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The Health Science Students' Emotional-Behavioral Problems, Childhood Trauma and Screen Exposure

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ABSTRACT

Purpose: To examine emotional-behavioral problems and their relation with hopelessness, childhood trauma, demographic characteristics and also screen exposure time in health science students.
Method: This study is a cross-sectional, descriptive study. It was carried out on health worker candidate students. The personal data form including sociodemographic features and screen exposure, Symptom Checklist-90, the Childhood Trauma Questionnaire, and the Beck Hopelessness Scale were used as data collection tools. Data analysis was performed using the Number Cruncher Statistical System software.
Results: The total number of participants was 347. Among them; approximately 1 in 10 (11.2%) had history of psychiatric disease, majority had psychiatric symptoms at a significant level (0.88±0.63), majority had experienced a moderate (64.5%) or severe (3.5%) levels of hopelessness, and 40.3% reported that they had been exposed to a childhood trauma. The level of emotional-behavioral problems was determined to be related to gender (greater in females), academic success (greater in those with low success), satisfaction with the department (greater in those who were dissatisfied), screen exposure time (especially social media usage greater in those with ≥5 hours/day use), and exposure to childhood trauma (greater in those with exposure). Hopelessness was found to be independent of gender, academic success, and social media use, but was correlated to satisfaction with the educational department.
Conclusions and Suggestions: Study results indicated that while the female gender, greater social media use and childhood trauma exposure were associated with poor mental health, satisfaction with the educational department was a protective factor for good mental health.

Sağlık Alanı Öğrencilerinin Duygusal-Davranışsal Problemleri, Çocukluk Çağı Travmaları ve Ekran Maruziyetleri

Makale Bilgileri

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ÖZ

Amaç: Sağlık alanındaki öğrencilerde duygusal-davranışsal problemleri ve bunların umutsuzluk, çocukluk çağı travmaları, demografik özellikler ve ayrıca ekrana maruziyet süreleri ile ilişkisini incelemek.
Yöntem: Çalışma kesitsel, tanımlayıcı bir çalışmadır. Sağlık çalışanı adayı öğrencilerde gerçekleştirildi. Veri toplama aracı olarak, sosyodemografik özellikler ve ekran maruziyetini değerlendiren kişisel data formu, Belirti Tarama Listesi (SCL-90), Çocukluk Çağı Travma Ölçeği ve Beck Umutsuzluk Ölçeği kullanıldı. Veriler Number Cruncher Statistical System ile analiz edildi.
Bulgular: Toplam katılımcı sayısı 347 idi. Bunlar arasında; yaklaşık her 10 kişiden birinde (%11.2) psikiyatrik hastalık öyküsü, çoğunluğunda anlamlı düzeyde psikiyatrik belirtiler vardı (0.88±0.63), çoğunluğunda orta (%64.5) veya şiddetli düzeyde (%3.5) umutsuzluk yaşadığı ve %40.3'ünün çocukluk çağı travmasına maruz kaldığı belirlendi. Duygusal-davranışsal problem düzeyinin; cinsiyet (kadınlarda daha fazla), akademik başarı (düşük olanlarda daha fazla), bölümden memnun olma (memnun olmayanlarda daha fazla), ekran maruziyeti süresi (özellikle sosyal medya kullanım süresi 5 saat ve üzerinde kullananlarda daha fazla) ve çocukluk çağında travmaya maruz kalma (maruz kalanlarda daha fazla) ile ilişkili olduğu belirlendi. Umutsuzluk ise cinsiyetten, akademik başarıdan ve sosyal medya kullanımından bağımsız ancak okunan bölümden memnun olma durumu ile ilişkili bulunmuştur.
Sonuç ve Öneriler: Çalışma sonuçları, kadın cinsiyeti, fazla sosyal medya kullanım süresi ve çocukluk çağı travmaları maruziyetinin kötü ruh sağlığı belirteci olduğuna, okunan bölümden memnun olmanın ise iyi ruh sağlığı belirteci olduğunu gösterdi.

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INTRODUCTION

The physical and mental well-being of a healthcare worker is one of the most important components in performing the work effectively and thus being able to effectively implement the diagnosis and treatment process for a patient (Dong et al., 2021). In the evaluation of a patient's condition, it is necessary to notice changes in the patient and thereby take the appropriate clinical decisions (Melin-Johansson et al., 2017). The clinician has to have the abilities for critical thinking, problem-solving, and accessing and using correct information when making clinical decisions (Melin-Johansson et al., 2017; Pursio et al., 2021). These are all elements which require the individual to be healthy in the sense of both physical and mental health (Melnyk et al., 2018).

