

Original Article

The Effect of Stress Level on Patient Care Behavior in Nurses

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Abstract

Background: Stress is one of the issues that has existed since ancient times, but which the modern world focuses on most, and is affected by many individual, social and communal situations. One of these situations is the profession in which individuals work. The nursing profession is known to be one of the most stressful occupations. The aim of this study is to determine the effect of the stress level on nursing behavior and the factors affecting the stress they experience.

Methods: 205 nurses working in Kayseri City Education and Research Hospital were included in this study. The research data were collected by the Introductory Information Form, the Perceived Stress Scale, and the Patient Care Behaviors-24 Scale.

Results: According to the results of the study, the total mean of perceived stress was 44.05 ± 6.36 and the total point average of care behavior perception was 5.29 ± 0.52 . It is observed that there is a relationship between nursing behaviors and perceived stress, and that 5.6% of variance changes in care behaviors are due to perceived stress total and 26.6% are due to inadequate self-sufficiency perception and stress disturbance perception. These variables appear to contribute significantly to variance variation in maintenance behavior ($p < 0.001$).

Conclusion: It is seen that the level of stress perceived by nurses positively affects patient care behaviors. However, this can cause nurses to experience extreme and sustained stress and increased burnout levels. For this reason, it is recommended to take steps to reduce the stress of nurses such as activating individual and social support systems, providing skills training to cope with stress, evaluating workload and reducing it if necessary, regulating wages and working environment.

Keywords: Stress, patient care behaviour, nurse, nursing

Introduction

Stress, which has always existed in human life since ancient times but is perceived as a disturbance brought about by the modern age, sometimes describes stimuli from the environment, and sometimes describes an inner feeling or reaction. But in general stress has been used to cover both definitions, perceived as negative and harmful. In spite of this negative perception, stress is a factor that enables motivation, change, development and growth in

individuals when it is coped with effectively (Cam & Engin, 2014).

Stress, which means physical and mental strain, can occur due to many physiological, psychological, behavioral and environmental factors. Stress can be a tool of change and development, as well as many physical and mental effects that negatively affect the health of individuals (Cam & Engin, 2014; Durna, 2006; Gelsema et al., 2006).

Stress is affected by individual characteristics as well as the work or profession of the individual. The stress level of individuals is more experienced especially in occupations that are constantly in one-to-one contact with people, have a busy work tempo and have to work at night, and cause many ailments such as restlessness, anger, anxiety, depression, gastrointestinal diseases (Gelsema et al., 2006; Onder et al., 2014). One of these professions is nursing.

Nursing is seen as a stressful profession due to its nature. In the nursing profession, difficulties such as heavy workload, time constraints, lack of enough nurses to share the workload, a strained relationship resulting from interaction with other health care personnel, role confusion, expectations of patients and their families undertaken to maintain the balance between clinical practices and administrative tasks in the nursing profession can cause stress (American Holistic Nurses Association 2012; Chou, Li & Hu, 2014). Studies show that psychological disorders such as poor health perception, anxiety, anger, frustration and depression occur in nurses along with increased levels of stress (Lin, Liao, Chen & Fan, 2014; Malinauskiene, Leisyte, Romualdas & Kirtiklyte, 2011). In addition to this, it can be said that stress causes conditions such as physical diseases, decreased quality of life and individual performance, and increased conflict among healthcare professionals (Chang et al, 2007; Lin et al, 2014; Nazari, Mirzamohamadi, & Yousefi, 2015). For these reasons, it is thought that both the quality of life of the nurse and the quality of care given to the patients will increase with the correct determination of the stress level of the nurses and taking the precautions correctly (Calik et al., 2015; Ersan et al., 2013; Tasciet al., 2007).

Nursing theorists regard the concept of care as the main phenomenon that distinguishes the nursing profession from other professions and consider it the reason for its existence (Cook & Peden, 2017). The process of care, according to Watson, is an important humanitarian, ethical, philosophical and epistemic effort and cultivated practice that contributes to the preservation of humanity. According to him, care is not about having a certain attitude, having a desire to help someone else, or worrying about someone else. Care "is the moral ideal of Nursing for the preservation, development and preservation of human dignity"

(Watson, 2012). Care, in the most inclusive language, is the quality displayed by the nurse, a mandatory moral value, a way to protect human life, and a requirement of the protection of human dignity (Cook & Peden, 2017). Therefore, it is very important to determine the factors that may affect nursing care correctly.

