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The Effects of Post-Earthquake Trauma Levels of Nursing Students on their Academic Motivation and Career Decisions

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Original Research

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Abstract

Objectives: This study was carried out to determine the effects of post-earthquake trauma levels of nursing students on their academic motivation and career decisions.

Methods: The sample of this descriptive study consisted of 228 students studying at Gaziantep Islamic Science and Technology University, Department of Nursing. The data were collected using an online questionnaire created by the researchers. This online questionnaire form consists of seven questions about socio-demographic characteristics, and it also includes the Determination of Post-Earthquake Trauma Levels Scale, Academic Motivation Scale, and Career Decision Scale. SPSS 23.0 package program was used for the analysis of the data, and $P < 0.05$ was accepted for the level of significance.

Results: It was determined that the post-earthquake trauma level of the students was above the moderate level (63.49 ± 17.29) and that the extrinsic motivation-identified regulation, extrinsic motivation-external motivation, and intrinsic-knowledge levels were more affected by the earthquake ($P < 0.05$). In addition, it was determined that the mean Career Decision Scale score of the students (74.20 ± 17.35) was below the average.

Conclusions: It was determined that post-earthquake trauma level had positive effects on intrinsic motivation-stimulation, extrinsic motivation, and amotivation, but had no effect on career decision.

Motivation is the process in which voluntary activities for a specific purpose are initiated and maintained.[1] Academic motivation is a concept related to the student's approach to educational issues, levels of effort and interest, success expectations, and goal-setting processes.[2] Academic motivation can be defined as an intensive study and related approaches and behaviors depending on the desire to learn something new.[3] The concept of career, on the other hand, is a process that is very difficult to manage, including experiences in professional life and individual development. It is stated that career decisions and academic motivation are affected by many factors such as gender, interests, abilities, culture, socioeconomic level, environment, and psychological and mental states due to traumatic events.[3,4] Earthquakes can also be considered among these traumatic events due to the loss of life and property they cause, their sudden occurrence, and the negative living conditions seen afterward. Physical, mental, and psycho-social problems that develop due to the trauma experienced continue intensely and repetitively not only during the earthquake but also later in life.[5] One of these problems is post-traumatic stress disorder (PTSD). Post-traumatic stress disorder is seen at a rate of 1–14% throughout life,[6] and this rate may increase depending on factors such as the level of impact of the trauma, its duration, losses of life and property, age, past experiences, and the duration of exposure to trauma.[7] On February 6, 2023, with the 7.8 magnitude earthquake centered in Kahramanmaraş-Pazarcık and the second 7.6 magnitude earthquake that occurred approximately 9 hours later, the disaster of the century that caused great destruction and loss of life in 11 provinces was experienced. According to official figures, this disaster, in which 90 000 people lost their lives, affected not only Turkey but also a wide geography including Syria, Lebanon, Cyprus, Iraq, Israel, Jordan, Iran, and Egypt.[8]

A severe earthquake that affected such a wide geography not only caused loss of life and property but also caused a series of events that caused physical, psychological, socio-cultural, economic, and environmental changes. University students are among the groups most affected by this process due to the change in physical environmental conditions after the earthquake, the grieving process, the distance education, staying away from friends and social environments, anxiety for the future, and economic losses. In this negative impact process, it is thought that there will be changes in students' desire to be beneficial to themselves, their families and society, their academic motivation and career decisions. In addition, in nursing profession education, which is an applied science and whose focus is on people, students received distance education due to Covid-19 and then the earthquake. This situation has caused deficiencies in clinical and field practices and all knowledge and skill acquisition activities to be carried out only with visual

activities. For this reason, it is thought that nursing students' academic motivation and career decisions are more affected.

A study conducted in the United States of America (USA) reported a positive and significant relationship between posttraumatic stress and growth.[9] However, there is no study on the effect of earthquake, a traumatic event, on nursing students' academic motivation and career decision. In order to fill the gap in the literature, this study was carried out to determine the effects of post-earthquake trauma levels of nursing students on their academic motivation and career decisions.

In this context, answers to the following questions were sought:

- How are the post-earthquake trauma levels of the students?
- What is the level of academic motivation of students?
- What is the level of career decisions of the students?
- What are the effects of post-earthquake trauma levels of students on their academic motivation and career decisions?

Methods

Research Design

The present study was executed in line with the requirements of the descriptive research design.

Time of the research

The current study was carried out between 03.01.2023 and 04.01.2023.

