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Assessment of nursing students' stress levels and coping strategies in operating room practice

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ABSTRACT

The aim of this study was to evaluate the stress levels and stress coping strategies of nursing students in their first operating room experience. This descriptive study was done with 126 nursing students who were having an experience in an operating room for the first time. Data were collected by using Personal Information Form, Clinical Stress Questionnaire, and Styles of Coping Inventory. The nursing students mostly had low clinical stress levels ($M = 27.56$, SD = 10.76) and adopted a self-confident approach in coping with stress ($M = 14.3$, SD = 3.58). The nursing students generally employed a helpless/self-accusatory approach among passive patterns as their clinical stress levels increased, used a self-confident and optimistic approach among active patterns as their average age increased, and those who had never been to an operating room previously used a submissive approach among passive patterns. The results showed that low levels of stress caused the nursing students to use active patterns in coping with stress, whereas increasing levels of stress resulted in employing passive patterns in stress coping. The nursing students should be ensured to maintain low levels of stress and use active patterns in stress coping.

Introduction

The clinical practice in the nursing education is essential to the acquisition of nursing competence (Blomberg et al.). However, several studies suggest that clinical practices, which constitute an important part of nursing training, are very stressful for nursing students (Gorostidi et al., 2007; Pryjmachuk and Richards, 2007; Sharif and Masoumi, 2005; Sendir and Acaroglu, 2008; Sheu et al., 2002). In the literature, it is stated that the practical parts of nursing training programs were more stressful than the academic parts (Blomberg et al., 2014; Taşdelen and Zaybak, 2013), and Blomberg et al. (2014) determined that 57% of nursing students experienced stress in the clinical field. Reasons for stress in clinical practices vary among nursing students. Chan et al. (2009) determined the most common reason for stress is lack of knowledge and skills. The first clinical experience, fear of making mistakes, emergency situations, expectations, irregularity of clinical training, patients, communication problems between the health professionals and clinical trainers, academic assessments on the clinical field, practicing on humans, and equipment and operation of the clinical areas are significant causes of stress (Gorostidi et al., 2007; Pryjmachuk and Richards, 2007; Sharif and Masoumi, 2005; Sendir and Acaroglu, 2008; Timmins and Kaliszer, 2002). Another cause for nursing students' increased clinical stress is practicing in special units. Children's services, intensive care units, emergency services, and operation rooms where the nursing students are required to practice in their second and third years are more stressful clinical practice areas due to the heavy workload and the assignment of too much responsibility to the students (Evans and Kelly, 2004; Kipping, 2000; Pryjmachuk and Richards, 2007). In their study, Sharif and Masoumi (2005) found that nursing students experienced much more stress during their second, third, and fourth years

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in nursing training. Stress is viewed as a complex and dynamic transaction between individuals and their environments (Evans and Kelly, 2004). The presence and level of stress has positive and negative effects on learning and thinking where high levels of stress impedes learning; low levels motivate students while learning (Burnard et al., 2007; Gammon and Morgan-Samuel, 2005; Sendir and Acaroglu, 2008; Tully, 2004). The effects of stress on individuals depend on the sufficiency of their coping behaviors. Lazarus and Folkman (1984) define it as "continuous effort by an individual to overcome the imbalance between the internal and external conditions" (Gammon and Morgan-Samuel, 2005; Sawatzky, 1998; Sheu et al., 2002). When coping efforts are successful, the stressful situation can be resolved and balance is retained by reducing the negative effects of stress (Sheu et al., 2002). In the scale developed for university students, Lazarus and Folkman (1984) defined the problem-oriented/active and emotion-oriented/passive patterns as coping patterns for different stressful situations. The problem-oriented/active coping patterns aim to change or manage the situation causing the stress, whereas the aim of emotion-oriented/passive coping patterns is organizing the emotional responses to stressors (Burnard et al., 2007; Evans and Kelly, 2004; Sawatzky, 1998; Temel et al., 2007). Gammon and Morgan-Samuel (2005) determined in their study that the nursing students with high stress levels had low coping levels. Presence and level of stress affect the academic performance and coping efforts of students in clinical practices (Gammon and Morgan-Samuel, 2005; Sendir and Acaroglu, 2008; Sheu et al., 2002). One of the practice areas for the surgical diseases nursing course provided Turkey's second-year nursing training is the operating room. In operating room practice, nursing students gain knowledge and skills in caring for patients undergoing surgery. The operating rooms are distressing for students because of their specific structure, operational rules, experience on patients, and the first-time experience of the students with regard to an operation on a patient. Despite of the fact that studies in the clinical area about stress among nursing students increased from day by day, there is no study evaluating the stress levels and stress coping behaviors of the nursing students in an operating room. Determination of the stress levels and stress coping behaviors of the nursing students will provide guidance to the nursing instructors in reducing the negative effects of stress and providing an effective clinical training in operating room practice (Kaya et al., 2007; Sheu et al., 2002).