As in other parts of the world (Lin et al, 2014; Nazari et al., 2015), nurses in Turkey also experience intense stress and it is seen that this stress negatively affects both work and general life of the nurses (Ersan et al., 2013; Onder et al., 2014; Tasciet al., 2007). This study aims to determine the effect of stress levels on care behaviors in nurses and to determine the factors affecting the stress they experience correctly.

Research Questions

- Are nurses ' perceived stress and patient care behaviors affected by demographic variables?
- Is there a relationship between perceived stress in nurses and patient care behavior?
- Does perceived stress in nurses affect patient care behavior?

Methods

Participants: The study was carried out in Kayseri City Education and Research Hospital. The study sample consists of 205 nurses working in Kayseri City Education and Research Hospital between the dates of 15 May 2020 and 30 June 2020. A 78.5% of the nurses interviewed within the scope of the research are women. 59.0% of them are married. 47.3% of them have bachelor's degree. 59.0% of them work in internal services. 34.6% of them work in this profession for 11 years and above. 48.3% of the participants have less income than their expenses and 54.6% of the participant have children. In addition, 52.7% of the participants stated that they were moderately satisfied with the working conditions. 87.8% of them stated that time pressure forced him. 64.9% of the participants stated that they chose the profession willingly. 72.2% of the participants stated that they love their profession. 57.1% of the participants stated that the place where they work is suitable for the working conditions. 64.4% of them stated that their life expectancy was not met and 82.9% of them stated that their communication with their colleagues was the way they wanted. The age range of the participants was 19-51 and the mean age was 31.48±8.02.

Data collection forms in the study: The data were collected by the Introductory Information Form, the perceived stress scale, and the patient care behaviors-24 scale. The researchers collected the data by interviewing nurses face-to-face. It took about 10 minutes for the forms to be filled out.

Introductory Information Form: The Form consists of 16 questions that enable the identification of socio-demographic variables such as age, gender, educational status, task area.

The Perceived Stress Scale: The scale was developed by Cohen, Kamarck and Mermelstein (1983). The scale, consisting of a total of 14 items, consists of two sub-dimensions: insufficient self efficacy perception (4,5,6,9,10,12,13) and stress/discomfort perception (1,2,3,7,8,11,14). The scale is designed to measure the degree to which a number of situations in a person's life are perceived as stressful. Participants give each item a 5-point Likert ranging from 0 (never) to 4 (very often). 7 of the articles containing positive expression (4, 5, 6, 7, 9, 10, 13) it is scored in reverse. Turkish validity and reliability of the scale was conducted by Eskin et al. (2013). For the whole scale, Cronbach's alpha coefficient is 0.84. The Cronbach's alpha coefficient for the perception of inadequate self-efficacy is 0.81, and the Cronbach's alpha coefficient for the stress / discomfort perception is 0.76 (Eksin, Harlak, Demirkiran, & Dereboy, 2013). In our study, Cronbach's alpha coefficient is 0.72 for the entire scale, Cronbach's alpha coefficient is 0.69 for inadequate self-efficacy perception, and 0.80 for the stress / discomfort perception.

Patient Care Behaviors-24 Scale: The scale was developed by Wu, Larrabee and Putman (2006). The scale consisting of a total of 24 items and four sub-dimensions: assurance (16, 17, 18, 20, 21, 22, 23, 24), knowledge skill (9, 10, 11, 12, 15), being respectful (1, 3, 5, 6, 13, 19) and commitment (2, 4, 7, 8, 14). The scale is used to compare nurses' self-assessments and patient perceptions (Wu et al., 2006). Participants score each item as 6-point Likert ranging from 1 (Never) to 6 (Always). The Turkish validity and reliability study of the scale was conducted by Lead and Kanan (2010). Cronbach's alpha coefficient was found to be 0.96 for the entire scale. The Cronbach alpha coefficient for the assurance sub-dimension in the scale was 0.92, the Cronbach alpha coefficient for the knowledge-sub-dimension was 0.87, the Cronbach alpha coefficient for being respectful