Population and sample

The population of the research consisted of the students of Gaziantep Islam, Science, and Technology University, Department of Nursing; the sample consisted of students who were in one of the provinces affected by the earthquake during the disaster that occurred on February 6, 2023 and met the inclusion criteria. In the study, the sample was not calculated, and the whole population was attempted to be reached. There are 305 students in the nursing department. Because students affected by the earthquake were included in the study, the sample of the study consisted of 228 students.

Inclusion criteria

- Being over the age of 18,
- Being a student of Gaziantep Islam, Science, and Technology University, Department of Nursing,
- Being in one of the 11 provinces affected by the earthquake during the disaster that occurred on February 6, 2023,
- Voluntarily agreeing to participate in the study,
- Not having any health problems that may prevent answering research questions,
- Having the necessary internet access to fill out the online survey form.

Data collection

The study was carried out between January 3, 2023 - January 4, 2023, and the necessary ethics committee approval was obtained from Gaziantep Islam Science and Technology University's Non-Interventional Clinical Research Ethics Committee (Approval No: 2023/251.26.2). The data were collected in a single measurement through an online questionnaire created by the researchers because distance education was started after the earthquake. This online questionnaire form consists of seven questions about socio-demographic characteristics, and it also included the Determination of Post-Earthquake Trauma Levels Scale (DPETLS), Academic Motivation Scale (AMS), and Career Decision Scale (CDS). After the necessary information was given to the students about the purpose, scope, and inclusion criteria of the study, their written consent was obtained, and the questionnaire form was sent. The questionnaire form was sent via WhatsApp, Instagram, email, social networks, etc.

Data collection tools

Determination of Post-Earthquake Trauma Levels Scale (DPETLS): The scale developed by Tanhan and Kayri in 2013 consists of five subscales (Behavior Problems, Emotive Constraint, Affective Structure, Cognitive Structure, and Sleep Problems) and 20 items. Scoring of the 5-point Likert-type scale is in the form of "I strongly disagree-1", "I slightly agree-2", "I agree-3", "I strongly agree-4", and "I completely agree-5", and the score that can be obtained from the scale is between 20 and 100. The increase in the scores obtained from the scale shows that the individuals' level of being affected by the earthquake also increases. As a result of the reliability analysis of the scale, the Cronbach's alpha internal consistency coefficient values were 0.64 for the subscale of Behavior Problems (BP), 0.75 for the subscale of Emotional Constraint (EC), 0.61 for the subscale of Affective Structure (AS), 0.68 for the subscale of Cognitive Structure (CS), and 0.70 for the subscale of sleep problems (SP). The internal reliability coefficient (Cronbach's alpha) calculated for all the items of the DPETLS was found to be 0.87.[10]

Academic Motivation Scale (AMS): The scale adapted by Unal-Karaguven in 2012 has seven subscales (Intrinsic Motivation-Knowledge [IMK], Intrinsic Motivation-Accomplishment [IMA], Intrinsic Motivation-Stimulation [IMS], Extrinsic Motivation-Identified Regulation [EMIR], Extrinsic Motivation-Introjected Regulation [EMIRe], and Amotivation [A]) and 28 items. The scoring of the 7-point Likert-type scale is between "1- It does not match at all" and "7- It fully matches", and the score that can be obtained from the scale varies between 28 and 196. Scores from subscales range from 4 to 28. Since the subscales are evaluated separately, the value close to 28 obtained for each subscale indicates that the chosen dimension is at a high level in the individual. The Cronbach's alpha value in the original scale was calculated as 0.87.[11]

Career Decision Scale (CDS): The scale developed by Yusupu in 2015 consists of 3 subscales (Conscious Career Decision [CCD], Unconscious Career Decision [UCD], and Environmental Factors [EF]) and 30 items. The scoring of the 5-point Likert-type scale is "1-It is completely appropriate for me", "2- Mostly suitable for me", "3-A little suitable for me", "4- Not suitable for me." and "5- Not suitable for me at all." The subscale of Conscious Career Decision includes items 1, 5, 6, 8, 9, 11, 14, 16, 18, 20, 24, 27, and 29. The subscale of Unconscious Career Decision includes items 3, 7, 10, 12, 17, 19, 21, 23, 26, 28, and 30. The subscale of Environmental Factors includes items 2, 4, 13, 15, 22, and 25. All items in the conscious career decision are reverse-scored. Scoring of the scale items is "1-Not suitable for me at all", "2-Not suitable for me", "3-A little suitable for me", "4-Mostly suitable for me," and "5-Completely suitable for me" and the score that can be obtained from the scale is between 30 and 150. High scores indicate indecision, and low scores indicate determination. The Cronbach's alpha coefficient was found to be 0.91 in the original scale.[12]

