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Research Article

The Relationship between the Empathy Level and Privacy Consciousness of Nursing and Midwifery Students: A Descriptive Cross-Sectional Study

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Abstract

Aim: This study was conducted to examine nursing and midwifery students studying in two different regions of Turkey relationship between the empathy level and privacy consciousness.

Methods: This descriptive and cross-sectional study was conducted between January-April 2023, 442 (37% participation) nursing and midwifery students in two regions of Turkey (Northern Anatolia and East regions). The data were collected using the Descriptive Information Form, Empathic Tendency Scale (ETS) and Privacy Consciousness Scale (PCS).

Results: It was determined that there was a significant relationship between the total score of empathic tendency and total score of privacy consciousness of the students participating in the study (F=18,920; p=0,000<0.05). It was seen that the total score of empathic tendency scale increased the level of total score of privacy consciousness (ß=0.112).

Conclusions: It was found that there is a positive relationship between the empathy level and privacy consciousness of nursing and midwifery students and it was determined that the student with a high level of empathy could perform the behaviors that would maintain the consciousness of privacy more effectively. It is recommended that the concepts of privacy and empathy should be included in nursing and midwifery education programs, and the instructor should enrich the educational content by using different techniques that will especially evaluate the empathy ability of the students, and improve the privacy consciousness.

Keywords: Empathy; Privacy consciousness; Nursing; Midwifery; Care; Student

Introduction

Health services which is one of the areas with the most intense interpersonal relations, is an area that requires providing the most special and attentive service to people, and imposes ethical responsibility on employees [1]. Midwives and nurses play a vital role in the delivery of health services. The value that midwives and nurses add to society is health safety. There are midwives and nurses who are critical in improving health outcomes in all areas of society. The absence of these professions will result in the formation of highly sensitive and fragile health systems against collapse in the shadow of the global crisis [2].

Nursing and midwifery are one of the professions that are based on communication and interpersonal relationships, considering that the service provider and the recipient are human. It is necessary and important to know oneself and empathy skills to be able to determine the needs of the healthy individual/patient to define their problems and to plan and realize their care within this framework and to be aware of how the interpersonal communication process affects them while providing this service [3]. Empathy is an important factor in the relationship established while providing nursing and midwifery care [4]. A thorough understanding of the patient's behavior is often difficult for the health care providers. The main purpose of the care giving is to try to understand the individual in front of us and to be able to look at what he/she is going through from his/her perspective. Looking from the prespective of an individual is the process of understanding the feelings and thoughts of that individual about a certain situation correctly and conveying this to him/her, which is named as empathy [5].

Empathy is putting you in someone else's position, looking at an event or a situation through that perspective, understanding and feeling as him/her and conveying this to that individual. As a result of the effective use of empathy skills, the patient's acceptance of the condition and treatment, the planning of nursing interventions suitable for the patient's needs, and patient satisfaction and quality of care increase [6]. The empathy skills required by nursing and midwifery students in clinical applications are accepted as a skill that can be improved with education. For this reason, nursing students are mentioned about empathy and its components, and it is aimed to graduate them by providing professional nursing competencies [7].

Nurses and midwives, who are important members of the team in the health system, are responsible for ensuring the trust of their patients, protecting their interests and well-being, advocating, communicating, protecting the principle of honesty and integrity, respecting religious beliefs and values, providing care, obeying ethical rules in research and respecting privacy [1]. While nurses and midwives are in close communication with patients in physical and

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psychological dimensions, they can see the sensitive, weak, private and special aspects of patients and witness their saddest and hopeless moments [8]. Nursing and midwifery students should also be given the ability to practice while maintaining patient privacy within the framework of ethical principles and rules during their education in this complex and challenging environment [9]. One of the important issues addressed within the scope of ethics education is patient privacy [10]. Privacy is the basic need and right of individuals. All health professionals, not only nurses and midwives, should undertake the responsibility of protecting these rights of patients. Protecting patient privacy strengthens the trust-based relationship between patients and healthcare professionals [11]. Violation of patient privacy leads to a decrease in patients' satisfaction with health services and restriction of their independence, ethical problems and legal problems for healthcare professionals [12]. It is important to consider the physical, social, psychological and cognitive aspects of patient privacy in the field of health [1].

