et al. yielded a Cronbach's alpha coefficient of 0.92 (27). Cronbach's alpha was calculated at 0.86 in the present study. A higher score showed worse condition.

#### 3.1.2. Locus of Control

Rotter's internal-external LOC scale, which has been shown to be both valid and reliable, was used to assess the LOC (14). This scale consists of 29 parts and applies two responses "yes" and "no". Subjects were asked to choose the statement that they believed most. Higher scores on this scale indicated that the person has more external LOC (14).

## 3.2. Statistical Analysis

SPSS v.16 (SPSS Inc., Chicago, IL, USA) was used for statistical analysis. Linear regression analysis was used to examine the association of job stress and locus control.

## 4. Results

The sample consists of female nurses. The mean age of participants was  $34.6 \pm 6.8$  years. Their mean of work experience was  $9.8 \pm 6.8$  years. Overall, 93% of nurses were married, 3.4% were single, 0.9% were divorced, and 1.9% were widow. Linear regression analysis was conducted. Job stress and LOC were considered as the dependent and independent variables, respectively. The following variables were considered as covariate variables: age, marital status, number of children, self-reported psychiatric problem, educational level, mean years of work experiences as a nurse, and the current medical disease. The results showed that job stress score was only associated with the LOC score ( $P < 0.001$ ;  $\beta = 0.26$ ; and 95% CI, 0.23-0.83). None of the other variables were significantly associated with job stress score.

## 5. Discussion

Our aim was to investigate the association between the LOC and job stress in nurses. The regression analysis showed that LOC has a significant positive correlation with the job stress. The findings of our research were consistent with those of Rahim (28), Meier et al. (29), Sliskovic et al. (30), and Sundaresh (31). These findings indicated that the higher the score on the LOC Scale is, the more stress will be experienced. Hence, those with external LOC experience more stress than people with internal LOC. In fact, people with an internal LOC believe that the stressful situation can be controlled. Therefore, they use effective coping strategies to deal with stressful situations. In contrast, people with an external LOC believe that it is not possible to change the stressful situation and hence, they do not use their abilities to eliminate the stressful situation (18). In fact, they perceive stressful situation beyond their coping abilities (2).

LOC plays an important role in people's lives, especially

in the work environment. In fact, the LOC has a significant association with the attendance in the workplace. LOC is associated with positive work outcomes while the lack of internal LOC is associated with negative work attitudes and behaviors. Hence, managers and supervisors should pay special attention to this issue. In fact, they can reveal that indirect control and as a result, promoting positive attitudes and behaviors is possible (18). Therefore, educational programs for managers such as stress management can be used for stress reduction. The training program for stress management and promoting mental health should be incorporated into comprehensive approaches for improving the general health (32). Further studies should investigate whether increasing perceived internal LOC can decrease job stress in nurses.

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## Authors' Contributions

Ali Sahraian: study concept, designing, data analysis, revision of the first draft. Banafsheh Omdivar: study design, collecting data, data analysis, preparing the first draft, and revision of the draft. Ahmad Ghanizadeh: data re-analysis and revision of the primary draft. Amir Bazrafshan: collecting data and revision of the manuscript.

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