sub-dimension 0.85 and the Cronbach alpha coefficient for the commitment sub-dimension was 0.82 (Kursun and Kanan, 2010). In our study, Cronbach alpha coefficient for the whole scale was 0.94, Cronbach alpha coefficient for the assurance sub-dimension was 0.90, Cronbach alpha coefficient for the knowledge-skill sub-dimension was 0.79, and Cronbach alpha coefficient was 0.82 for the being respectful sub-dimension and Cronbach alpha coefficient was 0.84 for the commitment sub-dimension.

Ethical statements: Data forms were given to nurses and asked to fill them out themselves. Meanwhile, the investigator was found alongside the nurses. In addition, approval was obtained from the Kayseri City Education and Research Hospital Clinical Research Ethics Committee. Institution permission was obtained from Kayseri City Education and Research Hospital Chief Physician. "Informed Volunteer Consent Form" was taken from all nurses participating in the study.

Statistical Analysis: The data obtained from the study were evaluated in the SPSS 25 (IBM SPSS Statistics Standard Concurrent User V 25) package program. Validity analysis and explanatory factor analysis were performed on the scales before evaluating the data. Cronbach's alpha internal consistency coefficients of the scales are given in the introduction section of the scales. Basic components technique was applied for Explanatory Factor analysis. It was determined that the test value of Kaiser-Meyer-Olkin (KMO) was 0.79, the common stakeholder value was 0.43, and Barlett's sphericity test <0.001 for the perceived stress scale. The KMO value for Patient Care Behaviors-24 Scale was 0.93, the common stakeholder value was 0.44, and Barlett's sphericity test was <0.001 . In line with these findings, it is observed that these scales can be used safely without removing any item from the scales (Gurbuz & Sahin, 2018). In the evaluation of the data, Shapiro-Wilk test was applied to evaluate the conformity to the normal distribution and it was seen that the data did not dissolve normally ($p < 0.05$). For this reason, Mann-Whitney U test was used for binary independent variables, Kruskal-Wallis test was used for three and above variables, and Spearman correlation test was used for correlation analysis. Relational hypotheses were tested by simple and multiple linear regression analysis. In comparisons, $p < 0.05$ value was considered statistically significant.

Results

In this section, descriptive statistics, correlation scores between variables and subsequent findings for regression analysis are given.

Descriptive Findings of the Participants

When we look at the scale mean scores according to demographic variables in Table 1, it is seen that there is no statistically significant difference between the mean scores by gender, education level and the service studied ($p > 0.05$). Similarly, there is no significant difference in perceived stress and care behavior average scores in terms of the willingness to choose nursing ($p > 0.05$). It was found that the respect sub-dimension scores of the care behavior of nurses who chose the profession willingly were statistically significantly higher than those who did not choose willingly. ($p < 0.05$). It was determined that the perceived stress scores of the nurses whose marital status was divorced were high, their self-efficacy perception scores were low, and the commitment scores in the care dimension were high ($p < 0.05$). It was determined that there was no statistically significant difference between the stress scores perceived according to the working year ($p > 0.05$), but the assurance and knowledge / skill sub-dimension scores of the care behavior sub-dimensions increased in nurses working 11 years and above and this difference was found to be significant ($p < 0.05$). It was observed that the perceived stress and sub-dimension mean scores of the nurses who reported that their income was less than their expenses were statistically significantly higher ($p < 0.05$), and there was no statistically significant difference in terms of care behavior and sub-dimension mean scores ($p > 0.05$). Similarly, the nurses who perceived the working conditions as bad and stated that the profession did not meet their life expectations were found to have statistically significantly higher scores in terms of total perceived stress and stress discomfort perception subscale scores ($p < 0.05$). Although nurses' love of the profession does not have a significant effect on their perceived stress scores ($p > 0.05$), nurses with negative attitudes seem to be statistically significantly lower in terms of care behaviors and subscale mean scores ($p < 0.05$). No nurses with a low perceived stress level were identified in our study. It was also determined that nurses with high stress levels had low perceptions of self-sufficiency and high levels of stress discomfort, and that their care behaviors and sub dimension