Privacy and confidentiality, one of the professional ethical principles, guide the nursing practices and nurses play an important role in protecting patient privacy. Disrespect to patient privacy will lead to increased anxiety and stress levels in patients, lack of trust in healthcare personnel, aggression, concealment of health history, and refusal of physical examination [13].

The concept of patient privacy has gained importance in recent years due to the prominence of patient rights in the field of health and the increasing demand. The concept of patient privacy explains the confidentiality of patients and being confidential. Privacy in health sciences includes confidentiality and protection of the patient's information about the disease, as well as the patient's physical and mental privacy [14].

In this context, nurses and midwives are next to women while receiving the health services they need in almost all periods of life, such as pregnancy, childbirth, curettage, breastfeeding, menopause, infertility, gynecological examination, and therefore they should pay attention to the privacy of women. Thus, when women have reproductive health problems, they can apply to health services without delay. As a result, it can be possible to protect and improve the women's health. For this reason, it is important to determine the opinions of nurses and midwives about patient privacy, who have an important role in protecting patients' right to privacy. Therefore, it is important to train healthcare personnel as individuals, who can recognize human emotions, empathize, respect privacy, and find solutions to problems [15].

When the literature was examined, no study was found in which privacy and empathy levels were discussed together in both nursing and midwifery departments. This study was conducted to examine nursing and midwifery students studying in two different regions of Turkey relationship between the empathy level and privacy consciousness.

Methods

Type of study

This study is a descriptive and cross-sectional study.

Place and time of study

The study was conducted between January-April 2023, with students studying at nursing and midwifery departments in Turkey's Northern Anatolia (Giresun) and East regions (Van).

Population and sample

The study population consisted of students (n=1168) studying nursing and midwifery in the Northern Anatolia and East regions between January- April 2023.The universe of the study was calculated as 1168 using the Roasoft online web calculator program, and the sample size of the study was determined as 290 with a 5% error margin in the 95% confidence interval. The sample of the study consisted of 442 (37% participation; 364 nursing, 78 midwifery) students who met the inclusion criteria (older than 18 years of age; no communication problems; volunteered to participate in the study) and answered the surveys.

Data collection tools

The data were collected through face-to-face interviews by the researchers. Descriptive Information Form, Empathic Tendency Scale (ETS) and Privacy Consciousness Scale (PCS) were used for data collection.

Descriptive information form

The questionnaire, which was created by the researchers by scanning the literature about the subject, consists of a total of 8 questions about students' age, gender, department, class, reason for choosing the profession, and status of taking an ethics course.

Empathic Tendency Scale (ETS)

It was developed by Dökmen to measure the empathy potential of individuals in daily life. It is a Likert-type scale consisting of 20 questions, and a score from 1 to 5 is given for each question. The minimum score that can be collected from the scale is 20, and the maximum score is 100. A high score indicates a high empathic tendency; low indicates low empathic tendency. The reliability of the scale obtained from this application is 0.82. The validity of the scale was found to be 0.68. The reliability coefficient of the scale calculated with Cronbach's alpha for the research group was 0.72 [16]. In our study, the Cronbach's alpha value of the scale was found as 0.75.