Data Analysis and Evaluation

SPSS 23.0 package program was used for the analysis of the data, and $P < 0.05$ was accepted for the level of significance. Due to the

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normal distribution of the data, a *t* test was used to compare 2 independent groups, which is 1 of the parametric analysis methods; additionally, ANOVA test was used for the comparison of 3 or more independent groups, Pearson Correlation analysis to determine the relationship between 2 numerical variables, and Regression analysis to determine the effect of 1 numerical variable on another numerical variable.[13] Then, the number, percentage, mean, and standard deviation values of the students' sociodemographic characteristics were examined.

Research Ethics

This research was conducted in accordance with the World Medical Association's Ethical Principles for Medical Research Involving Human Subjects (the Helsinki Declaration). The necessary ethics committee approval was obtained from Gaziantep Islam Science and Technology University's Non-Interventional Clinical Research Ethics Committee (Approval No: 2023/251.26.2). In addition, before the questionnaire was distributed, the students were informed about the purpose and scope of the research and that they can withdraw from the research at any time. Participants who voluntarily agreed to participate in the study were included. The collected data was used only for scientific purposes and privacy was given importance.

Results

As a result of the research, the average age of the students was 20.54, most of them were women (76.8%), their income was equal to their expenses (51.3%), they were studying in the third year (36.8%), they chose the nursing department willingly (70.6%), they experienced the earthquakes in Gaziantep (35.1%), and they lost at least one relative (51.8%) in the earthquake (Table 1). The statistical analysis results of the relationships between students' sociodemographic characteristics and scale scores are presented in Table 1.

The Cronbach alpha values, which are the reliability coefficients of the scales used in this study, were calculated as 0.938 for DPETLS, 0.903 for AMS, and 0.903 for CDS, indicating that they are reliable.

According to Table 2, it was determined that the post-earthquake trauma level of the students was above the moderate level and that the extrinsic motivation-identified regulation, extrinsic motivation-external motivation, and intrinsic-knowledge levels were more affected by the earthquake. In addition, it was determined that the students were determined about their careers because their CDS mean score was below the average score (Table 2).

When the relationships between the scale scores of the students were examined, it was determined that there were statistically significant correlations between the DPETLS and intrinsic motivation-stimulation, extrinsic motivation-identified regulation, extrinsic motivation-introjected regulation, extrinsic motivation-external regulation, and amotivation; it was also determined that there was a statistically significant correlation between the Career Decision Scale and all subscales of the AMS ($P < 0.05$) (Table 3).

As a result of the regression analysis conducted to determine the effects of post-earthquake trauma level on academic motivation and career decision, it was found that post-earthquake trauma level had a statistically significant positive effect on intrinsic motivation-arousal, extrinsic motivation-identified regulation, extrinsic motivation-internal regulation, extrinsic motivation-extrinsic regulation, and amotivation ($P < 0.05$); however, it had no effect on career decision. (Table 4).

Limitations

The limitations of the study can be listed as the collection of data online due to the transition to distance education after the earthquake, the inability to reach all students due to problems with the internet connections of the students living in the provinces affected by the earthquake, and the fact that only the academic motivation and career decisions of the students after the earthquake were considered due to the earthquake being an unpredictable and sudden natural disaster. In addition, the fact that some earthquake survivor students did not respond to the questionnaire is another limitation because the study is survey research and based on voluntary participation. The fact that the students are studying at the institution where the researchers are affiliated and that they may have given consistent and reasonable answers accordingly are also among the limitations.

Discussion

When the post-disaster studies in Turkey are analyzed, it is seen that the studies focus on disaster preparedness,[14,15] intervention during disaster,[16] community mental health,[17] and management of health services.[18,19] There is no study on students' academic motivation and career decisions after disasters. For this reason, it is thought that this study would contribute to the literature, as well as determine the academic motivation and career decisions of post-disaster students. In this direction, this study was conducted to determine the effects of post-earthquake trauma levels of nursing students on their academic motivation and career decisions. Throughout the study, answers to the following questions were sought:

How are the Post-Earthquake Trauma Levels of the Students?

