

Anatomy Education: A Study on the Perspectives of First Year Nursing Students Towards the Course

Anatomi Eğitimi: Hemşirelik Birinci Sınıf Öğrencilerinin Derse Bakış Açılırları Üzerine Bir Çalışma

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ABSTRACT

In this study, we aimed to obtain information about the difficulties and experiences of first year nursing students in anatomy education. Anatomy education is a crucial component of nursing training, and understanding the perspectives of first-year nursing students is essential for enhancing the learning experience.

Our study of anatomy education contributes to the ongoing debate. It provides a comprehensive understanding of the challenges and opportunities for improving the anatomy learning experience of first-year nursing students.

Participants have 31,7% very high interest and 32,9% high interest in anatomy course. Students with low interest in anatomy course constitute 11% of the participants. The rate of those who think that the anatomy course is difficult is 61%. The rate of those who did not find the anatomy course difficult was determined as 12.2%.

We believe that this study, which includes the opinions of nursing students about anatomy education, will provide feedback about the course, provide different perspectives to the educational staff and contribute to the more efficient teaching of the anatomy course.

Keywords: Nurse, Anatomy, Education

ÖZ

Bu çalışmada, hemşirelik birinci sınıf öğrencilerinin anatomi eğitiminde yaşadıkları zorluklar ve deneyimleri hakkında bilgi edinmeyi amaçladık. Anatomi eğitimi, hemşirelik eğitiminin önemli bir bileşenidir ve birinci sınıf hemşirelik öğrencilerinin bakış açılarını anlamak, öğrenme deneyimini geliştirmek için gereklidir.

Anatomi eğitimi üzerine yaptığımız çalışma, süregelen tartışmalara katkıda bulunmaktadır. Birinci sınıf hemşirelik öğrencilerinin anatomi öğrenme deneyimini geliştirmeye yönelik zorlukların ve fırsatların kapsamlı bir şekilde anlaşılmasını sağlamaktadır.

Katılımcıların %31,7'si anatomi dersine çok yüksek, %32,9'u yüksek ilgi duymaktadır. Anatomi dersine ilgisi düşük olan öğrenciler katılımcıların %11'ini oluşturmaktadır. Anatomi dersinin zor olduğunu düşünenlerin oranı %61'dir. Anatomi dersini zor bulmayanların oranı ise %12,2 olarak belirlenmiştir.

Hemşirelik öğrencilerinin anatomi eğitimi hakkındaki görüşlerini içeren bu çalışmanın ders hakkında geri bildirim sağlayacağı, eğitim kadrosuna farklı bakış açıları kazandıracağı ve anatomi dersinin daha verimli işlenmesine katkı sağlayacağı inancındayız.

Anahtar Kelimeler: Hemşirelik, Anatomi, Eğitim

The necessary ethical permission (with decision number: 2023/ 319) was obtained from the Ordu University Ethical Committee.)

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INTRODUCTION

Anatomy is the science that examines the normal shape, structure, organs, and systems formed by these organs coming together; the neighborhood, shape and placement of organs.¹ Anatomy science requires constant repetition. Anatomy education is given to students with a method based on rote memorisation, far from stereotyped rules. This leads to forgetting the information in a short time. The fact that it consists of Latin words and the necessity to learn the Turkish equivalents of these words is a factor that prolongs the learning process.² In general terms, all health workers who are responsible for protecting the health of the living body, caring for the patient, and healing the patient should learn the human body in the best way. Anatomy courses are taught in health sciences, education faculty, fine arts, and sports sciences as well as medical faculties. In the faculty of health sciences, nurse and midwife departments take anatomy courses.³ The importance of anatomy course in the career development of various nursing students was mentioned.⁴ In addition, there are studies aiming to determine the retention of anatomy knowledge for nursing students and the effect of practical training on exam results and motivation.⁵ Integration of digital technologies into anatomy course was found to increase the self-confidence and performance of first year nursing students.⁶ It is very important that the anatomy course is accepted as a basic course in the nursing curriculum.⁷ The scientific basis is very