score averages were statistically significantly higher ($p < 0.05$). Table 2 shows the mean and correlation values of the research group for age and scales. The average perceived stress total score of the research group was found to be 44.05 ± 6.36 . Insufficient self-efficacy perception was found to be 20.70 ± 4.46 . Stress discomfort perception was found as 23.35 ± 3.96 . Care behaviors total score average was found to be 5.29 ± 0.52 . Assurance was determined as 5.29 ± 0.62 , knowledge / skill was determined as 5.56 ± 0.49 , respect was determined as 5.24 ± 0.59 and commitment was determined as 5.08 ± 0.67 . When we look at the correlations between the variables, it is seen that the perceived stress and its sub-dimensions have a statistically significant positive correlation with the maintenance behaviors and sub-dimensions in themselves. While there was no significant relationship between perceived stress, care behaviors and sub-dimensions and age, a positive, statistically significant relationship was found with the knowledge skill sub-dimension of care behaviors.

Findings Regarding Regression Analysis

In this Section, simple regression analysis was performed to reveal the effect of perceived stress on care behaviors, and multiple regression analyses were performed to reveal the effect of sub dimensions of perceived stress on care behaviors. Table 3 shows the results of a simple regression analysis to examine how the perceived stress in nurses determines the care behaviors. Simple regression analysis results are statistically significant ($F_{(1,203)}:13.189$, $p < 0.001$). The regression equation for the simple linear relationship between variables is as follows: maintenance behaviors = $4.389 + 0.021$ (perceived stress) The adjusted R^2 value was 0.056 in the results of the analysis. According to this statistical result, 5.6% variance in maintenance behavior is due to perceived stress. Table 4 shows the results of multiple regression analysis to examine how the lower dimensions of perceived stress in nurses determine the care behaviors. Multiple regression analysis results are statistically significant ($F(2,202): 37.889$; $**p < 0.001$). The adjusted R^2 value was set at 0.266. This result shows that 26.6% of variance changes in care behaviors are explained by inadequate self-efficacy perception and stress discomfort perception, and both variables significantly contribute to variance change in care behaviors ($p < 0.001$).

Table1: Score Averages of Perceived Stress, Care Behaviors and Sub-Dimensions Relative to Demographic Variables

Demographic variables	Scales <i>X±SD</i> (Median)							
	PST	ISP	SDP	CBT	A	KS	R	C
Gender								
Female	44.16±6.33 (44.00)	20.79±4.44 (21.00)	23.36±3.97 (23.00)	5.31±0.53 (5.37)	5.30±0.63 (5.50)	5.57±0.52 (5.80)	5.26±0.58 (5.33)	5.11±0.66 (5.20)
Male	43.68±6.51 (43.50)	20.38±4.57 (19.50)	23.29±3.96 (22.00)	5.21±0.51 (5.27)	5.25±0.57 (5.25)	5.50±0.40 (5.60)	5.14±0.64 (5.25)	4.95±0.70 (5.00)
<i>p</i>	0.586	0.620	0.683	0.203	0.487	0.320	0.259	0.195
Marital Status								
Married	44.15±5.83 ^a (44.00)	20.98±4.15 ^a (21.00)	23.17±3.84 (23.00)	5.26±0.53 (5.33)	5.27±0.61 (5.37)	5.59±0.52 (5.80)	5.20±0.58 (5.16)	4.97±0.69 ^a (5.00)
Single	43.58±6.95 ^a (43.00)	20.04±4.75 ^a (20.00)	23.53±4.16 (23.00)	5.32±0.52 (5.33)	5.31±0.63 (5.50)	5.50±0.46 (5.60)	5.27±0.61 (5.33)	5.21±0.62 ^a (5.20)
Divorced	53.00±4.35 ^b (55.00)	27.33±1.52 ^b (27.00)	25.66±3.21 (27.00)	5.73±0.06 (5.75)	5.70±0.26 (5.62)	5.80±0.20 (5.80)	5.77±0.19 (5.66)	5.66±0.30 ^b (5.60)
<i>p</i>	0.040	0.011	0.403	0.239	0.469	0.146	0.115	0.017
Educational Level								
Health vocational High School	43.38±7.00 (41.00)	20.85±4.88 (22.00)	22.52±3.76 (21.00)	5.29±0.58 (5.37)	5.27±0.77 (5.62)	5.65±0.34 (5.80)	5.22±0.72 (5.33)	5.07±0.83 (5.20)
Associate degree	44.76±6.19 (45.00)	20.87±4.31 (21.00)	23.89±4.22 (23.00)	5.29±0.53 (5.33)	5.29±0.64 (5.43)	5.60±0.54 (5.80)	5.21±0.57 (5.33)	5.07±0.65 (5.20)
Bachelor's degree	43.61±6.51 (44.00)	20.49±4.57 (21.00)	23.12±3.84 (23.00)	5.28±0.52 (5.33)	5.30±0.58 (5.37)	5.48±0.49 (5.60)	5.26±0.59 (5.33)	5.09±0.64 (5.20)
Master degree	44.22±4.71 (44.00)	21.22±4.08 (22.00)	23.00±3.20 (23.00)	5.32±0.51 (5.50)	5.29±0.56 (5.37)	5.80±0.30 (6.00)	5.25±0.60 (5.50)	4.97±0.90 (5.40)
<i>p</i>	0.611	0.917	0.401	0.997	0.998	0.123	0.921	0.989