Earthquakes are natural disasters that are unpredictable, have devastating effects, cause loss of lives, and have serious psychological and traumatic consequences for survivors.[20] It was stated that after the 2010 earthquake in Haiti, 1 out of every 3 people had symptoms of severe depression, and the risk of alcohol consumption and suicide increased. It was also among the results that women were 41.8% more likely to experience post-traumatic stress disorder than men.[21] In addition, it was stated that the situation of experiencing human losses in an earthquake is related to stress, depression, anxiety, and trauma.[22,23] As a result of this study, it was determined that the post-earthquake trauma level of the students was above the moderate level and the post-earthquake trauma level of the women who lost their relatives in the earthquake was significantly higher than those who did not. In this respect, it is important to support women, who are among the most affected and vulnerable groups, and individuals who lost their loved ones, psychologically and socially after the earthquake.

What is the Level of Academic Motivation of Students?

Motivation is a force that encourages individuals to pursue their goals in order to achieve them. It can occur internally or externally.[24] In this study, students' intrinsic and extrinsic motivations are at a good level, and their amotivation is at a low level. This may be associated with post-traumatic growth. The concept of post-traumatic growth is the cognitive, emotional, and spiritual development of the individual after struggling with traumatic and stressful events.[5] Willingness towards life can also have a motivational

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Table 1. Relationship between students' sociodemographic characteristics and the scales

