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RESEARCH ARTICLE
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Examining Nursing Students' Opinions on the Nursing Process and the Difficulties They Experience

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ABSTRACT

Objective: This study aims to determine students' views on the nursing process and the difficulties experienced at each stage.
Method: The population of the descriptive research consists of all second-, third-, and fourth-year students studying in the nursing department of a health sciences faculty during the 2019-2020 academic year (N = 575). The sample consists of 219 students who were randomly selected using the non-probability sampling method and who volunteered to participate in the study. Ethics committee and institutional approvals were obtained. Data were collected using the Student Information Form. The data have been evaluated as frequencies, percentages, and averages using the program SPSS 22.0.
Results: The participants' mean age was determined as 20.78±1.4 years, and 88.6% are female. Of the students, 64.8% were determined to have received training on the nursing process, 48.4% to have mostly received training from professional practice courses and 26.9% from elective courses, 75.3% to have most frequently utilized lecture notes, and 69.4% to have frequently utilized Internet resources during the nursing process training. Of the students, 91.8% were seen to have selected the nursing process in the field of practice; however, the majority of them (85.4%) had difficulties, with 62.1% encountering many problems in the assessment stage, 61.2% in the evaluation stage, and 58.4% in the implementation stage. Of the students, 91.8% believe that the nursing process is practical for professional development; 91.3% believe that it is one of the tasks, authorities, and responsibilities of nurses; 91.3% believe that it contributes to determining priorities in patient care, and 90.0% believe that it provides written evidence related to care. However, 53.0% were noted to not feel ready to implement the nursing process, 52.1% to not consider the practical training they'd received to be adequate, and 51.1% to consider the nursing process to have not proceeded with the same significance between training periods.
Conclusion: Consequently, nursing students specified believing in the significance of the nursing process; however, they had challenges in every stage of the nursing process, particularly assessment and evaluation.
Keywords: Nursing process, nursing students, difficulties

INTRODUCTION

The nursing process is a scientific problem-solving method commonly utilized to establish the care needs of healthy and ill individuals and to solve health problems systematically (1,2). Using the nursing process to care for healthy and ill individuals involves procuring individualized care with a holistic approach and ensuring that the given care is accurate, comprehensive, detailed, efficient, and coordinated (1,3). The nursing process offers the nursing profession a professional identity, contributes to increasing the quality of care, and is utilized as a scientific tool to record maintenance (4). Furthermore, the nursing process develops nurses' critical thinking and decision-making skills and forms the basis of evidence-based implementations (1,2). As a dynamic approach, the nursing process consists of five interrelated stages: assessment, nursing diagnosis, planning, implementation, and evaluation (5). In Türkiye, nurses' duties, authorities, and responsibilities related to the use of the nursing process are described in Article 4 of Nursing Law No. 6283, dated 2007 (6), and in Article 6 of Nursing Regulation No. 27515, dated 08/03/2010 (7). The effects of the nursing process on nursing care and for legal reasons are tried to be

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taught the necessary knowledge and skills to use the nursing process during nursing education, in all clinical courses and elective courses. (8). Research indicates that students accredit importance to the nursing process (3, 9-12) yet experience problems at different stages of the nursing process. Şendir et al. (13) revealed that students experienced problems at the assessment stage; Bölükbaş et al. (14), Aydın and Akansel (15), and Kolaycı et al.(11) found these problems to occur regarding nursing diagnosis; Şendir et al. (13) found it for the planning stage; Bölükbaş et al. (14) found this for the implementation stage, and Efil (16) showed this to occur for the evaluation stage. Uysal et al.'s (17) study on second-year students determined students to have a high rate of accurate nursing diagnosis in their first clinical practice was high; to identify their nursing diagnosis with insufficient data; and to describe medical diagnosis, symptoms and findings as nursing diagnosis. Özer and Kuzu's (18) study stated that students to have a medium level ability for defining a nursing diagnosis, descriptive characteristics, related factors, outcome criteria, planning/implementation, and evaluation. When reviewing the current studies, they are seen to often concentrate on students' ability to implement certain stages of the nursing process; a limited number of studies is found evaluating their use of all stages of the nursing process as well (12,16,19,20). This study aims to determine students' views on the nursing process and the difficulties experienced at each stage.

MATERIAL AND METHODS

Research Type

•This research is descriptive.

Population and Sampling: The population of the research consists of all second-, third-, and fourth-year students studying in the nursing department of a faculty of health sciences during the 2019-2020 academic year (N = 575). The sample consists of 219 students (reaching 38.1% of the population) who were randomly selected using the non-probability sampling method and who volunteered to take part in the research. First-year nursing students were excluded as they have not yet received information about the nursing process nor performed an implementation during the planned study period.

Data Collection: The data were collected at a convenient time for the students outside of class hours and within the date range the school administration allowed for the study. Filling out the research form took an average of 15 minutes.

Data Collection Tools: Research data were collected using the 19-question Student Information Form provided by the researchers under the guidance of the literature. The first part of the survey form consists of questions regarding the students' individual characteristics and nursing process training experiences (13 questions). The second part includes questions for identifying the problems they experienced during the implementation of the nursing process (5 questions - assessment stage of the nursing process [12 items], nursing diagnosis stage [10 items], planning [4 items], implementation [3 items], and evaluation stage [4 items]). The third part includes questions about the student's opinions on the nursing process (1 question [35 items], including "yes/no/undecided" options) (3,10,12,13,16,21,22).

Ethics Committee Approval: To conduct the research, written permission was obtained from the university health research and publication ethics committee (Ethics Committee Number: 25 December 2019/ 2019-13) and from the institution where the data was collected (Research Commission Date/Number: 21.02.2020/01). The research was conducted in accordance with the guidelines of the Helsinki Declaration. All participants gave written informed consent.

Data Analysis

The program Statistical Package for Social Science (SPSS, version 23.0) was used for the data analysis. In descriptive statistics, numerical data are presented as means and standard deviations, whereas categorical variables are expressed as frequencies and percentages.

RESULTS

The research findings are discussed under three headings: students' sociodemographic characteristics, their views on the nursing process, and the difficulties they have experienced when implementing the nursing process.

Students' Sociodemographic Characteristics

The mean age of the students who participated in the study is 20.78±1.4 years (min. = 18 years; max. = 29 years). Of the students 88.6% were determined to be female, 64.8% to have graduated from an Anatolian high school, 32.9% to be second-year, 38.8% to be third-year, and 28.3% to be fourth-year nursing students. Of the students, 53% expressed having medium academic success and 11% stated having worked as nurses/student nurses (Table 1).

Students' Views on the Nursing Process

Of the students, 91.8% believe that the nursing process is beneficial for professional development; 91.3% believe that it is one of the duties, authorities and responsibilities of nurses; 91.3% believe that it contributes to determining priorities in patient care; and 90.0% believe in providing written evidence related to care. Meanwhile, 53.0% stated not feeling ready to implement the nursing process, 52.1% to not find the practical training they'd received adequate, and 51.1% to think the nursing process was not treated with the same importance between classes (Table 2).

Students Experiences and Difficulties in Implementing the Nursing Process

Of the students, 64.8% received information related to the nursing process, with professional practice courses and elective courses being the most substantial sources of information for 48.4% and elective courses for 27.4%; 75.3% frequently utilized

Table 1. Socio-demographic characteristics of students (n=219)

Variables	n	%
Gender		
Female	194	88.6
Male	25	11.4
Graduated High School		
Health Vocational High School	30	13.7
Anatolian High School	142	64.8
Science High School	7	3.2
Imam Hatip High School	12	5.5
Other High Schools	28	12.8
Class		
Second grade	72	32.9
Third grade	85	38.8
Fourth grade	62	28.3
Perception of Academic Success		
Very good	25	11.4
Good	58	26.5
Middle	116	53.0
Bad	16	7.3
Too bad	4	1.8
Working as a Nurse/Student Nurse		
Yes	24	11.0
No	195	89.0
Total	219	100

lecture notes, 69.4% the Internet, and 67.1% books while implementing the nursing process. Of the students, 92.7% were determined to have used the nursing process during clinical practice, 85.4% to have had difficulties while using the nursing process. Stages of the nursing process that were often had difficulties were assessment stage (62.1%) and evaluation stage (61.2%) (Table 3).

Of the students, 54.8% stated frequently encountering difficulties regarding the diagnostic phase of the nursing process due to the forms being long, 47.5% due to not being able to as ask questions related to some fields in the diagnostic form, and 40.25 due to patients not providing enough information. Of the difficulties the students commonly experience regarding the nursing diagnosis phase, 32.4% stated differences based on class in formulating nursing diagnosis, 31.5% stated not knowing a recent nursing diagnosis, and 31.1% stated not using other nursing diagnoses apart from the specific nursing diagnosis. Of the problems the students frequently experienced related to the planning stage, 32.9% stated being unable to decide on the appropriate nursing interventions due to inadequate medical knowledge, and 28.8% stated having difficulty defining the goals and objectives for the problems. Of the problems the students frequently encountered in the implementation

Table 2. Students' opinions on the nursing process (n=219)

Variables	Yes		No		Undecided		Unanswered	
	n	%	n	%	n	%	n	%
The nursing process is useful for professional development	201	91.8	4	1.8	7	3.2	7	3.2
The nursing process is under the duties, authority and responsibilities of nurses	200	91.3	6	2.7	7	3.2	6	2.7
The nursing process ensures that priorities are determined during patient care	200	91.3	5	2.3	7	3.2	7	3.2
The nursing process provides written evidence of care	197	90.0	5	2.3	9	4.1	8	3.7
Nursing process creates a resource for education/research	193	88.1	7	3.2	12	5.5	7	3.2
The nursing process provides ethical documentation related to care	192	87.7	7	3.2	12	5.5	8	3.7
The nursing process improves the nurse's critical thinking ability	191	87.2	8	3.7	13	5.9	7	3.2
The nursing process provides the nurse with the opportunity to use the theoretical knowledge she has learned.	190	86.8	9	4.1	13	5.9	7	3.2
The nursing process is a professional nursing approach	190	86.8	8	3.7	15	6.8	6	2.7
The nursing process contributes to the development of decision-making ability	190	86.8	6	2.7	17	7.8	6	2.7
The nursing process helps improve the quality of health care services	189	86.3	9	4.1	14	6.4	7	3.2
The nursing process provides care to the individual/ family/ society with a holistic view	188	85.8	9	4.1	15	6.8	7	3.2
The nursing process proves that nursing is a profession that uses scientific and intellectual/cognitive skills	186	84.9	9	4.1	17	7.8	7	3.2
The nursing process ensures continuity of communication between the individual and the nurse	185	84.5	5	2.3	21	9.6	8	3.7
The nursing process is necessary to provide systematic nursing care.	183	83.6	10	4.6	20	9.1	6	2.7
The nursing process enables communication and collaboration with other healthcare team members	182	83.1	10	4.6	19	8.7	8	3.7
The nursing process is a scientific problem solving method	181	82.6	9	4.1	22	10.0	7	3.2
The nursing process enables nurses to communicate and cooperate with each other	181	82.6	13	5.9	18	8.2	7	3.2
The nursing process ensures effective use of time during nursing care	180	82.2	12	5.5	20	9.1	7	3.2

Table 2. Continue

Variables	Yes		No		Undecided		Unanswered	
	n	%	n	%	n	%	n	%
The nursing process increases the nurse's independent functions	179	81.7	14	6.4	20	9.1	6	2.7
The nursing process ensures universality in nursing care	179	81.7	8	3.7	25	11.4	7	3.2
The nursing process helps provide individualized nursing care	178	81.3	11	5.0	23	10.5	7	3.2
The nursing process provides written evidence associated with nursing care	177	80.8	8	3.7	26	11.9	8	3.7
The nursing process contributes to the efficient use of time and energy in care	177	80.8	14	6.4	18	8.2	10	4.6
The nursing process can be used in every area where nursing services are carried out	165	75.3	11	5.0	37	16.9	6	2.7
I would like to apply the nursing process when I graduate	162	74.0	23	10.5	27	12.3	7	3.2
I think there are differences between classes related to the application of the nursing process	147	67.1	27	12.3	38	17.4	7	3.2
Nursing process should be used by nurses with a bachelor's degree	145	66.2	37	16.9	30	13.7	7	3.2
Preparation for the nursing process takes a lot of time	120	54.8	31	14.2	59	26.9	9	4.1
I think the theoretical education I received is sufficient to apply the nursing process	117	53.4	43	19.6	51	23.3	8	3.7
Nurses do not have enough time to practice the nursing process	114	52.1	43	19.6	55	25.1	7	3.2
It is possible to routinely apply the nursing process in clinics	109	49.8	34	15.5	68	31.1	8	3.7
I think that the nursing process is treated with the same importance in all education periods	107	48.9	58	26.5	47	21.5	7	3.2
I think the practical training I received is sufficient to apply the nursing process	105	47.9	55	25.1	51	23.3	8	3.7
I feel ready to apply the nursing process	103	47.0	51	23.3	56	25.6	9	4.1

Table 3. Students' experiences related to the implementation of the nursing process (n=219)

Variables		n	%
Getting knowledge about the nursing process	Yes	142	64.8
	No	77	35.2
Source of information regarding the nursing process *	Vocational applied courses	106	48.4
	Elective courses	60	27.4
	Books	17	7.8
	Internet	5	2.3
	Other	4	1.8
Resources used when applying the nursing process *	Lecture notes	165	75.3
	Internet	152	69.4
	Books	147	67.1
	Educators	82	37.4
	Nurses working in the clinic	82	37.4
	Articles	35	16.0
	Other	4	1.8
Using the nursing process in practice	Yes	203	92.7
	No	16	7.3
Having problems during the implementation of the nursing process	Yes	187	85.4
	No	32	14.6
The step of the nursing process in which there is a problem *	Assessment	136	62.1
	Nursing diagnosis	120	54.8
	Planning	99	45.2
	Implementation	128	58.4
	Evaluation	134	61.2

* More than one option is marked.

phase, 48.9% stated not being competent in implementing planned nursing interventions, and 43.4% stated not being able to implement planned interventions. Of the difficulties the students frequently experienced related to the evaluation stage, 58.4% stated their inability to evaluate the results of care due to the short clinical practice period , and 52.5% stated the failure to monitor patients due to the different distribution of patients each week in the clinical implementation (Table 4).

DISCUSSION

The nursing process gives a scientific identity to nursing practices and includes various benefits. The nursing process allows nurses to provide individual-centered nursing care, to provide care in the direction of a plan and thus use their time more efficiently, and to develop communication between team members. The process also makes nursing services apparent by creating written resources and evidence for nursing education and research. Utilizing the nursing process ensures systematic nursing care (10). The knowledge, attitudes, and skills that nurses need to have in order to utilize the nursing process are imparted through various teaching methods during nursing education, including through lectures, question-and-answer sessions, case analyses, small group work, simulations, standardized patient use, and care plan development on actual patients. In this context, faculty members have critical obligations (8,10,12). Nevertheless, various studies have revealed that students lack knowledge of the stages of the nursing process (3,10). In the current study, only 64.8% of the students mentioned having received information on the nursing process, and only 48.4% of students taking professional practice courses as a source of information suggests that the students had problems with the notion of the nursing process. In the institution where the research was carried out, students are known to utilize the concept of a care plan instead of the nursing process. Of the students, 75.3% were noted to frequently used lecture notes, 69.4% to frequently use the Internet, and 67.1% to frequently use books while implementing the nursing process. Keski and Karadağ's (10) study found lecture notes, books,

Table 4. Difficulties experienced by students regarding the implementation of the nursing process (n=219)

	Difficulties Encountered	n	%
ASSESSMENT	Forms are long	120	54.8
	Inability to ask questions related to some fields in the assessment form	104	47.5
	Patients not providing information	88	40.2
	Inability to perform physical examination due to patients not giving permission	76	34.7
	Using different nursing process forms	75	34.2
	Inability to make a physical diagnosis due to my insufficient medical and nursing knowledge.	74	33.8
	Difficulty in accessing patient data (laboratory findings, medications, etc.)	67	30.6
	Difficulty establishing therapeutic communication	67	30.6
	Inability to obtain information from members of the healthcare team responsible for the patient's care	66	30.1
	Inability to use electronic patient record systems	56	25.6
	Not knowing what data I should collect specific to the patient and their medical diagnosis	51	23.3
	Other	3	1.4
NURSING DIAGNOSIS	Class-based differences in the formulation of nursing diagnoses (nursing diagnoses are not expressed together with symptoms/findings and etiological factors/risk factors)	71	32.4
	Not knowing new nursing diagnoses	69	31.5
	Not using other nursing diagnoses other than specific nursing diagnoses.	68	31.1
	Inability to determine the appropriate nursing diagnosis for the individual	59	26.9
	Difficulty distinguishing etiological factors and descriptive features	58	26.5
	Inability to prioritize nursing diagnoses	55	25.1
	Difficulty expressing the diagnosis due to the lack of language unity associated with naming nursing diagnoses	49	22.4
	Inability to distinguish between nursing diagnosis and medical diagnosis	35	16.0
	Not knowing the differences between risk nursing diagnosis and actual nursing diagnosis	32	14.6
	Other	4	1.8
PLANNING	Inability to decide on appropriate nursing interventions due to my insufficient medical knowledge.	72	32.9
	Difficulty in determining goals/goals for the problem	63	28.8
	Difficulty determining individual-specific nursing interventions	62	28.3
	Other	7	3.2
IMPLEMENTING	Not being competent in implementing planned nursing interventions	107	48.9
	Inability to implement planned nursing interventions	95	43.4
	Other	10	4.6
EVALUATION	Inability to evaluate care results due to short clinical practice period	128	58.4
	Inability to monitor the patient due to different patient distributions every week in clinical practice	115	52.5
	Not knowing how the evaluation should be done	51	23.3
	Other	10	4.6

and the Internet to be the resources nursing students most commonly use.

In the current study, 91.8% of the students stated that the nursing process is practical for professional development; 91.3% stated thinking the nursing process is one of the duties, authorities, and responsibilities of nurses; and 92.7% stated using the nursing process in clinical practices. These findings are significant as they show that acquiring and transferring knowledge and skills regarding the nursing process are substantial and that the institution where the study was performed addresses the nursing process as part of its program. Other studies that have examined this issue arrived at results that support this study's findings (10,12,23).

The students were found to strongly agree with the remarks regarding the benefits of the nursing process, with benefit seen by 91.3% for "ensuring that priorities are determined during patient care," by 90.0% for "providing written evidence related to care," 88.1% for "providing resources for education/research," by 87.7% for "providing ethical documents related to care," and by 87.2% for "improving the nurse's critical thinking ability." These findings comply with Şendir et al.'s (13) study on student nurses.

Of the students, 75.3% were found to state being able to use the nursing process in every field where nursing services are provided and 74.0% to state wanting to implement the nursing process when they graduate. Meanwhile, 53.0% stated not feeling ready to implement the nursing process and 52.1% to state the practical training they'd received to be insufficient. These results demonstrated the students to have had positive attitudes toward utilizing the nursing process but to however lack knowledge regarding how to implement the nursing process.

The literature has reported that nursing students encounter difficulties at various stages of the process (3,10,12,13,16,21,22). The current study specifies that students had problems in all phases of the nursing process, especially assessment (62.1%) and evaluation (61.2%). Taşdemir and Kızılkaya's (20) study detected that students' ability to determine nursing diagnosis, outcome criteria, planning, implementation, and evaluation in their care plans to be low according to the symptom, etiology and problem (SEP) format while Aydın and Bektaş's (19) study stated that students had inadequacies and deficiencies in the assessment, evaluation, goal setting, planning, implementation and evaluation stages of care plans for diagnosed pain. Dalcalı's (21) study revealed that students had problems mostly in the nursing diagnosis stage. Çevik and Olgun's (8) research stated that most students learn the nursing process theoretically; nevertheless, they have difficulty efficiently planning and implementing patients' clinical care. Similar studies have revealed students to have problems in various stages of the nursing process, though the stages of the nursing process in which most issues are encountered are dissimilar.

This study found assessment to be the stage of the nursing process that students stated having the most difficulty. Similar studies conducted with nursing students have also noted the assessment phase to be one of the most challenging stages of the nursing process (12,13,21,22). This current study identified that factors such as the length of the forms nursing students use during clinical practice and the inability to ask questions regarding some fields in the diagnostic form cause difficulties when creating a care plan. These results are similar to the study findings of Akansel and Palloş (3). The literature suggests that students have difficulties collecting patients' data, particularly with regard to sexuality due to being shy and embarrassed talking about something that seems intangible to them (23).Using all information sources regarding the individual is essential during the assessment stage, as well as analyzing and using the gathered data (24). Assessment forms are a data collection source and should be comprehensively created using a specific systematic, as these guide students throughout the meeting and physical examination, prevent the relevant data from being ignored, facilitate the analysis of the data during the assessment stage, and provide the opportunity to compare a patient's previous condition through repeated assessments (25). The fact that the assessment forms were perceived as long by the students is thought to perhaps be related to their lack of knowledge regarding data collection and the loss of time due to trying to collect data only through the patient history during the assessment. Students in this research stated having difficulty with the assessment stage due to the patients not providing information. Similar to the findings of this study, different studies have determined nursing students to have difficulty with the assessment stage due to reasons such as patients not sharing information with the students, patients not wanting to talk (3,26), problems communicating with the patient (3,21,26), and students with deficient communication skills (22). These results reveal that increasing nursing students' awareness of the assessment stage is essential. Because assessment is the basis for all stages of the nursing process, making a complete and accurate evaluation is essential for ensuring proper safe care, as any problems during the assessment will lead to misinterpretations in all stages. A nurse who cannot obtain accurate and sufficient data will make the wrong nursing diagnosis, diagnose the wrong nursing interventions, and follow an incorrect implementation process. A nurse cannot solve the problem because an evaluation cannot be made correctly when steps are improperly implemented.

Nursing diagnosis is the second stage of the nursing process. It is implemented to discover the patient's needs and problems and is the stage where the nurse establishes the issues on which they will focus for planning and implementing interventions (24). Mistakes that occur when making a nursing diagnosis may lead to: loss of time and energy during the nursing implementations, failure to plan the required nursing interventions to solve the problem, failure to monitor positive or adverse outcomes related to care, and legal and ethical problems (27-29). The current study has noted that students encountered difficulties in the nursing diagnosis stage. Similar results were detected in the studies of Sönmez and Kısacık (30) and Keskin et al. (23) The present study observed that the difficulties students frequently experience are class-

based differences in formulating nursing diagnoses, not being knowledgeable of recent nursing diagnoses, and being unable to use nursing diagnoses other than specific nursing diagnoses. Similar results were reported in the study of Dalcalı (21). Şendir et al.'s (13) research stated that students experience differences between courses with regard to formulating the nursing diagnosis, and Freire et al.'s (31) study stated that 31.5% of students were unfamiliar with the NANDA-I taxonomy and therefore were unable to arrive at an accurate diagnosis. Various studies have determined that students believe nursing diagnoses to be necessary (4,30,32,33); however, they think that they lack adequate knowledge about nursing diagnosis (30,32), that they cannot describe nursing diagnosis using the assessment system and terminology (10,15,17), and that they use nursing diagnosis mostly related to the physiological field (4,14,16,17,20,23,34). In line with these results, utilizing efficient teaching methods is essential for teaching nursing diagnosis in basic nursing training, for planning initiatives to reduce the differences between courses, for attaching more importance to nursing diagnosis, for providing information regarding NANDA-I taxonomy, for guiding students through the assessment stages, and for ensuring continuous feedback.

The nursing process stage with which the students in this research stated having the least problems was planning. These outcomes are consistent with those of Yılmaz et al. (12) and Keski and Karadağ. (10) The students were determined to frequently have challenges in determining the goals/objectives for the problem and in identifying individual-specific nursing interventions in this stage. Similar to this study's findings, the studies by Dalcalı (21) and Terzioğlu et al.(35) observed that nursing students had problems determining priorities and planning interventions during the planning stage. These results reveal that students need knowledge and guidance on how to establish goals/objectives and plan interventions.

This study has specified that students frequently have such challenges in the implementation stage as not being competent enough for implementing nursing interventions and not being able to implement the nursing interventions they'd planned due to various reasons. Similar to these findings, Dalcalı (21) noted that students had difficulty implementing the interventions they'd planned, Bölükbaş et al.(14) stated that the interventions for the determined nursing diagnoses were limited, and Yılmaz et al. (12) revealed that more than half of the students were incapable of describing the implementation stages.

The present research has specified the evaluation stage as one of the stages of the nursing process that students had the most difficulty; due to the short time, the students often had challenges in this stage regard situations such as evaluating care outcomes, not being able to monitor the patient, and not knowing how to evaluate. In line with this study's findings, Efil's (16) research found that students mentioned encountering the most problems during the evaluation phase. Dalcalı's (21) study noted intern nursing students to have difficulty knowing the evaluation criteria and to lack time during the evaluation stage. The fact that the students had attended the implementation only once a week made them unable to carry out the evaluation stage. Carrying out case studies to improve students' evaluation skills and discussing the evaluation criteria used during implementation are believed would have practical benefits. Contrary to the current study's findings, , the studies conducted by Şendir et al. (13) and Keski and Karadağ (10) identified the evaluation stage as the one in which students experienced the least difficulty.

CONCLUSION AND RECOMMENDATIONS

Consequently, nursing students have been identified as believing in the significance of the nursing process. Nonetheless, they stated not feeling ready to implement the nursing process. Nursing students faced challenges in every stage of the nursing process, particularly the assessment and evaluation stages. According to these outcomes, this study recommends using different teaching methods to provide information, consultancy services, and feedback regarding the areas where students stated having problems while applying the nursing process.

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REFERENCES

1. Yıldız FT, Yıldırım D. Nursing Process. In: Kaşıkçı MK, Akın E, editors. Basic Nursing Fundamentals, Concepts, Principles, Practices. Istanbul: Istanbul Medical Bookstores; 2021.p.66-84.
2. Ojo IO, Adejumo PO, Olaogun AAE, Oyediran OO. Perception of nursing student about integrating standardized nursing language into the nursing curriculum at two Nigerian universities, International Journal of Africa Nursing Sciences (2020); https://doi.org/10.1016/j.ijans.2020.100192
3. Akansel N, Palloş A. Difficulties experienced by nursing students in the development of nursing care plans: root cause analysis. Acıbadem University Health Sciences Journal 2020;11(2):269-275.
4. Ozkan CG, Kurt Y, Bayram SB, Bayrak B, Kilinc KO. The effect of group case studies on NANDA-I nursing diagnosis identification and perception of nursing students. Clin Exp Health Sci 2020;10:256-64.