Privacy Consciousness Scale (PCS)

The Turkish validity and reliability of the scale developed by Tabata and Hirotsune in 2014 to measure privacy consciousness in Japan was determined by Öztürk et al. The scale consists of 11 items and 3 subdimensions. The subdimensions of the scale consist of "Consciousness and Behaviors Regarding Privacy of the Self", "Consciousness Regarding Privacy of Others", and "Behaviors Regarding Privacy of Others". It is scored on a five-point Likert scale as 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree. It is accepted that as the score obtained from the scale increases, the privacy consciousness increases in a positive way. As a result of the confirmatory factor analysis, it was stated that the existence of 3 dimensions constituting the structure of the scale was confirmed and the Cronbach alpha internal consistency reliability coefficient was found to be 0.77 for the whole scale. Cronbach's alpha coefficient for "Consciousness and Behaviors Regarding Privacy of the Self", "Consciousness Regarding Privacy of Others", and "Behaviors Regarding Privacy of Others" subdimensions was found to be 0.73, 0.74 and 0.70, respectively [17]. In our study, the Cronbach's alpha value of the scale was found to be 0.84. Cronbach's alpha value for "Consciousness and Behaviors Regarding Privacy of the Self, Consciousness Regarding Privacy of Others" and a "Behaviors Regarding Privacy of Others" subdimension were found to be 0.82, 0.83, and 0.80, respectively.

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Data assessment

SPSS version 25.0 was used for data analysis. Frequency, percentage, mean and standard deviation descriptive statistics were used. The relations between the dimensions determining the scale levels of the students were examined by correlation and regression analysis. T-test, one-way analysis of variance (Anova) and post hoc (Tukey, LSD) analyzes were used to examine the differences in scale levels according to the descriptive characteristics of the students. The level of signifiance was fixed at the 5% level.

Ethical considerations

Written permission was obtained from Atatürk University Non-Interventional Clinical Research Ethics Committee (date:01.12.2022; number: B.30.2.ATA.0.01.00/767) and the institutions where the study would be conducted. In addition, written and verbal consent was obtained from the individuals participating in the study after the purpose of the study was explained. Written and verbal consent was obtained from the students who accepted to participate in the study after it was stated that the information obtained from them would only be evaluated by the researchers and that this information would be used for scientific purposes.

Results

The mean age of the participants was 21.090 ± 2.119, 71.0% were female, 82.4% were nursing students and 30.5% were second-year students. 51.4% of the students stated that they chose the nursing profession because of its assignment status, 64.0% stated that they received ethical education, 30.0% of those who received ethical education stated that they had sufficient ethical education, and 41.4% stated that they definitely want to work as nurses/midwives after graduation (Table 1).

Table 1: Distribution of Students by Descriptive Characteristics.

Groups	Frequency (n)	Percentage (%)
Age (Mean ± SD=21.090 ± 2.119)		
Gender		
Female	314	71.0
Male	128	29.0
Department:		
Nursing	364	82.4
Midwifery	78	17.6
Grade		
1	73	16.5
2	135	30.5
3	115	26
4	119	26.9
Reason of Preference		
Assignment status	227	51.4
Desire for nursing/midwifery profession	106	24
Environmental recommendation	39	8.8
Exam Score Eligibility	70	15.8
Status of Receiving Ethical Training		
Yes	283	64
No	159	36
Sufficiency of the Ethical training		
Sufficient	85	30.0
Indecisive	144	50.9
Insufficient	54	19.1
Presence of a Career Plan		
I definitely want to work as a nurse/midwife	183	41.4
I have to work as a nurse/midwife because there is no other option	113	25.6
I have other plans besides being a nurse/midwife	146	33

Note: n=442

In the study, the score distributions of the arithmetic mean, standard deviation and minimum-maximum levels of students' empathy and privacy consciousness are given in Table 2. The total mean score of the empathic tendency scale of the students was determined as 65.362 ± 9.610. On the other hand, the total mean score of the privacy consciousness scale, and its "Consciousness and Behaviors Regarding Privacy of the Self", "Consciousness Regarding Privacy of Others", and "Behaviors Regarding Privacy of Others" subdimensions was found as 36.964 ± 5.303, 12.471 ± 2.289, 14.649 ± 2.492, and 9.844 ± 2.029, respectively (Table 2).