		n (%)	DPETLS (M ± SD)	AMS-IMK	AMS-IMA	AMS-IMS	AMS-EMIR	AMS-EMIRe	AMS-EMER	AMS-A	CDS (M ± SD)
Age	20.54 ± 1.20		63.49 ± 17.29	21.51 ± 5.57	17.59 ± 5.47	18.84 ± 5.33	22.08 ± 5.22	17.29 ± 5.76	22.39 ± 5.15	10.97 ± 5.98	74.20 ± 17.35
Test and Significance Level			r: 0.80	r: –0.01	r: 0.03	r: 0.07	r: –0.07	r: 0.05	r: 0.008	r: 0.07	r: 0.05
			p: 0.22	p: 0.85	p: 0.60	p: 0.25	p: 0.25	p: 0.43	p: 0.90	p: 0.27	p:0.43
Gender	Female	175 (76.8)	66.48 ± 15.40	21.78 ± 5.45	17.90 ± 5.25	19.15 ± 5.09	22.58 ± 4.72	17.84 ± 5.61	23.21 ± 4.62	10.58 ± 5.79	73.65 ± 17.26
	Male	53 (23.2)	53.62 ± 19.53	20.62 ± 5.89	16.566.11	17.83 ± 5.99	20.43 ± 6.39	15.50 ± 5.92	19.67 ± 5.87	12.26 ± 6.44	76.03 ± 17.67
Test and Significance Level			t: 4.98	t: 1.33	t: 1.56	t: 1.58	t: 2.66	t: 2.61	t: 4.56	t: –1.79	t: –0.87
			p: 0.000*	p: 0.18	p: 0.11	p: 0.11	**p: 0.02**	**p: 0.01**	**p: 0.000**	p: 0.07	p: 0.38
Income	Income is less than expenses	86 (37.7)	66.17 ± 17.38	21.51 ± 6.02	17.73 ± 6.01	18.86 ± 5.79	21.79 ± 5.21	17.12 ± 5.79	23.32 ± 4.66	11.81 ± 6.41	75.18 ± 16.66
	Income is equal to expenses	117 (51.3)	61.56 ± 17.22	21.30 ± 5.20	17.42 ± 5.01	18.59 ± 4.91	22.16 ± 5.05	17.46 ± 5.67	21.88 ± 5.0	10.94 ± 5.70	75.06 ± 16.37
	Income is more than expenses	25 (11.0)	63.28 ± 16.72	22.52 ± 5.73	17.92 ± 5.82	19.96 ± 5.60	22.76 ± 6.13	17.12 ± 6.26	21.60 ± 6.95	8.24 ± 5.02	66.80 ± 22.44
Test and Significance Level			F: 1.77	F: 0.48	F: 0.12	F: 0.67	F: 0.35	F: 0.09	F: 2.307	F: 3.53	F: 2.59
			p: 0.17	p: 0.61	p: 0.88	p: 0.51	p: 0.701	p: 0.909	p: 0.102	**p: 0.03 (1>3)**	p: 0.07
Year	1st year	72 (31.6)	63.05 ± 16.29	21.45 ± 5.48	17.37 ± 5.51	18.01 ± 5.30	22.95 ± 5.10	16.37 ± 6.03	22.87 ± 4.59	9.97 ± 5.97	71.83 ± 17.58
	2nd year	72 (31.6)	64.16 ± 17.36	20.98 ± 6.14	17.29 ± 5.66	19.01 ± 6.10	20.86 ± 5.94	17.80 ± 5.78	21.08 ± 5.93	11.65 ± 5.57	76.75 ± 16.2
	3rd year	84 (36.8)	63.28 ± 18.22	22.02 ± 5.13	18.04 ± 5.31	19.41 ± 4.56	22.39 ± 4.47	17.65 ± 5.47	23.10 ± 4.72	11.26 ± 6.27	74.05 ± 17.98
Test and Significance Level			F: 0.083	F: 0.67	F: 0.45	F: 1.39	F: 3.18	F: 1.36	F: 3.52	F: 1.57	F: 1.456
			p: 0.92	p: 0.509	p: 0.63	p: 0.24	p: 0.07	p: 0.25	**p: 0.03 (3>2)**	p: 0.209	p: 0.23
The Status of Choosing the Nursing Department Willingly	Present	161 (70.6)	63.82 ± 17.34	22.04 ± 5.22	18.36 ± 5.38	19.32 ± 5.27	23.0 ± 4.64	18.11 ± 5.46	22.85 ± 4.80	10.0 ± 5.70	68.98 ± 15.93
	Absent	67 (29.4)	62.68 ± 17.27	20.25 ± 6.17	15.76 ± 5.31	17.70 ± 5.33	19.88 ± 5.86	15.34 ± 6.03	21.28 ± 5.80	13.32 ± 6.01	86.76 ± 13.89
Test and Significance Level			t: 0.45	t: 2.22	t: 3.33	t: 2.10	t: 4.26	t: 3.38	t: 2.11	t: –3.94	t: –7.95
			p: 0.65	**p: 0.02**	**p: 0.001**	**p: 0.03**	**p: 0.000**	**p: 0.001**	**p: 0.03**	**p: 0.000**	**p: 0.000***
The Province where the earthquakes were experienced	Gaziantep	80 (35.1)	63.27 ± 18.55	22.18 ± 5.55	18.55 ± 5.28	19.43 ± 5.06	23.48 ± 5.08	17.78 ± 5.78	23.77 ± 4.43	10.17 ± 6.04	70.85 ± 18.81
	Osmaniye	5 (2.2)	54.40 ± 11.48	19.60 ± 5.07	15.40 ± 4.03	17.40 ± 4.82	18.80 ± 5.63	14.40 ± 2.60	18.40 ± 5.59	10.60 ± 8.61	79.20 ± 30.49
	Kahramanmaraş	16 (7.0)	68.0 ± 19.48	20.37 ± 6.57	16.18 ± 7.18	17.31 ± 6.57	21.87 ± 6.05	17.31 ± 6.09	22.06 ± 7.50	11.0 ± 7.81	74.0 ± 18.09
	Hatay	7 (3.1)	61.14 ± 18.30	19.0 ± 7.37	15.57 ± 5.88	15.85 ± 3.71	21.14 ± 3.07	14.85 ± 6.28	23.57 ± 3.30	9.28 ± 4.95	78.85 ± 11.09
	Adıyaman	18 (7.9)	67.61 ± 17.78	19.16 ± 6.26	15.05 ± 6.23	16.72 ± 7.42	19.44 ± 6.37	14.88 ± 6.64	20.38 ± 4.84	11.72 ± 6.0	82.0 ± 15.39
	Diyarbakır	28 (12.3)	68.39 ± 13.79	21.71 ± 6.24	17.32 ± 6.27	19.0 ± 5.58	21.67 ± 5.16	18.10 ± 6.12	22.89 ± 5.18	11.64 ± 6.46	75.75 ± 16.13
	Kilis	4 (1.8)	62.50 ± 29.19	20.75 ± 5.96	15.25 ± 5.12	18.0 ± 4.54	19.75 ± 6.18	16.50 ± 3.87	18.75 ± 4.34	11.50 ± 5.06	60.50 ± 20.04

(*Continued*)

Table 1. (*Continued*)