It has also been reported that students in the healthcare sector (medical, dentistry, nursing) who have not yet taken on primary responsibility in active working life, experience a more tiring educational process than other students because of the greater physical, cognitive, and emotional effort required (Pacheco et al., 2017). As emotional-behavioral problems can have a negative effect on the quality of life and social functionality of the individual and the workforce, early determination of those at risk is an important step in maintaining the functionality of the healthcare team.

It has been reported that negative experiences in childhood are a risk factor for physical diseases such as hypertension, diabetes mellitus and obesity, and for many psychiatric problems such as anxiety, depression, schizophrenia, and even suicide (Merrick et al., 2017). Chousko Mechmet and Yalçın Gürsoy (2023), Özçevik et al. (2019) reported that the level of childhood traumas was low among nursing students and that they had experienced emotional neglect more frequently than sexual abuse. These negative experiences include the loss of a parent, psychopathology of a parent, and childhood abuse of all types, such as physical, emotional, economic, or sexual abuse, and neglect. Studies on the subject of childhood abuse have shown that children and adolescents experiencing these types of trauma exhibit more psychiatric problems (Dong et al., 2021; Sciolla et al., 2019).

Several studies have reported that childhood trauma and hopelessness are strong risk factors for depression (McLaughlin et al., 2020; Nosrati et al., 2018; Rehan et al., 2017) and predict poor psychosocial functionality in adulthood (Heinonen et al., 2018). It has also been reported that these traumatic experiences are even more strongly associated with comorbid conditions (Song et al., 2018) and can affect the clinical course of severe psychiatric disorders such as bipolar disorder (age at onset, disease severity, recurrence, suicide attempts) (Helvacı Çelik & Hocaoğlu, 2018; Mclntyre et al., 2020). In addition, it is known that long-term screen exposure causes health problems such as lack of physical activity, musculoskeletal disorders, sleep problems, aggressive behaviors, negative cognitive, linguistic and emotional development (Gökçe et al., 2021; Mustafaoğlu et al., 2018; Topçu, 2018).

From a literature scan it was seen that although there are studies that have examined emotional-behavioral problems in health science students, there are very few studies that have examined the relationship of these with environmental factors such as hopelessness, childhood trauma, screen exposure time (Dong et al., 2021; Jung & Park, 2019; Özçevik et al., 2019). The aim of the current study was to examine emotional-behavioral problems and their relation with hopelessness, childhood trauma, demographic characteristics and also screen exposure time in health science students.

METHODS

Research Design

This cross-sectional, descriptive study was conducted in Bakirkoy Dr Sadi Konuk Training and Research Hospital. This study reports on sought to answer the following research questions:

1. What is the frequency of emotional-behavioral problems in health science students?

2. Is there a relationship between the emotional-behavioral problems of health science students and the level of hopelessness?
3. Is there a relationship between the emotional-behavioral problems of health science students and childhood trauma?
4. Is there a relationship between the emotional-behavioral problems of health science students and screen exposure time?

The dependent variable: Emotional-behavioral problems

The independent variable: Hopelessness, childhood trauma, screen exposure time

Participants

The study sample included 364 students who were on work experience for clinical skills education in the 2018-2019 academic year. The study inclusion criteria were: being within 16-24 years of age, being a student in Istanbul province, and being a voluntary participant in the study. Sampling selection was not applied as it was aimed to reach all the health science students who met the criteria and agreed to participate in the research. From a total of 364 health science students who met the criteria, 17 were excluded as they did not wish to participate, and so the study was conducted with 347 students.

Research Instruments and Processes

In the data collection, a personal data form was used together the Psychological Symptoms Checklist-90 (SCL-90), the Beck Hopelessness Scale (BHS), and the Childhood Trauma Questionnaire (CTQ).

Personal Data Form: Personal data form was created by the researchers to obtain information such as age and gender of the student, family structure, level of education of the parents, and the frequency of computer and social media use (the screen exposure time by questioning the computer and social media usage). The form has 20 items, as 6 open-ended questions and 14 closed questions (Özmen et al., 2016; Pacheco et al., 2017; Xie et al., 2018).

The Symptoms Checklist-90: The SCL-90 was developed by Derogatis and Cleary (1977), and validity and reliability studies for the scale in Turkish were performed by Dağ in 1991. The scale has 90 items under 10 symptom sub-headings which are somatization, depression, anxiety, phobic anxiety, hostility, interpersonal sensitivity, obsessive compulsive disorder, paranoid thoughts, psychotism, and additional items. Each item is scored from 0-4, and the total obtained from all 90 items is then divided by 90 to give an average general symptom score. Dağ determined that the Cronbach's alpha coefficient of the scale was 0.97 (Dağ, 1991). In this study, the Cronbach's alpha coefficient of SCL-90 was found as 0.974.