Table 2: Average Scores of Empathic Tendency and Privacy Consciousness (n=442).

	Mean ± SD	Min.	Max.
Empathic Tendency Total	65.362 ± 9.610	26	1,00,000
Privacy Consciousness Total	36.964 ± 5.303	11,000	55,000
Consciousness and Behaviors Regarding Privacy of the Self	12.471 ± 2.289	4,000	20
Consciousness Regarding Privacy of Others	14.649 ± 2.492	4,000	20
Behaviors Regarding Privacy of Others	9.844 ± 2.029	3	15,000

SD: Standard Deviation

The analysis conducted to reveal whether the empathic tendency and privacy consciousness scores of the students participating in the study differ according to the descriptive characteristics is presented in Table 3.

When the total mean score of empathic tendency scale was compared according to the gender of the students, it was found that the total mean score of empathic tendency scale of female students was 66.204 ± 9.424 (t=2.909; p=0.004<0.05) which was higher than that of male students (63.297 ± 9.786) (d=0.305) (Table 3).

It was determined that the total score of empathic tendency scale of the students differed significantly according to the grade (F=4.122; p=0.007<0.05; η2=0.027). The reason for the difference is that the total scores of empathic tendency scale of the 3rd and 4th grades were higher than that of the 1st and 2nd grades (p<0.05). The total score of empathic tendency scale of those who received ethical training in the profession was 65.993 ± 10.296, which was higher than the total mean score of empathic tendency scale of those who did not receive ethical training (t=1.846; p=0.05<0.05; d=0.183) (Table 3).

It was found that the students who stated that their ethical education was sufficient had a higher total mean score of empathic tendency scale (F=7.208; p=0.001<0.05; η2=0.049). The reason for the difference was that the total mean score of empathic tendency scale of those who found the training sufficient and those who were indecisive were higher than the scores of those who found the training insufficient (p<0.05) (Table 3).

It was determined that the total score of empathic tendency scale of the students who stated that they definitely wanted to work as midwives/nurses after graduation were 66.514 ± 9.503, and this score was higher than the other groups (F=3.656; p=0.027<0.05; η2=0.016). The reason for the difference is that the total score of empathic tendency scale of those who definitely want to work as nurse or midwife are higher than the total score of empathic tendency scale of those who think that they have to work as nurse or midwife because there is no other option (p<0.05) (Table 3).

When the mean scores of privacy consciousness scale and its subdimensions were compared according to the grade, it was determined that privacy consciousness scores differed significantly

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Table 3: Differentiation Status of Empathic Tendency and Privacy Consciousness Scores According to Descriptive Characteristics.