		n (%)	DPETLS (M ± SD)	AMS-IMK	AMS-IMA	AMS-IMS	AMS-EMIR	AMS-EMIRe	AMS-EMER	AMS-A	CDS (M ± SD)
	Şanlıurfa	34 (14.9)	62.29 ± 14.12	21.38 ± 4.62	17.76 ± 4.89	18.97 ± 4.66	20.58 ± 4.72	17.41 ± 5.74	20.76 ± 5.71	12.94 ± 5.39	76.88 ± 14.93
	Malatya	11 (4.8)	59.45 ± 21.69	21.63 ± 5.50	17.90 ± 4.01	20.54 ± 3.64	23.90 ± 3.26	16.45 ± 5.22	21.45 ± 4.05	8.90 ± 4.13	71.81 ± 17.06
	Adana	8 (3.5)	64.0 ± 12.87	22.62 ± 3.11	17.87 ± 4.18	19.0 ± 5.47	22.75 ± 4.13	18.37 ± 5.15	23.87 ± 4.12	10.75 ± 5.97	80.12 ± 10.0
	Mardin	17 (7.5)	56.47 ± 16.01	23.05 ± 4.70	18.94 ± 4.68	19.94 ± 5.14	22.58 ± 5.25	18.05 ± 5.36	22.23 ± 5.06	11.05 ± 5.04	72.64 ± 15.91
Test and Significance Level			F: 1.34	F: 0.88	F: 1.09	F: 1.08	F: 1.69	F: 0.80	F: 1.79	F: 0.69	F: 1.14
			p: 0.20	p: 0.56	p: 0.37	p: 0.37	p: 0.07	p: 0.63	p: 0.057	p: 0.74	p: 0.32
The Status of Losing a Relative in the Earthquakes	Present	118 (51.8)	67.2 ± 16.8	20.95 ± 5.90	16.99 ± 5.79	18.22 ± 5.38	22.04 ± 5.04	16.96 ± 5.79	22.79 ± 4.52	11.17 ± 6.26	76.17 ± 17.07
	Absent	110 (48.2)	60.03 ± 17.08	22.04 ± 5.21	18.16 ± 5.13	19.42 ± 5.24	22.12 ± 5.40	17.61 ± 5.73	22.02 ± 5.67	10.76 ± 5.72	72.37 ± 17.47
Test and Significance Level			t: 3.18	t: −1.47	t: −1.61	t: −1.70	t: −1.11	t: −0.84	t: 1.12	t: 0.47	t: 1.65
			p: 0.002*	p: 0.14	p: 0.10	p: 0.09	p: 0.90	p: 0.39	p: 0.26	p: 0.63	p: 0.09

M: Mean, SD: Standard Deviation, n: Number, r: Pearson correlation, p: Significance Value, t: Independent Samples t-test, F: ANOVA, DPETLS: Determination of Post-Earthquake Trauma Levels Scale, AMS: Academic Motivation Scale, CDS: Career Decision Scale, IMK: Intrinsic Motivation-Knowledge, IMA: Intrinsic Motivation-Accomplishment, IMS: Intrinsic Motivation-Stimulation, EMIR: Extrinsic Motivation-Identified Regulation, EMIRe: Extrinsic Motivation-Introjected Regulation, EMER: Extrinsic Motivation-External Regulation, A: Amotivation.

Table 2. The subscales' mean scores

Subscales	Mean ± SD
DPETLS	63.49 ± 17.29
Behavior Problems	10.95 ± 3.86
Emotive Constraint	15.05 ± 5.18
Affective Structure	12.64 ± 3.34
Cognitive Structure	15.32 ± 4.06
Sleep Problems	9.52 ± 3.85
AMS	130.71 ± 25.82
IMK	21.51 ± 5.57
IMA	17.59 ± 5.47
IMS	18.84 ± 5.33
EMIR	22.08 ± 5.22
EMIRe	17.29 ± 5.76
EMER	22.39 ± 5.15
A	10.97 ± 5.98
CDS	74.20 ± 17.35
Conscious Career Decision	28.87 ± 8.45
Unconscious Career Decision	30.33 ± 8.65
Environmental Problems	14.99 ± 4.92

DPETLS: Determination of Post-Earthquake Trauma Levels Scale, AMS: Academic Motivation Scale, CDS: Career Decision Scale, IMK: Intrinsic Motivation-Knowledge, IMA: Intrinsic Motivation-Accomplishment, IMS: Intrinsic Motivation-Stimulation, EMIR: Extrinsic Motivation-Identified Regulation, EMIRe: Extrinsic Motivation-Introjected Regulation, EMER: Extrinsic Motivation-External Regulation, A: Amotivation

role in terms of increasing personal power, being aware of its limits, and discovering new possibilities, as well as enabling individuals to question their lives and determine their goals in life.[25] As a result of a study conducted in the USA, it was determined that there is a positive and significant relationship between post-traumatic stress and growth.[9] The literature and the results of this study are similar, suggesting that the trauma experienced by the students positively affects their internal and external motivations.