5. Pokorski S, Moraes MA, Chiarelli R, Costanzi AP, Rabelo ER. Nursing process: from literature to practice. What are we actually doing? Rev Latino-am Enfermagem 2009; 17(3):302-7.
6. Official Gazette, 2007. Nursing Law No. 6283. http://www.ttb.org.tr/mevzuat/index.php?option=com_content&view=article&id=502:hemrel-kanunu-6283&catid=1:yasa&Itemid=28
7. Official Gazette, 2010. Nursing regulation. http://www.ttb.org.tr/mevzuat/index.php?option=com _content &view=article &id=745:hemrel-yetmel&catid=2:ymelik&Itemid=33
8. Çevik AB, Olgun N. Do problem-solving skills affect success in nursing process applications? An application among Turkish nursing students. International Journal of Nursing Knowledge 2015;26(2):90-5.
9. Can G, Erol O. Nursing students' perceptions about nursing care plans: A Turkish perspective. Int J Nurs Pract 2012;18:12-9.
10. Keski Ç, Karadağ A. Investigation of knowledge levels of final year nursing students regarding nursing process. HEMAR-G 2010;1:41-52.
11. Kolancı S, Özdemir H, Tunca A, Atay S. Examining the opinions of nursing students regarding the nursing process and care plan. Maltepe University Nursing Science and Art Journal 2010; Symposium Special Issue: 339.
12. Yilmaz FT, Sabanciogullari S, Aldemir K. The opinions of nursing students regarding the nursing process and their levels of proficiency in Turkey. J Caring Sci 2015;4(4): 265-75.
13. Şendir M, Acaroğlu R, Aktaş A. The knowledge and views of fourth class nursing school students about nursing process. Florence Nightingale Journal of Nursing 2009;17(3):166-73.
14. Bölükbaş N, Irmak B, Bulut G, Aydın Özdemir D, Bayrak HY. Evaluation of nursing diagnoses and interventions determined by students in surgical diseases nursing summer internship files. Ordu University Journal of Nursing Studies 2020;3(1):1-9.
15. Aydin N, Akansel N. Determination of accuracy of nursing diagnoses used by nurisng students in their nursing care plans. International Journal of Caring Sciences 2013;6(2):252-7.
16. Efil S. Analysis of care plans prepared by students in the clinical practice of course of internal medicine nursing. Istanbul Gelisim University Journal of Health Sciences 2020; 12:398-414.
17. Uysal N, Gürol Arslan G, Yılmaz İ, Yelkin Alp F. Analysis of collected data and of nursing diagnosis ın care plan second year nursing students'. Celal Bayar University Health Sciences Institute Journal 2016;2(5):139-43.
18. Özer FG, Kuzu N. The status of students' use of nursing process and NANDA diagnoses in their care plans. Journal of Ege University Nursing School 2006;22(1):69-80.
19. Aydın B, Bektaş M. Examination of nursing students' care plans in terms of pediatric pain management. E-Journal of Dokuz Eylul University Nursing Faculty 2019;12(2):243-54.
20. Taşdemir G, Kızılkaya M. Evaluation of NANDA nursing diagnoses of healthcare college final year students during the clinical application of the mental health and disease nursing course. International Journal of Human Sciences 2013;10(1):246-57.
21. Dalcalı BK. Determining the problems experienced by intern nursing students during the practice of nursing process. Health Academy Kastamonu (SAK) 2021;6(2):92-106.
22. Yılmaz AA, Gençer E, Seçkin Ç, Akyüz H, Güven KT, Gözütok S. Difficulties experienced by nursing students on the data collection step of the nursing process. Journal of Anatolia Nursing and Health Sciences 2019;22(4):231-38.
23. Keskin AY, Tuna PT, Molu B, Tuna Hİ. The skills of nursing first year students to determine the nursing diagnosis related to the case and affecting factors. Journal of Pre-Hospital 2021;6(1):69-82.
24. Seçer S, Karaca A. Evaluation of nurses' perceptions of nursing diagnoses and their opinions regarding the application of nursing process. Florence Nightingale J Nurs 2021;29(2):229-38.
25. Kaya N. Nursing Process Nursing Assesment. Atabek Aştı T, Karadağ A, editors. Nursing Fundamentals The Science and Art of Nursing. İstanbul: Academy Press and Publishing; 2019.p.137-75.
26. Sögüt S, Cangöl E, Dinç A. Determination of context levels of nursing students. Researcher Social Science Studies 2018;6:272-80.
27. Acaroğlu R, Kaya H, editors. Nursing Diagnoses, Definitions and Classification 2018-2020. İstanbul: Nobel Medical Bookstores; 2021.
28. Çalışkan N, Doğan N. Types of Nursing Diagnoses and Components. Şenol Çelik S., Karadağ A, editors. Nursing Care Plans: Diagnoses, Interventions, and Outcomes. Istanbul: Akademi Press and Publishing; 2019.p.21-6.
29. Terzi B, Uncu S. Nursing Diagnosis. Bozkurt G, Sönmez Düzyaka D, Terzi B, editors. Application of the Nursing Process Clinical Decision Making Process. İstanbul: Nobel Medical Bookstores; 2017.p.89-127.
30. Sönmez M, Kısacık ÖG. Perceptions of Turkish nursing students on nursing diagnoses. Clin Exp Health Sci 2022;12:885-91.
31. Freire VES, Lopes MV, Keenan GM, Lopez KD. Nursing students' diagnostic accuracy using a computer-based clinical scenario simulation. Nurse Educ Today 2018;71:240-6.
32. Ozveren H, Ozden D, Gulnar E. Determination of nursing students' perception states in nursing diagnosis. Int J Caring Sci 2019;12(2):1049-1055.
33. Abed El-Rahman M, Al Kalaldeh MT, Malak MZ. Perceptions and attitudes toward NANDA-I Nursing Diagnoses: A crosssectional study of Jordanian Nursing Students. Int J Nurs Knowl 2017;28(1):13-8.
34. Noh HK, Lee E. Relationships among NANDA-I diagnoses, nursing outcomes classification, and nursing interventions classification by nursing students for patients in medical-surgical units in Korea. International Journal of Nursing Knowledge 2015;26(1):43-51. https://doi.org/10.1111/2047-3095.12044
35. Terzioğlu F, Ejder Apay S, Akkuş Y, Irmak Z, Baybuğa M, Özer N et al. Nursing students' status of identifiying nursing dignosis and interventions on cases for trauma patient. Journal of Anatolia Nursing and Health Sciences 2012;15(2):106-18.

RESEARCH ARTICLE
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Determining the Factors Affecting the Compassion Levels of Students Studying in Health Sciences: A Cross-Sectional Study

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ABSTRACT

Objective: This study is being conducted to determine the perceived compassion levels of students studying in health sciences and the factors affecting these.
Method: The universe of this descriptive and cross-sectional study consists of university students studying in 2- and 4-year health-related undergraduate programs, with data being obtained from 920 students. The data were collected in Turkiye's Marmara and Mediterranean regions between March 15, 2019 and April 15, 2019. The data consist of answers to questions examining the students' sociodemographic characteristics and to the Compassion Scale. The data analysis benefits from descriptive statistics; number, percentage, mean, and standard deviation values; independent samples t-test results, and one-way analysis of variance (ANOVA).
Results: The study has found the students to have good compassion levels, with these levels having been determined to differ according to gender, class, and age. The female students' mean compassion scores both overall as well as for the six subdimensions were found to be higher than the male students' mean scores. A very significant difference ($p<0.001$) was determined between the mean overall compassion score and the mean score for the indifference subdimension according to the students' grade levels. A very significant difference ($p<0.001$) was also found between the mean scores for the kindness and separation subdimensions, as well as a significant difference ($p<0.05$) among the mean scores for the common humanity, mindfulness, and disengagement subdimensions.
Conclusion: Students' perceived compassion levels were determined to change as a result of many factors. Universities must use all available resources to demonstrate and model compassionate behavior so that students do not lose sight of what compassion means with regard to their profession and the provision of quality care.
Keywords: Compassion, affecting factors, students

INTRODUCTION

Despite the many years of research, ongoing studies are still needed to understand how helping professionals manage their personal suffering is associated with helping others (1). Compassionate healthcare delivery is related to positive patient outcomes. Educational interventions that develop compassion for healthcare students have been suggested to also be able to increase health, reduce burnout, and improve caregiver-patient relations (2).

Compassion is a focused emotion at the individual level toward one's own or another's suffering. It is an emotional response created as an individual preference in response to a call for help from others and can occur as a result of interpersonal interaction (3). Compassion is also expressed as a factor that increases self-esteem (4). For individuals to show compassion, they need to interact with each other, share the pain of others, and show empathy (5). Compassion is a reaction to human vulnerability and creates a desire to act on the behalf of others. In other words, the state of taking action distinguishes compassionate behavior from empathy, sympathy, and pity (6). Health education has been suggested as being effective at providing compassion and that the qualities of compassion and compassionate care are not included in the curriculum of health care education programs. In addition to theoretical components, learning environments that nurture

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the development of compassion should be encouraged in education programs (7).

Individuals with a high perception of compassion have been reported as being associated with low levels of stress, anxiety, and depression. Compassion improves positive emotions such as happiness, optimism, positive affect, and life satisfaction (8). Individuals suffer inside and outside an organization due to the changing pace of life. The pace of life and ongoing trends of change have affected individuals' work models and increased the need for compassionate actions (9). Compassion helps patients develop meaningful relationships with care providers and enables care providers to improve therapeutic relationships (10). Compassion also helps improve patients' trust in health workers and satisfaction with their care, self-esteem, and therapeutic relationships (11).

Many international studies and reviews (12, 13) have placed an increased emphasis on promoting a culture of compassionate care among healthcare providers (14) and especially on promoting compassion in health professional students (15, 16). Many studies have theoretically (17-19) and empirically (20-22) demonstrated the conceptualization of compassion and its expression in clinical settings. Although studies are found in the literature to have examined students' compassion levels, the strengths of the current study are that it includes students studying in different departments in the field of health sciences and that it has a relatively high number of samples.

MATERIAL AND METHOD

Purpose and Type of Study: This study was conducted using a descriptive cross-sectional design to determine the perceived compassion levels of students studying in health sciences and the factors affecting these. The research questions are as follow:

- How do students perceive their levels of compassion?

- Does a difference exist between students' perceived levels of compassion and their sociodemographic characteristics?

Place and Sample of the Study: The study population consists of university students studying in health-related undergraduate programs at universities in the Marmara and Mediterranean regions of Türkiye, which has seven geographical regions. The study sample consists of 920 people who voluntarily participated, who completed the questionnaires in their entirety between March 15, 2019 and April 15, 2019, and who were selected using random sampling.

Data Collection Tools: The study's data were collected through an online questionnaire.

Introductory Information Form: The first part of this form has five questions about age, gender, the department in which they are studying, their school year, and the geographical region where their university is located.

Compassion Scale: This scale was developed by Pommier (2010), with its Turkish adaptation, validity, and reliability study being conducted by Akdeniz and Deniz (2016) (23, 24). The scale consists of 24 items and six dimensions in total. The Turkish validity and reliability study calculated a Cronbach's alpha of 0.85. This study found Cronbach's alpha for the overall scale to be 0.89. The Cronbach's alpha values for the subdimensions are 0.75 for kindness, 0.73 for indifference, 0.57 for common humanity; 0.68 for separation disconnection, 0.64 for mindfulness, and 0.71 for disengagement. The scale is a 5-point Likert-type scale scored as 1 = Never, 2 = Rarely, 3 = Occasionally, 4 = Frequently, and 5 = Always. High scores on the scale indicate a high level of compassion, while low scores indicate a low level of compassion.

Data Collection: An online survey was used to collect data from students studying at two public universities and two foundation universities in the Marmara and Mediterranean regions between March 15, 2019 and April 15, 2019. After obtaining approval from the departments where the study was conducted, the study's online questionnaire form was emailed to the students by the department authorities, and the data were then collected.

Ethical Considerations: Ethics committee approval No. 2018/10 (dated 28.12.2018) was obtained for this study from Ethics Committee of Yeni Yüzyıl University. Permission was obtained from the institutions where the study was conducted. An informed consent form was included on the first page of the online data collection tool that was created for the participants; upon informing the participants, their consent was obtained. Permission for the study to use the Compassion Scale was obtained from the scale's author.

Limitations of the Study: The limitations of this study are its cross-sectional design and use of the survey method to obtain the data. Other limitations of this study include the fact that it was conducted with students from four universities in only two regions of Turkiye and that the data were collected using a self-report scale.

Data Analysis: The data were analyzed using the program SPSS version 22.0. Before determining which analysis methods to use, whether the data are normally distributed or not was checked. The study uses number, percentage, mean, and standard deviation values, as well as the independent samples t-test results, one-way analysis of variance (ANOVA) to evaluate the data and Tukey's honestly significant difference (HSD) test to determine the difference between groups. The significance level is accepted as ($p<0.05$).

RESULTS

The distributions for the sociodemographic characteristics of the students participating in the study are given in Table 1. The descriptive statistics results, including the students' lowest and highest scores, mean, and standard deviation for the Compassion Scale, are given in Table 2. The findings regarding the comparison of the mean scores for the overall Compassion Scale and its subdimensions according to the students' sociodemographic characteristics are given in Table 3.

Table 1. Sociodemographic characteristics of students

Features	Min-Max.	Mean±SD
Age	17-38 (years)	20.92±1.91
	n	%
Gender		
Woman	660	71.7
Male	260	28.3
Section		
Nursing	384	41.7
Nutrition and Dietetics	138	15.0
Physiotherapy and Rehabilitation	172	18.7
Occupational Health and Safety	37	4.0
Health Management	42	4.6
Emergency Aid and Disaster Management	32	3.5
Paramedic	115	12.5
Classroom		
1st grade	247	26.9
2nd grade	302	32.8
3rd grade	223	24.2
4th grade	148	16.1

Table 2. Students' scores on the Compassion Scale (n=920)

Scale and Dimensions		Min.-Max.	$\overline{X}$ ±SD
Compassion Total Scale		1-5	4.00±.60
Sub-dimensions	Kindness	1-5	4.10±.77
	Indifference	1-5	3.97±.84
	Common humanity	1-5	3.98±.75
	Separation	1-5	3.93±.80
	Mindfulness	1-5	3.99±.73
	Disengagement	1-5	4.01±.82

When analyzing the mean scores from the Compassion Scale according to students' gender, both the mean total score and mean scores from the six subdimensions were higher for the female students compared to the male students ($p < .001$; Table 3).

When examining the students' mean Compassion scores to the grade level, a significant difference was found to exist between the mean total score and the mean score for the indifference subdimension ($p < 0.001$), between the mean scores for the kindness and separation subdimensions ($p < 0.01$), and among the mean scores for the common humanity, mindfulness, and disengagement subdimensions ($p<0.05$; Table 3).

In the further analysis conducted to determine between the grades in which the difference occurred, the mean total score for compassion and the mean scores for the subdimensions of indifference and disconnection were significantly higher for second- and fourth-year students compared to first- and third-year students ($p < 0.05$), with the mean scores for the subdimensions of compassion also being significantly higher for first-, second-, and fourth-year students compared to third-year students ($p < 0.05$; Table 3).

The second- and fourth-year students' mean scores for the subdimension of common humanity were determined to be significantly higher than those of first-year students. The second-year students' mean scores for the subdimensions of common humanity and mindfulness were determined to be significantly higher than those of the third-year students. The second-year students' mean scores for the subdimension of separation disconnection were significantly higher than the means for first- and third-year students ($p < 0.05$; Table 3).

A significant difference was also found for the mean total score and mean scores for the subdimensions of the Compassion Scale according to the departments in which the students study. The mean total Compassion Scale score and mean score for the subdimension of common humanity are significantly higher for the students studying in the Departments of Nursing, Nutrition and Dietetics, Physiotherapy and Rehabilitation, Health Management, and Emergency Aid and Disaster Management compared to those of the students studying in the Paramedic and Occupational Health and Safety Departments ($p < 0.05$; Table 3).

The mean kindness subdimension scores for the students studying in the Departments of Nursing, Nutrition and Dietetics, Physiotherapy and Rehabilitation, Health Management, Emergency Aid and Disaster Management, and Paramedics are significantly higher than the mean scores for those studying in the Department of Occupational Health and Safety ($p < 0.05$; Table 3).

The mean scores from the subdimensions of indifference and of separation disconnection for students studying in the Departments of Nursing, Nutrition and Dietetics, Physiotherapy and Rehabilitation, and Health Management are significantly higher than the mean scores from these subdimensions for the students studying in the Departments of Paramedics and Occupational Health and Safety ($p < 0.05$). The mean separation subdimension score was also higher for students in the Emergency Aid and Disaster Management Department compared to the mean separation subdimension score for students in the Paramedic Department (Table 3).

The mean mindfulness subdimension scores for the students studying in the Departments of Nutrition and Dietetics, Physiotherapy and Rehabilitation, Health Management, and Emergency Aid and Disaster Management are significantly higher than those for students studying in the Paramedics and Occupational Health and Safety Departments. The mean mindfulness subdimension scores for the students studying in the Department of Nursing are also significantly higher than those for students studying in the Department of Emergency Aid and Disaster Management ($p < 0.05$; Table 3).

The mean separation subdimension scores for students studying in the Department of Nursing and the Department of Physiotherapy and Rehabilitation were found to be significantly higher compared to those for students studying in the Emergency Aid and Disaster Management, Paramedic, and Occupational Health and Safety Departments ($p < 0.05$; Table 3).

Table 3. Comparison of mean scores of Compassion Scale according to sociodemographic characteristics of students (n=920)

Features	n	Compassion Scale Total Mean±SD	Compassion Scale Subscales					
			Kindness Mean±SD	Indifference Mean±SD	Common humanity Mean±SD	Separation Mean±SD	Mindfulness Mean±SD	Disengagement Mean±SD
Gender								
Woman	660	4.08±.56	4.17±.76	4.08±.81	4.05±.72	4.03±.77	4.05±.72	4.13±.77
Male	260	3.77±.62	3.91±.77	3.69±.85	3.82±.79	3.67±.82	3.85±.74	3.70±.87
t		7.079	4.676	6.510	4.133	6.412	3.742	6.887
p		0.000	0.000	0.000	0.000	0.000	0.000	0.000
Classroom								
1st grade[a]	247	3.93±.66	4.10±.81	3.86±.88	3.89±.84	3.83±.91	3.97±.81	3.90±.93
2nd grade[b]	302	4.09±.52	4.18±.75	4.09±.74	4.08±.70	4.01±.70	4.06±.67	4.12±.72
3rd grade[c]	223	3.90±.62	3.96±.77	3.82±.90	3.93±.76	3.85±.77	3.89±.74	3.96±.84
4th grade[d]	148	4.07±.57	4.14±.70	4.10±.80	4.02±.64	4.06±.78	4.03±.68	4.04±.78
(SD: 3/916/919)		6.429	3.856	7.357	3.598	4.362	2.788	3.494
p		0.000	0.009	0.000	0.013	0.005	0.040	0.015
Difference		a, c < b, d	a, b, d > c	a, c < b, d	a<b, d / b>c	a, c < b, d	b > c	a, c < b
Section								
Nursing[a]	384	4.03±.56	4.08±.73	4.03±.79	3.99±.70	4.01±.69	3.98±.71	4.10±.73
Nutrition and dietetics[b]	138	4.03±.63	4.17±.78	3.97±.85	4.03±.76	3.94±.88	4.03±.72	4.05±.79
Physiotherapy and Rehabilitation[c]	172	4.11±.55	4.19±.71	4.07±.78	4.14±.69	4.05±.72	4.09±.69	4.14±.72
Health Management[d]	42	4.13±.54	4.20±.78	4.09±.84	4.14±.56	4.10±.79	4.18±.58	4.06±.75
Emergency Aid and Disaster Management[e]	32	4.01±.60	4.20±.66	3.91±1.01	4.10±.65	3.93±.82	4.14±.65	3.77±.95
Paramedic[f]	115	3.72±.66	4.02±.90	3.67±.94	3.71±.96	3.49±.98	3.85±.84	3.58±1.09
Occupational Health and Safety[g]	37	3.65±.58	3.68±.86	3.66±.79	3.57±.75	3.64±.74	3.59±.83	3.76±.85
(SD: 6/913/919)		8.253	2.920	4.297	6.449	8.568	3.923	8.154
p		0.000	0.008	0.000	0.000	0.000	0.001	0.000
Difference		a,b,c,d,e > f,g	a,b,c,d,e,f > g	a,b,c,d > f,g	a,b,c,d,e>f,g	a,b,c,d > f,g / e>f	b,c,d.e > f,g / a>g	a,c > e,f,g / b,d>f

t: Independent samples t test, SD:918
F: Analysis of variance in independent groups, further analysis: LSD test. SD: Between groups/within groups/total degrees of freedom

When examining the disengagement subdimension, the mean scores from this subdimension for students in the Department of Nursing and Department of Physiotherapy and Rehabilitation are higher than those for students in the Emergency Aid and Disaster Management, Paramedic, and Occupational Health and Safety Departments ($p < 0.05$). In addition, the mean disengagement subdimension scores for the students in the Department of Nutrition and Dietetics and the Department of Health Management are higher than those for students in the Paramedic Department (Table 3).

DISCUSSION

This study was conducted to determine the perceived compassion levels of students studying in the Health Sciences and the factors affecting them. The students were determined to have good perceived compassion levels. The study's results are similar to those in other studies conducted with nursing students (25, 26).

With regard to the subdimensions in the study, the students had the highest mean score in the kindness subdimension. The studies by Babahanoğlu et al. (2021) and Cingöl et al. (2018) also reported the kindness subdimension to have the highest mean score (25, 27). Kindness means being understanding and caring towards oneself and others. Being understanding creates a sense of closeness and reduces the differentiation between the individual and others. Individuals with high levels of kindness free their attention toward being open and sensitive to the pain of others and are more sincere. Indifference has the opposite structure of kindness and becomes more prominent in those with low levels of kindness (23).

The study's subdimension of separation saw the students' lowest mean score. This finding is similar to those in the studies of Cingöl et al. (2018), Babahanoğlu et al. (2021), and Özdelikara et al. (2021) (25, 26, 27). The sense of separation is an opposite construct to the subdimension of common humanity. Common humanity involves recognizing that another's situation is not separate from one's own understanding due to a shared human experience. Separation involves a sense of separation

from others, especially when others suffer. When individuals start to see others as separate from themself, they may stop approaching others with compassion in situations of suffering (23). When examining the scale items belonging to the separation subdimension, items are seen that include an individual being insensitive in a negative situation. The separation levels of the students in this study should be low, and having a low separation level may also hint towards having a high level of common humanity.

The mean total scale score and mean scores for the subdimensions of compassion differ according to the students' gender. The mean total compassion score and mean subdimension scores for female students are higher than those for male students. The literature shows studies to have reported compassion to be affected by gender (25, 28). Dizer and İyigün (2009) reported women to have more pronounced feelings of compassion and pity than men (29). Babahanoğlu et al.'s (2021) study on social worker students reported students' compassion levels and compassion subdimension levels to differ according to gender, with these levels being higher in women than in men (27). Female students perceive themselves as more compassionate than male students do.

Although the total score of the Compassion Scale and all the averages for the subdimensions are significantly higher for female students than for male students in this study, the highest average scores from the Compassion Scale's subdimensions for female students are, in order, kindness, disengagement, and indifference. For boys, the three highest mean subdimension scores are for kindness, mindfulness, and common humanity. Kindness is the subdimension with the highest mean for both gender groups. Kindness and sincerity help one develop the perception that the world is a safe place and allow individuals to be open to themself and others. People with low levels of kindness and sincerity perceive the world as dangerous and direct their attention negatively toward themself for protection (23). The high kindness scores for the male and female students may be vital for allowing them to be more open to themselves and the outside world, to show sincere interest in the needs of others, and to create a positive workplace environment, such as in volunteer activities. The fact that the subdimension of common humanity had the second highest mean score among male students may indicate that men "tend to see the pain and suffering of others not as a separate event but as a part of the human experience," as emphasized by Pommier (2010) (23). Mindfulness was the subdimension with the third highest mean among the male students. According to Neff (2003), mindfulness involves "a balanced approach to one's negative emotions" (30). Mindfulness comes from a place of emotional balance and allows one to care for others (23). Thus, when individuals suffer or witness someone suffering, they don't let the pain take over. According to the findings from the current study, male students are able to successfully manage negative emotions, although less so than female students. The female students had the second and third highest mean scores for the subdimensions of disengagement and indifference. Women having both kindness as the highest mean score and indifference as the second highest mean score among the subdimensions was an unexpected result due to indifference being the opposite construct of kindness. However, Pommier (2010) reported "In situations where there is a threat, attention to the safety of the self becomes a close priority, the individual feels the need to focus attention on the self as a protective reaction and may feel indifference to the suffering of others or become more attuned to the world by looking at the world from a critical perspective" (23). The fact that female students' scores for the indifference subdimension were second highest after kindness may be because they see their environment and the world as more threatening and look at these more critically than males. The female students' third highest mean subdimension score was for disengagement. Disengagement is an emotionally unstable response that can interfere with mindfulness (23). The presence of disengagement in female students indicates them to be more likely than male students "to be unable to hold painful thoughts and emotions in a balanced way, to over-focus on pain, or to deny it" (31). Another reason can be explained by women's active participation and openness to experience. Determining the factors affecting the level of compassion and its subdimensions and enabling development can be said to be able to increase students' compassion levels.

When analyzing the students' mean overall compassion scores according to grade level, a significant difference is seen to be present between the mean total score and mean subdimension scores. The mean total Compassion Scale scores for 2nd- and 4th-year students is higher than those for 1st- and 3rd-year students. The study had students in 2-year and 4-year programs. If one accepts that students who are about to complete their education have higher compassion scores than other students, perhaps these students can be considered better at approaching themselves, the people they work with in their work environment, and their patients with compassion when starting their professional life, which is a critical issue in the health service sector. Although Bilgiç's (2022) study on student nurses reported no difference to be found regarding the total compassion score and scores on its subdimensions with regard to school year, other studies are also found to have reported a difference to exist (32). Babahanoğlu et al. (2021) reported a difference to be present between the grade level of social worker students and their averages for the compassion subdimensions apart from the subdimensions of indifference and disconnection; when examining the differences among the subdimensions, they reported that the averages of first-year students to be higher than those for fourth-year students (27). Akin et al.'s (2021) study reported midwifery students' grade level to only affect the subdimension of common humanity (25). According to the results of the study, 1st- and 2nd-year students have less interaction and exposure with patients compared to other years. Therefore, the fact that these students have interacted with and provided care for patients for a shorter period of time affects the results in this direction. The different results regarding the different grade levels in the study may result from the lack of a standardized curriculum in schools, the presence of courses on interaction and communication skills

that may affect compassion, and differences in the amount of experience students have with clinical practice and patient interaction.

A significant difference was found regarding the total Compassion Scale score and its subdimension scores according to the departments in which the students study. Because no studies in the literature have included different student groups, this finding cannot be compared with other studies. However, topics such as the different courses and contents of the courses taken by the students according to the departments they study, whether they study in departments that have direct contact with people or not, and whether they have practical courses where they can encounter patients are thought to possibly cause these differences. According to an international survey in which 1,323 nurses, students, educators, and administrators from 15 countries participated, 73% of nurses had received inadequate training to be able develop compassionate care and had moderate perceptions of compassion (33). In the field of nursing as well as in other health-related fields, training on compassion may help students develop their sense of compassion and ensure that they compassionately approach patients and colleagues in their work.

