

## ORIGINAL PAPER

## RELATIONSHIP BETWEEN NURSING STUDENTS' EXPOSURE TO COLLEAGUE VIOLENCE AND STRESS LEVELS IN NURSING EDUCATION

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## Abstract

**Aim:** The study aimed to investigate the relationship between nursing students' exposure to colleague violence and stress levels in nursing education. **Design:** A correlational research design was chosen for the study. **Methods:** The study was implemented with 206 nursing students at a state university in northeast Turkey. Data were collected using the Scale of Exposure to Colleague Violence and the Nursing Education Stress Scale and analyzed using descriptive statistics and the Spearman correlation test. **Results:** The nursing students' mean age was 21.59 ( $\pm 1.88$ ) (min. = 20; max. = 40); 75.2% were female; 77.7% were from a nuclear family; and 77.2% stated that their income was equal to their expenses. The colleague violence score of the students was 63.29 ( $\pm 17.29$ ) and the nursing education stress score was 53.67 ( $\pm 19.42$ ). A positive and moderate relationship was found between the total colleague violence score and total nursing education stress score ( $p < 0.01$ ). A positive and moderate relationship was also determined between exposure to verbal / psychological violence and nursing education stress ( $p < 0.01$ ). Moreover, a positive and moderate relationship was observed between the effect of violence on physical and mental health and nursing education stress ( $p < 0.01$ ). **Conclusion:** Results indicated that nursing students who were exposed to colleague violence during clinical practice experienced practical and academic stress. Nurses should be aware that colleague violence is an ethical problem concerning respect for human dignity.

**Keywords:** academic stress, colleague violence, nursing education, nursing students.

## Introduction

Although clinical practice is an important part of nursing undergraduate education, contributing to the development of students' professional knowledge and skills, it can be a significant source of stress for students (Karagözoğlu et al., 2013). In recent years, a new source of stress related to the clinical setting has been identified. More than half of nursing students who have received training in clinical settings during the vocational education process have been exposed to or have witnessed violence (Curtis et al., 2007; Longo, 2007). The vast majority of nursing students are exposed to violent behavior by patients, their relatives and visitors, and, in recent years, by nurses and other healthcare professionals (Ferns & Meerabeau, 2008).

Colleague violence, which is referred to in the literature as "horizontal violence", "lateral violence", or "workplace violence", is defined as unfriendly, aggressive, or detrimental acts that nurses commit against other nurses through their attitudes, deeds,

words, or behaviors (Becher & Visovsky, 2012). Colleague violence encompasses emotional and verbal attacks such as humiliation in front of other people or speaking caustically (Ayakdaş & Arslantaş, 2018; Longo, 2007). Every cynical, insulting, rude, disrespectful, patronizing, and degrading word and act is regarded as colleague violence (Thomas & Burk, 2009).

Colleague violence is associated with higher levels of attrition among nursing students (Ergöl & Kürtüncü, 2013). However, one of the most important ethical codes of nursing is respect for human dignity. According to the American Nurses Association (2014), the principle of respect for human dignity requires that nurses show respect for the dignity, value, and human rights of each individual. The principle of respect for human dignity, which is defined as a professional value by nurses and nursing students in clinical settings, improves growth and care behavior individually and professionally. When this principle is violated, the result is a lack of motivation, a desire to leave the profession, and a negative public image of the nursing profession (Parandeh et al., 2016). Therefore, colleague violence is an urgent ethical problem in nursing education.

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Studies have examined the frequency of nursing students' exposure to colleague violence. According to these studies, the frequency of student exposure to violent behavior was determined at 45.1% in England, 42.2% in the United Kingdom, and 56.6% in Australia (Budden et al., 2017; Ferns & Meerabeau, 2008; Tee et al., 2016). The rate and frequency of violent behaviors that nursing students are exposed to in clinical areas are very high. According to Palaz (2013), 60% of students stated that they had encountered violent behavior. In a study involving nursing and midwifery students, more than half of the students said that they had been exposed to colleague violence by midwives and nurses (Koç & Batkın, 2016). Another study found that 50.3% of students had been exposed to violent behavior, and 91.6% of them reported that they had been exposed to verbal violence (Çelebioğlu et al., 2010).

Reportedly, students are mostly exposed to verbal violence, with male students exposed to gender discrimination by nurses (Ergöl & Kürtüncü, 2013). In one study, students stated that they were blamed for negative patient outcomes, criticized for spending too much time on preparing care plans, forced to do errands, and were ignored / snubbed by nurses after failing to perform a task (Lash et al., 2006). In another study, 65.2% of students reported being blamed for deficiencies, malpractice, and mistakes that occurred in care and treatment (Aydın & Argun, 2010).