The aim of this study is to determine the stress levels and stress coping patterns of nursing students in their first operating room practice.

Study questions

- What is the stress level of nursing students in their first operating room experience?
- What are the stress coping patterns of nursing students in their first operating room experience?
- What is the relationship between the stress level and stress coping patterns of nursing students in their first operating room experience?

Materials and methods

This study was conducted as a descriptive study at Trakya University and two Healthcare Schools in the region between February 1, 2008, and May 15, 2009. Data collection forms were given to 160 nursing students who experienced their first operating room practice; 126 of them (78.75%), who completed the forms fully, were included in the study. The survey forms were distributed to the students at the end of their first operating room practice and the students were asked to return the forms to the researchers after 20 min. Before distributing the survey forms, the researchers explained that the students were not required to participate in the study or identify themselves, that the data were to be used for a scientific research, and that the students might ask any questions about the study. The students were left on their own while completing the survey forms. A Personal Information Form, Clinical Stress Questionnaire, and Stress Coping Patterns Scale were used as data collection materials.

Personal Information Form

Collects data about age, sex, school of the students, and information such as whether the students have seen an operating room and their preference of school.

Clinical Stress Questionnaire (CSQ)

A Likert-type self-assessment scale developed by Pagana in 1989 to determine the initiation value of the stress levels of the nursing students or requiring them to struggle in their first clinical practice experience. The Clinical Stress Questionnaire can be used in all internal and surgical clinics at the end of the day the student experiences his/her first clinical practice. The items of the questionnaire consists of four scales including threat (I was sad, I was nervous, I was bored, I was affected, I was cowered, I was scared), struggle (I was stimulated, I was cheerful, I was hopeful, I liked it, I was aspired, I was excited, I was happy), harm (I was furious, I was grieved, I felt guilty, I was disgusted, I was disappointed), and benefit (I was relieved, I was in confidence). Each item is assessed in 5 levels; the students are asked to choose one of the following: "0- none", "1- a little", "2- medium", "3- pretty much", "4- very much." On the basis of points for each item, the minimum score of the questionnaire is "0" and maximum is "80". Low scores indicate low stress levels, whereas high scores indicate high stress levels. The reliability and validity of the Turkish form was demonstrated by Sendir and Acaroglu (2008).

Stress-coping patterns scale (SCPS)

A scale for university students in relation with coping mechanisms—in particular, depression, solidarity, and psychosomatic problems—and valid for short, different distressing situations, prepared on the basis of the stress-coping Ways Inventory (developed by Lazarus and Folkman (1984)). The reliability and validity of the Turkish form consisting of 30 items was demonstrated by Sahin and Durak (1995). It is a four Likert-type scale to measure two major stress-coping patterns, including problem-oriented/active patterns and emotion-oriented/passive patterns. Active patterns include sub-scales of "seeking social support (SSS), optimistic approach (OA) and self-confident approach (SCA)", and passive patterns include sub-scales of "helpless approach (HA)" and "submissive approach (SA)". The Cronbach alpha consistency coefficients of the scales are determined to be 0.63 for SSS, 0.68 for OA, 0.61 for SCA, 0.70 for HA, and 0.51 for SA. Items 8, 10, 14, 16, 20, 23, and 26 of the scale are related to SCA; 2, 4, 6, 12, and 18 are related to OA; 3, 7, 13, 15, 21, and 24 are related to HA; 5, 7, 13, 15, 21, and 24 are related to SA; and 1, 9, 29, and 30 are related to SSS. The scale has been developed to determine what individuals do to cope with troubles in life and stress (Kaya et al., 2007; Temel et al., 2007).

Statistical analysis

The data were assessed on computer by using percentage, average, *t*-test, and Pearson correlation test. The value of $P < 0.05$ was accepted as the statistical significance limit.