The Childhood Trauma Questionnaire: The CTQ was developed by Bernstein et al. (1994), was adapted to Turkish by Şar in 1996, and validity and reliability studies for the scale in Turkish were performed by Şar in 2012. The questionnaire is formed of 28 items with responses on a 5-point Likert-type scale under 5 sub-dimensions of sexual abuse, physical abuse, emotional abuse, emotional neglect, and physical neglect. Cronbach's alpha coefficient of the Turkish CTQ was found as 0.93 (Şar et al., 2012). In this study, the Cronbach's alpha coefficient of CTQ was found as 0.792.

The Beck Hopelessness Scale: This form was developed by Beck et al. (1974), then validity and reliability study for the scale in Turkish was performed by Seber et al. (1993). The scale is formed of 20 items, comprising 11 correct and 9 false suggestions. A response compatible with the item is scored with 1 point and a contrasting response with 0. The total points for the scale range from 0-20

and these are evaluated as 0-3: completely no hopelessness, 4-8: mild hopelessness, 9-14: moderate hopelessness, and 15-20: severe hopelessness. Cronbach's alpha coefficient of the original form of BHS was 0.93 (Beck et al., 1974), and this value was 0.86 for its reliable and valid Turkish form (Seber et al., 1993). In this study, the Cronbach's alpha coefficient of BHS was found as 0.716.

Data Collection

The data were collected by the researcher between February 18, 2019 and April 26, 2019. The participants were instructed to mark the statement most appropriate to themselves for each item on the form and that it was important to complete the form in full. The researchers checked that all the forms were fully completed and as they were, there was no loss of participants. Completion of the data collection forms took approximately 20-25 mins.

Data Analysis

Data obtained in the study were analyzed statistically using Number Cruncher Statistical System (NCSS) software. Descriptive statistical methods were applied in the evaluations and results were stated as mean±standard deviation (SD), median, minimum and maximum values, number (n) or percentage (%). The conformity of quantitative data to normal distribution was assessed with the Shapiro-Wilk test and graphic examinations. In the comparisons of quantitative data, the Student's t-test was applied to data with normal distribution, and the Mann Whitney U-test to data not showing normal distribution. In the comparisons of more than two groups of quantitative data with normal distribution, One-Way variance analysis was applied and Bonferroni correction was used in paired evaluations. In the comparisons of more than two groups of quantitative data not showing normal distribution, the Kruskal-Wallis test and Dunn-Bonferroni test were used. A value of $p<0.05$ was accepted as statistically significant.

Ethic

Approval for the study was granted by the Clinical Research Ethics Committee of Bakirkoy Dr Sadi Konuk Training and Research Hospital (decision no: 2018-15-12, dated 03.09.2018).

Informed Consent

Participation in the study was determined to be based on voluntary consent. Verbal and written informed consent was obtained from all participants, and from the parent or legal guardian of the participants who were younger than 18 years of age.

RESULTS

Evaluation was made of a total of 347 students comprising 276 (79.5%) females and 71 (20.5%) males with a mean age of 18.34±2.45 years (minimum: 16, maximum: 25 years). Of the participants; 224 (64.5%) cases were high school students in, 37 (10.7%) cases were 2 year degree students, and 86 (24.8%) cases were university degree students. The areas of study were nursing in 11.2% (n:39), midwifery in %12.5 (n:43), auxiliary nursing in %28.8 (n:100), auxiliary midwifery in 9.2% (n:32), healthcare technician in 26.2% (n:91), and orher auxiliary healthcare departments in 12.1% (n:42) of the participants (Table 1).

Of the total participants, 79.8% (n:277) stated that they had selected the department of study themselves and 70.0% (n:243) were satisfied with the department in which they were studying. Family structure was reported to be a nuclear family by 79.8% (n:277) of the participants, and 89.9% (n:312) stated that they were living with their parents. The demographic data and academic-related characteristics are shown in Table 1.