One of the important concepts affecting the level of motivation is poverty. Poverty is not only associated with the inadequacy of financial means but also with worsening health status and increasing psychological problems.[26] As a result of the increase in psychological problems, it will be difficult for individuals to discover themselves, to be aware of their possibilities, and to take decisive steps toward their goals. As a result, the level of motivation will be negatively affected. In this study, it was determined that the level of amotivation of the students was higher in the students whose income level was less than their expenses. As a result of a study conducted on health care professionals, it was determined that the motivation levels of the participants were higher in those with higher income levels.[27] According to the study of Mutlu et al. it was stated that low-income individuals have higher amotivation.[28] These findings are important in terms of proving the relationship between income levels and motivation. In addition, it is thought that the students' financial losses due to the earthquake, the resulting need for some students to work, and the inability to allocate time and financial income to social life also affects the lack of motivation. For this reason, providing sufficient financial support to all students affected by the earthquake, especially those with low

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Table 3. Correlation analysis of the relationships between scales

	DPETLS	IMK	IMA	IMS	EMIR	EMIRe	EMER	A
DPETLS								
IMK	r: 0.08 p: 0.17							
IMA	r: 0.12 p: 0.06	r: 0.75** **p: 0.000**						
IMS	r: 0.20** **p: 0.000**	r: 0.76** **p: 0.000**	r: 0.74** **p: 0.000**					
EMIR	r: 0.15* **p: 0.02**	r: 0.75** **p: 0.000**	r: 0.64** **p: 0.000**	r: 0.62** **p: 0.000**				
EMIRe	r: 0.23** **p: 0.000**	r: 0.59** **p: 0.000**	r: 0.76** **p: 0.000**	r: 0.64** **p: 0.000**	r: 0.55** **p: 0.000**			
EMER	r: 0.33** **p: 0.000**	r: 0.44** **p: 0.000**	r: 0.50** **p: 0.000**	r: 0.40** **p: 0.000**	r: 0.64** **p: 0.000**	r: 0.49** **p: 0.000**		
A	r: 0.23** **p: 0.000**	r: –0.40 **p: 0.000**	r: –0.22** **p: 0.001**	r: –0.12 p: 0.06	r: –0.43** **p: 0.000**	r: –0.11 p: 0.07	r: –0.16* **p: 0.01**	
CDS	r: 0.12 p: 0.06	r: –0.54** **p:.000***	r: –0.39** **p: 0.000**	r: –0.29** **p: 0.000**	r: –0.54** **p: 0.000**	r: –0.23** **p: 0.000**	r: –0.20** **p: 0.002**	r: 0.66** **p: 0.000**

*$P < 0.05$.
**$P < 0.01$.
DPETLS: Determination of Post-Earthquake Trauma Levels Scale, CDS: Career Decision Scale, IMK: Intrinsic Motivation-Knowledge, IMA: Intrinsic Motivation-Accomplishment, IMS: Intrinsic Motivation-Stimulation, EMIR: Extrinsic Motivation-Identified Regulation, EMIRe: Extrinsic Motivation-Introjected Regulation, EMER: Extrinsic Motivation-External Regulation, A: Amotivation.

Table 4. Regression analysis of the effects of DPETLS on the AMS and CDS

Results of the Regression Analysis					Results regarding the Validity of the Established Model	
Independent Variable	Dependent Variable	*β*	*t*	*p*	*F*	*p*
DPETLS	**IMK**	0.02	1.34	0.17	1.81	0.17
	IMA	0.03	1.86	0.06	3.46	0.06
	IMS	0.06	3.21	**0.001***	10.36	**0.001***
	EMIR	0.04	2.28	**0.02***	5.23	**0.02***
	EMIRe	0.07	3.63	**0.000***	13.20	**0.000***
	EMER	0.09	5.29	**0.000***	28.00	**0.000***
	A	0.08	3.55	**0.000***	12.63	**0.000***
	CDS	0.12	1.85	0.06	3.43	0.06

*$P < 0.05$.
DPETLS: Determination of Post-Earthquake Trauma Levels Scale, IMK: Intrinsic Motivation-Knowledge, IMA: Intrinsic Motivation-Accomplishment, IMS: Intrinsic Motivation-Stimulation, EMIR: Extrinsic Motivation-Identified Regulation, EMIRe: Extrinsic Motivation-Introjected Regulation, EMER: Extrinsic Motivation-External Regulation, A: Amotivation, CDS: Career Decision Scale.

and middle-income levels, in their education and social lives should be guaranteed by government policies and universities.