important in the process of fulfilling the responsibilities of nurses in the definition. The scientific foundation is laid with basic medical sciences courses. Among these courses, anatomy is the one that is most reflected in the clinic and is important for nurses. Nurses are among the groups that make the most applications on the living human body.⁸ Nurses have to know and learn the living body very well. It is difficult for a nurse who is not familiar with the anatomy and physiology of the circulatory system to take pulse from the right place, measure and evaluate blood pressure. Similarly, a nurse who cannot determine the correct site for intramuscular injection leaves both himself/herself and the patient in a difficult situation. The causes of sciatic nerve injuries in Turkey were investigated and it was found that 31.2% of the sciatic nerve injuries were caused by sciatic nerve injuries.⁹ It is important to take the opinions of the students. In this context, learning will benefit. Feedback from students at every step of the learning process is used as a data collection tool. The efficiency of anatomy education will also be evaluated by student requests and opinions.¹⁰

This study aimed to evaluate the current status of the anatomy education given to the first-year nursing students at Ordu University Faculty of Health Sciences, Department of Nursing and the problems related to the teaching process with the feedback of the students.

MATERIAL AND METHOD

Anatomy course is taken by first year nursing students. Students are given anatomy course for 14 weeks. A total of 4 hours of anatomy lessons are taught weekly, 2 hours theoretical and 2 hours practical.

A total of 82 first-year nursing students (13 male and 69 female) from Ordu University, Faculty of Health Sciences, 2023-2024 academic year were included in the study. A questionnaire study was organised

to learn the students' perspective on the anatomy course. The questionnaire included a total of 15 questions, including 14 multiple choice questions and 1 open-ended question. The survey questions were prepared from Google Forms application. The survey was delivered to the students via the social platform via the link.

A five-point Likert-type scale was applied as 'never', 'rarely', 'sometimes', 'often',

'always' as options in the answers of the questions. Students answered the questions individually.

The questions in the questionnaire evaluated whether the students had prejudices against anatomy course, whether they were affected by dogmatic information about anatomy course, whether they affected its functioning, and where they would put anatomy in their professional life.

In order to make the questionnaire feedback more reliable, students' names were not taken. Only their gender was learnt. Before sending the survey link, students were informed about the purpose of the study.

This questionnaire consists of 15 questions, 14 Likert and 1 open-ended. In the first question, genders were asked and 13 (15.84%) of the participants were male and 69 (84.16%) were female.

The questions in this questionnaire were categorised into 3 main groups. Questions 2-6 were asked to determine interest in anatomy course, questions 8-11 were asked to determine finding anatomy course difficult and feeling of fear and questions 7, 12, 13 and 14 were asked to determine attitude towards anatomy course. The answers to the questions are summarised in Table 1 and Table 2.

Table 1. Responses to the survey questions

	N	Med	Min	Max	Mean±Std	
Interest	Q2	82	4	1	5	3,64±1,13
	Q3	82	4	1	5	3,57±1,06
	Q4	82	4	1	5	3,60±1,09
	Q5	82	4	1	5	3,71±1,18
	Q6	82	3	1	5	3,40±1,30
Coercion	Q8	82	2	1	4	2,42±0,88
	Q9	82	4	1	5	3,87±0,96
	Q10	82	4	1	5	3,89±1,00
	Q11	82	3	1	5	2,82±0,99
Attitude	Q7	82	4	1	5	3,73±0,99
	Q12	82	4	1	5	4,15±0,90
	Q13	82	3	1	5	2,89±1,15
	*Q14	82	4	1	5	3,59±1,21

*Descriptive data are presented in the table (*reverse coded question), Question: Q, Median: Med, Minimum: Min, Maximum: Max*

In the section of interest in the anatomy course, the scores were very close to each other, and the highest score was given to the

statement 'I try to actively participate in the anatomy course'. The lowest score in this section was the statement 'I feel sad if I miss the anatomy course'.