Nursing students have stated that they experienced problems such as anxiety, panic attacks, psychological distress, lack of confidence, and loss of self-respect due to the colleague violence they were exposed to during clinical practice (Birks et al., 2018). The most common problems experienced by nursing students who faced violent behavior in the clinical setting were lack of concentration, loss of motivation, decreased school performance, loss of self-confidence, and thoughts of leaving the profession (Palaz, 2013). A study found that verbal violence caused an increase in psychological problems and perception of workload among students, and that the students received less social support when exposed to verbal violence than when exposed to physical violence (Magnavita & Heponiemi, 2011). In another study, students stated that they experienced problems such as insomnia, nutritional disorders, headache, irritability, palpitations, fatigue, and feelings of helplessness (Lash et al., 2006).

## Aim

The study aimed to assess the correlation between nursing students' exposure to colleague violence and stress levels in nursing education.

## Methods

### Design

A correlational study was designed to meet the research aims. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist was used in this study.

### Sample

The research population consisted of third and fourth grade students ( $n = 242$ ), since these students have more clinical experience than 1<sup>st</sup> and 2<sup>nd</sup> grade students and they have had internships in all clinics. A purposive sampling method was used for the study. The sample size was calculated using the sample size calculator Raosoft (2004). The calculation indicated that with a 5% margin of error, 95% confidence level, 50% response distribution, and a population size of 242, a sample size of 149 was required. The sample of the study consisted of 206 nursing students (76 third grade, and 130 fourth grade students).

The nursing students' mean age was 21.59 ( $\pm 1.88$ ) (min. = 20; max. = 40). Of the total number, 36.9% were third year and 63.1% were fourth year students; 75.2% were female; 77.7% were from a nuclear family; and 77.2% stated that their income was equal to their expenses. The mothers of 46.1% were elementary school graduates, and 16.5% were unemployed. Fathers of 35.4% were elementary school graduates, and 58.7% were employed. While 77.2% had selected the nursing profession willingly, 88.3% were satisfied with the profession (Table 1).

### Data collection

The study was conducted on February 15 and June 15, 2019, among nursing students at a state university in northeast Turkey. Data were collected using a Student information form (SIF) and two standardized tools: the Scale of Exposure to Colleague Violence (SECV), and the Nursing Education Stress Scale (NESS). Students were informed that participation was voluntary. The forms were completed during classes. The data collection process in each class took 15–20 minutes on average.

To ensure the anonymity of the respondents and questionnaires, students were asked not to enter personal information such as name and number. At the outset of the study, students were instructed that there were no right or wrong answers, and that

it was acceptable to say whatever they wanted in response to the questions.

#### Data collection tools

**Students' Information Form:** This form was prepared in accordance with the literature (Birks et al., 2018; Budden et al., 2017; Ergöl & Kürtüncü, 2013; Tee et al., 2016). The form included 11 questions regarding: age, gender, grade, family structure, socioeconomic status, mother's and father's educational status, mother's and father's employment status, whether the nursing profession was chosen willingly, and whether students were satisfied with the nursing profession.

**The Scale of Exposure to Colleague Violence:** This scale was developed by Bahadır-Yılmaz et al. (2020) to determine the severity of the nursing students' colleague violence experience in clinical practice, and the impact of colleague violence on them. The SECV consists of two sub-dimensions, namely,

“exposure to verbal / psychological violence” and “effect of violence on physical and mental health”. It consists of 22 items, with scores for each item ranging between 1 and 5 on a Likert scale. The score range for this scale is 22–110. The higher the scores obtained from the scale, the higher the levels of exposure to violence, and the higher the negative effects of violence on physical and mental health. The Cronbach's alpha coefficient for the total scale in the original study (Bahadır-Yılmaz et al., 2020) was 0.94; 0.93 for “exposure to verbal / psychological violence”; and 0.89 for “effect of violence on physical and mental health”. In this study, the Cronbach's alpha coefficient of the total scale was 0.93; 0.90 for “exposure to verbal / psychological violence”; and 0.89 for “effect of violence on physical and mental health”.