Demographic Features	n	Empathic Tendency Total	Privacy Consciousness Total	"Consciousness and Behaviors Regarding Privacy of the Self"	"Consciousness Regarding Privacy of Others"	"Behaviors Regarding Privacy of Others"
Gender		Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Female	314	66.204 ± 9.424	37.213 ± 5.137	12.526 ± 2.238	14.796 ± 2.433	9.892 ± 1.907
Male	128	63.297 ± 9.786	36.352 ± 5.665	12.336 ± 2.412	14.289 ± 2.606	9.727 ± 2.306
t=		2.909	1,552	0.789	1.947	0.776
p=		0.004	0,121	0.43	0.052	0.475
Department:		Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Nursing	364	65.717 ± 9.558	37,050 ± 5,01	12.407 ± 2.193	14.769 ± 2.356	9.874 ± 2.085
Midwifery	78	63.705 ± 9.742	36.564 ± 5.776	12.769 ± 2.687	14.090 ± 3.003	9.705 ± 1.752
t=		1.681	0.733	-1.271	2.195	0.665
p=		-0.093	0.464	0.204	0.063	0.506
Grade		Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
1	73	62.973 ± 9.466	36.712 ± 5.001	12.630 ± 2.195	14.370 ± 2.447	9.712 ± 1.867
2	135	64.148 ± 8.678	36.541 ± 5.761	12.252 ± 2.399	14.548 ± 2.841	9.741 ± 2.066
3	115	67.052 ± 10.624	37.791 ± 5.148	12.974 ± 2.265	14.844 ± 2.342	9.974 ± 2.062
4	119	66.571 ± 9.298	36.798 ± 5.062	12.135 ± 2.170	14.748 ± 2.233	9.916 ± 2.065
F=		4.122	1 316	3.289	0.673	0.424
p=		0.007	0.269	0.021	0.569	0.736
post hoc		3>1.4>1.3 > 2.4>2 (p<0.05)		3>2.3 >4 (p<0.05)		
Reason of Preference		Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Assignment Status	227	64.595 ± 9.123	36.934 ± 5.327	12.498 ± 2.303	14.551 ± 2.547	9.886 ± 1.997
Requesting the Nursing/ Midwifery Profession	106	67.283 ± 9.629	36.811 ± 5.311	12.509 ± 2.265	14.679 ± 2.428	9.623 ± 2.086
Environmental Recommendation	39	64.154 ± 9.391	37.436 ± 5.404	12.282 ± 2.714	14.974 ± 2.560	10.180 ± 1.998
Exam Score Eligibility	70	65.614 ± 10.934	37.029 ± 5.258	12.429 ± 2.054	14.743 ± 2.400	9.857 ± 2.073
F=		2.132	0.137	0.116	376	0.807
p=		0.095	0.938	0.951	,770	0.49
Status of Receiving Ethical Training		Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Yes	283	65.993 ± 10.296	37.085 ± 5.363	12.466 ± 2.294	14.742 ± 2.426	9.876 ± 2.101
No	159	64.239 ± 8.160	36.748 ± 5.205	12.478 ± 2.286	14.484 ± 2.604	9.786 ± 1.901
t=		1.846	0.64	0.051	1.044	448
p=		0.05	0.523	959	0.297	0.654
Sufficiency of the Ethical training		Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Sufficient	85	68.188 ± 10.387	36.988 ± 5.388	12.424 ± 2.238	14.800 ± 2.419	9.765 ± 2.394
Indecisive	144	66.340 ± 10.232	37.007 ± 5.559	12.354 ± 2.334	14.667 ± 2.517	9.986 ± 1.961
Insufficient	54	61.611 ± 9.110	37.444 ± 4.847	12.833 ± 2.280	14.852 ± 2.218	9.759 ± 1.990
F=		7.208	0.149	0.877	0.148	0.399
p=		0.001	0.861	417	0.862	0.672
post hoc		1>3.2 >3 (p<0.05)				
Presence of a Career Plan		Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
I definitely want to work as a nurse/midwife	183	66.514 ± 9.503	36.891 ± 4.616	12.317 ± 2.005	14.678 ± 2.320	9.896 ± 1.949
I have to work as a nurse/ midwife because there is no other option	113	63.425 ± 10.205	37.443 ± 5.571	12.823 ± 2.461	14.655 ± 2.570	9.965 ± 1.986
I Have Other Plans Apart From Being a Nurse/Midwife	146	65.418 ± 9.083	36.685 ± 5.879	12.390 ± 2.465	14.610 ± 2.651	9.685 ± 2.162
F=		3.656	0.679	1,849	0,030	0.708
p=		0.027	0.508	0.159	0.970	0.493
post hoc		1>2 (p<0.05)				

SD: Standard Deviation

according to the grade (F=3.289; p=0.021<0.05; η2=0.022). The reason for the difference is that the mean score of privacy consciousness of the 3rd grade is higher than that of the 2nd grade students (p<0.05). The mean privacy consciousness score of the 3rd grade students is also higher than that of the 4th grade students (p<0.05) (Table 3).