Service Worked								
Internal service	43.74±6.28 (44.00)	20.45±4.29 (20.00)	23.28±4.15 (23.00)	5.23±0.53 (5.25)	5.23±0.64 (5.25)	5.54±0.50 (5.60)	5.19±0.60 (5.33)	4.98±0.68 (5.00)
Surgical service	44.36±6.51 (43.00)	20.90±4.46 (22.00)	23.45±4.02 (23.00)	5.34±0.53 (5.45)	5.36±0.61 (5.50)	5.54±0.48 (5.80)	5.26±0.61 (5.33)	5.20±0.67 (5.20)
Intensive care	44.79±6.55 (44.00)	21.37±5.17 (21.00)	23.41±3.06 (23.00)	5.43±0.45 (5.50)	5.42±0.49 (5.50)	5.67±0.47 (5.80)	5.39±0.50 (5.33)	5.24±0.62 (5.40)
<i>p</i>	0.807	0.613	0.905	0.137	0.309	0.238	0.290	0.055
Working Year								
Less than 1 year	43.26±7.19 (42.50)	20.20±4.47 (19.00)	23.06±4.19 (23.00)	5.29±0.52 (5.29)	5.29±0.61 ^{ab} (5.37)	5.40±0.50 ^a (5.40)	5.28±0.57 (5.33)	5.19±0.59 (5.20)
Between 1-5 years	43.31±6.17 (42.00)	20.26±4.73 (22.00)	23.04±4.39 (22.00)	5.21±0.54 (5.20)	5.18±0.63 ^{ab} (5.00)	5.56±0.47 ^{ab} (5.60)	5.13±0.64 (5.16)	5.01±0.73 (5.00)
Between 6-10 years	44.97±5.57 (45.00)	20.76±4.53 (20.00)	24.20±3.47 (24.00)	5.16±0.58 (5.29)	5.11±0.65 ^a (5.12)	5.46±0.60 ^a (5.60)	5.15±0.66 (5.33)	4.94±0.70 (5.00)
11 years and above	44.49±6.31 (45.00)	21.28±4.26 (22.00)	23.21±3.82 (23.00)	5.41±0.46 (5.50)	5.47±0.55 ^b (5.62)	5.72±0.38 ^b (5.80)	5.33±0.54 (5.50)	5.12±0.67 (5.20)
<i>p</i>	0.496	0.570	0.455	0.071	0.009	0.001	0.344	0.401
Income Status								
Income less than expense	45.49±5.94 ^a (46.00)	21.46±4.37 ^a (21.00)	24.03±3.75 ^a (24.00)	5.29±0.56 (5.37)	5.28±0.68 (5.50)	5.59±0.49 (5.80)	5.22±0.62 (5.33)	5.07±0.70 (5.20)
Income equals expense	42.35±5.96 ^b (42.00)	19.76±4.46 ^b (19.00)	22.58±3.68 ^b (22.00)	5.29±0.51 (5.27)	5.30±0.58 (5.43)	5.54±0.51 (5.60)	5.25±0.59 (5.33)	5.07±0.67 (5.20)
Income less than expense	43.95±7.96 ^{ab} (45.50)	20.79±4.39 ^{ab} (22.00)	23.16±5.23 ^{ab} (23.00)	5.30±0.45 (5.31)	5.30±0.49 (5.31)	5.46±0.44 (5.40)	5.29±0.49 (5.33)	5.17±0.59 (5.20)
<i>p</i>	0.004	0.047	0.035	0.973	0.930	0.320	0.944	0.850
Working Conditions								
Good	41.03±6.83 ^a (42.00)	19.51±4.11 (19.00)	21.51±4.28 ^a (21.00)	5.27±0.65 (5.29)	5.34±0.68 (5.50)	5.44±0.62 (5.40)	5.21±0.67 (5.33)	5.08±0.77 (5.00)