Table 2. Percentage of participants' answers to the questions

	Never	Rarely	Sometimes	Frequently	Always	
Interest	Q2	3,7	12,2	29,3	25,6	29,3
	Q3	4,9	8,5	31,7	34,1	20,7
	Q4	7,3	3,7	31,7	35,4	22
	Q5	4,9	13,4	18,3	31,7	31,7
	Q6	8,5	17,1	29,3	15,9	29,3
Coercion	Q8	15,9	36,6	36,6	11	0
	Q9	1,2	6,1	26,8	35,4	30,5
	Q10	1,2	8,5	23,2	34,1	32,9
	Q11	11	20,7	47,6	15,9	4,9
Attitude	Q7	4,9	2,4	29,3	41,5	22
	Q12	1,2	4,9	12,2	40,2	41,5
	Q13	12,2	23,2	40,2	12,2	12,2
	*Q14	7,3	11	24,4	29,3	28

In the section of interest in the anatomy course, the scores were very close to each other, and the highest score was given to the statement 'I try to actively participate in the anatomy course'. The lowest score in this section was the statement 'I feel sad if I miss the anatomy course'.

In the category related to the difficulty of the anatomy course, the statement 'I feel sleepy during the anatomy course' received the lowest score. In this section, the questions 'I think anatomy is a difficult course' and 'I like the anatomy course, but the exams are difficult for me' were very close to each other and received the highest scores.

In the section on attitudes and behaviours in the anatomy course, questions 7 and 14 were prepared as the opposite of each other and incompatible answers were determined as exclusion criteria. At this stage, no participant was excluded because he/she did not give a distractor answer. The question 'The approach of the lecturer in the course affects my thoughts about anatomy' received the highest score in the attitude section of the anatomy course.

Table 3. Scoring of answers under main headings (expressed as %)

	Very Low	Low	Middle	High	Very High
Interest	3,7	7,3	24,4	32,9	31,7
Coercion	1,2	11	26,8	43,9	17,1
Attitude	0	2,4	24,4	39	34,1

*Interest: 5≤very low<9, 9≤low<13, 13≤medium<17, 17≤high<21, 21≤very high≤25

Thinking it is difficult: 4≤very low<7, 7≤low<10, 10≤medium<13, 13≤high<16, 16≤very high≤20

Anatomy course attitude: 4≤very low<7, 7≤low<10, 10≤medium<13, 13≤high<16, 16≤very high≤20

The answers given to the questionnaire sections were summed and a scale was formed. Participants have 31,7% very high interest and 32,9% high interest in anatomy course. Students with low interest in anatomy course constitute 11% of the participants.

The rate of those who think that the anatomy course is difficult is 61%. The rate of those who did not find the anatomy course difficult was determined as 12.2%.

In the attitudes and behaviours towards the anatomy course, its contribution to professional life and the educator's interest in student behaviour were questioned. The rate of the participants who thought that the behaviours of the educator and the anatomy course of the participants were effective in their own lives was determined as 73.1%.

Table 4. Correlation analysis between questionnaire sub-dimensions

	Interest	Coercion	Attitude
Interest			
r	1		
sig. (p)			
Coercion			
r	-0,634	1	
sig. (p)	<0.001		
Attitude			
r	0,199	-0,204	1
sig. (p)	0,073	0,66	

Correlation analyses were performed according to the previous literature. (PMC3576830, PMC8741919).

There is a negative moderate correlation between interest in anatomy course and finding anatomy course challenging ($-0.50 < r < -0.70$, $p < 0.001$). There was no correlation between interest in anatomy course and attitude towards anatomy course ($0 < r < 0.30$, $p > 0.05$). There was no correlation between finding the anatomy course challenging and attitude ($0 < r < -0.30$, $p > 0.05$).

Statistical Analysis

The data in the study were analysed for normal distribution by considering 5 parameters (Skewness-Kurtosis, Std/Mean, Q-Q Plots, Histogram and Shapiro Wilk Test). Normally distributed parameters with sufficient data were shown as Mean±Std. Descriptive data were expressed as median, minimum and maximum values and frequencies were expressed as percentage (%). Cut off values were determined for the total scores of the questionnaire subscales and divided into 5 levels. Pearson correlation analysis was performed between the total scores of the questionnaire sub-dimensions. In the study, $\alpha = 0.05$ and $p < \alpha$ were considered significant. IBM SPSS 23.00 package programme was used for statistical analysis.