Table 1. *Distribution of Students' Demographic Characteristics and Family Characteristics (n: 347)*

		n (%)
Age (year)	*Min-Max (Median)*	16-25 (17)
	Mean±SD	18.34±2.45
Gender	Female	276 (79.5)
	Male	71 (20.5)
Education level	High school	224 (64.5)
	2-year degree	37 (10.7)
	University	86 (24.8)
Type of the school	Private/Foundation school	139 (40.1)
	State school	208 (59.9)
Department	Nursing	39 (11.2)
	Midwifery	43 (12.5)
	Auxiliary nursing	100 (28.8)
	Auxiliary midwifery	32 (9.2)
	Healthcare technician	91 (26.2)
	Other	42 (12.1)
Academic success	Low	4 (1.2)
	Pass	7 (2.0)
	Middle	105 (30.2)
	Good	179 (51.6)
	Very good	52 (15.0)
The person who prefers the education department of health service that the participant is currently study	Themselves	277 (79.8)
	Family	52 (15.0)
	Teacher	9 (2.6)
	Other	9 (2.6)
Satisfaction with the education department of health service that the participant is reading	Satisfied	243 (70.0)
	Dissatisfied	21 (6.1)
	Partially Satisfied	83 (23.9)
With whom the participant is living with	Family (Nuclear)	277 (79.8)
	Family (Extended)	34 (9.8)
	Friend	6 (1.8)
	Close relative	13 (3.7)
	Student dormitory	16 (4.6)
	Other	1 (0.3)
Family structure	Parents are together	312 (89.9)
	Parentalal loss	7 (2.0)
	Parents were divorced / separated	22 (6.3)
	Other	6 (1.8)
Educational level of mother	Illiterate	24 (6.9)
	Literate	11 (3.2)
	Primary school	161 (46.4)
	Secondary school	85 (24.5)
	High school	54 (15.5)
	University	12 (3.5)
Educational level of father	Illiterate	3 (0.9)
	Literate	12 (3.5)
	Primary school	110 (31.6)
	Secondary school	108 (31.1)
	High school	87 (25.1)
	University	27 (7.8)
Number of children in the family	1	17 (4.9)
	2	130 (37.5)
	3	119 (34.3)
	4	39 (11.2)
	≥5	42 (12.1)
Monthly family income	≤ Minimum wage	92 (26.5)
	Minimum wage -5000 TL	117 (33.7)
	>5000 TL	138 (39.8)

SD=Standard Deviation,Min=Minimum, Max=Maximum

Computer use of ≥3 hours was reported by 12.1% (n:42). To the question of "For what reason do you most use a computer?", 57.6% (n:200) stated that is was to obtain academic information, and 29.1% (n:101) to use social media. The mean duration of mobile phone use was 5.17±4.14 hours

(range, 1-24 hours). The majority of participants had at least one social media account. The mean duration of social media use was 3.38±3.21 hours (range, 0-24 hours). To the question of "What do you use your mobile phone for?", 38.9% (n:135) to send WhatsApp messages, and 33.4% (n:116) to use other social media networks (Table 2).

Table 2. *Distribution of Students' Computer and Mobile Phone Use (n: 347)*

		n (%)
Purpose of Using the Computer	To obtain academic information	200 (57.6)
	To play games	38 (11.0)
	To use social media	101 (29.1)
	Not using	8 (2.3)
Duration of computer use (hour/day)	<1 hours	124 (35.7)
	1-2 hours	181 (52.2)
	≥3 hours	42 (12.1)
Purpose of using mobile phone	To talk to another person	94 (27.1)
	To send WhatsApp messages	135 (3.,9)
	To play games	2 (0.6)
	To use other social media networks	116 (33.4)
Duration of mobile phone use (hour/day)	*Min-Max(Median)*	1-24 (4)
	Mean±SD	5.17±4.14
Social Media Account	Instagram	304 (87.6)
	Twitter	90 (25.9)
	Swarm	26 (7.5)
	Facebook	95 (27.5)
	Other	26 (7.5)
Duration of social media use (hour/day)	*Min-Max(Median)*	0-24 (2)
	Mean±SD	3.38±3.21
	Not using	16 (4.6)
	1-2 hours	158 (45.6)
	3-4 hours	90 (25.9)
	≥5 hours	83 (23.9)

SD=Standard Deviation, Min=Minimum, Max=Maximum

The mean SCL-90 score was 0.81±0.68 for the somatization subdimension, 1.12±0.76 for obsession, 1.01±0.80 for interpersonal sensitivity, 0.96±0.78 for depression, 0.78±0.72 for anxiety, 0.92±0.84 for anger and hostility, 0.56±0.61 for phobic anxiety, 0.99±0.79 for paranoid thoughts, 0.67±0.70 for psychotism, 0.99±0.79 for additional items, and 0.88±0.63 for general symptoms. There was determined to be a significant level of psychiatric symptoms in many of the students according to the SCL-90 (Table 3).

The mean BHS scores were determined to be 9.20±3.03. According to the BHS scores, 5.2% of the students had a minimal level of hopelessness, 26.8% mild, 64.5% moderate, and 3.5%, severe (Table 3).