Despite the literature review, no studies had covered the type of students in the sample group, so the discussion has mainly occurred around nursing students. This situation constitutes a limitation of the study.

CONCLUSION AND RECOMMENDATIONS

Students' perceived compassion levels are found to vary with many factors. Universities must use all available resources to demonstrate and model compassionate behaviors so that students do not lose sight of what compassion means to the profession and quality caregiving. The sampled groups are prospective health professionals who will work directly in patient care. Regardless of the department in which they are studying, making sure that students have good levels of perceived compassion is thought will contribute to positive patient care outcomes. These results suggest that students' attitudes toward compassion levels may positively affect their compassion toward themselves and others. To underscore the importance of interpersonal and cognitive skills such as compassion and mindfulness, universities should consider intentionally modeling these skills for students. Modeling compassion development and mindfulness skills in the context of patient interactions can directly address student empathy erosion in addition to stress management training. Such practices may help increase the compassion levels of students in all health professions, especially male students, paramedics, and students in occupational health and safety departments. Therefore, course content at all grade levels could include interventions (e.g., sensitivity training, role-playing, psychodrama) to increase students' sensitivity toward compassion, especially kindness and mindfulness. By illuminating these perspectives, this study hopes to encourage practitioner reflection, such as through peer support meetings or moral case discussions. This might also reveal the extent to which adopting and acquiring perspectives is possible.

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Informed Consent: Written consent was obtained from the participants.

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REFERENCES

1. Chachula KM. A comprehensive review of compassion fatigue in pre-licensure health students: antecedents, attributes, and consequences. Current Psychology 2020: 1-13.
2. Weingartner LA, Sawning S, Shaw MA, Klein JB. Compassion cultivation training promotes medical student wellness and enhanced clinical care. BMC Medical Education 2019; 19(1):1-11.
3. Choudhary S, Ismail A, Hanif R. Individual compassion leading to employees' performance: An empirical study from Pakistan. Journal of Management and Research 2017;4(1):1-35.
4. Sexton K, Thompson S. Compassion leads to the creation of the back pack program in Kentucky--research. Kentucky Journal of Excellence in College Teaching and Learning 2016;13(1):4.
5. Fulmer CA, Ostroff C. Convergence and emergence in organizations: An integrative frame work and review. Journal of Organizational Behavior 2016;37(1):122-45.
6. Pehlivan T, Güner P. Compassion fatigue: The known and unknown. Journal of Psychiatric Nursing 2018;9(2):129-34.
7. Adamson E, Dewar B. Compassionate care: Student nurses' learning through reflection and the use of story. Nurse Education in Practice 2015;15(3):155-61.
8. López A, Sanderman R, Ranchor AV, Schroevers MJ. Compassion for others and self-compassion: Levels, correlates, and relationship with psychological well-being. Mindfulness 2018;9(1):325-31.
9. Aboul-Ela GMBE. Reflections on workplace compassion and job performance. Journal of Human Values 2017;23(3):234-43.
10. Haslam D. More than kindness. Journal of Compassionate Health Care 2015;2(1):1-3.
11. Sundus A, Younas A, Fakhar J, Sughra U. Pakistani nursing students' perspectives of compassion: A convergent mixed methods study. Journal of Professional Nursing 2020; 36(6):698-706. https://doi.org/10.1016/j.profnurs.2020.09.014
12. Reader TW, Gillespie A. Patient neglect in healthcare institutions: a systematic review and conceptual model. BMC Health Serv Res. 2013;13:156–70.

13. Kitching GT, Firestone M, Schei B, Wolfe S, Bourgeois C, O'Campo P, et. al. Unmet health needs and discrimination by healthcare providers among an indigenous population in Toronto, Canada. Canadian Journal of Public Health 2020;111(1):40–9.
14. Fotaki M. Why and how is compassion necessary to provide good quality healthcare? International Journal of Health Policy and Management 2015;4(4):199-201.
15. Booth L. Compassion: A universal language. Contemporary Nurse 2016;52(1–3):366-68.
16. Younas A, Maddigan J. Proposing a policy framework for nursing education for fostering compassion in nursing students: A critical review. Journal of Advanced Nursing 2019;75(8):1621-36.
17. Schantz ML. Compassion: a concept analysis. Nursing Forum 2007;42(2): 48-55.
18. Cole-King A, Gilbert P. Compassionate care: The theory and the reality. Journal of Holistic Healthcare 2011;8(3):29-37.
19. Younas A. Relational inquiry approach for developing deeper awareness of patient suffering. Nursing Ethics 2020;27(4):935-45.
20. Sinclair S, Norris JM, McConnell SJ, Chochinov HM, Hack TF, Hagen NA, et al. Compassion: A scoping review of the healthcare literature. BMC Palliative Care 2016;15(1):6.
21. Durkin M, Gurbutt R, Carson J. Qualities, teaching, and measurement of compassion in nursing: A systematic review. Nurse Education Today 2018;63:50-8.
22. Straughair C. Cultivating compassion in nursing: A grounded theory study to explore the perceptions of individuals who have experienced nursing care as patients. Nurse Education in Practice 2019;35:98–103.
23. Pommier EA. The Compassion Scale. Dissertation Abstracts International Section A: Humanities and Social Sciences 2010; 72:1174.
24. Akdeniz S, Deniz EM. The Turkish adaptation of the Compassion Scale: A validity and reliability study. The Journal of Happiness & Well-Being 2016;4(1):50-61.
25. Çingöl N, Çelebi E, Zengin S, Karakaş M. The investigation of compassion level of nursing students in a health college. Turkish Journal of Clinical Psychiatry 2018:1:61-7.
26. Özdelikara A, Babur S. Determination of compassion levels and empathic tendency of nursing students. Acıbadem University Health Sciences Journal 2020;11(2):342-9.
27. Babahanoğlu R, Obuz AT, Gencer N. Determinationof the compassion levels of social work students. Journal of Society & Social Work 2021;32(3):847-66.
28. Salazar LR. The relationship between compassion, interpersonal communication apprehension, narcissism and verbal aggressiveness. J Happiness Well-Being 2016;4:1–14.
29. Dizer B, İyigün E. The empathic tendency in the critical care nurses and the factors affecting. Journal of Anatolia Nursing and Health Sciences 2009;12:9-18.
30. Neff KD. The development and validation of a scale to measure self-compassion. Self and Identity 2003a;2(3):223-50.
31. Neff KD. Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. Self and Identity 2003b;2(2):85-101.
32. Bilgiç Ş. Does the compassion level of nursing students affect their ethical sensitivity? Nurse Education Today 2022;109:105228.
33. Papadopoulos I, Ali S. Measuring compassion in nurses and other healthcare professionals: an integrative review. Nurse Educ. Pract. 2016;16:133-9.

RESEARCH ARTICLE
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Sexual Function in Postmenopausal Women with Urinary Incontinence and Pelvic Organ Prolapse

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ABSTRACT

Objective: This study aims to investigate the frequency of pelvic organ prolapse and urinary incontinence and their effects on sexual function.
Material and Method: This descriptive and cross-sectional study included 605 women in their climacteric period who were admitted to a hospital in Istanbul, between April 2018 and January 2019. The data was collected by a structured questionnaire form with 37 questions and pelvic organ prolapse/urinary incontinence sexual function questionnaire scale (PISQ-12).
Results: The incidence of urinary incontinence (43.1%) and pelvic organ prolapse (protrusion 24.3%; bulging 16.4%) was noticeably high in postmenopausal women. The mean score of PISQ-12 was 29.43 ± 3.51. The women with urinary incontinence (p=0.008) and pelvic organ prolapse (p=0.000) had lower PISQ-12 scores in comparison to those without urinary incontinence and pelvic organ prolapse.
Conclusion: The incidence of urinary incontinence and pelvic organ prolapse was noticeably high in postmenopausal women. The women with urinary incontinence and pelvic organ prolapse had lower sexual function scores.
Keywords: Postmenopausal, sexual function, urinary incontinence, pelvic organ prolapse

INTRODUCTION

Significant loss of estrogen with menopause results in physical problems such as atrophy, prolapse, and incontinence in genitourinary tissues. These physical symptoms, which are part of the newly termed menopause genitourinary syndrome (menopause-GS), negatively affect women in all aspects of their lives (1,2). The most frequently observed genitourinary problems include pelvic organ prolapse (POP) and urinary incontinence (UI) (3,4).

Problems such as vaginal obstruction, coital incontinence, and dyspareunia that result from POP and UI, adversely affect female sexual function (5). In their study, Gupta et al. (6) reported that one-third of the women with POP showed signs of sexual dysfunction such as loss of libido, anorgasmia, vaginal dryness, and dyspareunia. In a study conducted by Yesiltepe et al. (7), 83.6% of sexually active women with UI had lower libido and frequency of sexual intercourse. According to the study by Grzybowska and Wydra (8), 65% of 289 women with stress urinary incontinence experience coital incontinence. Evaluation of the incidence of POP and UI in the postmenopausal period and its effects on sexual function will help healthcare professionals improve women's physical, social, and mental health and quality of life. This study aims to determine sexual function in postmenopausal women with urinary incontinence and pelvic organ prolapse.

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MATERIAL AND METHODS

Study Design

It was designed to be descriptive and cross-sectional. The study sample included menopausal women admitted to a university hospital's gynecology Clinic in Istanbul between April 2018 and January 2019. The study sample included 605 volunteers meeting the inclusion criteria, which was initially determined as 600 individuals by means of power analysis 3.1.7 at 95% confidence interval, 5% error term, and an effect size of 0.5 with 80% power.

The inclusion criteria were as follows; willingness to participate, being in postmenopausal period, sexually active, and knew Turkish. Women who had neurological problems were excluded from the study.

Data Collection Tools

The study data was obtained through a pelvic organ prolapse/ urinary incontinence sexual function questionnaire scale (PISQ-12) questioning the presence of pelvic organ prolapse and urinary incontinence and their effect on sexual function and through another questionnaire of 37 questions prepared by the researcher, which contain menopause-related, obstetric and gynecological information, and investigate the symptoms of urinary continence (enuresis, nocturia, incontinence during activities such as coughing and so forth) and pelvic organ prolapse (bulging and protrusion in the genital organ) in line with the literature (1,9,10).

Pelvic Organ Prolapse/Urinary Incontinence Sexual Function Questionnaire Scale (PISQ-12): It is a questionnaire form that evaluates sexual function in women with urinary incontinence and/or pelvic organ prolapse and includes 12 questions. The questions that constitute the questionnaire are divided into subgroups: 1 to 4 behavioral-emotional, 5 to 9 physical, and 10-12 partner-relationship. The answers given to the questions in each topic are scored between 0-4. The maximum total score of this questionnaire consisting of 12 questions is 48. Higher scores indicate higher sexual function (11). Turkish validation of the scale was carried out by Cam et al. (11) in 2009 and the internal consistency of Cronbach alpha was found to be 0.89. In this study, the internal consistency coefficient of Cronbach alpha of the PISQ-12 was 0.79.

Study data was collected utilizing a face-to-face interview technique.

Data Analysis

The study data was evaluated using the Statistical Package for the Social Sciences (SPSS) (Windows 15.0) package program. For the statistical analysis of data, descriptive statistical methods (mean, standard deviation, mode, median, frequency, minimum, maximum) and Mann Whitney U and Chi-Square tests were used.

Ethical Approval

Ethical approval was obtained from Zeynep Kamil Gynecology and Pediatric Training and Research Hospital's Clinical Research Ethics Committee (Ethics Committee Number: 23, July 2018). The data was collected after obtaining informed consent from the participants and having them sign the Informed Consent Form.

RESULTS

The mean age of the women who participated in the study was 54.52 ± 9.59. Most of the women (71.9%) were primary school graduates, and 42.3% were found to be obese (> 25) according to body mass index. When the obstetric data of women was examined, it was found that 79.7% of women had had 2 or more pregnancies. Of these, 52.2% had their deliveries in a hospital, 71.4% had a vaginal delivery, 48.9% of women underwent episiotomy during labor and 40.8% of them received oxytocin induction during delivery. Other information about the demographic, obstetric, and gynecological data of the women is given in Table 1.

Of all the women in the study, 66.9% were found to be in a menopausal period for 10 years or below. It was found that only 19% were taking hormone therapy (HT), 34.5% had a daily urine count above 6 and 26.9% had enuresis. When the data on UI was examined, it was found that 43.1% (n=261) of women had an involuntary loss of urine and 96.2% of these women had this complaint for 5 years or less. It was found that 34.3% of women with UI experience incontinence once a day. It was found that 28.8% of women with UI showed the symptoms of stress urinary incontinence, 23.7% had urge urinary incontinence, and 47.5% experienced mixed urinary incontinence. When the findings of POP were examined, it was found that 24.3% (n = 147) of the women had vaginal prolapse, and 16.4% (n = 99) of women had vaginal bulging (Table 2).

The PISQ-12 score was 29.43 ± 3.51, and the lowest score was found to be related to the partner-relationship factors section (4.42 ± 1.58). When the women with and without UI were compared in terms of PISQ-12 scales, a higher PISQ-12 scale score was determined in women without urinary incontinence. (Z_{MWU}: -4.798, p=0.008). When the data was examined in terms of the sub-dimensions, scale scores were higher in those without UI in terms of partner-relationship factors (Z_{MWU}: -3.491, p=0.000), behavioral-emotional factors (Z_{MWU}: -2.659, p=0.008) and physical factors (Z_{MWU}: -2.634, p=0.008) (Table 3). Women who did not have POP symptoms had a higher total PISQ-12 score compared to women without POP symptoms (Z_{MWU}: -4.152, p=0.000). When examined in terms of the sub-dimensions, there was a statistically significant relationship in terms of physical factors (Z_{MWU}: -7.786, p=0.000) and partner-relationship factors (Z_{MWU}: -2.604, p=0.009). However, there was no significant difference in terms of behavioral-emotional factors (Z_{MWU}: -1.898, p=0.058) Accordingly, the physical factor and partner-relationship factor sub-dimension scores were higher in women without POP (Table 3).

Women with a body mass index >25 (obese) (χ^2=6.814, p=0.009) and who had chronic constipation (χ^2=60.582, p=0.000) were found to have more UI symptoms. It was found that UI was seen more frequently in women who had POP symptoms (χ^2=49.029, p=0.000). Additionally, it was found that UI was seen more frequently in women who had had gynecological surgery (χ^2=18.067, p=0.000). In women who had UI, a significant difference was found in terms of the number of deliveries compared to those without UI (χ^2=6.960, p=0.008). Accordingly, multiparous women showed more symptoms of urinary incontinence than primiparous and nulliparous women. When the type of delivery was examined, it was determined that women with UI had more vaginal deliveries (χ^2 = 41.182, p= 0.000). More UI symptoms were observed in women who did not undergo episiotomy (χ^2=8.444, p=0.004) during labor and

Table 1: Demographic, obstetric and gynecological characteristics of women (n=605)

Variables	n	%
Age		
32-45	110	18.2
46-65	412	68.1
66 or above	83	13.7
Level of Education		
Non-literate	11	1.8
Primary School	435	71.9
High School	114	18.8
Undergraduate or above	45	7.5
Body Mass Index (BMI)		
18.5-24.9 kg/m2(normal weight)	129	25.0
25-29.9 kg/m2(overweight)	198	32.7
≥ 30 kg/m2(obese)	256	42.3
Income Status		
$500 or less	195	32.2
$501-1000	375	62.0
$1001 or more	35	5.8
Parity		
0	9	1.5
1	114	18.8
2	153	25.3
3 or more	329	54.4
Place of Delivery		
House	94	17.1
Hospital	316	52.2
Both	186	30.7
Type of Delivery		
Vaginal	432	71.4
Cesarean section	54	8.9
Both	36	32.7
Oxytocin Induction (yes)	248	40.8
Episiotomy (yes)	296	48.9
Fetus over 4000 g (yes)	172	28.4
Chronic Disease (yes)	337	55.7
Chronic Constipation (yes)	251	41.5
Gynecological Surgery (yes)	190	31.4

Table 2: Information on women's menopausal period, UI and POP symptoms

Characteristics	n	%
Menopause Duration		
0-5 years	329	54.4
6-10 years	76	12.5
>11 years	200	31.1
Hormone Therapy		
Yes	115	19.0
No	490	81.0
Daily Urination		
≤ 6	396	65.5
> 6	209	34.5
Enuresis		
Yes	163	26.9
No	442	73.1
Nocturia		
Yes	404	66.8
No	201	33.2
Urinary Incontinence		
Yes	261	43.1
No	344	56.9
Urinary Incontinence Duration		
≤ 5	251	96.2
> 6	10	3.8
The frequency of Urinary Incontinence		
1/day	89	34.3
>1/day	64	24.5
<1/week	49	18.7
1/week	37	14.1
>1/week	22	8.4
Types of Urinary Incontinence		
Stress UI	75	28.8
Urge UI	62	23.7
Mixed UI	124	47.5
Intensity of Incontinence		
A few drops	144	55.1
Wetting the underwear	80	30.6
Wetting the clothes	28	10.7
Wetting the floor	9	3.6
Vaginal Prolapse		
Yes	147	24.3
No	458	75.7
Vaginal Bulging		
Yes	99	16.4
No	506	83.6

Table 3: Comparison of PISQ-12 Scale scores and general health conditions and obstetric data of women in terms of UI and POP

Characteristics	UI							POP						
	Yes		No					Yes		No				
	X̄ ±SD	Min.-Max.	X̄ ±SD	Min.-Max.	*ZMWU	**p		X̄ ±SD	Min.-Max.	X̄ ±SD	Min.-Max.	*ZMWU	**p	
PISQ-12 Scale (Sub-Dimensions)	**28.41 ±3.25**	**20-36**	**30.20 ±3.51**	**22-38**	**-4.798**	**0.008**		**28.17 ±3.03**	**20-36**	**29.84 ±3.56**	20-38	**-4.152**	**0.000**	
(behavioral-emotional factors)	6.13 ±2.25	4-11	6.88 ±2.90	4-13	-2.659	**0.008**		6.17 ±2.36	4-12	6.68 ±2.74	4-13	-1.898	0.058	
(physical factors)	18.06 ±2.47	10-20	18.73 ±1.67	13-20	-2.634	**0.008**		17.17 ±2.42	12-20	18.85 ±1.77	10-20	-7.786	**0.000**	
(Partner-relationship factors)	4.21 ±1.58	3-9	4.58 ±1.56	3-9	-3.491	**0.000**		4.82 ±1.88	3-9	4.29 ±1.45	3-9	-2.604	**0.009**	
	UI							POP						
	Yes		No					Yes		No				
	n	%	n	%	*χ²	**p	***OR (95% CI)	n	%	n	%	*χ²	**p	***OR (95% CI)
BMI					6.814	**0.009**	0.60 (0.41-0.88)					11.644	**0.001**	0.43 (0.26-0.70)
≤ 25 kg/m2	55	34.4	105	65.6				23	14.4	137	85.6			
>25 kg/m2	206	46.3	293	53.7				124	27.9	321	72.1			
Constipation					60.582	**0.000**	3.19 (2.68-5.31)					60.582	**0.000**	1.34 (0.92-1.95)
Yes	155	61.8	96	38.2				69	27.5	182	72.5			
No	106	29.9	248	70.1				78	22.0	276	78			
Gynecological Surgery					18.067	**0.000**	2.11 (1.49-3.00)					42.275	**0.000**	2.46 (2.37-5.14)
Yes	106	55.8	84	44.2				78	41.1	112	58.9			
No	155	37.3	260	62.7				69	16.6	346	83.4			
Parity					6.96	**0.008**	0.65 (0.30-0.84)					3.459	0.063	0.62 (0.29-1.03)
0-1	24	29.06	57	70.4				13	16.0	68	84.0			
2 or more	237	45.2	287	54.8				134	25.6	390	74.4			
Type of Delivery					41.182	**0.000**	1.03 (0.07-0.16)					35.785	**0.000**	2.36 (0.08-0.16)
Vaginal	218	50.5	214	49.5				133	30.8	299	69.2			
Cesarean section	7	13.0	47	87				7	13.0	47	87			
Both	36	32.7	74	67.3				7	6.4	103	93.6			

Table 3: Continued

Characteristics	UI							POP						
	Yes		No					Yes		No				
	X̄ ±SD	Min.-Max.	X̄ ±SD	Min.-Max.	*ZMWU	**p		X̄ ±SD	Min.-Max.	X̄ ±(SD)	Min.-Max.	*ZMWU	**p	
Episiotomy					8.444	**0.004**	1.08 (0.44-0.85)					8.006	**0.005**	0.58 (0.39-0.84)
Yes	110	37.2	186	62.8				57	19.3	239	80.7			
No	151	48.9	158	51.1				90	29.1	219	70.9			
Fetus over 4000 g					0.478	0.489	1.01 (0.79-1.61)					2.295	0.130	1.36 (0.91-2.03)
Yes	78	45.3	94	54.7				49	28.5	123	71.5			
No	183	42.3	250	57.7				98	22.6	335	77.4			
Oxytocin Induction					16.820	**0.000**	0.49 (0.35-0.69)					9.540	**0.002**	0.53 (0.36-0.79)
Yes	82	33.2	165	66.8				44	17.8	203	82.2			
No	179	50	179	50				103	28.8	255	71.2			
HT					1.378	**0.240**	1.01 (0.51-1.18)					1.378	0.24	0.69 (0.41-1.14)
Yes	44	38.3	71	61.7				22	19.1	93	80.9			
No	217	44.3	273	55.7				125	25.5	365	74.5			
Enuresis					48.607	**0.000**	1.03 (2.53-5.42)					0.593	0.441	0.87 (0.55-1.29)
Yes	108	66.3	55	33.7				36	22.1	127	77.9			
No	153	34.6	289	65.4				111	25.7	331	74.9			
POP					49.029	**0.000**	3.19 (2.61-5.83)	---	---	---	---			
Yes	100	68.8	47	32.8				---	---	---	---			
No	161	35.2	297	64.8				---	---	---	---			

*ZMWU= Mann Whitney U *χ^2 Chi-square **p=0<0.05 ***OR: Odds Ratio UI: Urinary Incontinence POP: Pelvic Organ Prolapse

who were not given oxytocin induction (χ^2=16.820, p=0.000). UI was observed more frequently in women with a history of enuresis (χ^2=48.620, p=0.000), (Table 3).

When the POP data was examined, there was no significant difference found in terms of the number of deliveries (χ^2=1.328, p=0.240). When the type of delivery was examined, more POP symptoms were observed in vaginal deliveries (χ^2=35.785, p=0.000). More POP symptoms were observed in women who did not undergo episiotomy (χ^2=8.006, p=0.005) during labor and who were not given oxytocin induction (χ^2=9.540, p=0.002). There was no statistically significant difference between women with and without POP in terms of HT status (χ^2=1.378, p=0.240) and the presence of a fetus over 4000 g (χ^2=2.295, p=0.130). Women who had a body mass index > 25 (χ^2=11.644, p=0.001), had chronic constipation (χ^2=60.582, p=0.000), and had a gynecological surgery (χ^2=42.275, p=0.000) were found to have more POP symptoms (Table 3).

DISCUSSION

The climacteric period, which begins with the reduction of follicular function of the ovaries, is a period that lasts about 20 years until the age of 65 and is accepted as the onset of aging (12). The climacteric period is staged as premenopausal, menopausal and postmenopausal periods. The postmenopausal period includes a process of 8-10 years after menopause (13). While the age of menopause is between approximately 45-55 years of age in the world, it is stated as between 45-47 years of age in Turkey (9,13). Most of the women in this study were found to be in the postmenopausal period (66.9%).

Pelvic floor muscles are extremely sensitive to estrogen. In the postmenopausal period, estrogen decreases significantly, resulting in loss of elasticity and tonus in the pelvic floor muscles and connective tissue. Consequently, physical problems such as POP and UI are observed due to the pelvic floor dysfunction (14). UI is one of the most frequent problems observed in the postmenopausal period (15). Dellu et al. (4), in their study, reported that 47.3% of 1200 women who were in the climacteric period were found to have UI and the most frequently observed (19.2%) was mixed UI. In a study conducted by Şentürk and Kara (16) with 216 women in the postmenopausal period, the prevalence of UI was 45.3%. The most frequent type of incontinence was mixed UI with 64.3%. Şensoy et al. (17), in their study, found that 60.9% of menopausal women had UI. The results of this study, similar to other studies, demonstrated that UI is frequently observed in women in the postmenopausal period (43.1%). When the UI experiences of the women were examined , it was found that 28.8% of the patients had stress UI, 23.7% had urge UI and 47.5% had the symptoms of mixed UI.

In this study, a significant relationship was found between UI and factors such as multiparity, vaginal birth, chronic constipation, body mass index>25 (obesity), and history of gynecological surgery. Since the presence of chronic constipation and obesity causes an increase in factors such as intraabdominal and intravesical pressure and stress in the pelvic floor muscles, they increase the incidence of UI (4). In addition to high body mass index and the presence of chronic constipation, Cerruto et al. (18) reported that UI risk factors include the type of delivery (vaginal), the presence of POP, smoking, urinary infection, and gynecological surgery history. The tension in the pelvic floor muscles, pudendal nerve damage and ruptures in the perineal muscles due to pregnancy and vaginal delivery lead to UI (10). Biswas et al. (19) reported that more UI symptoms are observed in multiparous women and women who had a vaginal delivery. According to a study conducted by Aniulienė et al. (20), UI is seen more frequently in women who had a vaginal delivery and had more than two pregnancies, gave birth to a 3000 g or above newborn, and had perineal rupture during labor. In this study, more UI was observed in women who did not receive oxytocin induction and did not undergo episiotomy during delivery. Labor duration lasting more than 24 hours and spontaneous perineal lacerations increase the frequency of UI both in the postpartum period and at later ages (21). Within the scope of this study, it can be said that the presence of more UI in women was due to not receiving oxytocin induction or episiotomy. According to the Royal College of Obstetricians and Gynaecologists (RCOG) (22), similarly, episiotomy is effective in the presence of risk factors (rigid perineum, large fetus, fetal distress, etc.), when applied at the right time and the right angle (mediolateral) (Evidence level II). In the literature, there are different findings on episiotomy. In a study carried out by Kılıç (23), women with episiotomy have been reported to have more incidents of UI. In addition, in this study, there was more UI observed in women with enuresis in their childhood. Although Enuresis, defined as urinary incontinence during sleep in childhood, ceases in the progression of age, 2-3% of cases are experienced in future life (24). Therefore, as suggested in this study, it can be said that women who have enuresis in childhood have a higher risk of developing UI in their adulthood and that enuresis should be considered as a risk factor in women for UI.