**Table 1** Sociodemographic characteristics of the students (n = 206)

Sociodemographic characteristics		n	%
Age (mean $\pm$ SD; min.–max.)		21.59 $\pm$ 1.88; 20–40	
Year of study	3	76	36.9
	4	130	63.1
Gender	female	155	75.2
	male	51	24.8
Family structure	nuclear	160	77.7
	extended	42	20.4
	divorced	4	1.9
Socioeconomic status	income is less than expenses	27	13.1
	income is equal to expenses	159	77.2
	income is more than expenses	20	9.7
Mother's educational status	illiterate	20	9.7
	literate	14	6.8
	primary school	95	46.1
	secondary school	35	17.0
	high school	31	15.0
	university	11	5.3
Father's educational status	illiterate	5	2.4
	literate	14	6.8
	primary school	73	35.4
	secondary school	39	18.9
	high school	44	21.4
	university	31	15.0
Mother's employment status	employed	34	16.5
	not employed	153	74.3
	retired	19	9.2
Father's employment status	employed	121	58.7
	not employed	24	11.7
	retired	60	29.1
	no answer	1	0.5
Was nursing profession willingly chosen?	yes	159	77.2
	no	47	22.8
Are you satisfied with nursing?	yes	182	88.3
	no	24	11.7

min. – minimum; max. – maximum; SD – standard deviation

**The Nursing Education Stress Scale:** This scale was developed by Rhead (1995) and adapted to Turkish by Karaca et al. (2014). The NESS has two sub-dimensions and 32 items, answered on a four-point Likert scale. The sub-dimensions are practical stress (PS) and academic stress (AS). The PS measures concerns about patient care, stress arising from interaction with healthcare professionals and lecturers, lack of knowledge, and examinations in clinical environments. The AS measures stress arising from nursing education, lecturers, the curriculum, and the way lessons are taught. The score range for this questionnaire is 0–96, with higher scores indicating greater stress. The Cronbach's alpha coefficient in the original study (Karaca et al., 2014) was 0.84 for practical stress; 0.83 for academic stress; and 0.90 for the total scale. In this study, the Cronbach's alpha coefficient was 0.90 for practical stress; 0.87 for academic stress; and 0.94 for the total scale.

### Data analysis

The SPSS (Statistical Package for Social Science for Windows 24.0) program was used to evaluate the data. Descriptive statistics such as frequency, percentage, average, and standard deviation were used. Nonparametric tests were used for measurement values not suitable for normal distribution. According to the K-S test, p values were 0.031 for practical stress; 0.007 for academic stress; 0.022 for the NESS; 0.200 for “exposure to verbal / psychological violence”; 0.033 for “effect of violence on physical and mental health”; and 0.200 for the SECV. For this reason, the Spearman correlation coefficient was used to evaluate the relationship between colleague violence and nursing education stress.

## Results

The total SECV score average of the students was  $63.29 (\pm 17.29)$ ;  $30.35 (\pm 8.34)$  for the sub-dimension of “exposure to verbal / psychological violence”; and  $32.93 (\pm 10.07)$  for the sub-dimension of “effect of violence on physical and mental health”. The students' total NESS score average was  $53.67 (\pm 19.42)$ . The mean score was  $26.94 (\pm 10.37)$  for the practical stress sub-dimension; and  $26.73 (\pm 9.57)$  for academic stress (Table 2).

Table 3 displays the mean scores of the SECV items. The statement “They vent their anger on us when they get angry about something else” was in the highest position with an average of  $3.40 (\pm 1.14)$ ; followed by the statements “They negatively affect my clinical success” at  $3.22 (\pm 1.18)$ ; “I am afraid of not meeting their expectations” at  $3.22 (\pm 1.17)$ ; and “They cause me to be reluctant to practice” at  $3.16 (\pm 1.21)$ . Other statements, above the average were: “They insist that I do something that I know is wrong” at  $3.08 (\pm 1.19)$ ; “They disincite me from my profession” at  $3.06 (\pm 1.27)$ ; “They act like I am not there” at  $3.05 (\pm 0.93)$ ; and “They gossip among themselves about us” at  $3.04 (\pm 1.12)$ .

Correlation findings between the NESS and the SECV are shown in Table 4. There was a positive and moderate relationship between the total SECV and total NESS scores ( $r = 0.374$ ;  $p < 0.01$ ). There was a positive and moderate relationship between the SECV and academic stress ( $r = 0.397$ ), and practical stress ( $r = 0.344$ ;  $p < 0.01$ ). Although a positive and moderate relationship existed between exposure to verbal / psychological violence and total NESS score ( $r = 0.329$ ) and academic stress ( $r = 0.310$ ), it was found to have a positive and weak relationship with practical stress ( $r = 0.282$ ;  $p < 0.01$ ). In addition, a positive and moderate relationship existed between the effect of violence on physical and mental health and the total NESS score ( $r = 0.374$ ), practical stress ( $r = 0.343$ ), and academic stress ( $r = 0.399$ ;  $p < 0.01$ ).