According to the CTQ results, many students had a significant level of scores indicating a traumatic experience. Significant CTQ scores were determined for the sub-dimensions of emotional abuse in 25.1% of cases (n:87), physical abuse in 17.6% (n:61), physical neglect in 33.1% (n:115), emotional neglect in 40.3% (n:140), sexual abuse in 17.9% (n: 62), and for the total abuse scores in 40.3% (n:140) (Table 3).

Table 3: *Distribution of Scale Scores*

The Beck Hopelessness Scale (BHS)	*Min-Max (Median)*	0-20 (10)
	Mean±SD	9.20±3.03
	Minimal	18 (5.2)
	Mild	93 (26.8)
	Moderate	224 (64.5)
	Severe	12 (3.5)
The Symptoms Checklist-90 (SCL-90)		
Somatization Score	*Min-Max (Median)*	0-3.67 (0.67)
	Mean±SD	0.81±0.68
	Meaningful	112 (32.3)
	Not meaningful	235 (67.7)
Obsession Score	*Min-Max (Median)*	0-4 (1)
	Mean±SD	1.12±0.76
	Meaningful	168 (48.4)
	Not meaningful	179 (51.6)
Interpersonal Sensitivity Score	*Min-Max (Median)*	0-3.67 (0.89)
	Mean±SD	1.01±0.80
	Meaningful	144 (41.5)
	Not meaningful	203 (58.5)
Depression Score	*Min-Max (Median)*	0-3.69 (0.77)
	Mean±SD	0.96±0.78
	Meaningful	136 (39.2)
	Not meaningful	211 (60.8)
Anxiety Score	*Min-Max (Median)*	0-3.33 (0.56)
	Mean±SD	0.78±0.72
	Meaningful	90 (25.9)
	Not meaningful	257 (74.1)
Anger and Hostility Score	*Min-Max (Median)*	0-3.67 (0.67)
	Mean±SD	0.92±0.84
	Meaningful	123 (35.4)
	Not meaningful	224 (64.6)
Phobic Anxiety Score	*Min-Max (Median)*	0-3.14 (0.43)
	Mean±SD	0.56±0.61
	Meaningful	58 (16.7)
	Not meaningful	289 (83.3)
Paranoid Thoughts Score	*Min-Max (Median)*	0-3.57 (0.86)
	Mean±SD	0.099±0.79
	Meaningful	139 (40.1)
	Not meaningful	208 (59.9)
Psychotism Score	*Min-Max (Median)*	0-3.10 (0.4)
	Mean±SD	0.67±0.70
	Meaningful	83 (23.9)
	Not meaningful	264 (76.1)
Additional Items	*Min-Max (Median)*	0-3.57 (0.86)
	Mean±SD	0.99±0.79
	Meaningful	134 (38.6)
	Not meaningful	213 (61.4)
General Symptoms	*Min-Max (Median)*	0-2.96 (0.74)
	Mean±SD	0.88±0.63
	Meaningful	118 (34.0)
	Not meaningful	229 (66.0)
The Chilhood Trauma Questionnaire (CTQ)		
Emotional Abuse	*Min-Max (Median)*	5-25 (5)
	Mean±SD	6.84±3.37
	Meaningful	87 (25.1)
	Not meaningful	260 (74.9)

Physical Abuse	*Min-Max (Median)*	5-25 (5)
	Mean±SD	5.87±2.63
	Meaningful	61 (17.6)
	Not meaningful	286 (82.4)
Physical Neglect	*Min-Max (Median)*	5-21 (6)
	Mean±SD	6.85±2.40
	Meaningful	115 (33.1)
	Not meaningful	232 (66.9)
Emotional Neglect	*Min-Max (Median)*	5-25 (10)
	Mean±SD	12.08±5.72
	Meaningful	140 (40.3)
	Not meaningful	207 (59.7)
Sexual Abuse	*Min-Max (Median)*	5-21 (5)
	Mean±SD	5.95±2.75
	Meaningful	62 (17.9)
	Not meaningful	285 (82.1)
Total CTQ	*Min-Max (Median)*	25-101 (33)
	Mean±SD	37.59±12.56
	Meaningful	140 (40.3)
	Not meaningful	207 (59.7)

SD=Standard Deviation, Min=Minimum, Max=Maximum,CTQ=The Chilhood Trauma Questionnaire, SCL-90= The Symptons Checlist-90,BHS=The Beck Hopelessness Scale

The SCL-90 total scores were determined to be correlated with gender, academic success, satisfaction with the department of study, and duration of social media use. A correlation at a statistically significant higher level was determined in females than in males (0.68±0.64, p=0.002). The total scale points were determined to be statistically significantly higher in students with a moderate level of academic success compared to those with a good or very good level of academic success (0.83±0.6, 0.81±0.65, p=0.009, p=0.018). Statistically significantly lower SCL-90 scores were obtained by students satisfied with the department of study than those who were partially satisfied or dissatisfied (1.24±0.83, 1.04±0.64, p=0.004, p=0.04), and in those with social media use of 1-2 hours compared to those who reported social media use of ≥ 5 hours (1.02±0.65, p=0.047) (Table 4).