Pelvic organ prolapse is another frequently observed pelvic floor disorder that profoundly affects the lives of women (14). In the study conducted by Slieker-ten Hove et al. (25), 21% of Dutch women between 45-85 years of age have been reported to have POP. According to a study carried out by Yıldız et al. (26), the prevalence of stage 2 and above of POP was 26.2% in menopausal women. In their study, Jennifer et al. (27) predict that by 2050, the frequency of POP is expected to increase by 46%, from 3.3 million to 4.9 million, due to the increased life expectancy and the increase in the elderly population. Similar to the findings of the literature, 24.3% of women had vaginal prolapse and 16.4% of them had vaginal bulging in this study.

Various risk factors were identified, which are thought to result in POP. High body mass index (> 25 = obesity), type of delivery (vaginal birth), multiparity, overweight (4000 g and over) infant delivery, and chronic constipation are some of these factors (28). As within the case of UI, POP is also affected by factors such as intraabdominal pressure, tension and tearing in the pelvic floor muscles. Accordingly, obesity, vaginal birth, chronic constipation and multiparity increase the incidence of POP

(21). In their study, Masenga et al. (29) found that POP is seen more frequently in multiparous women, in women who have chronic constipation and have a body mass index >25 and had a delivery over 4000 g. In a study conducted by Elbiss et al. (30), the presence of chronic constipation and a high body mass index were identified as POP risk factors. In this study, POP was seen more in multiparous women, those with vaginal delivery, chronic constipation, and those with a high body mass index (> 25). There was also a higher rate of POP in women who did not undergo episiotomy. It can be argued that POP occurs due to the inability to prevent pelvic lacerations which result from the absence of episiotomy applications when needed. Spontaneous pelvic lacerations have been reported to increase the likelihood of POP (31).

Another function of the pelvic floor muscles is to support the pelvic organs and prevent urinary incontinence, as well as to enable sexual intercourse. (32). Therefore, the presence of pelvic floor dysfunction negatively affects sexual function. In the presence of POP and UI, which are the most common symptoms of pelvic floor dysfunction, women stay away from sexual life due to vaginal obstruction, not feeling attractive, fear of incontinence during intercourse, and an inability to orgasm (33,34). According to a study conducted by Güdücü and Özcan (15), women with UI complaints had lower PISQ-12 scale scores than those who did not have such complaints. In the study of Li-Yun-Fong et al. (35), women with POP were found more likely to have symptoms of sexual dysfunction, such as sexual reluctance and lack of orgasm. According to a study conducted by Novi et al. (36), 56% of POP patients experience urinary incontinence and 13% of them have fecal incontinence and very seldom have intercourse. It is also reported that, in the same study, 70 % of them abstained from sexual intercourse due to the fear of urinary or fecal incontinence although they did not have a low sex drive. In a study carried out by Çayan et al. (37), urinary incontinence was observed more frequently in women with sexual dysfunction. Similarly, in a study by Turhan et al. (38), urinary incontinence was found to be a risk factor for sexual dysfunction. According to the PISQ-12 scale scores in this study, women with POP and UI were found to have poorer sexual function. When the physical factor sub-dimension, which questions the effects of prolapse and incontinence on sexual function, was examined, it was found that sexual function was affected more in women with POP and UI. Of the women with UI, 78.2% responded 'always' to the question of whether they had urinary incontinence during sexual intercourse. Of women with POP, 69.4% stated that they abstain from sexual intercourse due to the reasons such as protrusion, palpable mass and bulging in their vagina. As stated in the literature as well as in this study, it is seen that sexual function is poorer in women with UI and POP.

CONCLUSION

According to the results of the study, the prevalence of UI and POP in the menopausal period was found to be considerably high. The identified UI and POP risk factors are as follows: High body mass index, constipation, vaginal delivery, the presence of POP, smoking, urinary infection, and gynecological surgery history. It was found that sexual function was adversely affected in women with POP and UI. Considering that women spend 1/3 of their lives in the postmenopausal period, risk assessment, treatment and solution of sexual problems pertaining to POP and UI will contribute to the improvement of their quality of life.

The results of the study are important in terms of increasing the awareness of healthcare professionals about urinary incontinence and pelvic organ prolapse, which are common in the postmenopausal period, and informing women to prevent these diseases. The prevalence of urinary incontinence and pelvic organ prolapse in postmenopausal women was quite high. Moreover, postmenopausal women with urinary incontinence and pelvic organ prolapse had worse sexual function. In addition, it can be a resource for health professionals on sexual dysfunction, which may occur due to these diseases and significantly affect women's quality of life, and should not be ignored.

Ethics Committee Approval: This study was approved by the ethics committee of Zeynep Kamil Gynecology and Pediatric Training and Research Hospital's Clinical Research Ethics Committee (Decree no: 38; Date: 03.07.2018).

Informed Consent: Written consent was obtained from the participants.

Peer Review: Externally peer-reviewed.

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REFERENCES

1. Farrell E. Genitourinary syndrome of menopause. RCOG. 2017;46(7):481-4.
2. Mitchell CM, Reed SD, Diem S, et al. Efficacy of vaginal estradiol or vaginal moisturizer vs placebo for treating postmenopausal vulvovaginal symptoms: A randomized clinical trial. JAMA Internal Medicine. 2018;178(5): 681-90. doi: 10.1001/jamainternmed.2018.0116.
3. Jennifer MW, Hundley AF, Fulton RG, et al. Forecasting the prevalence of pelvic floor disorders in U.S. women. Obstet Gynecol. 2009;114(6): 1278-83. doi: 10.1097/AOG.0b013e3181c2ce96.
4. Dellü MC, Schmitt ACB, Cardoso MRA, et al. Prevalence and factors associated with urinary incontinence in climacteric. Rev Assoc Med Bras. 2016;62(5):441-6. doi: 10.4103/ijcm.IJCM_29_19

5. Topuz Ş. Urinary incontinence and sexuality. Balıkesir J Health Sci. 2015;4(1): 60-4.
6. Gupta N, Aggarwal M, Sinha R, et al. Study on prevalence and severity of urogenital complaints in postmenopausal women at a tertiary care hospital. J Mid Health. 2018;9:130-4. doi: 10.4103/jmh.JMH_91_17
7. Yeşiltepe Oskay U, Kızılkaya Beji N, Yalçın O. A study on urogenital complaints of postmenopausal women aged 50 and over. Acta Obstet Gynecol Scand. 2005;84: 72-8.
8. Grzybowska MR, Wydra DG. Coital incontinence: a factor for deteriorated health-related quality of life and sexual function in women with urodynamic stress urinary incontinence. Int Urogynecol J. 2017;28: 697–704. doi: 10.1007/s00192-016-3185-3.
9. Santoro N, Epperson N, Mathews SB. Menopausal symptoms and their management. Endocrinology and Metabolism Clinics of North America. 2015;44(3): 497-515. doi: 10.1016/j.ecl.2015.05.001
10. Kılıç M, Ejder Apay S, Kızılkaya Beji N. Sexual function disorders and nursing approach due to pelvic organ prolapse. I.U.F.N. Journal of Nursing.2011;19(3): 194-202.
11. Cam Ç, Sancak P, Karahan N, et al. Validation of the short form of the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12) in a Turkish population. European J Obstet Gynecology and Reproductive Bio. 2009;146: 104-7. doi: 10.1016/j.ejogrb.2009.05.016.
12. Hoga LAK, Rodolpho JRC, Gonçalves BG, Quirino B. Women's experiences of menopause: A systematic review protocol of qualitative evidence. JBI Database System Rev Implement Rep. 2014;12(7): 72 – 81. doi: 10.11124/jbisrir-2015-1948.
13. Sis Çelik A, Pasinlioğlu T. The symptoms of climacteric period and the role of the nurse. Erciyes University Faculty of Health Scien J. 2013;1(1): 48-56.
14. Jha S, Gopinath D. Prolapse or incontinence: what affects sexual function the most? Int Urogynecol J. 2016;27: 607–611. doi: 10.1007/s00192-015-2887
15. Güdücü N, Özcan Keser N. Evaluation of sexual functions of women with urinary incontinence. J Academic Res in Nursing. 2016;2(1):16-23.
16. Şentürk S, Kara M. Risk factors and prevalence of urinary incontinence in postmenopausal women living in Turkey. Clinical and Experimental Obstetrics & Gynecology 2011;69-71.
17. Şensoy N, Doğan N, Özek B, Karaaslan L. Urinary incontinence in women: prevalence rates, risk factors and impact on quality of life. Pakistan Journal of Medical Sciences. 2013;29(3): 818-22.
18. Cerruto MA, D'Elia C, Aloisi A, Fabrello M, Artibani W. Prevalence, incidence and obstetric factors' impact on female urinary incontinence in Europe: A systematic review. Urologia Internationalis. 2013;90: 1-9. https://doi.org/10.1159/000339929
19. Biswas B, Bhattacharyya A, Dasgupta A, Karmakar A, Mallick N, Sembiah S. Urinary incontinence, its risk factors, and quality of life: A study among women aged 50 years and above in a rural health facility of West Bengal. J Mid-life Health. 2017;8:130-6. doi: 10.4103/jmh.JMH_62_17.
20. Aniulienė R, Aniulis P, Steibliene V. Risk factors and types of urinary incontinence among middle-aged and older male and female primary care patients in kaunas region of Lithuania: Cross sectional study. Miscellaneous. 2015;13(1): 2552-61.
21. Rørtveit G, Hannestad YS. Association between mode of delivery and pelvic floor dysfunction. Tidsskr Nor Legeforen. 2014;19(134): 1848 – 52.
22. Royal College of Obstetricians and Gynaecologists. The Management of third- and fourth-degree perineal tears green-top guideline [homepage on the Internet]. 2015. Available from https://www.rcog.org.uk/globalassets/documents/guidelines/gtg-29.pdf.
23. Kılıç M. Incidence and risk factors of urinary incontinence in women visiting Family Health Centers. Springer Plus. 2016;5:1331.
24. Ural Büyükbesnili Z. Enuresis. J Pediatr Surg. 2016;30(6): 575-82.
25. Slieker-ten Hove MC, Pool-Goudzwaard AL, Eijkemans MJ, Steegers-Theunissen RP, Burger CW, Vierhout ME. The prevalence of pelvic organ prolapse symptoms and signs and their relation with bladder and bowel disorders in a general female population. International Urogynecology Journal and Pelvic Floor Dysfunction. 2009;20:1037–45. doi: 10.1007/s00192-009-0902-1.
26. Yıldız Ç, Akkar ÖB, Karakuş S, Korğalı E. Sexual life after pelvic surgery in women. Andrology Bulletin. 2016;17(60): 56-9.
27. Jennifer MW, Hundley AF, Fulton RG, Myers ER. Forecasting the prevalence of pelvic floor disorders in U.S. women. Obstetrics & Gynecology. 2009;114(6): 1278-83.
28. Vergeldt TFM, Weemhoff M, IntHout J, Kluivers KB. Risk factors for pelvic organ prolapse and its recurrence: a systematic review. Int Urogynecol J. 2015;26:1559–73. doi: 10.1007/s00192-015-2695-8
29. Masenga GG, Shayo BC, Rasch V. Prevalence and risk factors for pelvic organ prolapse in Kilimanjaro, Tanzania: A population-based study in Tanzanian rural community. Plos One. 2018;13(4): 1-13. doi: 10.1371/journal.pone.0195910
30. Elbiss HM, Osman N, Hammad FT. Prevalence, risk factors and severity of symptoms of pelvic organ prolapse among Emirati women. BMC Urology. 2015;15:66.
31. Kömürcü Ö, Uğur GM. Pelvic floor changes due to birth. Bulletin of Continence and Neurourology. 2017;4: 25-34.
32. Bilgiç D, Kızılkaya Beji N, Yalçın Ö. Evaluation of sexual function in patients with urogynecology. Journal of Turkish Society of Obstetrics and Gynecology. 2012;9(3): 142-52.
33. Yount SM. The Impact of pelvic floor disorders and pelvic surgery on women's sexual satisfaction and function. Journal of Midwifery &Women's Health. 2013;538-45.
34. Yıldız E, Dinçgez Çakmak B, Ketenci Gencer F, Aydın Boyama B. Frequency, severity and risk factors of pelvic organ prolapse in perimenopausal women. Okmeydanı Medical Journal. 2018;34(2):148-53.
35. Li-Yun-Fong RJ, Larouche M, Hyakutake M, et al. Is pelvic floor dysfunction an independent threat to sexual function? A cross-sectional study in women with pelvic floor dysfunction. J Sex Med. 2017;14:226–37. doi: 10.1016/j.jsxm.2016.11.323.

36. Novi JM, Jeronis S, Morgan MA, Arya LA. Sexual function in women with pelvic organ prolapse compared to women without pelvic organ prolapse. Journal of Urology. 2005;173: 1669-72. doi: 10.1007/s001920170012.
37. Çayan S, Yaman Ö, Orhan İ, et al. Prevalence of sexual dysfunction and urinary incontinence and associated risk factors in Turkish women. European Journal of Obstetrics & Gynecology and Reproductive Biology. 2016;203: 303–8. doi: 10.1016/j.ejogrb.2016.06.030.
38. Turhan A, Akhan SE, Bastu E, Güngör Uğurlucan F, Yasa C, Oskay Ü, Yalçın Ö. The effect of urinary incontinence on sexual functioning in Turkish women of reproductive and menopausal ages. International Journal of Sexual Health. 2015;27(4):396-405.

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Parental Presence in the Care of Hospitalized Children: Nursing Students' Perspectives and Attitudes

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ABSTRACT

Objective: The aim of this study was to investigate the perceptions and attitudes of nursing students regarding parental presence in the care of hospitalized children.
Method: This descriptive cross-sectional study was conducted from January to March 2020 with 572 nursing students who volunteered to participate. Data were collected using a Demographic Form and the Parent Participation Attitude Scale (PPAS). Data analysis was performed using means, percentages, and chi-squared tests.
Results: The study participants had a mean age of 20.89±1.53 years; 80.4% (n=460) were female, and 36.75% (n=210) were juniors. Students reported a mean PPAS score of 76.04±7.68. It was found that 63% (n=360) of the students were aware of the family-centered approach to care, with 81.1% (n=292) attributing their knowledge to coursework. Most students believed parents should be involved in care practices within the hospital setting (90.9%; n=520) and in decision-making (93.5%; n=535).
Conclusion: This study reveals a limited awareness among nursing students about parental presence in caring for hospitalized children. Most students believed parents should be actively involved in care practices and decision-making processes in the hospital setting. However, it was observed that they were uncertain about this issue in practice. These results emphasize the importance of awareness and positive attitudes toward family-centered care in nursing education.
Keywords: Pediatric nursing, family-centered care, parental presence, nursing students, nursing education

INTRODUCTION

The concept of "family-centered care (FCC)" is widely recognized as a cornerstone of pediatric nursing, emphasizing the vital connection between parents, children, and healthcare professionals (1–3). FCC embodies a holistic approach to care, encompassing the physical, emotional, intellectual, social, cultural, and spiritual well-being of the child and his/her family (4). It champions the idea that a child's continuity within the family circle is essential and promotes unity between the child and the family at all stages of care (5,6). FCC stands as a model that aligns with the expectations of parents and children, fostering collaboration between healthcare professionals and families (7). At its core, the family takes center stage in care, with pediatric nurses partnering with parents throughout the care and treatment processes, ensuring that the family primarily supports the child (8). It envisions parents actively participating in care planning, implementation, evaluation, and decision-making for the child's well-being (9).

Within the philosophy of FCC lies the commitment to minimize anxiety for both the child and parents, nurturing trust and open communication among all stakeholders, including the child, the parents, and the nursing staff (1). The practice of FCC has garnered recognition worldwide as the ideal pediatric care system (10). Foster et al. (11) highlight potential barriers, such as time constraints, limited resources for family education, and varying institutional priorities, which may influence individuals' perceptions of FCC. Policy discrepancies exist despite parents' desire to be present during invasive procedures, with institutions like the American Academy of Pediatrics (AAP) supporting parental presence. At the same

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time, some hospitals maintain restrictive policies (12), (13). An Italian study reported that unlimited visitation policies were only in place in 12% of pediatric intensive care units (14). To enhance the effectiveness of interventions in pediatric hospital care, healthcare systems and hospital policies must be aligned to maintain a child's connection with his/her parents during hospitalization. Pediatric nurses, primarily responsible for children's care in these settings, play a pivotal role in shaping these policies. Some studies have indicated that nurses rely on parents for individual patient care due to workload pressures (15). Nevertheless, the aim should not be to shift the entire care burden to parents but to preserve the parent-child relationship during hospitalization, ensuring the child's physical and social-emotional comfort (1).

Cultural competency and interpersonal skills training in nursing education cannot be overstated, as effective communication is essential in building trust, avoiding conflicts, and fostering positive relationships (16). While cultural knowledge and sensitivity may take time, educational programs can equip nursing students with the skills to provide competent care to pediatric patients (17). Bhana (18) even suggests that educators should encourage students to engage in discussions and create an environment that reflects the patient's and family's culture and preferences before invasive treatments. Future nurses should adopt a holistic perspective when considering their patients and their families, strengthening the patient-family relationship. Nevertheless, it is worth noting that FCC is often underrepresented in nursing education curricula and insufficiently applied in clinical practice (19). To successfully integrate FCC into nursing practice, students need to understand its context comprehensively. Therefore, examining nursing students' perceptions of FCC, identifying their educational needs, and developing effective strategies to address these needs can significantly enhance their nursing skills.

Research Questions

- What are the perceptions of undergraduate nursing students regarding parental presence in the care of hospitalized children?

- What are the attitudes of undergraduate nursing students regarding parental presence in the care of hospitalized children?

MATERIALS AND METHODS

Aim

This descriptive cross-sectional study was conducted to investigate the perceptions and attitudes of nursing students regarding parental presence in the care of hospitalized children.

Study Population

The study population consisted of 713 students in the 2nd, 3rd, and 4th years of the nursing faculty at a university in Istanbul. We tried to reach the whole population without resorting to sampling. Between January 2020 and March 2020, 572 students who agreed to participate were included in the research. First-year students were not included in the study because they did not know enough about the importance of FCC.

Data Collection Tools

The Demographic Form and PPAS were used in the study.

The Demographic Form developed by the researchers consists of 16 questions asking students for their demographic information and their views on parental presence in care and treatment practices in pediatric clinics.

The Parent Participation Attitude Scale (PPAS) was developed (20) and modified (21) to measure nurses' attitudes toward parental presence. Özbodur-Yıldırım and Elçigil (22) conducted the Turkish version of the scale. The PPAS consists of 24 items, graded on a 5-point Likert-type scale, ranging from strongly agree (5) to strongly disagree (1). Gill reported an alpha coefficient of 0.75 for internal consistency in 1987. The scores can be obtained from the scale range from 24-120. A high score on the scale indicates an accepting attitude toward parental involvement. A total score of 24-36 points on the scale is interpreted as altogether rejecting, 37-60 points as leaving, 61-84 points as undecided, and 85-108 points as accepting (22).

Procedure

Undergraduate nursing students at a state university in Istanbul participated in the study between January 2020 and March 2020. The students who agreed to participate in the study completed the data collection form and the Parent Participation Attitude Scale under the supervision of the researchers in an average of 20 minutes. While the students completed the scale forms we were available to answer any questions they had..

Ethical Considerations

Institutional approval from the nursing faculty of İstanbul University-Cerrahpaşa where the research was conducted, and ethics committee approval (2019/77) from the university ethics committee were obtained for the study. After being informed about the purpose and importance of the research and the data collection forms, nursing students who wished to participate voluntarily signed the informed consent form.

Data Analysis

Data were analyzed using the IBM SPSS 21 program (Armonk, New York: IBM Corp.). Mean (M), standard deviation (SD), and frequencies were used for descriptive statistics. The normality of all continuous factors was tested using the Shapiro-Wilk test. Mann-Whitney U and Kruskal-Wallis tests were used to evaluate nonparametric data between two groups for independent samples for variables that did not conform to the normal distribution in the significance test of the change in measurement times. The level of statistical significance was accepted as $p < 0.05$.

RESULTS

572 nursing students in their 2nd, 3rd, and 4th years participated in the study. Among them, 80.4% (n=460) were female, and 19.6% (n=112) were male. The mean age of the students was 20.89±1.53 years. It was found that 36.7% (n=210) of the students were studying in the 3rd grade, and 49.7% (n=284) were living with their families. 91.6% (n=524) of the students had no chronic diseases, and 65.2% (n=373) had not been hospitalized during their childhood. 54.7% (n=313) of the students had chosen the nursing specialty partially voluntarily, 51.2% (n=293) were taking the pediatric nursing course, and 47.3% (n=271) wanted to take a specialty related to pediatrics (Table 1).

Table 1: Demographic characteristics of nursing students (n=572)

Characteristics		n	Mean±SD
Age		572	20.89±1.53
		n	%
Gender	Female	460	80.4
	Male	112	19.6
Grade	2nd	180	31.5
	3rd	210	36.7
	4th	182	31.8
Do you have a chronic disease?	Yes	48	8.4
	No	524	91.6
Were you hospitalized in your childhood?	Yes	199	34.8
	No	373	65.2
Did you choose to study nursing...?	Voluntarily	175	30.6
	Partially voluntarily	313	54.7
	Against your will	84	14.7
Did you take the pediatric nursing course?	Yes	293	51.2
	No	279	48.8
Do you want to work in a department of pediatrics after graduation?	Yes	271	47.3
	No	301	52.6

In Table 2, the students' opinions regarding parental involvement were examined. It was found that 90.9% (n=520) of the students believed that parents should be involved in the care of their children in the hospital, 93.5% (n=535) believed that parents should be involved in making decisions about their children, and 57.7% (n=330) believed that parents should be present with their child during procedures. It was found that 73.2% of the students thought that psychological support would be the reason for wanting the parents to be present with their child. 56.8% (n=50) of the students stated that the mother's inability to control her emotions was the reason for not wanting the parents to be present with the child. 79.9% (n=457) of the students were happy for the parents to be present during hospital procedures. It was found that 83.4% (n=477) of the students wanted to be present when procedures were performed on a child from their family, 63% (n=360) had heard about the FCC approach, and 81.1% (n=292) had heard about it through the courses given in the faculty.

Table 2. Students' opinions on parental presence (n=572)

Opinions	n	%
Should parents participate in the care of their children in hospital?		
Yes	520	90.9
No	52	9.1
Should parents participate in decisions about their children in hospital?		
Yes	535	93.5
No	37	6.5
Should parents be present with their children during procedures in hospital?		
Yes	330	57.7
No	87	15.2
Undecided	155	27.1
Why should the parent be present with their child during rocedures in hospital?		
Helping the nurse	57	17.4
Supporting the child	240	73.2
Distracting the child during the procedures	31	9.4
Why should the parent not be present with their child during the procedures in hospital?		
Mother's inability to control her emotions	50	56.8
The mother is affected by the child's crying	9	10.2
Making the process complicated by parents	29	33
Would you like your parents to be present when you undergo procedures at the hospital?		
Yes	457	79.9
No	115	20.1
Would you like to be present when a child from your family undergoes procedures?		
Yes	477	83.4
No	95	16.6
Have you heard of the family-centered care approach?		
Yes	360	63
No	212	37
Where did you hear of the family-centered care approach?		
Courses	292	81.1
Hospital environment/Internship	41	11.4
Social media	21	5.8
Scientific publications	6	1.7

The total mean PPAS score was 76.04±7.68. According to the PPAS evaluation in the study, this score expressed the "undecided" attitude of the sample (Table 3). Table 3 shows no statistically significant difference between the demographics and the mean PPAS score. It was noted that 3% of the students were pediatric clinic residents. The mean PPAS total score of the pediatric clinic residents was statistically higher than that of the others (p=0.046).

DISCUSSION

A positive relationship between parents and healthcare providers is essential for FCC (23). When parents' questions about their child's condition and necessary care procedures are answered, parental satisfaction increases when health professionals are kind and concerned about their children and

Table 3.PPAS Score and comparison of demographic characteristics with PPAS Score (n=572)

PPAS Score and Characteristics				PPAS Score Mean±SD (Min-Max)	
PPAS Score				76.04±7.68 (47-112)	
		n	**%**	**Mean±SD Test**	**p**
Gender	Female	460	80.4	76.14±.57	p=0.806
	Male	112	19.6	75.63±8.14	
				*Z=-0.246	
Grade	2nd	180	31.5	76.07±8.75	p=0.513
	3rd	210	36.7	75.85±8.21	
	4th	182	31.8	76.24±7.07	
				**χ2=1.337	
Are you an intern at pediatric clinics?	Yes	17	3	78.00±8.93	**p=0.046**
	No	121	21.2	76.12±6.49	
				*Z=-1.999	
Do you have a chronic disease?	Yes	48	8.4	76.20±7.91	p=0.693
	No	524	91.6	76.03±7.66	
				*Z=-0.395	
Were you hospitalized in your childhood?	Yes	199	34.8	76.29±7.68	p=0.406
	No	373	65.2	75.91±7.68	
				*Z=-0.831	
Would you like your parents to be present when you undergo procedures at hospital?	Yes	457	79.9	75.88±7.36	p=0.906
	No	115	20.1	76.67±8.83	
				*Z=-0.081	
Would you like to be present when a child from your family undergoes procedures?	Yes	477	83.4	76.03±7.53	p=0.570
	No	95	16.6	76.11±8.40	
				*Z=-0.568	

**Mann-Whitney U test*
*** Kruskal Wallis test*

themselves (9). It has been concluded that parental presence increases patient satisfaction, contributes to parental skills after discharge, reduces parental stress, and improves self-confidence (7). The studies conducted with parents stated that most parents wanted to be with their children during care, receive information from nurses about their children's diagnosis and treatment, and participate in the care (24,25). The present study was conducted to assess the perceptions and attitudes of nursing students regarding parental presence in the care of hospitalized children. When reviewing the literature, although many studies examine the views of nurses and parents on FCC in regard to parental presence, few studies explore the opinions of nursing students. Therefore, it is believed that this study will contribute to nursing education.

The current study found that 90.9% of nursing students supported parental presence in caring for their children in the hospital, 93.5% supported parental presence in decisions about their children, and 57.7% believed parents should be with their children during procedures (Table 1). The total mean score of the PPAS of the nursing students was 76.04. According to the scale evaluation, this score expresses the "undecided" attitude of the sample. Although the students have positive opinions about parental presence in care practices and decisions made about their children, the determination to be "undecided" according to the scale score may be related to the difficulties experienced in practicing FCC in the clinical setting and/or the students' challenges in reflecting parental presence practices in the clinical setting. Although FCC is essential in nursing, nursing students have difficulty integrating FCC into clinical care. Various factors, such as minimal exposure to family interactions during their clinical practice, lack of experience organizing FCC clinical experiences, access to limited clinical areas, and inadequate supervision from clinical instructors, cause nursing students to have difficulties implementing FCC in clinics (23). Holtslander et al. (19) found that nursing students had problems reflecting on the FCC approach in the clinical setting. Fisher et al. (26) reported that nursing students are concerned about communicating with parents, and innovative methods could teach students to communicate with parents. A study suggested that students do not perceive FCC well due to minimal exposure to family interactions during their clinical practice education (8). Similar to these studies, in the current study, the mean PPAS score of the pediatric clinic residents was statistically higher than that of the residents in the other clinics. It is thought that students who communicate more with parents in pediatric clinics are more moderate on the issue of parental presence. Like the current study, Daneman et al. (27) found that individuals working in specialty units were more supportive of parental presence. Due to limited space, nursing students also face issues such as FCC practice and lack of family experience during clinical practice (19). Evidence-based practice should be attempted in educating nursing students and nurses who

generally have difficulty understanding the needs of parents. Trying to understand parents' emotions through interventions such as simulation provides a foundation for safe FCC and increases students' and nurses' ability to be empathetic (28).