Moderate	43.75±6.13 ^{ab} (44.00)	20.62±4.46 (21.00)	23.12±4.05 ^a (23.00)	5.32±0.49 (5.37)	5.31±0.62 (5.50)	5.58±0.45 (5.80)	5.30±0.55 (5.50)	5.11±0.62 (5.20)
Bad	46.14±5.84 ^b (45.50)	21.45±4.55 (21.50)	24.68±3.16 ^b (25.00)	5.24±0.51 (5.29)	5.25±0.58 (5.25)	5.58±0.49 (5.80)	5.14±0.61 (5.16)	5.03±0.72 (5.20)
<i>p</i>	0.002	0.142	0.001	0.603	0.502	0.489	0.253	0.901

Willingness to Choose Nursing

Yes	43.92±6.46 (44.00)	20.96±4.32 (21.00)	22.95±4.03 (23.00)	5.34±0.49 (5.37)	5.34±0.60 (5.50)	5.57±0.46 (5.80)	5.31±0.57 (5.33)	5.14±0.64 (5.20)
No	44.30±6.19 (44.00)	20.22±4.69 (21.00)	24.08±3.74 (24.00)	5.20±0.57 (5.22)	5.21±0.64 (5.25)	5.53±0.55 (5.60)	5.11±0.62 (5.08)	4.96±0.72 (5.00)
<i>p</i>	0.656	0.272	0.062	0.094	0.180	0.839	0.024	0.105

Status of Liking The Profession

Yes	44.08±6.42 (44.00)	20.85±4.38 (21.00)	23.22±4.07 (23.00)	5.36±0.50 (5.43)	5.39±0.57 (5.50)	5.57±0.47 (5.70)	5.31±0.56 (5.33)	5.15±0.66 (5.20)
No	43.98±6.24 (43.00)	20.31±4.66 (20.00)	23.66±3.68 (23.00)	5.12±0.55 (5.12)	5.04±0.66 (5.00)	5.53±0.54 (5.60)	5.05±0.64 (5.00)	4.89±0.69 (4.80)
<i>p</i>	0.773	0.404	0.673	0.003	0.001	0.989	0.006	0.013

The Status of Meeting Life Expectancy of The Profession

Yes	42.21±6.16 (42.00)	20.32±4.02 (20.00)	21.89±3.80 (21.00)	5.32±0.55 (5.37)	5.34±0.61 (5.50)	5.55±0.52 (5.60)	5.30±0.64 (5.50)	5.12±0.67 (5.20)
No	45.07±6.26 (45.00)	20.91±4.68 (21.00)	24.15±3.83 (24.00)	5.27±0.51 (5.29)	5.270.62 (5.37)	5.56±0.48 (5.70)	5.20±0.57 (5.33)	5.06±0.68 (5.20)
<i>p</i>	0.001	0.371	0.001	0.315	0.488	0.863	0.147	0.555

Stress Level (no low level)