The BHS scores were seen to be independent of gender, academic success and duration of social media use, and a relationship was determined with satisfaction with the department of study. The BHS scores of the students who were satisfied with the department in which they were studying were determined to be statistically significantly lower than those of students who were dissatisfied (10.76±3.37, p=0.02) (Table 4).

The CTQ scores were determined to be correlated with gender and satisfaction with the department of study. The CTQ scores were statistically significantly lower in females compared to males (40.21±14.1, p=0.041), and in students satisfied with the department of study compared to those who were dissatisfied or partially satisfied (44.52±12.71, 39.77±14.24, p=0.002). No correlation was determined between the CTQ total scores and academic success or duration of social media use (Table 4).

Table 4. *Evaluation of Scale Scores by Demographic Characteristics*

			BHS Score	SCL-90 Score	CTQ Score
Gender	Female (n=276)	*Min-Max (Median)*	0-20 (10)	0.01-2.96 (0.79)	25-91 (33)
		Mean±SD	9.27±3.01	0.93±0.64	36.92±12.07
	Male (n=71)	*Min-Max (Median)*	0-20 (9)	0-2.36 (0.63)	25-101 (35)
		Mean±SD	8.93±3.11	0.68±0.57	40.21±14.1
		p	***[a]0.396***	***[b]0.002*****	***[b]0.041****
Academic Success	Below avarage (n=11)	*Min-Max (Median)*	1-11 (10)	0.07-1.64 (0.56)	25-50 (31)
		Mean±SD	8.91±2.88	0.64±0.48	34.82±8.32
	At the average (n=105)	*Min-Max (Median)*	0-18 (10)	0.01-2.62 (0.92)	25-101 (34)
		Mean±SD	9.47±3.17	1.04±0.66	38.12±13.36
	Good (n=179)	*Min-Max (Median)*	0-20 (9)	0-2.96 (0.72)	25-87 (33)
		Mean±SD	9.17±2.89	0.83±0.6	37.63±12.92
	Very Good (n=52)	*Min-Max (Median)*	0-14 (10)	0.01-2.79 (0.63)	25-78 (33)
		Mean±SD	8.83±3.26	0.81±0.65	36.96±10.34
		p	***[d]0.548***	***[d]0.019****	***[d]0.84***
Satisfaction with the education department of health service that the participant is reading	Yes (n=243)	*Min-Max (Median)*	0-20 (9)	0-2.79 (0.69)	25-101 (33)
		Mean±SD	8.97±3	0.8±0.59	36.25±11.65
	No (n=21)	*Min-Max (Median)*	4-20 (11)	0.06-2.96 (1.44)	25-69 (41)
		Mean±SD	10.76±3.37	1.24±0.83	44.52±12.71
	Partially (n=83)	*Min-Max (Median)*	0-15 (10)	0.01-2.79 (1.01)	25-91 (34)
		Mean±SD	9.49±2.9	1.04±0.64	39.77±14.24
		p	***[c]0.02****	***[d]0.001*****	***[d]0.001*****
Duration of social media use	Not using (n=16)	*Min-Max (Median)*	3-15 (10)	0.02-1.56 (0.57)	25-49 (31.5)
		Mean±SD	10±2.97	0.71±0.46	32.75±6.62
	1-2 hours (n=158)	*Min-Max (Median)*	0-16 (9)	0-2.96 (0.71)	25-101 (34)
		Mean±SD	9.06±2.7	0.8±0.61	37.7±11.99
	3-4 hours (n=90)	*Min-Max (Median)*	0-20 (9)	0.01-2.79 (0.79)	25-87 (33)
		Mean±SD	9.11±3.54	0.93±0.66	37.5±12.55
	≥5 hours (n=83)	*Min-Max (Median)*	0-20 (10)	0.01-2.36 (0.9)	25-91 (33)
		Mean±SD	9.42±3.04	1.02±0.65	38.42±14.35
		p	***[c]0.575***	***[d]0.039****	***[d]0.495***

[a]Student-t Test, [b]Mann Whitney U Test, [c]Oneway ANOVA, [d]Kruskal Wallis Test,SCL-90= The Symptons Checlist-90, CTQ=The Chilhood Trauma Questionnaire,BHS=The Beck Hopelessness Scale

The correlations were examined between the SCL-90, CTQ, and BHS scores. A positive correlation was determined between the total SCL-90 scores and the total CTQ scores (as the CTQ scores increased, so the SCL-90 scores increased) (r=0.226, p=0.001). No correlation was determined between the total SCL-90 scores and the total BHS scores (r=-0.092, p=0.087) (Table 5).