Ethical Considerations

Ethical approval was obtained from the Ordu University Health Sciences Scientific Research Ethics Committee (Number:2023/319).

RESULTS AND DISCUSSION

Our article provides valuable information about first-year nursing students' perceptions and experiences of anatomy education. The study examines the effects of first contact with the clinical learning environment on

students' empathy levels and perceptions of professional identity. It is crucial to consider the perspectives of students as they navigate the transition into the clinical setting, as this can significantly influence their professional

development and identity. Anatomy education plays a pivotal role in the nursing curriculum, and it is essential to explore innovative approaches to enhance students' learning experiences.¹¹ Additionally, the integration of the anatomy curriculum in the undergraduate clinical education period has been highlighted as a significant aspect from the medical students' perspectives, emphasizing the importance of a comprehensive and cohesive approach to anatomy education.¹² Furthermore, the need for valid and reliable tools to measure the anatomy education environment has been emphasized, indicating the importance of assessing the effectiveness and quality of anatomy education from a student-centered perspective.¹³

Students studying in health sciences have to learn anatomical terms in a short time, so students see the anatomy course as a course that requires a long time based on rote learning and see it as a boring course. One issue we have difficulty teaching anatomy is that students are prejudiced against the course. This situation makes it difficult for them to learn. Reviewing the anatomy course education methods will be useful in terms of curriculum.¹⁴

Understanding the students' experiences and perceptions is essential for continuously improving the anatomy education environment and ensuring that it aligns with the needs and expectations of first-year nursing students. In conclusion, the perspectives of first-year nursing students on anatomy education are multifaceted and influenced by various factors such as the clinical learning environment, educational tools, curriculum integration, and the need for reliable measurement tools.¹⁵

Nursing class is a short training period with a lot of learning and memorization of anatomical terms. For this reason, prejudices were developed that it would take a long time to understand the anatomy provided and that memorizing it would be boring. This

awareness has made it difficult to improve anatomy. Bolatlı (2021) thinks that he was deeply challenged in all of the progress he made (37.5% difficult, 19.4% very difficult).²

Özdemir et al. (2001) stated in their study that practical course hours were insufficient compared to theoretical course hours.¹⁶ Bolatlı (2021) concluded in his study that practical lesson hours were insufficient.² Anatomy course is a visual course. Therefore, students who are proficient in theory want to work visually oriented in practical lessons.

Students should clearly express their opinions about the anatomy course. It is important for teaching an efficient lesson. In their study, Arı and Şendemir stated that the students expressed their opinions at a rate of 92%.¹⁷ Likewise, in Uygur et al.'s study, the rate of students openly expressing their thoughts about anatomy was stated to be 74.7%.¹⁸ In our study, the question 'Describe anatomy in one word' was asked to 82 students. Despite full participation, 78 students answered the question.

In Mutluay and Açıkgöz's study, 48.6% of Nursing class students stated that anatomy made other courses more understandable.¹⁹ Uygur et al. (2013) found this rate to be 82.3% in medical faculty.¹⁸ In addition, it was stated that the anatomy course pioneered what should be known as a nursing profession.²⁰ As a result of all these findings, it will help them to fulfill their anatomy profession correctly in their working lives as healthcare professionals. In the study, a questionnaire was applied to the students who attended the classes regularly, and students with three absences were excluded from the study.

By considering these perspectives, educators and curriculum developers can enhance the quality and effectiveness of anatomy education for first-year nursing students, ultimately contributing to their professional development and identity within the healthcare field.

CONCLUSION AND RECOMMENDATIONS

In conclusion, the article on the overview of anatomy education among first-year nursing students provides a comprehensive exploration of student perspectives, challenges, and potential improvements. This discussion contributes to the ongoing dialogue on refining nursing education, offering valuable insights for educators, curriculum developers, and healthcare institutions striving to create a robust

foundation in anatomy for future nursing professionals. Ultimately, the findings presented in the article pave the way for continued advancements in anatomy education, ensuring that nursing students are well-equipped to navigate the complexities of human anatomy in their journey towards becoming competent healthcare professionals.

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