The literature indicates that the presence of parents with their children during painful medical procedures enables the child to cope with pain and anxiety more efficiently (29). Negative societal perceptions of the FCC may hinder the provision of quality care. When the studies with nurses were reviewed in the literature, a range of views regarding the practice of allowing parents to stay with their children during interventions was apparent, some supporting the practice, others not (30). The current study found that most nursing students (57.7%) believed parents should be with their children during procedures, while 15.2% thought the child should not be with them. Consistent with the literature, 73.2% of the students who supported parental presence indicated that they believed the parent would provide psychological support during the procedures. 56.8% of those who did not want the parent to be with the child cited the mother's inability to control her emotions (Table 2). In parallel with the current study, it was reported that most of the students who supported the presence of the parent (36.3%) thought that the parent would support the child psychologically, while the students who did not support the presence of the parent (3.9%) stated that the parent was affected by the child's crying (2). Yayan et al. (31) reported that nurses who support parental presence argued that mutual communication with parents provides trust and that parental decisions are essential in care. Reasons for opinions that do not support parental presence include nurses' concerns about being observed during practice, refraining from parental intervention, performance concerns, parent-child anxiety, nurses' stigma toward parents, and nurses' inability to explain medical procedures to parents (2,30,31). A study with nursing students concluded that parents should be present in the care process. Students reported that parents reduced their stress by supporting children, helping them develop coping skills, and increasing the child's adaptation to the environment (2).

CONCLUSION

The results of this study revealed limited awareness of parental presence in the care of hospitalized children among nursing students. Students were ambivalent about parental presence in the care of hospitalized children. Most students believed parents should be actively involved in nursing practice and decision-making in the hospital setting, but uncertainty was observed in practice. In general, however, students who spent more time in pediatric clinics had more favorable attitudes toward encouraging parental presence during nursing practice. These findings highlight the need to improve nursing education awareness and attitudes towards family-centered care. Nursing students should be exposed to FCC courses throughout their education and encouraged to use this model of care in their clinical practice. In addition, examining nursing students' attitudes and perceptions of parental presence through in-depth interviews will provide an important data source for undergraduate education and future programs.

Ethics Committee Approval: This study was approved by the ethics committee of İstanbul Üniversitesi-Cerrahpaşa, approval no (2019/77).

Informed Consent: Written consent was obtained from the participants.

Peer Review: Externally peer-reviewed.

Author Contributions: Conception/Design of Study- M.A., S.Ç.; Data Acquisition- İ.C., E.Ü.; Data Analysis/Interpretation- M.A., S.Ç.; Drafting Manuscript- M.A., S.Ç.; Critical Revision of Manuscript- M.A., S.Ç.; Final Approval and Accountability- M.A., İ.C., E.Ü., S.Ç.

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REFERENCES

1. Yavaş-Çelik M. Family-centered care in child diseases and nursing. Sağlık ve Toplum 2018;28(1):26–31.
2. Boztepe H, Çınar S, Ertug N. An ınvestigation of nursing students' views about the presence of family members and parents during painful procedures and cardiopulmonary resuscitation. J Educ Res Nurs 2016;13(3):264–71.
3. Ball JW, Bindler RC, Cowen KJ. Principles of Pediatric Nursing Caring for Children. 5th ed. New Jersey: Pearson Education Inc; 2017. p. 231.
4. Törüner E, Büyükgönenc L. Çocuk sağlığı temel hemşirelik yaklaşımları. Ankara: Göktuğ yayıncılık; 2012. p. 22–30.
5. Harrison TM. Family-centered pediatric nursing care: state of the science. J Pediatr Nurs 2010;25(5):335–43.
6. Al-Motlaq MA, Shields L. Family-centered care as a western-centric model in developing countries: luxury versus necessity. Holist Nurs Pract 2017;31(5):343–7.
7. Azak M, Aksucu G, Çağlar S. The effect of parental presence on pain levels of children during ınvasive procedures: a systematic review. Pain Manag Nurs 2022;23(5):682–8.
8. Brown EA, De Young A, Kimble R, Kenardy J. Review of a parent's ınfluence on pediatric procedural distress and recovery. Clin Child Fam Psychol Rev 2018;21(2):224–45.
9. Boztepe H, Kerimoğlu Yıldız G, Çınar S, Ay A. Çocuğu hastanede yatan ebeveynlerin aile merkezli bakım alma durumlarını etkileyen faktörlerin belirlenmesi. AUHSJ 2019;10(4):748–55.
10. Smith J, Swallow V, Coyne I. Involving parents in managing their child's long-term condition—a concept synthesis of family-centered care and partnership-in-care. J Pediatr Nurs 2015;30(1):143–59.
11. Foster M, Whitehead L, Maybee P. The parents', hospitalized child's, and health care providers' perceptions and experiences of family-centered care within a pediatric critical care setting: a synthesis of quantitative research. J Fam Nurs 2015;22(1):6–73.
12. AAP. Joint policy statement—guidelines for care of children in the emergency department. J Emerg Nurs 2013;39(2):116–31.
13. Egberts MR, de Jong AEE, Hofland HWC, Geenen R, van Loey NEE. Parental presence or absence during paediatric burn wound care procedures. Burns 2018;44(4):850–60.
14. Giannini A, Miccinesi G. Parental presence and visiting policies in Italian pediatric intensive care units: A national survey. Pediatr Crit Care Med 2011;12(2):e46-50.
15. Ayyıldız-Kuzlu T, Kalıncı N, Köse-Topan A. Üniversite hastanesinde çocuklara verilen bakımın aile merkezli bakım yönünden incelenmesi. FSHD 2011;6(16):1–17.

16. Liang HF, Wu KM, Hung CC, Wang YH, Peng NH. Resilience enhancement among student nurses during clinical practices: A participatory action research study. Nurse Educ Today 2019;75:22–7.
17. Dabney K, McClarin L, Romano E, Fitzgerald D, Bayne L, Oceanic P, et al. Cultural competence in pediatrics: Health care provider knowledge, awareness, and skills. Int J Environ Res Public Health 2015;13(1):14.
18. Bhana VM. Interpersonal skills development in Generation Y student nurses: A literature review. Nurse Educ Today 2014;34:1430–4.
19. Holtslander L, Solar J, Smith NR. The 15-minute family ınterview as a learning strategy for senior undergraduate nursing students. J Fam Nurs 2013;19(2):230–48.
20. Seidl FW, Pillitteri A. Development of an attitude scale on parent participation. Nurs Res 1967;16(1):71–3.
21. Gill KM. Nurses' attitudes toward parent participation: Personal and professional characteristics. Child Health Care 1987;15(3):149–51.
22. Özbodur-Yıldırım S, Elçigil A. A validity and reliability study of parent participation attitude scale in Turkey. Dokuz Eylül University Institute of Health Sciences, Master's Thesis. 2008.
23. Alabdulaziz H, Cruz JP. Perceptions of female Saudi undergraduate nursing students toward family-centered care. Nurse Educ Today 2020;89:104421.
24. Çağlar S, Ar I, Yaşa B, Kurt Ş. Family-centered care in the neonatal ıntensive care unit: mothers' opinions. STED 2019;28(2):120–6.
25. Güdücü-Tüfekci F, Erci B. The opinion of children, parents and health staff about parental presence during painful procedures. Journal of Nursology 2010;10(4):52–62.
26. Fisher MJ, Taylor EA, High PL. Parent-nursing student communication practice: Role-play and learning outcomes. J Nurs Educ 2012;51(2):115–9.
27. Daneman S, Macaluso J, Guzzetta CE. Healthcare providers' attitudes toward parent participation in the care of the hospitalized child. J Spec Pediatr Nurs 2004;8(3):90–8.
28. Zimmermann E, Alfes CM. Simulating the role of the parent: Promoting family-centered nursing care. Nurs Educ Perspect 2019;40(2):121–2.
29. Pancekauskaitė G, Jankauskaitė L. Paediatric pain medicine: pain differences, recognition and coping acute procedural pain in paediatric emergency room. Medicina 2018;54(6):94.
30. Özkan S, Taş Arslan F. Nurses' views about parent participation in the care of hospitalized children. J Contemp Med 2017;7(4):355–64.
31. Yayan EH, Suna Dağ Y, Düken ME. Examination of the effect of the family-centered approach of the empathic trends of children's nurses and student. Archives of Health Science and Research. 2018;5(2):179–87.

RESEARCH ARTICLE
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Practical Health Education Experiences of Nursing Students: Qualitative Research

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ABSTRACT

Objective: The study aimed to explore the experiences, expectations, and suggestions of undergraduate nursing students regarding a health education seminar on technology addiction.
Method: This is a qualitative descriptive study. A convenience sample of undergraduate nursing students who had organized and actively participated in a health education seminar about Technology Addiction conducted in a public high school in Istanbul was asked to participate in the study. Semi-structured interviews were conducted with six nursing students in the fifth semester of a four-year nursing degree program who were accepted to participate in the study. Thematic content analysis was used.
Results: Two themes; (1) Reflections on the health education seminar and (2) Reflections on the role of nurses as health educators, and seven sub-themes were identified: seminar preparation process, feelings regarding practice as a nurse educator, raising community awareness, preparation for the future, difficulties in working as a group, importance of the nurse's role as an educator and deficiencies in health education in nursing practice.
Conclusion: The health education seminar on technology addiction not only revealed challenges but also had significant positive impacts on the academic and professional development of nursing students. The emphasized positive effects underscore the ongoing importance of innovative educational initiatives that not only address contemporary health challenges but also promote the personal and professional growth of future nurses.
Keywords: Health education, leadership, qualitative research, nursing, students, technology addiction

INTRODUCTION

Nursing is a profession that encompasses various essential functions. Beyond being caregivers, nurses also take on roles as managers, researchers, and educators, all aimed at delivering high-quality care (1). Through the implementation of educational activities, nursing care is enriched by fostering effective information exchange between nurses and the community (2). Consequently, nursing students must cultivate essential skills such as empathy and effective communication to excel in their roles as educators (3). By developing these abilities, they can better engage with diverse audiences and ensure that health information is disseminated effectively, leading to improved health outcomes and increased community well-being.

Nursing education is a dynamic and systematic process, through which students are educated to care for different populations according to their changes and needs (4). Thus, nursing education is progressive and integrates theoretical and practical activities (5). As in other countries, in Turkey, different teaching methods are used for nursing students to develop the different interpersonal, technical, and conceptual skills needed by nurses (6).

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Nursing students necessitate ongoing preparation to adeptly engage with individuals and communities, assuming a pivotal educational role in advancing health promotion and making significant contributions to the overall well-being of the population. While they acquire andragogy techniques (adult-oriented teaching methods), during theoretical classes, it is in practical classes that students have the opportunity to assess and refine their skills, identifying both their strengths and areas that require development (2, 7, 8). Consequently, a thorough reflection on the experiences of nursing students regarding the methods implemented for the development of these skills is crucial.

Seminars, role-playing, community-based practical activities, and group discussions, among others, are effective pedagogical strategies commonly used to prepare nursing students as health educators (9, 10). Gaining insights from the practical experiences of students as community educators is relevant for improving teaching techniques and, consequently, the nursing curriculum. These opinions provide valuable arguments that can inform adjustments and innovations, aiming for a more effective education aligned with the real needs faced by students during their educational activities within the community.

Nursing students should tackle relevant topics when engaging in public education. Consequently, a variety of subjects can be addressed by these students as they contribute to educating the population. One of these issues is current and worrying; technology addiction is a widely discussed topic for bringing physical and psychosocial harm to the population (11, 12). Based on the aforementioned, this study aimed to explore the experiences, expectations, and suggestions of undergraduate nursing students regarding a health education seminar on technology addiction.

MATERIAL AND METHOD

Design

This study employs a descriptive qualitative design to explore the lived experiences of nursing students in a health education seminar on technology addiction, which they organized and presented to enhance their community education skills. The choice of qualitative research aligns with the complexity of understanding students' perceptions and emotions in depth, emphasizing their roles as emerging educators. Guided by the Consolidated Criteria for Reporting Qualitative research checklist - COREQ (13), this approach enables a contextual examination of social and cultural factors (14), providing valuable insights into practical strategies for effective community education.

Setting and Subjects

The study was carried out at a private university in Istanbul, Turkey. A convenience sample of undergraduate nursing students who had organized and actively participated in a health education seminar about Technology Addiction conducted in a public high school in Istanbul was asked to participate in the study. The students were in their fifth semester of a four-year nursing degree program. The seminar was an activity that students conducted in the "Education in Nursing" course. For 11 weeks, 17 students organized the seminar, in the 12th week they presented it to the other students in their class under the supervision of an assistant professor and a research assistant. After that, they made some changes in the content and methods used in the seminar according to the recommendations made by the supervisors. In the 14th week, they presented it to approximately 120 students at a high school. Students used diverse teaching methods and techniques such as question-answer, role play, poster presentation, slide projection, and leaflet distribution during the activity. The health education seminar took place in January 2023.

Six of the 17 students agreed to participate in the study. Despite the small number of participants, it is believed that data saturation was reached since the information provided by participants did not present significant differences. Furthermore, it is believed that the sample of six students represented the group researched since the characteristics such as age and gender percentage between those who agreed to participate and those who did not were similar. Four female and two male students aged 20 to 24 years participated in the study. The individual in-depth face-to-face semi-structured interviews were conducted by the second author in March 2023.

Researchers

This study was carried out by three female researchers. The primary author is a Registered Nurse/Assistant Professor, who has a Ph.D. in Nursing Management and holds a certificate in qualitative research methods. The second author is a Registered Nurse/Assistant Professor, who has a Ph.D. in Internal Medicine Nursing. The third author is a Registered Nurse/Research Assistant, who holds a master's degree in surgical nursing.

Data Collection

A pilot test was carried out with one student by the primary author in the presence of the second author to evaluate the data collection tool. Two more questions were added to the interview schedule after the test. The data of this student were not included in the survey. The interviews were conducted at the university by the second author to avoid bias or embarrassment since the seminar was an activity of the course supervised by the primary and third authors. Before performing the interviews, the researcher provided the participants with the purpose and overview of the study. The students already knew the researcher who had been their professor before, which could limit the autonomy of the students, thus, the fact that the student was free to participate or not in the interviews was emphasized by the researcher several times. Only the participant and the researcher were present in the room during the interviews. A semi-structured form with open-ended questions prepared by scanning the literature

(7, 9-11) was used during the interviews. The interviews were conducted in Turkish, each lasting between 30 and 45 minutes. The interviews were tape-recorded with the consent of the participants and transcribed verbatim. Measures were taken to maintain the anonymity of students.

Limitations of the Study

The interviews were carried out approximately two months after the health education seminar, which could generate memory bias, however, the researcher responsible for the interviews asked the participants to reflect deeply on their experiences at the seminar and on their views regarding nurses' roles as educators and technology addiction to reduce recall bias. Another limitation of the study is the fact that students and researchers were from the same educational institution, which, despite the efforts of the researchers, may have impaired the autonomy of the participants. The low number of participants can also be considered a limitation. Nursing students reflected their own opinions about the health education seminar and nurses' roles as educators, therefore, the results of this study cannot be generalized.

Rigor

Credibility, dependability, confirmability, and transferability are strategies employed in qualitative research to ensure the trustworthiness of the findings (16). The study includes thorough and detailed descriptions of the research context and procedures for data collection, along with a pilot test of the data collection tool. A specific protocol for data collection was implemented. The procedures for data analysis were articulated with clarity and detail, and researchers maintained prolonged engagement with the data. Direct quotations were faithfully included, and the coding, subthemes, and themes underwent multiple evaluations by researchers. Special attention was given to accurately conveying the sentiments and inquiries expressed by the participants.

Ethical Considerations

This study received approval from the Istanbul Esenyurt University Ethics Committee (approval date: 16.03.2023; decision number: 2023/03-13), and permission was obtained from the university where the participants were enrolled. The informed consent form was meticulously explained, and participants voluntarily signed it.

It is essential to note that the interviewers in this study were professors associated with the participants' academic institutions. Recognizing the potential power dynamics inherent in this relationship, steps were taken to mitigate any undue influence. Before the interviews, participants were assured that their participation or responses would not affect their academic standing, and they were reminded of their right to withdraw from the study at any point without consequence. Furthermore, the interviewers maintained a transparent and supportive demeanor, emphasizing the confidential nature of the discussions. Participants were encouraged to express their thoughts openly and honestly, reassured that their responses would be treated with the utmost confidentiality.

Data Analysis

The thematic content analysis (15) process employed in this study involved several systematic steps to derive meaningful insights from the collected data. After obtaining the textual data, the researchers initiated the analysis by thoroughly reading the texts multiple times to gain familiarity with the content. The next step involved organizing the data based on two main subjects, namely "seminar preparation" and "health education." Within these subjects, the data were systematically arranged by identifying similarities and differences. Subsequently, the researchers applied coding to the organized data, wherein specific codes were assigned to segments of the text that shared commonalities. These codes were then compared and organized into broader categories based on their similarities. To ensure a comprehensive and reliable analysis, the researchers engaged in a thorough process of reviewing and refining the codes, subthemes, and emerging themes through multiple iterations. The analysis also included a validation step by checking the coded data with the participants, seeking their input to ensure that the interpretations accurately reflected their perspectives. This iterative process continued until a consensus was reached among the researchers, enhancing the confirmability and credibility of the identified themes and sub-themes. Themes and sub-themes are presented in Table 1.

RESULTS

The results were categorized into two themes: "reflections on the health education seminar" and "reflections on the role of nurses as health educators." Seven subthemes were identified, each supported by quotations from the participants.

Theme 1. Reflections on the Health Education Seminar

The first theme delves into the experiences, perceptions, and feelings of the students before, during, and after the health education seminar. The theme is presented under five subthemes: (1) Seminar preparation process, (2) Feelings regarding practice as a nurse educator, (3) Raising community awareness, (4) Preparation for the future, and (5) Difficulties in working as a group.

Sub-theme 1.1. Seminar Preparation Process

Students recognized that the period preceding the health education seminar was important for them to get used to the idea and also prepare for the activity through research on technology addiction and teaching methods that could be used during the seminar. Participants toured the school and the amphitheater designated for the seminar, familiarizing themselves with the surroundings and ensuring the proper functioning of all necessary equipment. Additionally, students verified the suitability of the planned teaching methods and techniques for the venue. The quotes below reflect students' concern about adequately preparing for the activity:

"We went to the school where we were going to present the health education seminar the day before and we did a proof. We tested the speakers and the projection equipment. If there were any problems with them, we would solve them, we didn't leave it for the next day, we didn't want to have problems. So, we had no problems on the day of the seminar. We were ready" (Participant 1).

"[…] we thought that interactive methods would be more interesting in order not to bore the students. We also thought that the duration should not be too long to maintain a more pleasant educational environment for us and them, we made a plan thinking about all this" (Participant 2).

Sub-theme 1.2. Feelings Regarding Practice as a Nurse Educator

Participants reported that at first, they felt anxious and even confused when they were told by the professor that they would be responsible for organizing and running a health education seminar for teenagers in a high school. However, with the course of the activity and when they fell into the role of health educators, positive feelings emerged, and the attention, respect, and self-esteem of the listeners relaxed them, making the activity fun and pleasant, as well as efficient. The quotes below report the various feelings of students regarding the health education seminar:

"At first you think, what does nursing have to do with technology addiction? But then you understand that the subject is associated with health. […] It was great doing research (to prepare for the seminar). I had a great time. I really enjoyed it, especially while preparing for the seminar. […] when the students started to arrive and the conference room became crowded, there was anxiety. Other than that, I had no problems, as I said this type of anxiety is normal. Then, the students made us feel very comfortable" (Participant 1).

"I noticed that the interest of teenagers in high school and their self-esteem is very high, it made me happy. […] I was a little nervous, but the way they spoke and respected us made me feel relieved" (Participant 5).

One student reported that in addition to feeling comfortable and having fun during the presentation, the health education seminar also promoted unity among group colleagues. The statement below reflects on the importance of encouraging teamwork:

"Going to a high school and performing in front of people we didn't know caused me some anxiety, frankly, even in the proofs I was anxious. The proof environment was tense. But after a while, I started to feel a little more relaxed. […] In the seminar itself, I had fun because I felt more comfortable, it wasn't as tense as I expected. This activity also helped me to improve relationships with my classmates" (Participant 4).

Sub-theme 1.3. Raising Community Awareness

According to the students, engaging in an activity focused on disease prevention was rewarding, and it allowed them to practically realize the importance of nursing in promoting community health through education. Participants emphasized the significance of diverse and ongoing educational activities to prepare them for the role of educators. The following quotes report the students' satisfaction in response to the positive reactions from the seminar audience:

"I had no idea about the nurse's role as an educator when I chose the profession [...] I learned during graduation that nurses have educator functions [...] During the health education seminar I felt good about teaching something to the students and raising their awareness. I felt useful" (Participant 3).

"The students really listened to us carefully […] they really understood what we wanted to teach" (Participant 6).

Sub-theme 1.4. Preparation for the Future

Students reported that the health education seminar represented a valuable experience, providing preparation for other activities where they may need to engage with a large audience and deliver oral presentations. In other words, organizing and running an educational seminar for the community was an important experience to prepare them for the future as educators. The quote below reflects the importance of communication skills for nurses to carry out their functions effectively and efficiently:

"It was very good to communicate with young people [...]. That was really good, teaching the teenagers... This experience prepared me for my future professional life, now I know how to address myself to people and how I will feel during oral presentations" (Participant 1).

Participants also identified the importance of learning the appropriate methods to communicate with the population,

Table 1: Themes and sub-themes

Themes	Sub-themes
Reflections on the health education seminar	-Seminar preparation process -Feelings regarding practice as a nurse educator -Raising community awareness -Preparation for the future -Difficulties in working as a group
Reflections on the role of nurses as health educators	-Importance of the nurse's role as an educator -Deficiencies in health education in nursing practice

emphasizing that it is important not only to provide information but also to exchange knowledge with the community, approaching individuals so that they can absorb the knowledge needed to generate awareness. The following quote reflects the need for nurses to research and share knowledge with the community:

"Being part of a group giving health education obviously added a lot to me. [...] Before, I thought it was just getting there and talking, but I learned that it's important to choose words and speak in a way that people can understand, I have learned to speak like a nurse. [...] I think this experience gave us responsibility" (Participant 6).

Sub-theme 1.5. Difficulties in Working as a Group

Despite all the positive aspects highlighted by the students regarding the conducted activity, all six participants mentioned difficulties regarding teamwork. Working in a group means having to face various obstacles. The challenges of leading, delegating tasks, and making decisions were reported by the participants. The importance of having a common goal when working in a group was emphasized in several narratives. The quotes below report the difficulties that arose during the process of organizing the health education seminar since many individuals formed the working group:

"We were a very large group, the distribution of tasks was a little difficult, it was very difficult to prepare the content, as everyone's opinion might not be the same [...] I mean, many times I got nervous (during seminar preparation)" (Participant 3).

"We spent a lot of time on the health education seminar preparation process. It was difficult to rehearse with such a large group. Most often some colleagues could not come to proofs. I couldn't attend a proof myself. The seminar preparation process was a bit complicated" (Participant 4).

Theme 2. Reflections on the Role of Nurses as Health Educators

The second theme is focused on the students' reflections regarding the important role of nurses as health educators. The participants acknowledged that the experience of preparing a health education seminar made them more observant and critical of the nurse's role as an educator. The theme is divided into two subthemes: (1) the Importance of the nurse's role as an educator and (2) the Deficiencies of health education in nursing practice.

Sub-theme 2.1. Importance of the Nurse's Role as an Educator

Based on the health education seminar, students reflected on the role of nurses in educating the population. According to the students, nurses should exercise more of their roles as health educators. They stated that there is a need to better prepare nursing students to be educators, thus contributing to the well-being of the community. The seminar played a crucial role in heightening students' awareness of the nursing profession's vital contribution to raising public consciousness. According to them, this consciousness should be achieved through the sharing of knowledge on various topics related to health and the disease process. The quotes below address the importance of nursing for disease prevention and community health promotion:

"Health education is important; we have to give more importance to these things because patients need to be aware to promote and protect their own health. It's very important. Yes, before the disease happens, the most important thing is to prevent it, to do something before the disease happens. The population needs to be made aware" (Participant 3).

"I think nurses could go further, research more. I think we can add good things to the health of the community in all areas [...] It is important to raise awareness among the population. It is in our hands to raise awareness among the population through our role as educators" (Participant 5).

Sub-theme 2.2. Deficiencies of Health Education in Nursing Practice

The activity developed by the students made them reflect on the way health education should be shared with the community. The deficiencies of the health sector were emphasized by the participants as they observed during clinical placements in varied health institutions that nurses do not actively exercise their functions as educators. According to students, nurses are limited to giving basic information very quickly, which cannot be considered health education, since they are not an in-depth exchange of knowledge, and they are not capable of generating changes in people's habits. The quotes below are about situations that came to the minds of the participants after the seminar, which allowed them to make comparisons between the activity carried out by them and how health education can be deficient in health institutions:

"During clinical placements, I came across a nurse guiding a patient about breastfeeding, but the communication between the nurse and the patient took only 30 seconds or a minute. That is, it did not even reach 2 minutes, her approach was very bad. She walked straight into the room, squeezed the patient's breast, and just said it was ok" (Participant 1).

"In clinical placements, I did not come across nurses exercising the role of educator. Maybe they teach patients, but I haven't seen it [...] Only during patient discharge do they teach something" (Participant 3).

DISCUSSION

This study aimed to explore the experiences, expectations, and suggestions of undergraduate nursing students regarding a health education seminar on technology addiction. Students recognized the importance of planning their activities in detail to avoid unexpected complications. Anxiety and stress during the preparation of the seminar were reported by the participants, but during and after the activity, feelings such

as pride, happiness, and accomplishment of duty stood out. According to the students, the health education seminar allowed them to provide information about technology addiction as they became aware of the importance of the topic. In addition, difficulties in working in groups were identified. The students emphasized that the nurse's role as an educator is very important for the well-being of the community, however, deficiencies related to the interaction with patients and their families during nursing practices were also reported.