**Table 2** Descriptive data on the SECV and NESS scale and subscales

	min.	max.	mean $\pm$ SD	median	Cronbach's alpha coefficient
<b>Total SECV</b>	23.00	101.00	$63.29 \pm 17.29$	63.50	0.93
<b>Exposure to verbal / psychological violence</b>	11.00	51.00	$30.35 \pm 8.34$	30.00	0.90
<b>Effect of violence on physical and mental health</b>	12.00	55.00	$32.93 \pm 10.07$	33.00	0.89
<b>Total NESS</b>	0.00	94.00	$53.67 \pm 19.42$	54.00	0.94
<b>Practical stress</b>	0.00	48.00	$26.94 \pm 10.37$	27.00	0.90
<b>Academic stress</b>	0.00	46.00	$26.73 \pm 9.57$	27.00	0.87

SECV – Scale of Exposure to Colleague Violence; NESS – Nursing Education Stress Scale; min. – minimum; max. – maximum; SD – standard deviation

**Table 3** The mean scores of the items of the SECV

	min.	max.	mean	median	SD
They act like I am not there.	1.00	5.00	3.05	3.00	0.93
They talk to me loudly.	1.00	5.00	2.88	3.00	0.92
I am exposed to humiliating words.	1.00	5.00	2.63	3.00	1.05
They do not allow me to apply the treatment to the patient.	1.00	5.00	2.80	3.00	0.93
They give me more work than I can handle.	1.00	5.00	2.58	2.00	1.04
When I make a mistake, they scold me repeatedly.	1.00	5.00	2.69	3.00	1.03
They make fun of the things we do.	1.00	5.00	2.59	2.00	1.08
They gossip among themselves about us.	1.00	5.00	3.04	3.00	1.12
They frighten us with threats.	1.00	5.00	2.10	2.00	1.03
They vent their anger on us when they get angry about something else.	1.00	5.00	3.40	3.00	1.14
They insist that I do something that I know is wrong.	1.00	5.00	3.08	3.00	1.19
They say humiliating words in front of others.	1.00	5.00	2.68	3.00	1.10
They exhibit insulting behaviors in front of others.	1.00	5.00	2.63	2.00	1.12
When I am with them, I feel useless.	1.00	5.00	2.62	2.00	1.18
After working with them, I feel physically exhausted.	1.00	5.00	2.82	3.00	1.12
They cause me to be reluctant to practice.	1.00	5.00	3.16	3.00	1.21
I am afraid of not meeting their expectations.	1.00	5.00	3.22	3.00	1.17
They disincite me from my profession.	1.00	5.00	3.06	3.00	1.27
They negatively affect my clinical success.	1.00	5.00	3.22	3.00	1.18
I do not want to go to internship because of their behavior toward me.	1.00	5.00	2.98	3.00	1.26
I constantly have a headache after the internship due to the tension they make me experience.	1.00	5.00	2.98	3.00	1.26
I cannot pay attention to the things I do.	1.00	5.00	2.83	3.00	1.17

SECV – Scale of Exposure to Colleague Violence; min. – minimum; max. – maximum; SD – standard deviation

**Table 4** Correlation between the SECV and NESS scores

Scales		Total NESS	Practical stress	Academic stress
Total SECV	r	0.374	0.344	0.397
	p	0.000	0.000	0.000
Exposure to verbal / psychological violence	r	0.310	0.282	0.329
	p	0.000	0.000	0.000
Effect of violence on physical and mental health	r	0.374	0.343	0.399
	p	0.000	0.000	0.000

SECV – Scale of Exposure to Colleague Violence; NESS – Nursing Education Stress Scale;  $p < 0.01$ ;  $r$  – Spearman correlation coefficient

## Discussion

The study found that the students had been exposed to moderate colleague violence levels. The students' exposure to verbal / psychological violence in clinical practice, and the effect of violence on physical and mental health were also moderate. In a study investigating the violence suffered by student nurses in the workplace in Iran, it was reported that 73.3% of students had been exposed to verbal violence (Samadzadeh & Aghamohammadi, 2018). In a study investigating the clinical violence experienced by students in Hong Kong, 30.6% were found to have been exposed to verbal violence during clinical practice (Cheung et al., 2019). In a study examining the experiences of nursing students in Turkey with regard to occupational health and safety, 40.7% stated that they had been exposed to verbal / physical violence by nurses / doctors (Eyi & Eyi, 2020). A study examining workplace violence experienced by nursing students in the UK found that 42.1% had

experienced bullying / harassment in the clinical setting, 19.6% of whom had been subjected to this behavior by nurses (Tee et al., 2016). It can therefore be stated that nursing students are exposed to colleague violence in clinical practice. This situation should be carefully handled by clinical instructors. Students should be encouraged to report their experiences, and should not be judged for doing so.