Medium	37.20±2.92 (37.00)	16.83±2.80 (17.00)	20.36±2.74 (21.00)	5.14±0.44 (5.12)	5.15±0.56 (5.25)	5.41±0.45 (5.40)	5.05±0.54 (5.00)	4.94±0.55 (5.00)
High	47.84±4.20 (48.00)	22.84±3.70 (23.00)	25.00±3.55 (25.00)	5.37±0.55 (5.50)	5.37±0.63 (5.62)	5.64±0.50 (5.80)	5.34±0.60 (5.50)	5.16±0.72 (5.40)
<i>p</i>	0.001	0.001	0.001	0.001	0.003	0.001	0.001	0.006

Mann-Whitney U Test/Kruskal-Wallis Test (significant if $p < 0.05$ and $p < 0.01$); The a, b superscripts show intra-group differences. There is no difference in the measurements with the same letters). PST: Perceived Stress Total, ISP: Insufficient Self-Efficacy Perception, SDP: Stress / Discomfort Perception, CBT: Care Behavior Total, A: Assurance, KS: Knowledge / Skills, R: Respect, C: Commitment;

Table 2: Nurses ' Age, Mean and Standard Deviation Values of Scales and Correlation Values (N=205)

Variables	$\bar{X} \pm SD$	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. PST	44.05±6.36	-								
2. ISP	20.70±4.46	.786**	-							
3. SDP	23.35±3.96	.725**	.173*	-						
4. CBT	5.29±0.52	.289**	.544**	-.129	-					
5. A	5.29±0.62	.228**	.458**	-.133	.914**	-				
6. KS	5.56±0.49	.338**	.545**	-.084	.749**	.655**	-			
7. R	5.24±0.59	.292**	.529**	-.111	.915**	.744**	.602**	-		
8. C	5.08±0.67	.243**	.452**	-.096	.898**	.721**	.580**	.837**	-	
9. Age	31.48±8.02	.035	.055	-.005	.059	.112	.205**	.004	-.089	-

Spearman's rho (** p<.01, * p<.05); PST: Perceived Stress Total, ISP: Insufficient Self-Efficacy Perception, SDP: Stress / Discomfort Perception, CBT: Care Behavior Total, A: Assurance, KS: Knowledge / Skills, R: Respect, C: Commitment;

Table 3: Simple Regression Analysis Results Regarding the Effects of Nurses Perceived Stress on Behaviors (N=205)

Variables	B	Standard Error	β
PST	0.021	0.006	0.247**

Note: $R^2=0.061$; Adjusted $R^2:0.056$; $F_{(1,203)}:13.189$; ** $p<0.001$; Bold value indicates statistical significance; PST: Perceived Stress Total

Table 4: Multiple Regression Analysis Results for The Effect of Lower Dimensions of Perceived Stress on Nursing Behavior (N=205)

Variables	B	Standard Error	β
SDP	4.707	0.226	-0.212**
ISP	0.060	0.007	0.507**

Note: $R^2=0.273$; Adjusted $R^2:0.266$; $F_{(2,202)}:37.889$; ** $p<0.001$; Bold value indicates statistical significance.; ISP: Insufficient Self-Efficacy Perception; SDP: Stress / Discomfort Perception

Discussion

The concept of care is the most important reason for existence and main focus of nursing. This existential cause provides nurses with a social authority and service identity. Also, care is not a tool in the relationship between the nurse and the patient, but a basic goal. Research on the factors that can affect the main purpose of the nursing

profession is very important (Cook&Peden, 2017).

In this study, which examined the default factors that may affect patient care behavior, it was determined that nurses whose marital status was divorced had high perceived stress scores and low self-sufficiency perception scores (Table 1). Divorce is a difficult, distressed and highly