Table 5. *Evaluation of the Relationship Between Scale Scores*

	CTQ Score		BHS Score	
	r	***p***	**r**	***p***
SCL-90 Score	0.226	***0.001*****	-0.092	***0.087***
BHS Score	-0.241	***0.001*****	-	-

*SCL-90= The Symptons Checlist-90, CTQ=The Chilhood Trauma Questionnaire,BHS=The Beck Hopelessness Scale, r=Spearman's Correlation Coefficient,*p<0,01*

DISCUSSION

The aim of this study was to examine the presence of emotional-behavioral problems and their relationship with the demographic characteristics, hopelessness, the frequency of computer/telephone/social media use, and childhood trauma in health science students. In a study of university students by Çömlekçi and Başol (2019), it was determined that young people spend an average of 4 hours and 16 minutes a day on social media, and use social media to evaluate their free time, get to know people better, and exchange ideas. Al-Hadidi et al. (2019) reported that mobile phone use was extremely high in students in the healthcare students. In the current study, the duration of computer use was ≥3 hrs in 12.1% of the subjects, mobile phone use was mean 5.17 hrs/day, and approximately half of the students used social media for ≥3 hrs. Smartphones were used mostly for WhatsApp messaging and for social media. The reasons for computer use were reported to be obtaining academic information by 57.6% and using social media by 29.1%. These mean values demonstrated that the screen exposure of these health science students was extremely high. Although there is constantly increasing use of computers and the internet within the healthcare systems, there can be interruptions to patient care and follow up and active participation in working life because the time spent on social media both impairs mental health and steals time. In this context, it would be useful to review the time spent by health science students on digital communication such as computer/telephone/tablet and to include these subjects in the lesson curriculum, to be able to obtain adaptation to working life and the provision of patient care.

The findings of some previous studies of the mental health of students in the health science were examined. In their study with nursing students, Çunkuş et al. (2021) reported a mild level of depression, and a mild level of hopelessness. Yıldırım et al. (2020) evaluated medical faculty students and reported mean depression points of 6.56±5.52, mean anxiety points of 8.56±3.83, depression frequency of 49% and frequency of anxiety disorder of 36.3%. Özmen et al. (2016) reported that university students in the field of healthcare experienced mild hopelessness. As hopelessness causes the individual to experience anxiety about the future and has a negative effect on mental health (Aloba et al., 2016), hopelessness is usually seen as a depressive disease (Hermosillo-De la Torre et al., 2020). Similar to these previous studies, in this current study, we demonstrated that mental health problems were extremely frequent in the students who were candidates for being a healthcare worker.

Previous studies have shown that childhood trauma is seen very often in the Population and it has short and long-term negative effects on physical and mental health. Previous studies on this subject have reported that psychiatric disorders such as emotional and behavioral disorders, alcohol or substance abuse, and panic disorder, can be seen in adults who were exposed to trauma in childhood (Dunn et al., 2018; Helvaci Çelik and Hocaoğlu, 2018). Manay and Collin-Vézina (2021) reported that females are exposed to neglect and abuse at a higher rate than males. It has been observed that in studies that have examined the age and gender of childhood trauma that female gender, certain age groups and family factors represent a risk for these traumatic experiences. Previous studies of students have reported that emotional neglect was the childhood trauma to which they were most exposed (Rehan et al., 2017; Xie et al., 2018). In the current study of health science students, the frequencies of exposure to childhood trauma were found to be similar to findings in literature (total abuse 40.3%, emotional neglect 40.3%, physical neglect 33.1%, emotional abuse 25.1%, physical abuse 17.6%, and sexual abuse 17.9%) and these were seen to be related to impaired psychiatric health. Exposure to childhood trauma was seen to be greater in male gender, but was not correlated with academic success and the duration of social media use. These findings indicate that greater attention should be paid to traumatic experiences in male (Table 3). Moreover, in a study in South Korea, it was determined that adolescents who had been exposed to violence within the family in childhood had higher rates of smartphone addiction (Kim et al., 2018). In this context, the results of the current study that there was

no relationship between social media use and traumatic experiences are not consistent with the information in literature. This could be due to the extremely high rate of social media use (3.38±3.21 hours) by the students in this study, and the finding related to gender could be because girls found it more difficult to report sexual trauma.