For nursing students to be prepared to perform their functions as educators, they need to receive theoretical and practical education (17). Practical classes, in which nursing students can share knowledge about health and illness with the population, are included in the nursing curriculum and are characterized by detailed planning of the activity to be carried out (10). In a study conducted in Brazil, the use of ludic activities, such as theatrical presentations to attract the attention of the population during health education, was identified as a widely used method that generates good results for both students and the community (10). A study carried out in Australia emphasized that skills related to planning routines, teamwork, active communication, and cultural competence are some of the abilities needed by newly graduated nurses (18). Based on the narratives of the participants in the present study, it is believed that the systematic and continuous implementation of activities such as lectures and seminars help students develop such skills and should be continuously encouraged in nursing schools.

A document developed by the World Health Organization (WHO) highlights that nurses must play their role as educators and effective communicators to enable individuals to be active agents of their health-disease processes (19). This information is in line with the findings of the present study since mainly interpersonal skills related to communication with colleagues and the community were identified by the participants as essential for nurses to be efficient educators. In addition, participants stated that during the health education activity, they were able to better understand the role of nurses as an important agent for raising awareness of the population.

Students who participated in the present study reported they felt anxiety and stress during the preparation and in the minutes that preceded the health education seminar. Such symptoms at moderate levels are common in nursing students, especially before or during practical activities (20, 21). Professors and instructors who supervise such practical courses are responsible for supporting and empowering students so that they feel happy and fulfilled during their practical nursing activities (20).

Participants of the present study also stated it was difficult to work as a group, especially because it was a group composed of many individuals. This is a concerning fact, since in addition to the role of educator, the nurse also has a role as manager and leads and coordinates nursing and multidisciplinary teams (1). Therefore, nurses need to acquire skills to work in groups and lead people. It is important to emphasize that the group of students in question started their undergraduate nursing education during the COVID-19 pandemic, which prevented group activities. The participants' reflections reinforce the importance of teaching nursing in face-to-face classes in which group activities are continuously developed.

Another noteworthy finding is that participants, following the seminar, were able to draw comparisons with the health education practices provided by nurses in the healthcare institutions where they conducted their clinical placements. They identified a deficiency in this area and emphasized the need for improvement. Nurses face several obstacles that prevent them from planning and carrying out activities aimed at the health education of the population. The lack of time to teach is identified by nurses as one of the most common barriers to effective health education. The insufficient knowledge to develop such activities is also cited by nurses as an obstacle, which intensifies the need to better prepare undergraduate students for the role of health educators (17).

Administrators of educational and health institutions, professors, and instructors have the important role of enabling nursing students to perform all their functions efficiently. Practical activities, developed in groups, in which students interact with each other, planning, coordinating, and executing activities aimed at the community through diversified teaching methods should be increasingly incorporated into nursing curricula. Thus, during external activities, the use of interactive and alternative methods, where nursing students are not limited to the clinical model, focused on the biological and individual dimension, but are capable of focusing on disease prevention and health promotion, should be increasingly encouraged in educational institutions (10). In addition, through activities such as seminars, students can also learn to use different teaching techniques to communicate with multiple communities (9).

Concerning the exaggerated or inappropriate use of technologies; the participants recognized the need to inform the population about the subject. The problematic use of technology can generate physical disorders such as postural problems and obesity (22) and psychosocial disorders such as anxiety and depression (23). This and many other subjects can be addressed by nursing students and nurses during the health education of the population.

Practical activities in which students can interact with the community and exercise the role of health educators using creative, innovative, and interactive teaching methods should be increasingly encouraged in educational and health institutions responsible for educating future nurses. Educating individuals and communities about healthy lifestyles is one of the important functions of nurses.

CONCLUSION

This study sheds light on nursing students' diverse experiences of conducting a health education seminar on technology

addiction. The identified challenges, ranging from initial anxiety to the complexities of group work, underscore the need for more comprehensive and practical approaches in nursing education. As we navigate an era marked by technological advancements and unforeseen disruptions, the findings advocate for the continued integration of face-to-face education and dynamic group activities. The role of nurses as educators and leaders in health promotion becomes pivotal, necessitating not only the acquisition of technical skills but also the fostering of effective interpersonal communication.

It is imperative for nursing curricula to adapt, equipping students with the tools and competencies required to meet the evolving demands of healthcare. This study invites educators, administrators, and policymakers to reflect on and refine educational strategies, ensuring that nursing students are not only well-prepared professionals but also empathetic educators capable of addressing contemporary health challenges within their communities. Special attention must be given to the group of students educated during the COVID-19 pandemic, in which distance classes have become mandatory because nursing is a theoretical-practical science that cannot be taught without face-to-face and group activities.

Additionally, it is crucial to highlight that the seminar on technology addiction not only revealed challenges but also had significant positive impacts on the academic and professional development of nursing students. The emphasized positive effects underscore the ongoing importance of innovative educational initiatives that not only address contemporary health challenges but also promote the personal and professional growth of future nurses.

Ethics Committee Approval: This study was approved by the ethics committee of Istanbul Esenyurt University (approval date: 16.03.2023; decision number: 2023/03-13)

Informed Consent: Written consent was obtained from the participants.

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REFERENCES

1. Çiftçioğlu Yalçın G, Tunç G. Changing roles of executive nurses. Aijhs 2022;2(2):23–30. http://dx.doi.org/10.29228/aijhs.19
2. Costa DAC, Cabral KB, Teixeira CC, Rosa RR, Mendes JLL, Cabral FD. Enfermagem e a Educação em Saúde/Nursing and Health Education. *Revista Científica da Escola Estadual de Saúde Pública de Goiás “Candido Santiago”.* 2020;6(3): e6000012.
3. Öz YC, Er RA, Uran IO. Evaluation of effective communication skills of university students in the field of health: Example of Kocaeli. Kocaeli Med J 2022;11(2):204–214. http://dx.doi.org/10.5505/ktd.2022.70456
4. Bezerril M dos S, Chiavone FBT, Lima JVH de, Vitor AF, Ferreira Júnior MA, Santos VEP. Nursing education: a conceptual analysis of the evolutionary method of Rodgers. Esc Anna Nery 2018;22(4). http://dx.doi.org/10.1590/2177-9465-ean-2018-0076
5. Hellström-Hyson E, Mårtensson G, Kristofferzon M-L. To take responsibility or to be an onlooker. Nursing students’ experiences of two models of supervision. Nurse Educ Today 2012;32(1):105–10. http://dx.doi.org/10.1016/j.nedt.2011.02.005
6. Ibrahimoglu O, Mersin S, Kilic HS. Nursing education curriculum and learning outcomes. J High Educ Sci 2019;9(1):12. http://dx.doi.org/10.5961/jhes.2019.305
7. Aydın M, Güven E, Aydın Avcı İ. Adult education experiences of nursing students. In: 4th International Symposium on Innovative Approaches in Health and Sports Sciences Proceedings. SETSCI; 2019.
8. Hacıalioğlu, N. Teaching, learning and education in Nursing. Istanbul: Nobel BOOKSTORE, 2019.
9. Morgan R. Using seminars as a teaching method in undergraduate nurse education. Br J Nurs. 2019;28(6):374–6.
10. Pereira FGF, Pinheiro SJ, Caetano JÁ, De Ataíde MBC. Características de práticas de educação em saúde realizadas por estudantes de enfermagem/Characteristics of nursing students’ health education practices. Cogitare Enferm 2016;21(2). http://dx.doi.org/10.5380/ce.v21i2.44209
11. Fatema K, Nasreen S, Parvez MS, Rahaman MA. Impact of using the internet on students: A sociological analysis at bangabandhu sheikh mujibur Rahman science and technology university, gopalganj, Bangladesh. Open J Soc Sci 2020;08(12):71–83. http://dx.doi.org/10.4236/jss.2020.812007
12. Uslu O. Causes and consequences of technology addiction: A review of information systems and information technology studies. Int J Soc Sci Educ Res 2022;8(3):299–306. http://dx.doi.org/10.24289/ijsser.1131136
13. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. Int J Qual Health Care 2007;19(6):349–57. http://dx.doi.org/10.1093/intqhc/mzm042
14. Creswell JW, Creswell JD. Research design. Los Angeles: SAGE Publications, 2018.
15. Braun V, Clarke V. Conceptual and design thinking for thematic analysis. Qual Psychol 2022;9(1):3–26. http://dx.doi.org/10.1037/qup0000196
16. Lincoln YS, Guba EG. Naturalistic inquiry. Naturalistic Inquiry, 1st ed. SAGE Publications, 1985.
17. Bastable SB, Gonzalez KM. Perspectives on Teaching and Learning. SB, Bastable editors. Nurse as Educator, Principles of Teaching and Learning for Nursing Practice. New York: Jones & Bartlett Learning; 2019.p. 3-33.
18. Brown RA, Crookes PA. What are the ‘necessary’ skills for a newly graduating RN? Results of an Australian survey. BMC Nurs 2016;15(1). http://dx.doi.org/10.1186/s12912-016-0144-8

19. Langins M, Borgemans L. *Strengthening a competent health workforce for the provision of coordinated/integrated health services*. Copenhagen: WHO Regional Office for Europe 2015.
20. Lavina R, Deepa P, Abin K, Shwetha R, Priya MN. Anxiety among the nursing students during the initial clinical experience. Int J Curr Res Rev 2021;13(14):161–5. http://dx.doi.org/10.31782/ijcrr.2021.131412
21. Sanad HM. Stress and anxiety among junior nursing students during the initial clinical training: A Descriptive study at College of Health Sciences, University of Bahrain. American Journal of Nursing Research 2019;7(6):995–9. http://dx.doi.org/10.12691/ajnr-7-6-13
22. Mustafaoğlu R, Zirek E, Yasacı Z, Razak Özdinçler A. The negative effects of digital technology usage on children's development and health. Addicta 2018;5(2):227–247. http://dx.doi.org/10.15805/addicta.2018.5.2.0051
23. Souza K, Cunha MXC. Impactos do uso das redes sociais virtuais na saúde mental dos adolescentes: uma revisão sistemática da literature/Impacts of the use of virtual social networks on adolescents' mental health: A systematic review of literature. Educ, Psicol Interfaces 2019;3(3):204–17. http://dx.doi.org/10.37444/issn-2594-5343.v3i3.156

REVIEW ARTICLE
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Sleep Hygiene Education in Adolescents: The Role of the Pediatric Nurses

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ABSTRACT

Pediatric nurses have an essential role in promoting adolescent health. Adolescence is a vital childhood period. This period is the transition from childhood to adulthood, and the mainstay of a healthy life occurs. Adolescents' needs and risks should be considered to continue their growth and development. Sleep is an essential factor influencing adolescent health, such as nutrition, physical activity, psychosocial environment, and risky behaviors. Sleep is directly related to situations such as physical health, the development of cognitive skills, and risky behaviors for adolescents. If adolescents do not have adequate and quality sleep, they face various problems such as learning difficulties, low academic success, accidents, and injuries. Sleep hygiene programs are beneficial for preventing adolescent's sleep problems. Sleep hygiene programs contain parameters such as creating a sleep schedule, regulating daily physical activity and eating habits, creating a pre-sleep routine, reducing caffeine consumption, and creating a sleep environment. Pediatric nurses lead sleep hygiene education programs together with adolescents' parents, teachers, and healthcare professionals. It is recommended to develop games and web-based alternative designs. Games and web-based designs increase the effectiveness of sleep hygiene programs. This article aimed to emphasize the importance of sleep health in adolescents and the roles of pediatric nurses. Sleep hygiene practices are essential to develop healthy sleep patterns in adolescents. The article points out the roles of pediatric nurses, such as educators, guides, and consultants, in promoting the sleep health of adolescents.
Keywords: Adolescent, sleep hygiene education, pediatric nursing

INTRODUCTION

According to the World Health Organization's (WHO) definition, adolescence is a unique phase of human life, and the mainstay of a healthy life occurs during this period. Adolescence is defined as the age of 10 to 19. (1). In this period, when bio-physiological, cognitive, and psychosocial growth accelerates, it becomes essential for adolescents to interact with their emotions, thoughts, decisions, and environment (2). Adolescents face significant morbidity, injuries, and deaths worldwide. Adolescents can protect their health and surroundings during this period but also exhibit risky behaviors (3). Most factors influencing adolescent health, such as nutrition, physical activity, sleep, substance use, and sexual health, can be prevented and treated (1). Sleep is directly related to situations such as thinking and academic achievement, emotional health, physical health, growth and development, decision-making, risky behavior, accidents, and injuries for adolescents (4). If we determine the factors that negatively affect sleep and adolescent sleep needs, sleep problems can be prevented. It is known that sleep hygiene interventions are beneficial in preventing sleep problems. Pediatric nurses have an essential role in protecting adolescents' sleep health. Nurses use roles such as educators and consultants. They can prepare sleep hygiene education to promote adolescents' sleep quality. They help adolescents cope with sleep problems.

In this article, we tried to explain the importance of sleep health in adolescents and the role of pediatric nurses in sleep

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hygiene. It aims to contribute to the literature and to generalize sleep hygiene education. The article is intended to guide the development of new education programs.

Sleep Importance in Adolescents

Sleep, one of the critical factors affecting the health of adolescents, is essential for brain development**.** (4). According to data obtained by the Sleep Foundation and Centers for Disease Control Prevention (CDC) from the American Academy of Sleep Medicine, it is indicated that adolescents between the ages of 13 and 18 should regularly sleep 8 to 10 hours a day to support their optimal health (5-7). A study conducted with 1717 European adolescents from Spain, Iceland, and Estonia shows that the daily sleep duration of adolescents, who require an average of 9 hours of sleep, is 7 to 7.5 hours. It has been reported that adolescents have insufficient sleep duration due to the tendency to go to bed late, early start of classes at school, exposure to screens before bedtime and, at the beginning of sleep, the influence of the social environment, and increased school-related responsibilities (8).

Factors Affecting Sleep in Adolescents

It is indicated that there are many factors affecting sleep in adolescents. Starting classes early at school affects sleep. Additionally, the sleep quality of adolescents with an evening chronotype is affected. In the evening chronotype, the adolescent goes to bed late at night, has difficulty waking up early in the morning, and feels better in the afternoon—performance increases in the afternoon (9). A study was conducted to determine sleep habits in adolescents in Turkiye. In this study, the sleep hours of adolescents were examined in terms of age, gender, and educational status. In a recent research, the sleep hours of adolescents were examined. It has been shown that 16.3% of people sleep after midnight and experience sleep problems when bedtime is delayed (10). In meta-analysis research, there is evidence that later school start times are associated with longer sleep durations and a less negative mood in adolescents (11). Adolescents' obligations, such as their busy schedules, homework, test anxiety, etc., increase stress levels and cause insomnia during their school periods. Socializing and hanging out with friends also causes them to stay up late at night (7). Adolescents' excessive use of electronic devices and long periods of staring at screens critically affects sleep. Other factors that negatively affect sleep quality include having an electronic device in the bedroom and excessive use of the internet, telephone, and social media (12, 13). Some research shows that exposure to blue light emitted from screens, especially before sleep, affects melatonin levels and harms sleep quality (14,15). Research has shown that it affects sleep quality and cause sleep disorders, such as sleep apnea, a sleep interrupter (16), restless legs syndrome (17), narcolepsy, which affects the sleep-wake balance (18), anxiety that occurs due to insomnia or affects the process two-way by causing insomnia and mental health problems such as depression (19,20), neurodevelopmental diseases such as Attention Deficit Hyperactivity Disorder and Autism Spectrum Disorder (21) in adolescents.

Sleep Problems and Impact of Insomnia in Adolescents

The American Academy of Pediatrics (APA) indicates that approximately 92% of children in the United States (USA) consult a doctor with at least one sleep problem—only 20% of children are diagnosed with sleep disorders (22). According to the Sleep Foundation from the APA, it is estimated that 20 to 50% of children and 40% of adolescents are affected by sleep problems (4). Sleep is vital for growth and development in adolescence bio-physiologically, spiritually, mentally, emotionally, and socially. Sleep has positive effects on all systems of the body, such as the strengthening of the immune system, the balance of hormones, and the healing of muscles and tissues. Sleep is required to perform metabolic activities for the body. Adequate and quality sleep is essential for a healthy physical and cognitive development. Considering the physical health of adolescents, insufficient sleep may affect metabolic activities such as blood pressure and cholesterol levels, causing them to be at risk for diabetes and cardiovascular problems in the long term (4,23). Research shows that adolescents who do not have sufficient sleep time are negatively affected emotionally (24) and that poor sleep quality is associated with emotional-behavioral problems (25). In addition, it was emphasized in a cohort study that sleep deprivation increases the risk of major depression (26). Wu et al. (2022), in their research, state that poor sleep quality, short sleep duration, poor sleep hygiene, and insomnia symptoms are associated with suicidal ideation in adolescents (27). Considering the importance of sleep for the development of brain functions, it is known that insufficient sleep causes a decrease in academic performance, and in a review of various research studies in this field, it is indicated that postponing school start times has positive effects on academic performance (28). In a study in which adolescents were analyzed for risky behaviors over a certain period due to reasons such as not getting enough sleep, excessive sleepiness in adolescents is dangerous for driving, not wearing seat belts and helmets, and drunk driving, etc. and they engaged in behaviors such as these, it is indicated that they encounter accidents for this reasons (29). Research conducted in the United States analyzed the effects of sleep deprivation on the health and behavior of high school students. They were asked to self-report how many hours they slept on a weekday school night. In the research, it is indicated that risky behaviors such as drinking alcohol, drunk and driving, message while driving, fighting, having suicidal ideation, taking sexual risks, and tendency to obesity are more common in adolescents who sleep less than five hours compared to adolescents who sleep eight hours or more (30).

The Sleep Foundation has reported that critical situations such as physiological problems, difficulty in learning, decrease in academic performance, impact on emotional health, having risky behaviors that may harm themselves and their families, and accidents and injuries resulting in death may develop in adolescents who do not have adequate and quality sleep cycles (4). Research shows that the COVID-19 pandemic, which occurred in recent years and continues worldwide, affects sleep processes in children and adolescents. A cross-sectional study

conducted in Hong Kong (2022) emphasized that school-age children's physical activity, screen viewing time, and sleep duration were affected during the pandemic period (31).

Recommendations for Sleep Health Protection

Interventions of the healthcare team are needed to determine and improve adolescent sleep problems. Although it is not recommended to treat sleep problems experienced during this period with medication, it is necessary to define and enhance each adolescent's unique sleep hygiene practices. Sleep hygiene processes by the Sleep Foundation to improve sleep quality are determined as complying with an eight-hour daily sleep schedule on weekdays and weekends, creating a pre-sleep routine that will make it easier to fall asleep and relax, avoiding the consumption of caffeine and energy drinks especially in the afternoons and evenings, stopping the use of electronic devices at least half an hour before bedtime, and staying in silent mode throughout the night, creating a quiet, calm and dark sleeping environment in a comfortable bed with a comfortable pillow. Adolescents should also be supported by their parents regarding sleep hygiene processes (4).

Sleep Hygiene Education

Today, in the direction of adolescents' changing characteristics and differing needs, educational programs are essential for improving sleep health to protect adolescents' physical, mental, emotional, and social health, and improve their sleep problems. When the research conducted in this field is analyzed, it is seen that face-to-face or web-based sleep hygiene training positively affects adolescents' sleep health (32). In a review evaluating sleep education given in schools, it has been shown that sleep education generally consists of two groups that aim to change behavior and provide information. Sleep education programs planned in the future have a high potential to improve the sleep health of young people; it was concluded that sleep education is considered essential by students, teachers, and parents. However, this review recommends developing programs with more intense content, different focuses, and targeting other age groups (33). A pilot study published in New Zealand in 2014 to evaluate a sleep education program in high school students determined that while there was no difference between the intervention group and the control group in terms of sleep duration on weekday nights, the intervention group's sleep duration was longer on weekend nights compared to the control group (34). Another randomized controlled study applied a school-based sleep education program to the intervention group. After the education program, while the sleep duration of the intervention group increased by even a short margin compared to the control group, there was no difference in sleep duration in the control test (35). A review analyzing research on sleep hygiene recommendations and sleep time extension interventions emphasized that there is evidence that this research reduces sleep problems and depressive symptoms. In this regard, it is assumed that different groups of adolescents with various sleep problems may respond differently to the interventions in future research (36). In another systematic review analyzing sleep education programs, it has been indicated that sleep education programs, which include strategies planned within specific frameworks, will change the sleep behaviors of adolescents. A knowledge-to-action perspective into practice is needed to develop pediatric sleep health approaches. This review, as a knowledge-to-action perspective, suggests that informing stakeholders and ensuring their participation, determining goals and targets for change, assessing needs, ensuring that programs are suitable for local use, evaluating barriers and facilitators, evaluating the results of studies, developing a sustainable education program, reporting interventions clearly and comprehensively, and ensuring that other researchers and practitioners are aware of these interventions, It is recommended to design and integrate into practice so that they can benefit from (37,38). In another research study, after video-based sleep hygiene education was given to adolescents diagnosed with Type 1 Diabetes Mellitus (DM) to determine their sleep quality, the intervention group's sleep quality score was higher than the control group (39). In another school-based sleep education program, research applied to adolescents; while knowledge about the importance of sleep increased, small changes in sleep quality and hygiene were detected (40). Although there is a quantitative increase in sleep education programs in general, when the results are monitored, it is stated that the increases in sleep behaviors and sleep hygiene practices are variable (41). The research reviewed suggests some features for programs planned to be designed in the future. For example, keeping the age range wide in interventions and including larger groups, respecting the autonomy needs and multiple lifestyles of adolescents, objectively measuring sleep durations through devices such as actigraphy as well as self-reports, keeping intervention periods longer, evaluating behavioral changes in the short and long term, to determine the permanent effects of the interventions, to support them with protocols involving the participation of stakeholders, especially parents, and to include internet-based and family-based alternative approaches including game activities such as animation (34,38,39,41,42).

Education aims to ensure sleep hygiene, provide adequate and effective adolescent sleep patterns, and intervene in behavioral sleep problems (43). Ensuring sleep hygiene includes arranging the sleep environment, arranging sleep time and duration, and regulating daily activities, nutrition, and habits (44). Sleep hygiene was first put forward in 1977 and defined as "giving suggestions to patients suffering from insomnia." It has undergone many changes until today. Nowadays, sleep education is planned through guides that include recommendations on sleep hygiene (45). It has been emphasized that experimentally designed studies that include sleep hygiene suggestions are partially inadequate regarding the evaluation processes of the results in the general population. Sleep hygiene education plays an essential role in improving sleep. It has been indicated that to increase the usefulness of training, comprehensive studies are needed, especially evaluating habits and behavioral and environmental factors (46). It is stated that individual differences should be considered in implementing sleep education programs, which

include main topics such as making a daily sleep schedule, creating and following a night routine, developing healthy daily habits, and arranging the bedroom (47). Accordingly, starting sleep hygiene early and with a personalized approach is essential. Although there is no specific information in the literature about the frequency of training, it seems that one-time counseling and monthly follow-ups are suggested for patients with insomnia. It is indicated that developing personalized sleep forms and evaluating sleep durations with actigraphy will be beneficial for assessing the effectiveness of education (46).

Pediatric Nurse's Role in Sleep Health

Pediatric nurses have essential roles and responsibilities in protecting, developing, and improving the health of children and their families. One of the areas where they actively use their roles as caregivers, consultants, educators, advocates, comfort providers, and comforters (48) is the protection and improvement of children's sleep health. Nurses have a lot of responsibility for sleep management. They monitor the sleep behaviors of healthy and unhealthy children with health problems, diagnose children's sleep disorders, provide training for adolescents, support families and teachers about sleep hygiene practices, provide guidance, evaluate the sleep practices processes, and give feedback (49).

The literature shows model-based sleep hygiene education studies for healthy children and those with health problems. These studies were conducted by pediatric nurses (50). When the literature is examined, nurses mostly participated in sleep education interventions for children with health problems and their families in sleep education research (51). A pediatric nurse gave sleep education to the parents of a group of school-age children with neurodevelopmental disorders, and the results were evaluated. As a result of the training, insomnia problems decreased, and sleep durations increased on weekdays and weekends (42). In addition, pediatric nurses have essential responsibilities in managing the treatment and rehabilitation processes of those who need special care in line with the identified problems and determined nursing diagnoses (49).

CONCLUSION

In conclusion, the health of adolescents must be protected, developed, and promoted holistically to help them live a healthy and quality life, and build their lives on solid foundations. To achieve the desired level of sleep health, which affects the individual significantly in bio-psycho-social and cultural terms, essential responsibilities fall on parents, caregivers, teachers, and nurses, who are the primary health leaders of the society. Pediatric nurses working with healthy and sick children take an active role in sleep education to improve the sleep health of adolescents. When national and international literature on this subject was analyzed, it was seen that interventions aimed at improving the sleep health of adolescents, especially those without any diagnosed health problems, were insufficient. To protect and improve the sleep health of adolescents who are a part of society, it is suggested to increase research involving sleep health practices of nurses, who are essential health spokespersons.

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REFERENCES

1. Adolescent Health, World Health Organization. Available from: URL: https://www.who.int/health-topics/adolescent-health#tab=tab_1. (07.05.2023).
2. Parlaz EA, Tekgül N, Karademirci E, Öngel K. Adolescence period: physical growth, psychological and social development process. Turkish Family Physician 2012; 3(2): 10-6.
3. Uncu B, Doğan E, Duman R. Common health risks and problems in adolescent period. Sakarya University Journal of Holistic Health 2023; 6(2): 338-52. doi: 10.54803/sauhsd.1215788
4. An introduction to the importance of sleep in children and how to help them sleep better. Available from: URL: https://www.sleepfoundation.org/children-and-sleep.
5. Paruthi S, Brooks LJ, D'Ambrosio C, Hall WA, Kotagal S, Lloyd RM, et al. Recommended amount of sleep for pediatric populations: A consensus statement of the American Academy of Sleep Medicine. J Clin Sleep Med 2016; 12(11): 1549-61. doi: 10.5664/jcsm.5866.
6. Centers for Disease Control and Prevention (CDC). Sleep in middle and high school students (page last reviewed: September 10, 2020): 24/7. Available from: URL: https://www.cdc.gov/healthyschools/features/students-sleep.htm#:~:text=The%20American%20Academy%20of%20Sleep,10%20hours%20per%2024%20hours. (08.05.2023).
7. Teens and sleep, an overview of why teens face unique sleep challenges and tips to help them sleep better. Available from: URL: https://www.sleepfoundation.org/teens-and-sleep. (08.05.2023).
8. Galan-Lopez P, Dominguez R, Gisladottir T, Sanchez-Oliver AJ, Pihu M, Ries F, et al. Sleep quality and duration in European adolescents (the adoleshealth study): A cross-sectional, quantitative study. Children (Basel) 2021; 8(3):188-201. doi: 10.3390/children8030188.
9. Hirshkowitz M, Whiton K, Albert SM, Alessi C, Bruni O, DonCarlos L, et al. National Sleep Foundation's updated sleep duration recommendations: Final report. Sleep Health 2015;1(4): 233-43. doi: 10.1016/j.sleh.2015.10.004.
10. Haylı ÇM, Demir Kösem D. Evaluation of sleep and sleep habits in adolescents. Journal of Turkish Sleep Medicine 2023; 10: 9-16. doi: 10.4274/jtsm.galenos.2022.70783.
11. Yip T, Wang Y, Xie M, Ip PS, Fowle J, Buckhalt J. School start times, sleep, and youth outcomes: A meta-analysis. Pediatrics 2022;149(6): e2021054068. doi: 10.1542/peds.2021-054068.