As a result of this study, the internal motivation and extrinsic motivation levels of the students who chose the nursing department willingly were statistically significantly higher than those who chose the nursing department unwillingly, and the levels of amotivation were statistically significantly lower. Intrinsic motivation is the type of motivation that is mostly related to the factors of interest, desire, and curiosity. In short, it is the inner strength required to achieve a goal without any external coercion or compulsion. Extrinsic motivation is reward, money, status, pleasing others, social pressure, etc. It is a form of motivation that arises for reasons.[29] Choosing a profession willingly provides information about the social status of that profession, job opportunities, working conditions, and positive and negative aspects of that profession, and it also provides acceptance of that profession. As a result of acceptance, satisfaction, and pleasure, motivation levels are positively affected.[30] In this context, it is important for students to be informed adequately about the department they will choose, to provide counseling, and to choose the department they want in order to ensure good motivation and success in their undergraduate education.

The extrinsic motivation-external regulation mean score of the third-grade students is statistically significantly higher than the second-grade students. This situation makes us think that the professional readiness, competence, and professional image of the students studying in the third grade are more positive than the second-grade students due to the longer period they are in the program. As a matter of fact, it was stated that extrinsic motivation levels are high due to increased visibility of the nursing profession in Turkey[31,32] and positive images of nursing geared toward students. Determining the professional image perceptions of nursing students, raising their awareness about the importance of the nursing

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image, and giving nursing the social respect it deserves would be important initiatives in terms of increasing the external motivation of students and enhancing professionalism.

What is the Level of Career Decisions of the Students?

In this study, it was determined that the students who were serious about their careers and who chose the nursing department willingly were more determined than those who chose the nursing department for other reasons. Career indecision is a situation that causes the student to avoid making decisions, or to make decisions that are not necessarily suitable for the student but are determined by family/friends/society. If we consider this situation in terms of professional career indecision, it was stated that it is caused by a lack of motivation, lack of information, and false beliefs about the profession to be decided.[33] For this reason, it is thought that the professional motivation levels and independent decision-making mechanisms about their careers are better for those who willingly choose the nursing department. However, because the level of career determination of the students in this study before the earthquake is not known, conducting studies before and after earthquakes in order to determine their effects on career decisions is recommended.

What are the Effects of Post-Earthquake Trauma Levels of Students on their Academic Motivation and Career Decisions?

As a result of the regression analysis carried out to determine the effects of post-earthquake trauma level on academic motivation and career decision, it was determined that the level of trauma after the earthquake has a positive effect on intrinsic motivation-stimulation, extrinsic motivation, and amotivation, but has no effect on career decision. In other words, it can be said that post-earthquake trauma is a situation that motivates students internally and externally, and it also creates amotivation. After a traumatic event, some individuals experience negative situations such as stress, anxiety, and burnout, while others may develop psychologically and spiritually. So, they change and mature by perceiving the trauma they experience as a symbol of psychological resilience. This change takes place by improving interpersonal relationships, realizing the meaning and value of life, and seeing new options.[34] Trauma experienced after the earthquake may have an impulsive role that causes individuals to experience these changes. The losses of life and property may have increased the motivation levels of individuals by contributing to their added value to life and their efforts to improve their current lives.

As a result of this study, it was found that post-earthquake trauma had a positive effect on the level of amotivation. It may be related to the level of trauma. It is stated that low levels of trauma and stress have motivating and mobilizing effects on individuals, but as the level of stress and trauma increases, the negative effects will increase.[35] For this reason, it is necessary to determine the post-earthquake trauma levels of the students and to support those who experienced high levels of trauma psychologically and socially.

In line with these results, one of the most important problems caused by the earthquakes in Turkey on February 6 is the disruption in education and training. The fact that students faced significant challenges in their daily lives may have affected their academic performance. For this reason, the needs of students, such as accommodation, fee exemption, and scholarship, should be resolved and face-to-face education should be started. It is thought that returning students to their daily routines may contribute positively to their psychological and academic well-being. In this direction, higher education authorities and policymakers should support and provide the necessary opportunities for students to switch to face-to-face education. In addition, nursing academic staff organizing plans and programs for psychosocial support to students affected by disasters will contribute positively.

Conclusions

As a result of this study, which was conducted to determine the effects of post-earthquake trauma levels of nursing students on their academic motivation and career decisions,

- It was found that the post-earthquake trauma level of the students was above the moderate level,
- Intrinsic motivation and extrinsic motivation are at a good level, while amotivation is at a low level,
- The students are determined about their careers,
- It was determined that post-earthquake trauma level had positive effects on intrinsic motivation-stimulation, extrinsic motivation, and amotivation, but had no effect on career decision.

Competing interest. None.

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