stressful situation for many people. In addition to the legal, economic, social and individual consequences of divorce, the loss of a spouse or a relationship may result in emotional collapse. This emotional breakdown negatively affects the stress level of individuals and individuals experience feelings such as failure, depression, euphoria, relief, guilt, and low self-esteem, which can lead to loss of self-confidence (Sharma, 2011). In addition, nurses whose marital status was divorced were found to have high commitment scores in terms of care dimension (Table 1). This difference in the lower dimension of commitment can be interpreted as the transfer of commitment (Ramirez, 2008) to patient care, which is positively associated with the strategies of maintaining the relationship in marriage. A divorced person may exhibit individual characteristics such as giving the patient more time to suppress the feeling of failure towards their relationship in their marriage, being helpful/supportive, being patient and understanding. This may increase the level of commitment of divorced nurses. In three different studies, there was no statistically significant difference between nurses' marital status and stress levels (Gul, 2019; İyice, 2019; Koc et al., 2017). It is thought that the difference between the findings of the literature and the findings of the stress situation in this study is due to the different sample from which the study was conducted and that the perception of stress will change over time. The study found that while there was a difference in the sub-dimension of commitment relative to marital status, it did not affect the perception of caring behavior in accordance with the literature in general (Aydin, 2013; Eyi 2016; Green, 2004).

Working time is a factor that can affect nurses' care behavior. In our study, it was determined that the reassurance and knowledge/skill lower dimension scores of nurses who worked for 11 years and longer were higher than nurses with other working periods (Table 1). In line with the results of this study, there are studies that show that working time positively affects care behaviors and sub dimensions. (Burtson & Stichler, 2010; Erol & Turk 2019; Mobley et al., 2007; Kolay, 2019; Okumus & Ugur, 2017). However, there are studies that report that nurses' professional experiences do not affect their perceptions of care (Kursun, 2010; Eyi, 2016; Rostami et al, 2019). The findings of this study were particularly similar to those of recent

studies. The increase in knowledge/skills and assurance scores of nurses as their working years increase suggests that they rely more on their knowledge and skills as their professional experience increases.

In our study, it was found that having a negative attitude towards loving the profession in nurses was negatively associated with caring behaviors and sub dimensions (Table 1). In line with this finding, Beklevic (2019) stated that willingly choosing the profession positively affects the perception of patient care behavior, while Aydin (2013) reported that willingly choosing the profession does not affect the perception of care behavior. Also, a study in nursing students reported that willingly choosing their profession positively affects the perception of caring behavior (Alkaya, Yaman & Simones, 2018). The findings of the study are similar to other studies in the literature and they are an expected.

In this study, it was determined that nurses' income status affected perceived stress and sub-dimensions (Table 1). The fact that income does not meet the expenses in nurses causes stress. In accordance with the results of this study, there are studies reporting that the nurses who think that their wages are insufficient have high stress levels (Durmus & Gunay, 2007; Koc et al., 2017; Turk, Eroglu & Turk, 2008). The nurses are thought to experience stress in terms of their individual, familial and social difficulties as a result of their failure to cover their expenses.

In nurses who perceive working conditions as bad and who express that they do not meet the life expectations of the profession, it was determined that the total perceived stress and the perception of discomfort from stress increased sub dimension scores (Table 1). Similarly, studies have found a positive correlation between poor living conditions and stress levels among nurses (Koc et al., 2017; Konbay & Ustun, 2009; İyice, 2019).

In our study, it was determined that there were no nurses with low stress levels and all nurses experienced high levels of stress. It was determined that there is a relationship between stress and care behaviors, and with increasing stress level, care behaviors and sub-dimensions are also affected (Table 1, Table 2, Table 3, Table 4). The high stress levels of nurses are supported by the literature (Konbay & Ustun, 2009; Andolhe et al., 2015). Nurses experience stress due to various factors (such as working

conditions, social lives). This may be thought to negatively affect nurses' perceptions of self-sufficiency. In addition, high levels of care behaviors and sub-dimensions in this study suggest that nurses pay maximum attention to nursing care despite stress conditions and other factors.

Conclusion: Based on our study findings, it can be said that the stress that nurses perceive positively affects care behavior. In addition, excessive and constant stress on nurses can increase the level of burnout and many physical and mental illnesses can occur in nurses; which can result in a loss of the nurses' performance and workforce. Therefore, it is recommended to make improvements such as reducing the stress level of nurses, evaluating the stress levels, activating individual and social support systems, providing coping skills training, assessing workload and reducing it if necessary, regulating wages and working environment.

Limitations of the Study: The limitation of the study is that this study is conducted only with Turkish nurses and in a single city.

Acknowledgements: No financial support was received from any institution for this study. We thank all participants for their participation in this study.

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