12. Borghese MM, Tremblay MS, Katzmarzyk PT, Tudor-Locke C, Schuna JM, Leduc G, et al. Mediating role of television time, diet patterns, physical activity, and sleep duration in the association between television in the bedroom and adiposity in 10-year-old children. Int J Behav Nutr Phys Act 2015; 12:60-70. doi: 10.1186/s12966-015-0221-5.
13. Bruni O, Sette S, Fontanesi L, Baiocco R, Laghi F, Baumgartner E. Technology use and sleep quality in preadolescence and adolescence. J Clin Sleep Med 2015; 11(12): 1433-41. doi: 10.5664/jcsm.5282.
14. Wahnschaffe A, Haedel S, Rodenbeck A, Stoll C, Rudolph H, Kozakov R, et al. Out of the lab and into the bathroom: evening short-term exposure to conventional light suppresses melatonin and increases alertness perception. Int J Mol Sci 2013; 14(2): 2573-89. doi: 10.3390/ijms14022573.
15. Rolling J, Rabot J, Schroder CM. Melatonin treatment for pediatric patients with ınsomnia: Is there a place for it? Nat Sci Sleep 2022; 14: 1927-44. doi: 10.2147/NSS.S340944.
16. Lynch MK, Elliott LC, Avis KT, Schwebel DC, Goodin BR. Quality of life in youth with obstructive sleep apnea syndrome (osas) treated with continuous positive airway pressure (CPAP) therapy. Behav Sleep Med 2019; 17(3): 238-45. doi: 10.1080/15402002.2017.1326918.
17. DelRosso LM, Mogavero MP, Baroni A, Bruni O, Ferri R. Restless legs syndrome in children and adolescents. Child Adolesc Psychiatr Clin N Am 2021; 30(1): 143-57. doi: 10.1016/j.chc.2020.08.010.
18. Inocente CO, Gustin MP, Lavault S, Guignard-Perret A, Raoux A, Christol N, et al. Quality of life in children with narcolepsy. CNS Neurosci Ther 2014; 20(8): 763-71. doi: 10.1111/cns.12291.
19. Baroni A, Bruzzese JM, Di Bartolo CA, Ciarleglio A, Shatkin JP. Impact of a sleep course on sleep, mood, and anxiety symptoms in college students: A pilot study. J Am Coll Health 2018; 66(1): 41-50. doi: 10.1080/07448481.2017.1369091.
20. Gupta P, Sagar R, Mehta M. Subjective sleep problems and sleep hygiene among adolescents having depression: A case-control study. Asian J Psychiatr 2019; 44: 150-5. doi: 10.1016/j.ajp.2019.07.034.
21. Kronk R, Kim I, Nolfi D. Sleep in children with neurodevelopmental disabilities during COVID-19: An integrative review. J Pediatr Health Care 2023; 37(2): 153-66. doi: 10.1016/j.pedhc.2022.10.001.
22. Sleep problems in children, American Academy of Pediatrics. Pediatric Patient Education 2022. Available from: URL: https://publications.aap.org/patiented/article abstract/doi/10.1542/peo_document200/80112/Sleep-Problems-in-Children?redirectedFrom=fulltext. (07.05.2023).
23. Feliciano EMC, Quante M, Rifas-Shiman SL, Redline S, Oken E, Taveras EM. Objective sleep characteristics and cardiometabolic health in young adolescent. Pediatrics 2018; 142(1): e20174085. doi: 10.1542/peds.2017-4085.
24. McMakin DL, Dahl RE, Buysse DJ, Cousins JC, Forbes EE, Silk JS, et al. The impact of experimental sleep restriction on affective functioning in social and nonsocial contexts among adolescents. J Child Psychol Psychiatry 2016; 57(9): 1027-37. doi: 10.1111/jcpp.12568.
25. Bedir Y, Gündoğdu F, Şişman FN, Ergün A. Adölesanlarda uyku kalitesi ve duygu-davranış sorunları ilişkisi. J Turk Sleep Med 2020; 7(1): 17-23. doi: 10.4274/jtsm.galenos.2020.46220.
26. Roberts RE, Duong HT. The prospective association between sleep deprivation and depression among adolescents. Sleep 2014; 37(2): 239-44. doi: 10.5665/sleep.3388.
27. Wu R, Wang CY, Wang F, Wang YJ, Zhu H, Wang GH, et al. Association between sleep and suicidal ideation in Chinese undergraduate students. Int J Environ Res Public Health 2022;19(23): 154433-44. doi: 10.3390/ijerph192315433.
28. Alfonsi V, Scarpelli S, D'Atri A, Stella G, De Gennaro L. Later school start time: The impact of sleep on academic performance and health in the adolescent population. Int J Environ Res Public Health 2020;17(7): 2574-90. doi: 10.3390/ijerph17072574.
29. Wheaton AG, O'Malley Olsen E, Miller GF, Croft JB. Sleep duration and injury-related risk behaviors among high school students-United States, 2007-2013. MMWR Morb Mortal Wkly Rep 2016; 65(13): 337-41. doi: 10.15585/mmwr.mm6513a1.
30. Meldrum RC, Restivo E. The behavioral and health consequences of sleep deprivation among US high school students: relative deprivation matters. Prev Med 2014; 63: 24-8. doi 10.1016/j.ypmed.2014.03.006.
31. So HK, Chua GT, Yip KM, Tung KTS, Wong RS, Louie LHT, et al. Impact of COVID-19 pandemic on school-aged children's physical activity, screen time, and sleep in Hong Kong: A cross-sectional repeated measures study. Int J Environ Res Public Health 2022; 19(17): 10539. doi: 10.3390/ijerph191710539.
32. Pakpour AH, Fazeli S, Zeidi IM, Alimoradi Z, Georgsson M, Brostrom A, et al. Effectiveness of a mobile app-based educational intervention to treat internet gaming disorder among Iranian adolescents: study protocol for a randomized controlled trial. Trials 2022; 23(1): 229-42. doi: 10.1186/s13063-022-06131-0.
33. Blunden S, Rigney G. Lessons learned from sleep education in schools: A review of dos and don'ts. J Clin Sleep Med 2015; 11(6): 671-80. doi: 10.5664/jcsm.4782.
34. Kira G, Maddison R, Hull M, Blunden S, Olds T. Sleep education improves the sleep duration of adolescents: a randomized controlled pilot study. J Clin Sleep Med 2014; 10(7): 787-92. doi: 10.5664/jcsm.3874.
35. Rigney G, Blunden S, Maher C, Dollman J, Parvazian S, Matricciani L, et al. Can a school-based sleep education program improve sleep knowledge, hygiene, and behaviors using a randomized controlled trial? Sleep Med 2015;16(6):736-45. doi: 10.1016/j.sleep.2015.02.534.
36. Dewald-Kaufmann JF, Oort FJ, Meijer AM. The effects of sleep extension and sleep hygiene advice on sleep and depressive symptoms in adolescents: a randomized controlled trial. J Child Psychol Psychiatry 2014;55(3):273-83. doi: 10.1111/jcpp.12157.
37. Gruber R. School-based sleep education programs: A knowledge-to-action perspective regarding barriers, proposed solutions, and future directions. Sleep Med Rev 2017; 36:13-28. doi: 10.1016/j.smrv.2016.10.001.
38. Arora T, Taheri S. Is sleep education an effective tool for sleep improvement and minimizing metabolic disturbance and obesity in adolescents? Sleep Med Rev 2017; 36:3-12. doi: 10.1016/j.smrv.2016.08.004.

39. Tumakaka GYS, Agustini N, Nurhaeni N, Rustina Y. The effect of sleep hygiene education on sleep quality in children with type 1 diabetes mellitus: A preliminary study. Compr Child Adolesc Nurs 2019;42(sup1):189-96. doi: 10.1080/24694193.2019.1578440.
40. Illingworth G, Sharman R, Harvey CJ, Foster RG, Espie CA. The Teen sleep study: the effectiveness of a school-based sleep education program at improving early adolescent sleep. Sleep Med X 2020; 2:100011. doi: 10.1016/j.sleepx.2019.100011.
41. Rigney G, Watson A, Gazmararian J, Blunden S. Update on school-based sleep education programs: how far have we come and what has Australia contributed to the field? Sleep Med 2021; 80:134-57. doi: 10.1016/j.sleep.2021.01.061.
42. Bastida-Pozuelo MF, Sanchez-Ortuno MM, Meltzer LJ. Nurse-led brief sleep education intervention aimed at parents of school-aged children with neurodevelopmental and mental health disorders: Results from a pilot study. J Spec Pediatr Nurs 2018; 23(4): e12228. doi: 10.1111/jspn.12228.
43. Sutton CE, Huws JC, Burton CR. Sleep hygiene education and children with developmental disabilities: Findings from a co-design study. J Intellect Disabil 2020;24(4): 522-42. doi: 10.1177/1744629518818950.
44. İşsever O, Akçay Didişen N, Bal Yılmaz H. An important subject in child care: safe sleep and sleep education. İzmir Katip Çelebi University Faculty of Health Science Journal, 2021; 6(2):157-61.
45. Chung KF, Lee CT, Yeung WF, Chan MS, Chung EW, Lin WL. Sleep hygiene education as a treatment of insomnia: a systematic review and meta-analysis. Fam Pract 2018; 35(4): 365-75. doi: 10.1093/fampra/cmx122.
46. Irish LA, Kline CE, Gunn HE, Buysse DJ, Hall MH. The role of sleep hygiene in promoting public health: A review of empirical evidence. Sleep Med Rev 2015; 22: 23-36. doi: 10.1016/j.smrv.2014.10.001.
47. Mastering sleep hygiene: your path to quality sleep. Available from: URL: https://www.sleepfoundation.org/sleep-hygiene. (11.09.2023).
48. Çetinkaya B, Turan T, Ceylan SS, Bayar Şakın N. Determining implementation status of pediatric nurses' roles and functions. Pamukkale Medical Journal 2017; 10(2): 152-6. doi:10.5505/ptd.2017.15579.
49. Willgerodt MA, Kieckhefer GM. School nurses can address existing gaps in school-age sleep research. J Sch Nurs 2013;29(3):175-80. doi: 10.1177/1059840512463438
50. Topan A, Gözen D. Effect of model-based training by nurses on the promotion of sleep patterns among students in the middle school. Journal of Turkish Sleep Medicine 2020; 7(2): 96-104. doi: 10.4274/jtsm.galenos.2019.68077
51. Haylı ÇM, Aydın A. The effect of sleep hygiene education on sleep quality of children with intellectual disabilities and their mothers according to the health promotion model. Journal of Child 2023; 23(3): 99-107. doi: 10.26650/jchild.2023.1332281

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Self-Efficacy in Nursing Students: Traditional Review

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ABSTRACT

Self-efficacy is the belief in achieving a task/performance that affects all periods of the lives of individuals and varies according to the individual, time, and performance, depending on many internal factors such as family/social environment, educational environment, and experience. Academic self-efficacy is the belief that academic tasks will be completed. Self-efficacy is closely related to problem-solving skills and academic achievement. The development of nursing students' self-efficacy will provide positive contributions to their academic and post-graduate professional lives. This review examines self-efficacy, academic- self-efficacy concepts, related factors, and studies conducted on nursing students' self-efficacy. It is intended to guide the efforts to enhance nursing students' self-efficacy.
Keywords: Academic self-efficacy, nursing education, student, self-efficacy

INTRODUCTION

Nursing education is an applied education that includes complex knowledge and skills. Students encounter various problems during this experience. Students are expected to develop solutions to these problems and show academic success. Students' problem-solving skills and academic success are related to self-efficacy belief (1). Self-efficacy (SE) affects individuals' effort, resistance, and stability (2). SE shows its effect in all areas of an individual's life. Individuals with high SE have high personal resilience (3,4) and emotional intelligence, whereas individuals with low SE are more emotionally unstable (3). SE is an essential factor for nursing students' success in their professional lives and affects their success in their academic lives. Academic self-efficacy (ASE), a type of self-efficacy, is the learner's belief in himself/herself in achieving educational goals (4). It is observed that nursing students with low ASE have more malpractice tendencies (5), whereas students with high self-efficacy have high professional attitudes (6).

Undergraduate nursing education aims to train nurses to provide safe and quality patient care. Since SE and ASE have multidimensional effects on nursing student's educational and professional lives, it is essential to understand the concepts of SE, ASE, and related factors. When the nursing literature is examined, although there are many research articles on SE and ASE, there is no review study on this subject. This review article examined the concepts of SE and ASE, SE in nursing students, and variables associated with ASE. In this direction, the review aims to guide nurse educators in their attempts to increase the SE and ASE of nursing students. As a result of these initiatives, it is thought that the SE and ASE levels of nursing students will increase, contributing positively to the quality of patient care. It will contribute to quality patient care, academic success, and general nursing performance.

Self –Efficacy

Self-efficacy, as defined by Social Cognitive Theory, is a person's subjective assessment of their own performance (2). This is the individual's perception of what he/she can do with what he/she has rather than his/her skills, knowledge, and physical and psychological characteristics. SE belief affects how individuals think, feel, behave, and motivate themselves. These effects are

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seen through mental, emotional, and motivational aspects, and choices. Individuals with low SE are slow to make efforts in the face of difficulties and give up easily. When faced with complex tasks, they focus on their shortcomings, the obstacles that may come their way, and the possible negative consequences. They attribute their inadequate performance to a lack of ability rather than effort. After an unsuccessful performance, gaining the belief of competence takes a long time. They are prone to depression and stress. On the other hand, an individual with high SE does not consider complex tasks as a threat. He/she attributes performance failure not to lack of ability but to insufficient effort, knowledge, and skills. High SE individuals quickly regain their feelings of competence after failure (7). However, it should be remembered that high SE is not the only factor for performance success; knowledge and skills are also necessary (8). SE perception is related to four sources:

1. Previous success experience: This is the source with the highest impact because it is based on the experiences of the individual. As the individual becomes successful, his/her SE increases, while unsuccessful performances may decrease SE (7).

2. Experiences of others: These are based on the person's experiences modeled by an individual. It affects the observer indirectly. When a person sees that a model, whom he/she thinks is similar to himself/herself, completes a similar task, his/her belief that he/she can do the same increases. For example, seeing a peer perform makes the individual feel he/she can do it too. However, when the model cannot be chosen correctly (when the model is more skilled), the SE of the individual may be negatively affected (8).

3. Verbal support from others (social persuasion): Depending on the person who makes the social persuasion and the persuasion content, the individual's SE increases or decreases. Support of the individual can be verbal or non-verbal. The person who provides this support to the individual may be an educator, peer, parent, or someone the individual considers important (9).

4. Physical and emotional state: One way to influence the perception of SE is to reduce the stress and anxiety of the individual and to change his/her emotional and/or physical reactions. Changing the individual's thoughts about how he/she perceives his/her performance also positively affects SE (7,8,9).

SE belief starts at birth and changes and develops throughout life. It is individual, multidimensional, and varies according to the field. A person may have different levels of SE for different tasks, or different SE can be seen between two people for the same task (10). Sachitra and Bandara (2017) evaluated the SE level of students in terms of various performances and found that although students showed low SE in activities such as having a study plan, asking questions, taking part in academic discussions, and asking for help from the educator, they were more competent in subjects such as getting help from friends and finishing the undergraduate program on time (11). Wilson et al. (2007) reported that SE is related to career choice, and women have low SE in career choice (12). Individuals are expected to fulfil their duties on time in all areas of their lives, especially academically and professionally. Time management is the demonstration of behaviors that ensure the correct use of time for an activity with a particular purpose. It is seen that students with high SE are better at time management (13).

In addition to the SE of the student, the SE level of the educator is also an essential factor in learning. Creating a suitable learning environment is related to the educator's instructional SE. Educators with low instructional SE prefer more external encouragement and punishment and less academic activity for the learning process. They also give feedback by associating unsuccessful performance with their students. On the other hand, the educator with high instructional SE focuses on students' intrinsic motivations, prefers more academic activities, and gives positive feedback more frequently (7).

Academic Self-Efficacy

ASE, a type of self-efficacy, is an individual's self-confidence and belief that he/she can accomplish an academic task (14-16). Studies emphasize that ASE is also essential for academic success (7,14,16). It is observed that students who perceive themselves as being academically successful have higher levels of ASE (17-19). ASE is also closely related to decision-making mechanisms. Urgancı and Gürgan (2019) stated in their study that individuals with high ASE have better decision-making skills and less personal indecision (20). In the study conducted by Seçer et al. (2022), it is stated that ASE is positively correlated with careful decision-making. However, as the level of ASE increases, the behaviors of hesitating to make decisions, making decisions in a hurry, and postponing decision-making decreases (1).

Self-efficacy and academic self-efficacy in nursing education

Nursing education requires intensive and complex knowledge acquisition, clinical practice, and close interaction with healthcare professionals and patients/relatives. (21). In nursing education, students are in the clinical environment for about half their education. Students are exposed to many stressors during this training, especially in the clinical environment (22). Factors such as motivation, SE, and stress affect the clinical success of the student (16).

SE and ASE levels of nursing students have been evaluated in various studies. In the study by Baran et al. (2020), the SE level of nursing students was found to be moderate (23), and in the studies conducted by Açıksöz et al. (2016) and Karabacak et al. (2013), it was found to be high (10,24). In other studies, the ASE level of nursing students was average or above (25,26), below average (5,19,27), and medium and high (6,28).

Students with higher SE levels are more resilient to learning difficulties, high stress, and burnout (29). Students with low SE have lower clinical motivation and tend to avoid new learning for fear of making mistakes (30). As the SE levels of nursing students who have not had clinical experience increase, their anxiety about clinical practice decreases (24).

Additionally, negative psychomotor skill experience, especially in the clinical environment, may cause a decrease in the student's SE. Looking at the studies examining the relationship between SE and psychomotor skill success in the nursing literature, Karabacak et al. (2013) found that the SE level of students did not change before and after administering intra-muscular (IM) injections (10). The results are similar to the study by Baran et al. (2020) on intravenous catheter insertion skills (23).

Concepts related to self-efficacy and academic self-efficacy

Various studies have revealed how SE and ASE are affected by socio-demographic variables. The analyzed variables are as follows:

Gender: Many studies have examined the relationship between gender and ASE. According to the meta-analysis study by Huang (2013), women have higher ASE in language skills, and men have higher ASE in mathematics, and computer and social sciences (31). In some studies, it is seen that there is no difference between the ASE level of women and men (3,5,17,30). However, women in some studies (4,11,27,32) and men in some studies (17,30) have higher levels of ASE. In the study by Bulfone et al. (2021), the ASE levels of female students increased over time, whereas male students decreased over time (33). Based on these results, it is impossible to make a definite conclusion about the relationship between gender and ASE.

Age: As experience increases, academic self-efficacy can be expected to increase. The study by Özgül and Diker (2017) stated that the level of ASE was higher between the ages of 32-37 (34). A similar result was observed in the study conducted by Bulfone et al. (2021) with nursing students (33). In contrast, Cuartero and Tur (2021) suggest that age is not a significant variable in their study (3). Bulfone et al. (2021) state that age and gender variables affect ASE by 7%. This suggests that the effect of the age variable on ASE may vary according to individuals and groups (33).

Grade: According to Bandura (1993), SE increases with increasing experience (7). Therefore, 4th graders can be expected to have higher levels of ASE. The studies by Yorulmaz (2019) and Sachitra and Bandara (2017) support this result (11,35). On the contrary, there are also studies in which the ASE of first graders is high (5,28). There are also studies in which the level of ASE did not change depending on the grade attended (15,25,27). These results may be related to the different sample groups in the studies.

Parent's education: In Yorulmaz's (2019) study, it was observed that students whose fathers graduated from secondary school had a higher level of ASE (35), while in Urgancı and Gürgan's (2019) study, the education status of the father did not affect the level of ASE (20). However, in the same study, it was observed that students whose mothers had undergraduate and higher education had the highest level of ASE. There is a need for more studies examining the effect of parental education status on the student's ASE level.

Personality characteristics: In the study by Baykal and Yildirim (2020), it was reported that those with neurotic and extraverted personality traits had lower levels of ASE (5).

Social support: Social support enables the student to control the stress in the educational environment, to be more flexible, and to increase SE. In the studies by El-Sayed et al. (2021) and Warshawski (2022), regression analysis indicated that perceived social support is one of the variables affecting the level of ASE (4,28).

Preference status of the nursing program: It is seen that preference for the nursing program (i.e., willingly or unwillingly being placed in the program) is not related to the ASE level of nursing students (27,33).

Additionally, Bulfone et al. (2021) evaluated the effect of many social variables on ASE with advanced analysis and found that being employed, being married/single, and having children did not affect ASE, but the ASE of students with different high school backgrounds also differed (33). More studies are needed to examine the relationship between personal characteristic variables and ASE.

When the literature is examined, it is seen that the relationship between academic motivation and SE and ASE in nursing students is frequently examined. Motivation starts in the mind. The individual thinks and directs his/her actions and calculates the possible consequences. SE beliefs play an essential role in these mental processes (7). In the studies by Sarıkoç and Öksüz (2017) and Kaplan and Güngörmüş (2022), it was stated that academic motivation increased as the level of ASE increased (18,25). A similar result was observed in the study by Vahedian-Azimi and Moayed (2021), conducted with graduate students studying postgraduate education in nursing (36). In another study, El-Sayed et al. (2021) revealed by regression analysis that academic motivation is one of the variables affecting ASE (28). According to these results, the academic motivation of students with high ASE levels is expected to be high.

The relationship between ASE and academic achievement has been frequently examined in studies. In the systematic review conducted by Honicke and Broadbent (2016), it was reported that there was a moderate relationship between ASE and academic achievement (14), and in the meta-analysis conducted by Richardson et al. (2012), it was stated that ASE belief was as effective as 9% on the average academic achievement score (37). It is seen that ASE is an essential determinant of many academic performances. It has been observed that students with high levels of ASE cope with academic problems effectively (35,38) and that students experience more burnout as the level of ASE decreases (6). In addition to these results, students with high ASE make more effort when performing academic tasks and are more planned in their work (35). In studies investigating the relationship between ASE and academic procrastination, Kaplan and Güngörmüş (2022) stated that students with high

AES did not perform academic task procrastination behavior (18), and Atılgan and Güngörmüş (2018) stated that this did not make a difference (15). To reveal the relationship between ASE and academic procrastination behavior, it would be helpful to conduct studies in which students' ASE levels are monitored in long-term studies.

ASE is closely related to cognitive skills. In one study, Karaoğlan-Yılmaz et al. (2019) revealed that students with high ASE also had improved critical thinking and metacognitive thinking skills (39). In studies examining the relationship between students' post-graduation career goals and academic self-efficacy, it is seen that the ASE levels of students who plan an academic career after graduation are higher (17,32).

When the literature is examined, a limited number of studies examining the effect of various training methods on the level of ASE are found. In the single-group experimental study by Ökten and Seferoğlu (2022), it was observed that the ASE levels of nursing students increased significantly after the use of concept maps (38), and in the study conducted by Roshangar et al. (2020) with the experimental and control groups using the same education method, it was stated that the ASE level of the experimental group increased as a result of the use of concept maps, but there was no difference between the groups in terms of ASE level (40). Self-assessment and peer assessment, another approach, are related to self-efficacy since they are based on the individual's performance. Since SE belief is related to self-monitoring and evaluation, it affects learning performance (10). In the meta-analysis study by Panadero et al. (2017), self-assessment has positive effects on students' SE and ability to regulate their learning (41), and in the meta-analysis study by Sitzmann et al. (2010), the relationship between SE and self-assessment is moderate (42). In addition, peer-assisted learning (26,43) and peer assessment are also reported to increase students' ASE levels (26) significantly.

There are a limited number of studies in which the ASE levels of nursing students are monitored long-term. In the study conducted by Bulfone et al. (2021), when the ASE levels of nursing students were monitored for three years in terms of various variables, it was observed that the ASE of students did not change over time (33). In contrast, El-Sayed et al. (2021) found that the ASE level of nursing students decreased significantly from the 1st to the 4th grade (28). Nursing students experience many positive and negative learning experiences in classroom, clinical, and laboratory environments throughout their nursing education. The fact that the ASE level of the students did not change or decrease in the long-term follow-up suggests that the learning environment does not contribute to SE or cause a decrease in SA and that students may be in a learning environment where they lack positive experience or do not receive enough support during negative experiences. It is thought that it would be helpful to examine the relationship between more variables related to the learning environment and ASE in future studies.

CONCLUSION AND SUGGESTIONS

There is a need for more interventions to increase students' SE and ASE levels and more experimental studies to reveal the results of the interventions. In addition, it is thought that it would be helpful to use advanced analysis methods to determine which factors are related to SE and ASE.

The learning environment affects students' SE level. Since most of the studies are cross-sectional, they may not be sufficient to determine the variables related to the learning environment. For this reason, increasing long-term follow-up studies with different sample groups will be helpful in terms of better revealing the variables that cause this effect. The effect of students' own experiences and the experiences of others on SE is known. Because of this, it is believed that employing peer-supported learning, cooperative learning, and peer mentoring techniques will boost SE. In addition, portfolio and skill report cards can be used to monitor the student's development. It is recommended that self-assessment and peer assessment methods be expanded and that the contribution of self-assessment and peer assessment to SE and ASE in different performances/tasks be investigated. It's believed that utilizing objective assessment instruments (such as checklists, rubrics, etc.) for both peer and self assessment will lessen anxiety related to conducting assessments and producing objective results. Given the importance of verbal persuasion in raising SE, students may be able to track their progress with immediate, one-on-one feedback from teachers. Assisting the educator in establishing precise, logical, and achievable objectives about the pupil's work could successfully shield the pupil from potentially bad experiences. Since there are no studies on the SE level about students' caregiving behavior and skills, conducting more studies in this field may be useful.

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REFERENCES

1. Seçer E, Korucu TŞ, Uzunlar, H, Dinç G, Özer D. Investigating the relationship between academic self-efficacy levels and problem solving skills of university students studying in the field of health and self-esteem and decision-making styles in decision-making. Hacettepe University Faculty of Health Sciences Journal, 2022; 9(1): 223-35. doi: 10.21020/husbfd. 996260
2. Bandura A. Self-efficacy mechanism in human agency. American Psychologist 1982; 37(2): 122-47.
3. Cuartero N, Tur AM. Emotional intelligence, resilience and personality traits neuroticism and extraversion: predictive capacity in perceived academic efficacy. Nurse Education Today 2021;102: 104933. doi: 10.1016/j.nedt.2021.104933.