The relationship between the mean scores of empathic tendency and privacy consciousness of students is shown in Table 4. When the correlation analysis between total empathic tendency score, total privacy consciousness score, Consciousness and Behaviors Regarding Privacy of the Self score, Consciousness Regarding Privacy of Others score, Behaviors Regarding Privacy of Others score were examined; a positive very weak correlation was found between total privacy consciousness score and total empathic tendency score with r=0.203 (p=0.000<0.05), a positive weak correlation was found between Consciousness Regarding Privacy of Others score and total empathic tendency score with r=0.251 (p=0.000<0.05), a positive very weak correlation was found between Behaviors Regarding Privacy of Others score and total empathic tendency score with r=0.162 (p=0.001<0.05). The correlations between other variables were not

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Table 4: Correlation analysis between empathic tendency and privacy consciousness scores.

		Empathic Tendency Total
Privacy Consciousness Total	r	0.203
	p value	0
Consciousness and Behaviors Regarding Privacy of the Self	r	0.054
	p value	0.256
Consciousness Regarding Privacy of Others	r	0.251
	p value	0
Behaviors Regarding Privacy of Others	r	162
	p value	0.001

*<0.05; **<0.01; Correlation Analysis

statistically significant (p>0.05).

In Table 5, the regression analysis conducted to determine the cause-and-effect relationship between the total empathic tendency score and total privacy consciousness score of the students participating in the study was found to be significant (F=18.920; p=0.000<0.05). The total change in the level of privacy consciousness was explained due to the total empathic tendency score with a rate of 3.9% (R2=0.039). It was observed that the total empathic tendency score has increased the total privacy consciousness score (ß=0.112).

The regression analysis performed to determine the cause-and-effect relationship between the total empathic tendency score and total privacy consciousness score was not found significant (F=1.291; p=0.256>0.050). The total change in the level of Consciousness Regarding Privacy of Others was explained by the total empathic tendency with a ratio of 6.1% (R2=0.061). The total empathic tendency score was found to increase the level of Consciousness Regarding Privacy of Others (ß=0.065). The regression analysis performed to determine the cause-and-effect relationship between the total empathic tendency score and Behaviors Regarding Privacy of Others score was found to be significant (F=11,800; p=0.001<0.05). The total change in the level of Behaviors Regarding Privacy of Others was explained by the total empathic tendency with a ratio of 2.4% (R2=0.024). The total empathic tendency score was found to increase the level of Behaviors Regarding Privacy of Others (ß=0.034) (Table 5).

Discussion

Midwives and nurses, who are important members of the team working in the field of health care, should have an understanding of ethical responsibility for the individual they care for in their care practices [18]. It is important for nursing and midwifery students to be able to empathize so that they can understand the patient's feelings and experiences related to the disease. In addition, protecting and maintaining confidentiality and privacy by showing ethical sensitivity in defending patient rights is an important issue that should be addressed in nursing education. For this reason, this study was conducted to examine the relationship between the level of empathy and privacy consciousness of nursing and midwifery students. The findings obtained from the study were discussed in line with the relevant literature.

Considering the findings obtained from the study, it is seen that the majority of the students who agreed to participate in the study were female, and they chose the nursing/midwifery department due to the appointment status of the profession. When the literature was researched, it was seen that similar results have been obtained [18-20]. It can be said that students prefer nursing and midwifery because their working areas in our country and abroad are wide and it is easier to find a job.

As a result of the study, the total mean score of empathic tendency scale of the students was 65.362 ± 9.610. In the study of Özdelikara and Babur, the total mean score of empathic tendency scale of nursing students was found to be 68.34 ± 8.21 [21]. In a different study involving 348 nursing students, it was determined that the total mean score of empathic tendency scale of the students was 69.94 ± 8.44 [22]. Our study findings are similar to those in the literature, and it can be said that nursing and midwifery students have moderate empathic skills.