Another significant finding of the current research was that satisfaction with the department of study was related to mental health and exposure to childhood trauma. The hopelessness level of students who were satisfied with the department in which they were studying was significantly lower than that of those who were dissatisfied with the department (p=0.02). Similarly, in their study, Taslak and Işıkay (2015) showed that students who were not completely satisfied with the education they received experienced a significantly higher level of hopelessness than those who were partially satisfied and indecisive. Likewise, in Açıkgöz's study (2019), students who could not find what they were looking for at school had a higher level of hopelessness. The students who were satisfied with their department of study were more hopeful about employment after graduating and of reaching associated life goals, whereas those who were not satisfied could have concerns and anxiety that they would not find employment or reach life goals.

Previous researchers have drawn attention to the relationship between screen exposure (telephone/tablet/computer/television) and poor psychiatric health. In a study of adolescent students, Machado et al. (2018) reported behavioral problems in adolescents with internet addiction. Studies have demonstrated that this property of phones developed internet addiction in adolescent students associated with long-term use of social media due to the internet connection of the mobile phone (Herrero et al., 2019). In this study, emotional-behavioral problems were seen more common in those who used social media more frequently (p=0.04). Fewer psychiatric symptoms were determined in students who used social media for 1-2 hours per day compared to those who used social media for ≥5 hours per days. Çömlekçi and Başol (2019) and Brunborg and Andreas (2019) also determined that greater social media addiction developed in young people who spent their free time and longer periods on social media. There may be a two-way relationship between social media use and mental health problems. Just as those who experience mental health problems and experience social withdrawal may spend more time in a virtual environment as they feel more comfortable distancing themselves from a real social environment, so the use of social media may cause deteriorations in mental health by breaking off from productive working life.

It was determined that there was a positive relationship between exposure to childhood trauma and psychiatric symptoms in students, but not with the level of hopelessness. This finding indicates that childhood traumas are associated with increased psychiatric problems in adolescence and young adulthood. In the study of Collishaw et al. (2007), it was determined that psychiatric symptoms were observed in the majority of adults who experienced childhood trauma.

CONCLUSION AND SUGGESTIONS

This current study demonstrated important results related to psychological well-being of students who were training to be healthcare workers. First of all among them approximately one out of ten had a positive history of psychiatric disease and approximately one out of two had a positive childhood trauma history. Besides in their current assessments majority had significant levels of psychiatric symptoms and moderate or severe levels of hopelessness. The level of emotional-behavioral problems was determined to be related to gender (greater in females), academic success (greater in those with low success), satisfaction with the department (greater in those who were dissatisfied), greater screen exposure time (social media useage greater in those with ≥5 hours/day use) and positive childhood trauma history. Hopelessness was found to be independent of gender, academic success, and social media use, but was similarly correlated to satisfaction with the department of

study.

With the aim of minimizing the negative effects of childhood trauma, which may emerge for many reasons later in life, psychiatric health screening programs and education sessions should be organized for children and families at the earliest possible stage (pre-school, primary school, etc.). According to the results of the current study, these training sessions should give great importance to the effects of screen time in particular on the health of school-age children. This type of education and recommendations will contribute to children becoming healthy individuals in life and acquiring the skills for correct decision-making.

As healthcare services are an extremely complex and intense area that affect people's lives, correct decision-making in their practices by healthcare professionals is required. In this respect, nurses, midwives and other healthcare professionals may have behavioral-emotional problems, and this can have negative effects not only on family and social life but also on work performance and productivity. Therefore, nursing, midwifery and other health science students who have behavioral-emotional problems must be identified before graduation, solutions must be provided for the problems determined, and strategies must be developed to improve the mental health of students by nursing academics. Thus, early interventions made before graduation could contribute to preventing problems which could be experienced when providing healthcare services after graduation.

LIMITATIONS

The fact that the study was conducted only on students in the healthcare sector limits generalizability of the results.

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Conflicts of interest

The authors declare no conflict of interest.

Author Contributions

Design: F.Ç., N.I., S.Y., E.U.K., Data Collection or Processing: F.Ç., N.I., S.Y., E.U.K., Analysis or Interpretation: F.Ç., N.I., S.Y., Literature Search: F.Ç., N.I., S.Y., E.U.K., Writing: F.Ç., N.I., S.Y., E.U.K.

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