4. Warshawski S. (2022) Academic self-efficacy, resilience and social support among first-year Israeli nursing students learning in online environments during COVID-19 pandemic. Nurse Education Today 2022; 110: 105267. doi: 10.1016/j.nedt.2022.105267
5. Baykal D, Yildirim D. Investigating the effect of personality traits and academic self-efficacies on malpractice tendencies in health college students. Nigerian Journal of Clinical Practice 2020; 23: 1721-27. doi: 10.4103/njcp.njcp_677_19.
6. Zhou Z, Liu H, Zhang D, Wei H, Zhang M, Huang A. Mediating effects of academic self-efficacy and smartphone addiction on the relationship between professional attitude and academic burnout in nursing students: A cross-sectional study. Nurse Education Today 2022; 116: 105471. doi: 10.1016/j.nedt.2022.105471
7. Bandura A. Perceived self-efficacy in cognitive development and functioning. Educational Psychologist 1993; 28(2): 117–48.
8. Schunk DH. Self-efficacy, motivation, and performance. Journal of Applied Sport Psychology, 1995;7(2): 112-37.
9. Bouih A, Nadif B, Benattabou, D. Assessing the effect of general self-efficacy on academic achievement using path analysis: A preliminary study. Journal of English Language Teaching and Applied Linguistics 2021; (3): 18–24. doi: 10.32996/jeltal.2021.3.4.3
10. Karabacak Ü, Serbest Ş, Kan Öntürk Z, Eti Aslan F, Olgun N. Relationship between student nurses' self-efficacy and psychomotor skills competence. International Journal of Nursing Practice 2013; 19(2): 124-30. doi: 10.1111/ijn.12051
11. Sachitra V, Bandara U. Measuring the academic self-efficacy of undergraduates: The role of gender and academic year experience. International Journal of Educational and Pedagogical Sciences2017; 11(11): 2608-13.
12. Wilson F, Kickul J, Marlino D. Gender, entrepreneurial self–efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. Entrepreneurship Theory and Practice 2007; 31(3): 387-406. doi: 10.1111/j.1540-6520.2007.00179.x
13. Ersoy NC, Peker M. The role of academic integration and time management in the relationship between self-efficacy and GPA. Turkish Journal of Psychology 2020; 35(85): 85-96. doi: 10.31828/tpd1300443320190205m000017
14. Honicke T, Broadbent J. The influence of academic self-efficacy on academic performance: A systematic review. Educational Research Review 2016; 17: 63-84. doi: 10.1016/j.edurev.2015.11.002
15. Atılgan M, Güngörmüş Z. Examining the relationship between academic procrastination behaviours, academic self-efficacy and academic motivation of day and night education students. Atlas Journal 2018; 4(15): 1771-83.
16. Bulfone G, Iovino P, Mazzotta R, Sebastian M, Macale L, Sili A, ... Alvaro R. (2022). Self-efficacy, burnout and academic success in nursing students: A counterfactual mediation analysis. Journal of Advanced Nursing 2022; 78(10): 3217-24. doi: 10.1111/jan.1523
17. Özvurmaz S, Mandıracıoğlu A. Evaluation of students' perceptions of the clinical education environment and academic self-efficacy: a cross-sectional study. Medical Education World 2018; (53): 51-9. doi: 10.25282/ted.433398
18. Kaplan M. Güngörmüş Z. Academic procrastination behavior in nursing students: the role of academic motivation, academic self-efficacy, and academic attributional style. Anatolian Journal of Health Research 2022; 3(2): 53-9. doi: 10.29228/anatoljhr.57730
19. Uzdil N, Günaydın Y. The effect of sense of coherence on mindful attention awareness and academic self-efficacy in nursing students. Nurse Education in Practice 2022; 64: 103429. doi: 10.1016/j.nepr.2022.103429
20. Urgancı S, Gürgan U. Investigation of the relationship between decision-making skills and academic self-efficacy in young people according to some variables. Eurasian Journal of Social and Economic Research 2019; 6(6): 243-62.
21. Aloufi MA., Jarden RJ, Gerdtz MF, & Kapp S. Reducing stress, anxiety and depression in undergraduate nursing students: Systematic review. Nurse Education Today 2021; 102: 104877. doi:10.1016/j.nedt.2021.104877
22. Ngoc NB, & Tuan NV. Stress among nursing students in Vietnam: Prevalence and associated factors. International Nursing Review 2023;1-7. doi:10.1111/inr.12831
23. Baran L, Güneş Ü, Khorshid L. Investigation of the relationship between self-efficacy levels and psychomotor skills of nursing students. Life Sciences,2020; 15(4): 55-63. doi: 10.12739/NWSA.2020.15.4.4B0036
24. Açıksöz S, Uzun Ş, Arslan F. nvestigation of the relationship between self-efficacy perception and anxiety and stress related to clinical practice in nursing students. Gulhane Medical Journal 2016; 58(1): 129-35. doi: 10.5455/gulhane. 169643
25. Sarıkoc G, Oksuz E. Academic motivations and academic self-efficacy of nursing students. Journal of Clinical and Analytical Medicine 2017;18(69): 47-51. doi: 10.4328/JCAM.4654
26. Fertelli TK., Tuncay FO. The effect of peer assessment method on the perception of nursing diagnosis and academic self-efficacy in nursing process teaching. International Journal of Caring Sciences 2020; 13(2): 812-9.
27. Ülgen H, Köksoy S. Effect of academic self-sufficiency on vocational motivation levels of nursing students. Current Perspectives on Health Sciences 2022; 3(3); 109-14
28. El-Sayed MM., Mousa MAEG, Abd-Elhamid, EAEF. Academic motivation, academic self-efficacy and perceived social support among undergraduate nursing students, Alexandria University, Egypt. Assiut Scientific Nursing Journal 2021; 9(24.0): 76-86.
29. Bulfone G, Fida R, Ghezzi V, Macale L, Sili A, Alvaro R, & Palese A. Nursing student self-efficacy in psychomotor skills: Findings from a validation, longitudinal, and correlational study. Nurse Educator 2016; 41(6): E1-E6. doi: 10.1097/NNE.0000000000000285
30. Zengin N, Pınar R. Akinci AC, Yildiz H. Psychometric properties of the self-efficacy for clinical evaluation scale in Turkish nursing students. Journal of Clinical Nursing 2014; 23(7-8): 976-84. doi: 10.1111/jocn.12257
31. Huang C. Gender differences in academic self-efficacy: A meta-analysis. European Journal of Psychology of Education 2013;28: 1-35. doi: 10.1007/s10212-011-0097-y
32. Seki H, Ayhan D, Söyünmez S. The relationship between academic competences and meaning of life of final year students of faculty of health sciences. Yasar University E-Journal 2021;16(61): 264-77.

33. Bulfone G, Badolamenti S, Biagioli V, Maurici M, Macale L, Sili A, ... Alvaro R. Nursing students' academic self-efficacy: A longitudinal analysis of academic self-efficacy changes and predictive variables over time. Journal of Advanced Nursing 2021;77(5): 2353-62. doi: 10.1111/jan.14771
34. Özgül F, Diker G. Investigation of academic self-efficacy and motivation of postgraduate education candidates (Cumhuriyet University case). Journal of Human Sciences 2017;14(2): 2129-39. doi: 10.14687/jhs.v14i2.4411
35. Yorulmaz M. Academic self-efficacy research in health management students. Business & Management Studies: An International Journal 2019; 7(1): 172-89. doi: 10.15295/bmij.v7i1.1056
36. Vahedian-Azimi A, Moayed MS. The relationship between self-esteem and academic motivation among postgraduate nursing students: A cross-sectional study. International Journal of Behavioral Sciences 2021;15(1): 113-19. doi: 10.30491/IJBS.2021.262883.1447
37. Richardson M, Abraham C, Bond R. Psychological correlates of university students' academic performance: a systematic review and meta-analysis. Psychological Bulletin 2012; 138(2): 353.
38. Ökten Ç, Seferoğlu EG. The effect of concept map use in nursing education on creative thinking tendencies and academic self-efficacy levels. Journal of Health Sciences 2022; 31(2): 229-34. doi: 10.34108/eujhs.96481
39. Karaoğlan-Yılmaz FG., Yılmaz R, Üstün AB, Keser H. Examination of critical thinking standards and academic self-efficacy of teacher candidates as a predictor of metacognitive thinking skills through structural equation modelling. Journal of Theoretical Educational Science 2019;12(4): 1239-56. doi: 10.30831/akukeg.467435
40. Roshangar F, Azar EF, Sarbakhsh P, Azarmi R. The effect of case-based learning with or without conceptual mapping method on critical thinking and academic self-efficacy of nursing students. Journal of Biochemical Technology 2020;11(1): 37-44
41. Panadero E, Jonsson A, Botella J. Effects of self-assessment on self-regulated learning and self-efficacy: Four meta-analyses. Educational Research Review 2017; (22): 74-98. doi: 10.1016/j.edurev.2017.08.004.
42. Sitzmann T, Ely K, Brown KG, Bauer, KN. Self-assessment of knowledge: A cognitive learning or affective measure? Academy of Management Learning & Education 2010;9(2): 169-91.
43. Pålsson Y, Mårtensson G, Swenne CL, Ädel E, Engström M. A peer learning intervention for nursing students in clinical practice education: A quasi-experimental study. Nurse Education Today 2017; (51): 81-87. doi: 10.1016/j.nedt.2017.01.011

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An approval of research protocols by the Ethics Committee in accordance with international standards mentioned above is required for experimental, clinical, and drug studies and for some case reports. If required, ethics committee reports or an equivalent official document will be requested from the authors. For manuscripts concerning experimental research on humans, a statement should be included that shows that written informed consent of patients and volunteers was obtained following a detailed explanation of the procedures that they may undergo. For studies carried out on animals, the measures taken to prevent pain and suffering of the animals should be stated clearly. Information on patient consent, the name of the ethics committee, and the ethics committee approval number should also be stated in the Materials and Methods section of the manuscript. It is the authors' responsibility to carefully protect the patients' anonymity. For photographs that may reveal the identity of the patients, signed releases of the patient or of their legal representative should be enclosed.

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The journal requires the authors and all individuals taking part in the evaluation process to disclose any existing or potential conflict of interest (such as financial ties, academic commitments, personal relationships, institutional affiliations) that could unduly influence one's responsibilities. To disclose potential conflicts of interest, the ICMJE Potential Conflict of Interest Disclosure Form should be filled in and submitted by authors as explained in the Author Form of the journal. Cases of a potential conflict of interest are resolved within the scope of COPE Conflict of Interest Flowcharts and ICMJE Conflict of Interest guidelines

Besides conflict of interest, all financial support received to carry out research must be declared while submitting the paper

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All the authors of a submitted manuscript must have direct scientific and academic contribution to the manuscript. The author(s) of the original research articles is defined as a person who is significantly involved in "conceptualization and design of the study", "collecting the data", "analyzing the data", "writing the manuscript", "reviewing the manuscript with a critical perspective" and "planning/conducting the study of the manuscript and/or revising it". Fund raising, data collection or supervision of the research group are not sufficient roles to be accepted as an author. The author(s) must meet all these criteria described above. The order of names in the author list of an article must be a co-decision and it must be indicated in the Copyright Agreement Form. The individuals who do not meet the authorship criteria but contributed to the study must take place in the acknowledgement section. Individuals providing technical support, assisting writing, providing a general support, providing material or financial support are examples to be indicated in acknowledgement section.

All authors must disclose all issues concerning financial relationship, conflict of interest, and competing interest that may potentially influence the results of the research or scientific judgment.

When an author discovers a significant error or inaccuracy in his/her own published paper, it is the author's obligation to promptly cooperate with the Editor to provide retractions or corrections of mistakes.

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Editor-in-Chief evaluates manuscripts for their scientific content without regard to ethnic origin, gender, sexual orientation, citizenship, religious belief or political philosophy of the authors. He/She provides a fair double-blind peer review of the submitted articles for publication and ensures that all the information related to submitted manuscripts is kept as confidential before publishing.

Editor-in-Chief is responsible for the contents and overall quality of the publication. He/She must publish errata pages or make corrections when needed.

Editor-in-Chief does not allow any conflicts of interest between the authors, editors and reviewers. Only he has the full authority to assign a reviewer and is responsible for final decision for publication of the manuscripts in the Journal.

Reviewers must have no conflict of interest with respect to the research, the authors and/or the research funders. Their judgments must be objective.

Reviewers must ensure that all the information related to submitted manuscripts is kept as confidential and must report to the editor if they are aware of copyright infringement and plagiarism on the author's side.

A reviewer who feels unqualified to review the topic of a manuscript or knows that its prompt review will be impossible should notify the editor and excuse himself from the review process.

The editor informs the reviewers that the manuscripts are confidential information and that this is a privileged interaction. The reviewers and editorial board cannot discuss the manuscripts with other persons. The anonymity of the referees must be ensured. In particular situations, the editor may share the review of one reviewer with other reviewers to clarify a particular point.

PEER REVIEW

Peer Review Policies

Only those manuscripts approved by its every individual author and that were not published before in or sent to another journal, are accepted for evaluation.

Submitted manuscripts that pass preliminary control are scanned for plagiarism using iThenticate software. After plagiarism check, the eligible ones are evaluated by editor-in-chief for their originality, methodology, the importance of the subject covered and compliance with the journal scope.

The editor hands over the papers matching the formal rules to at least two national/international referees for double-blind peer review evaluation and gives green light for publication upon modification by the authors in accordance with the referees' claims.

Responsibility for the Editor and Reviewers

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Editor-in-Chief evaluates manuscripts for their scientific content without regard to ethnic origin, gender, citizenship, religious belief or political philosophy of the authors and ensures a fair double-blind peer review of the selected manuscripts.

The selected manuscripts are sent to at least two national/international referees for evaluation and publication decision is given by Editor-in-Chief upon modification by the authors in accordance with the referees' claims.

Editor-in-Chief does not allow any conflicts of interest between the authors, editors and reviewers and is responsible for final decision for publication of the manuscripts in the Journal.

Reviewers' judgments must be objective. Reviewers' comments on the following aspects are expected while conducting the review.

- Does the manuscript contain new and significant information?
- Does the abstract clearly and accurately describe the content of the manuscript?
- Is the problem significant and concisely stated?
- Are the methods described comprehensively?
- Are the interpretations and consclusions justified by the results?
- Is adequate references made to other Works in the field?
- Is the language acceptable?

Reviewers must ensure that all the information related to submitted manuscripts is kept as confidential and must report to the editor if they are aware of copyright infringement and plagiarism on the author's side.

A reviewer who feels unqualified to review the topic of a manuscript or knows that its prompt review will be impossible should notify the editor and excuse himself from the review process.

The editor informs the reviewers that the manuscripts are confidential information and that this is a privileged interaction. The reviewers and editorial board cannot discuss the manuscripts with other persons. The anonymity of the referees is important.

Manuscript Organization and Submission

Manuscript is to be submitted online via https://dergipark.org.tr/en/pub/curare.

The manuscripts should be prepared in accordance with ICMJE-Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals Author(s) are required to prepare manuscripts in accordance with the CONSORT guidelines for randomized research studies, STROBE guidelines for observational original research studies, STARD guidelines for studies on diagnostic accuracy, PRISMA guidelines for systematic reviews and meta-analysis, ARRIVE guidelines for experimental animal studies, and TREND guidelines for non-randomized public behavior.

Publication language of the journal is English.

Manuscripts submitted to the journal will first go through a technical evaluation process where the editorial office staff will ensure that the manuscript has been prepared and submitted in accordance with the journal's guidelines. Submissions that do not conform to the journal's guidelines will be returned to the submitting author with technical correction requests.

Due to double-blind peer review, the main manuscript document must not include any author information.

Authors are required to submit the following together with the main manuscript document: Copyright Agreement Form, Author Form and Title Page.

Title page: A separate title page should be submitted with all submissions and this page should include:

- The full title of the manuscript as well as a short title (running head) of no more than 50 characters,
- Name(s), affiliations, highest academic degree(s) and ORCID ID(s) of the author(s),
- Grant information and detailed information on the other sources of support,
- Name, address, telephone (including the mobile phone number) and fax numbers, and email address of the corresponding author,
- Acknowledgment of the individuals who contributed to the preparation of the manuscript but who do not fulfill the authorship criteria.

Abstract: An English abstract should be submitted with all submissions except for Letters to the Editor. The abstract of Research Articles should be structured with subheadings (Objective, Materials and Methods, Results, and Conclusion). Abstracts of Case Reports and Reviews should be unstructured. Please check Table 1 below for word count specifications.

Keywords: Each submission must be accompanied by a minimum of 3 to a maximum of 6 keywords for subject indexing at the end of the abstract. The keywords should be listed in full without abbreviations. The keywords should be selected from the National Library of Medicine, Medical Subject Headings database (http://www.nlm.nih.gov/mesh/MBrowser.html).

Manuscript Submission Guide

Before beginning the online submission process please make sure you have the followings available:

- The category of the manuscript
- Confirming that "the paper is not under consideration for publication in another journal".
- Including disclosure of any commercial or financial involvement.
- Confirming that the references cited in the text and listed in the references section are in line with NLM.
- Confirming that last control for fluent English was done.
- Confirming that the statistical design of the research article is reviewed.
- Confirming that journal policies detailed on web page of the journal have been reviewed.
- Acknowledgement of the study "in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration in materials and methods section.
- Statement that informed consent was obtained after the procedure(s) had been fully explained in the materials and methods section. Indicating whether the institutional and national guide for the care and use of laboratory animals was followed as in "Guide for the Care and Use of Laboratory Animals".
- Copyright Agreement Form.
- Author Form
- Title page

Main Manuscript Document:

- The title of the manuscript
- Abstract in English (250 words). (Case report's abstract limit is 200 words)
- Key words: 3-6 words both in Turkish and in English
- Main article sections (Please see Manuscript Types section for word limits)
- References
- All tables
- The title, description or footnotes of all illustrations (figures)

Files to be sended separately:

- Copyright Agreement form
- Title page
- Author Form
- Main Manuscript Document
- All illustrations (figures) (including title, description, footnotes)

Manuscript Types

Research Articles: This is the most important type of article since it provides new information based on original research. The main text of original articles should be structured with Introduction, Material and Method, Results, Discussion, and Conclusion subheadings. Please check Table 1 for the limitations for Original Articles.

Statistical analysis to support conclusions is usually necessary. Statistical analyses must be conducted in accordance with international statistical reporting standards (Altman DG, Gore SM, Gardner MJ, Pocock SJ. Statistical guidelines for contributors to medical journals. Br Med J 1983: 7; 1489-93). Information on statistical analyses should be provided with a separate subheading under the Materials and Methods section and the statistical software that was used during the process must be specified.

Units should be prepared in accordance with the International System of Units (SI).

Editorial Comments: Editorial comments aim to provide a brief critical commentary by reviewers with expertise or with high reputation in the topic of the research article published in the journal. Authors are selected and invited by the journal to provide such comments. Abstract, Keywords, and Tables, Figures, Images, and other media are not included.

Review: Reviews prepared by authors who have extensive knowledge on a particular field and whose scientific background has been translated into a high volume of publications with a high citation potential are welcomed. These authors may even be invited by the journal. Reviews should describe, discuss, and evaluate the current level of knowledge of a topic in clinical practice and should guide future studies. The main text should contain Introduction, Clinical and Research Consequences, and Conclusion sections. Please check Table 1 for the limitations for Review Articles.

Case Reports: There is limited space for case reports in the journal and reports on rare cases or conditions that constitute challenges in diagnosis and treatment, those offering new therapies or revealing knowledge not included in the literature, and interesting and educative case reports are accepted for publication. The text should include Introduction, Case Presentation, Discussion, and Conclusion subheadings. Please check Table 1 for the limitations for Case Reports.

Letters to the Editor: This type of manuscript discusses important parts, overlooked aspects, or lacking parts of a previously published article. Articles on subjects within the scope of the journal that might attract the readers' attention, particularly educative cases, may also be submitted in the form of a "Letter to the Editor." Readers can also present their comments on the published manuscripts in the form of a "Letter to the Editor." Abstract, Keywords, and Tables, Figures, Images, and other media should not be included. The text should be unstructured. The manuscript that is being commented on must be properly cited within this manuscript.

Table 1. Limitations for each manuscript type

Type of manuscript	Word limit	Abstract word limit	Reference limit	Table limit	Figure limit
Research Article	4000	250 (Structured)	35	6	5 or total of 10 images
Review	5000	250	50	6	10 or total of 15 images
Case Report	1000	200	15	No tables	4 or total of 8 images
Letter to the Editor	400	No abstract	5	No tables	No media

Tables

Tables should be included in the main document, presented after the reference list, and they should be numbered consecutively in the order they are referred to within the main text. A descriptive title must be placed above the tables. Abbreviations used in the tables should be defined below the tables by footnotes (even if they are defined within the main text). Tables should be created using the "insert table" command of the word processing software and they should be arranged clearly to provide easy reading. Data presented in the tables should not be a repetition of the data presented within the main text but should be supporting the main text.

Figures and Figure Legends

Figures, graphics, and photographs should be submitted as separate files (in TIFF or JPEG format) through the submission system. The files should not be embedded in a Word document or the main document. When there are figure subunits, the subunits should not be merged to form a single image. Each subunit should be submitted separately through the submission system. Images should not be labeled (a, b, c, etc.) to indicate figure subunits. Thick and thin arrows, arrowheads, stars, asterisks, and

similar marks can be used on the images to support figure legends. Like the rest of the submission, the figures too should be blind. Any information within the images that may indicate an individual or institution should be blinded. The minimum resolution of each submitted figure should be 300 DPI. To prevent delays in the evaluation process, all submitted figures should be clear in resolution and large in size (minimum dimensions: 100 × 100 mm). Figure legends should be listed at the end of the main document.

All acronyms and abbreviations used in the manuscript should be defined at first use, both in the abstract and in the main text. The abbreviation should be provided in parentheses following the definition.

When a drug, product, hardware, or software program is mentioned within the main text, product information, including the name of the product, the producer of the product, and city and the country of the company (including the state if in USA), should be provided in parentheses in the following format: "Discovery St PET/CT scanner (General Electric, Milwaukee, WI, USA)"

All references, tables, and figures should be referred to within the main text, and they should be numbered consecutively in the order they are referred to within the main text.

Revisions

When submitting a revised version of a paper, the author must submit a detailed "Response to the reviewers" that states point by point how each issue raised by the reviewers has been covered and where it can be found (each reviewer's comment, followed by the author's reply and line numbers where the changes have been made) as well as an annotated copy of the main document.

Accepted manuscripts are copy-edited for grammar, punctuation, and format. Once the publication process of a manuscript is completed, it is published online on the journal's webpage as an ahead-of-print publication before it is included in its scheduled issue. A PDF proof of the accepted manuscript is sent to the corresponding author and their publication approval is requested within 2 days of their receipt of the proof.

References

The journal uses the NLM reference system. While citing publications, preference should be given to the latest, most up-to-date publications. If an ahead-of-print publication is cited, the DOI number should be provided. Authors are responsible for the accuracy of references. Journal titles should be abbreviated in accordance with the journal abbreviations in Index Medicus/ MEDLINE/PubMed. When there are six or fewer authors, all authors should be listed. If there are seven or more authors, the first six authors should be listed followed by "et al." In the main text of the manuscript, references should be cited using Arabic numbers in parentheses. The reference styles for different types of publications are presented in the following examples.

Journal Article: Blasco V, Colavolpe JC, Antonini F, Zieleskiewicz L, Nafati C, Albanèse J, et al. Long-termoutcome in kidneyrecipientsfromdonorstreatedwithhydroxyethylstarch 130/0.4 andhydroxyethylstarch 200/0.6. Br J Anaesth 2015;115(5):797-8.

Book Section: Suh KN, Keystone JS. Malaria and babesiosis. Gorbach SL, Barlett JG, Blacklow NR, editors. Infectious Diseases. Philadelphia: Lippincott Williams; 2004.p.2290-308.

Books with a Single Author: Sweetman SC. Martindale the Complete Drug Reference. 34th ed. London: Pharmaceutical Press; 2005.

Editor(s) as Author: Huizing EH, de Groot JAM, editors. Functional reconstructive nasal surgery. Stuttgart-New York: Thieme; 2003.

Conference Proceedings: Bengisson S. Sothemin BG. Enforcement of data protection, privacy and security in medical informatics. In: Lun KC, Degoulet P, Piemme TE, Rienhoff O, editors. MEDINFO 92. Proceedings of the 7th World Congress on Medical Informatics; 1992 Sept 6-10; Geneva, Switzerland. Amsterdam: North-Holland; 1992. pp.1561-5.

Scientific or Technical Report: Cusick M, Chew EY, Hoogwerf B, Agrón E, Wu L, Lindley A, et al. Early Treatment Diabetic Retinopathy Study Research Group. Risk factors for renal replacement therapy in the Early Treatment Diabetic Retinopathy Study (ETDRS), Early Treatment Diabetic Retinopathy Study KidneyInt: 2004. Report No: 26.

Thesis: Yılmaz B. Ankara Üniversitesindeki Öğrencilerin Beslenme Durumları, Fiziksel Aktivitelerive Beden Kitle İndeksleri Kan Lipidleri Arasındaki Ilişkiler. H.Ü. SağlıkBilimleriEnstitüsü, DoktoraTezi. 2007.

Manuscripts Accepted for Publication, Not Published Yet: Slots J. The microflora of black stain on human primary teeth. Scand J Dent Res. 1974.

Epub Ahead of Print Articles: Cai L, Yeh BM, Westphalen AC, Roberts JP, Wang ZJ. Adult living donor liver imaging. DiagnIntervRadiol. 2016 Feb 24. doi: 10.5152/dir.2016.15323. [Epub ahead of print].

Manuscripts Published in Electronic Format: Morse SS. Factors in the emergence of infectious diseases. Emerg Infect Dis (serial online) 1995 Jan-Mar (cited 1996 June 5): 1(1): (24 screens). Available from: URL: http://www.cdc.gov/ncidodlElD/cid.htm.

SUBMISSION CHECKLIST

Please make sure you have the followings available:

- Acknowledgement of the study "in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration in the materials and methods section.
- Statement that informed consent was obtained after the procedure(s) had been fully explained in the materials and methods section. Indicating whether the institutional and national guide for the care and use of laboratory animals was followed as in "Guide for the Care and Use of Laboratory Animals".
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- Copyright Agreement Form
- Author Form
- Main Manuscript Document
  - Important: Please avoid mentioning the the author (s) names in the manuscript.
  - The title of the manuscript.
  - Abstract (250 words). (Case report's abstract limit is 200 words)
  - Keywords: 3-6 words
  - Main article sections
  - References
  - All tables
  - The title, description or footnotes of all illustrations (figures)

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