When the total mean score of empathic tendency scale was compared according to the gender of the students, it was found that the total mean score of empathic tendency scale of female students was higher than that of male students. In a study, it was determined that the total empathic tendency score level was higher in female students [21]. In another study, it was reported that women's communication abilities and emotional intelligence were better than men's, their feelings such as compassion and pity are more prominent, and their socially assumed roles have increased the empathic tendency (Dizer and Iyigün, 2009). In a study in China that involves 993 nursing students, it was determined that female students are more successful in communication with patients, understanding the experiences of patients and empathizing than male students [23]. Similar to our study findings, in the studies of Sağır and Özkaptan with 339 nursing students and Çaka et al. [24] with 159 nursing and 81 midwifery students, it was determined that the mean empathy scores of female students were significantly higher [24,25]. In the literature, it was reported that women are more empathetic due to the higher emotional intelligence compared to men and the social role assigned to women in our society [22,25]. In addition, it is thought that female students' ability to develop empathic skills has an impact on the results, as they are more emotional than males.

It was determined that the total score of empathic tendency of the students differed significantly according to the grade. In a study with nursing students, similar to our results, a significant difference was found between the grade variable and the level of empathic tendency [26]. In a study of Oran and Kurul in 2019 with midwifery students, it was stated that the total score of empathic tendency did not differ significantly according to the grade, unlike our study [27]. In a study

Table 5: The effect of empathic tendency on privacy consciousness.

Dependent variable	Independent Variable	ß	t	p value	F	Model (p)	R^2
Privacy Consciousness Total	Constant	29,640	17,417	0	18.920	0.000	0.039
	Empathic Tendency Total	0.112	4.350	0			
Consciousness and Behaviors Regarding Privacy of the Self	Constant	11.629	15.53	0	1.291	0.256	0.001
	Empathic Tendency Total	0.013	1.136	0.256			
Consciousness Regarding Privacy of Others	Constant	10.398	13.153	0	29.541	0.000	0.061
	Empathic Tendency Total	0.065	5.435	0			
Behaviors Regarding Privacy of Others	Constant	7.613	11.600	0	11.800	0.001	0.024
	Empathic Tendency Total	0.034	3.435	0.001			

f: Linear regression analysis, t: independent sample t test.

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of Karataş with 332 students, it was stated that the empathy levels of the students differed according to the grade [28]. In another study in which first, second, and third grade medical school students in South Korea were compared, it was reported that there was a significant difference between the students' empathic levels and the grade variable, and that the empathic tendency scores of the 3rd year students were higher than the first-year students [29]. The result of the study is compatible with the literature in terms of this parameter. Nursing and midwifery education is periodically equipped with courses that support personal development. It is thought that high empathic tendency score is effective on active participation of the students in these courses and the maturation of these students in later grades.

It was found that the students who reported that their ethics training was sufficient had a higher total mean score of empathic tendency. When the literature on the subject was examined, it was found that the cognitive empathy level of the students, who found the ethics education sufficient in the study, who wanted to work as a nurse after graduation, and who perceived their empathy level to be higher, was found to be higher than the other groups [18]. In a study, it was argued that ethical sensitivity can be acquired with training [30]. In another study, it was stated that nursing students who received ethical education empathized as a reflection of ethical sensitivity in ensuring patient safety and protecting their privacy [31]. In a randomized controlled study of Bas-Sarmiento et al., it was reported that nursing students who received empathy education have a better communication with patients and understood patients better in their practices [32]. It is thought that students' receiving ethics training will create ethical sensitivity in the process of preparing for the profession, and ultimately it may have an effect on the level of empathy in determining patient needs and in patient care.