In this study, the total NESS score average of the students was moderate. These findings were lower than the NESS mean scores obtained from the other studies conducted in Turkey (Bahadır-Yılmaz, 2016; Karabulutlu et al., 2019; Küçükakça et al., 2017; Ozsaban et al., 2019; Tarsuslu et al., 2020; Yıldırım et al., 2016). In accordance with the findings of these studies, students reported that they were not supported in clinical settings (Dinmohammadi et al., 2014). Nursing students were vulnerable in the clinical setting in terms of vertical violence from nurses.

The violence experienced can increase clinical education stress, and students' motivation to learn may decrease. It can cause both physical and mental health problems. Therefore, Labrague et al. (2018) have suggested that hospital policies to support nursing students are needed to prevent the occurrence of stress and to reduce its impact.

It is important to review the violent behaviors toward nursing students in hospitals while establishing hospital policies to reduce the sources of stress that nursing students are exposed to in clinical practice. This study has indicated that as colleague violence experienced by the nursing students increases, their practical and academic stress also increases. In fact, we also determined that as verbal / psychological health problems increased, stress levels in nursing education also increased. Another study has determined that nurses are among the most important sources of stress among nursing students in clinical practice (Orujlu et al., 2015). In a study examining the stressful situations of student nurses, 42.9% of students reported that they had been exposed to disrespectful behavior from physicians, and 41.4% from nurses (Yılmaz et al., 2017). Another study found that in clinical practice, students were treated tactlessly by nurses, thereby causing them to experience emotional burnout (Babenko-Mould & Laschinger, 2014). Therefore, the violence experienced by student nurses in clinical settings increases the stress levels related to their education and the health problems they experience. In order to prevent health problems, students' communication skills and ability to cope with stress should be developed. These skills can empower students psychologically.

Colleague violence is not confined to the nursing education process; it also continues after students graduate and start a new job. Colleague violence was identified as the most important stressor by newly graduated nurses and was expressed in unfriendly behavior, unwillingness to communicate, unwillingness to provide support, humiliation, bullying, and exploitation (Hezaveh et al., 2014). Therefore, colleague violence can discourage students and nurses and cause them to consider leaving the profession (Palaz, 2013).

Nurses proposed the following explanations for colleague violence: jealousy, having a higher educational level, rivalry, being a beginner at the clinic, differences in political views, workload and patient density, and physical appearance (Ayakdaş & Arslantaş, 2018). The birthplace, education level, professional identity, sensitivity, prior experience of workplace vertical violence before clinical

practice, and resilience were the most important influencing factors of workplace vertical violence for nursing students (Tian et al., 2019). There is little evidence of policies and programs to eradicate workplace incivility, lateral violence, and bullying among nurses (Bambi et al., 2018). Üzar-Özçetin et al. (2020) reported that having an understanding of nursing students' experiences and the impacts of violence, along with effective systems for reporting it can help mitigate the risk of violence occurring during clinical practice.

### **Limitation of study**

One limitation of this study is that the results cannot be generalized to the entire population, since it was conducted in a single location. If such a study were conducted using the colleague violence scale on larger samples and different locations, it could enrich the literature on the subject. In addition, the data obtained was based purely on self-report. A third limitation is the study design; a correlational design was used in this study, whereas descriptive studies could be conducted in future studies. The final limitation is that an observational section, which would eliminate individual perception and increase the reliability of the findings, was not included.

### **Conclusion**

We determined that the nursing students participating in this study were exposed to moderate colleague violence and that their stress levels related to nursing education were moderate. In addition, with the increased effect of verbal / psychological violence that students were exposed to and the increased effect of colleague violence on physical and mental health, the practical stress they experienced, and their academic stress levels also increased.

In accordance with these results, the following recommendations can be made: 1) the causes of colleague violence and its effects on students and nursing education should be further investigated; 2) in-depth interviews should be conducted to analyze the issue more thoroughly; 3) a unit should be established by healthcare facilities in which students exposed to colleague violence in the clinical environment can report their experiences; 4) students should receive instruction on how to deal with violent behavior and student nurses should be supported in managing the violent behaviors they are exposed to so that they can develop resilience by surviving this difficult process and avoid behaving in a similar manner to others; 5) in future studies, the effects of sociodemographic variables on nursing education stress and colleague violence should be evaluated.

## Ethical aspects and conflict of interest

Before the study was commenced, written permissions were obtained from the Ethics Committee (approval number 2019 / 83), and from the Faculty of Health Sciences. Students participating in the study were informed about the research, and assured that individual information would remain confidential.

The author(s) declare that there is no conflict of interest.

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