As a result of the study, it was determined that the total privacy consciousness score of the students was more than the mean value and they had a high level of privacy consciousness. When the scale scores of the participants are examined, it is seen that they got the highest score from the "Consciousness Regarding Privacy of Others" subdimension. When the literature is examined, it is seen that in a study examining the privacy consciousness of nursing and midwifery department students, the total mean score of the privacy consciousness scale is similar to our study results, but they obtain the highest score from the "Behaviors Regarding Privacy of Others" subdimension of the scale [14]. In another study, while nursing students have a high level of privacy consciousness, score from behaviors regarding privacy of others was lower than other dimensions [18]. In another study, the total score of privacy perceptions of midwives and nurses was found to be 76.00 (27-135), and the result was reported to be moderate [1]. In a different study, it was determined that the total mean score of the privacy consciousness scale of nursing students was 51.04 ± 4.10, and they received a moderate score of 18.45 ± 2.14 from the "Consciousness Regarding Privacy of Others" subdimension of the scale [33]. Similar results were obtained in a study consisting of 576 nursing, physical therapy and rehabilitation, nutrition and dietetics and engineering students [34]. In a study conducted with midwifery students, it was stated that the mean privacy score was high and that students paid attention to protecting the privacy of patients [35]. According to the results of the study, the higher level of Consciousness Regarding Privacy of Others subdimension of nursing and midwifery students compared to other dimensions may be related to the high level of empathy.

It was determined from the scores of privacy consciousness scale and Consciousness and Behaviors Regarding Privacy of the Self subdimension differed significantly according to the grade. The reason for the difference is that the privacy consciousness scores of the 3rd grade students are higher than the privacy consciousness scores of the 2nd grade students. In a study conducted with midwifery students, similar results were obtained [36]. In a different study, it was interpreted that the high level of privacy consciousness of 3rd grade students may have contributed to their more holistic approach to humans as a result of the fact that the students had taken courses such as mental health and public health and other main courses of nursing in previous periods [18]. It has been stated that 4th grade intern nurses who learn the concept of patient-centered nursing care will be more successful in understanding patients and protecting their privacy [37]. As such, our study findings are similar to the literature.

It was determined that the total score of empathic tendency of the students participating in the study increased the total score of privacy awareness and there was a weak relationship between them. Similar to our study findings, a study with midwifery and nursing students found that there was a weak relationship between empathy level and privacy consciousness. It has been stated that students with a high level of empathy will be able to perform behaviors that will maintain their consciousness of privacy more effectively in nursing care practices [18]. In a study of Xia et al. [11] with 408 nursing students in 30 different schools in China, it was stated that there was a positive correlation between the empathy level of the students and their behavior to protect patient privacy. It was emphasized that nursing students with a high level of empathy act in accordance with ethical principles in nursing practices as an indicator of ethical sensitivity and protect patient privacy. Similarly, different studies have reported that nursing students with higher empathy can communicate better with patients and exhibit a more successful attitude in protecting and maintaining patient privacy [32,38]. Our study results are consistent with the results of an international study. In line with these results, the level of empathy affects privacy consciousness and is an important variable that needs to be evaluated.

Limitations of the Study

This study has some limitations. First, the data were obtained using a cross-sectional design and came only from nursing and midwifery students studying in two different regions of Turkey. Therefore, the results may not represent all Turkish nurse and midwifery students. Secondly, the reliability of the data is limited by the accuracy of the answers given by the study participants.

Conclusion

As a result of this study, it was determined that there is a positive relationship between the empathy levels and privacy consciousness of nursing and midwifery students and that the student with a high level of empathy can perform the behaviors that will maintain the awareness of privacy more effectively in patient care practices. In line with these results, it can be suggested that the concepts of privacy and empathy should be included in nursing and midwifery education programs in order to ensure that students act in line with professional values and ethical principles while fulfilling their roles and responsibilities, and provide the necessary qualified care with their theoretical background. It is recommended that the instructor enrich the educational content by using different techniques that will especially evaluate the empathy ability of the students, one of the communication skills, and improve the consciousness of privacy.

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Ethics Committee Approval

Approval was obtained from Atatürk University Non-Interventional Clinical Research Ethics Committee (date:01.12.2022; number: B.30.2.ATA.0.01.00/767).

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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