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RESEARCH ARTICLE

How Were Experiences of Stoma for Nursing Students?

Hemşirelik Öğrencilerinin Stoma Deneyimleri Nasıldı?

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ABSTRACT

Aim: The purpose of this study was to determine the experiences of baccalaureate nursing students with stoma bags and adaptors over 24 hours.
Method: The study was semi-experimental. Participants included 80 students from two nursing faculties with 10 students per class. The students were chosen by random sampling. Stoma adaptors were worn as a pouch and removed after 24 hours. A data collection form was used to gather the students' demographic and descriptive characteristics, previous degree of knowledge and experience about stomas, and experiences and feelings they had during the process. In the data analysis, percentages and the chi-square test were used.
Results: Among the students, 86.3% stated they worried continuously that the stoma bag would leak and 30.0% stated they were anxious because of the stoma. Four main themes emerged from the answers: (1) restriction in social activities, (2) restriction in physical activities, (3) worry about a stoma leakage, and (4) effect on body image. All of the students said that they understood better how stoma patients felt and that it was a good experience for them.
Conclusion: These experiences and feelings are important for baccalau reate nursing students to have more awareness about living with a stoma.
Keywords: Baccalaureate, experience, nursing student, ostomy

ÖZ

Amaç: Bu çalışmanın amacı, lisans hemşirelik öğrencilerinin stoma torbası ve adaptörleri ile 24 saat boyunca yaşadıkları deneyimlerini belirlemekti.
Yöntem: Çalışmamız yarı deneyseldir. Örneklemde her sınıftan 10 öğrenci olmak üzere iki hemşirelik fakültesinden 80 öğrenci yer aldı. Öğrenciler rastgele örnekleme ile seçildi. Öğrencilere takılan stoma adaptör ve torbaları 24 saat sonra çıkarıldı. Öğrencilerin demografik ve tanımlayıcı özelliklerini, stoma hakkındaki önceki bilgi ve deneyimlerini ve süreç boyunca yaşadıkları deneyim ve duygularını öğrenmek için bir veri toplama formu kullanıldı. Verilerin analizinde sayı-yüzde ve ki-kare testi kullanıldı.
Bulgular: Öğrencilerin %86,3'ü stoma torbasının sızdıracağından sürekli endişelendiğini ve %30,0'ı stoma nedeniyle endişeli olduğunu belirtti. Yanıtlardan dört ana tema ortaya çıktı: (1) sosyal aktivitelerde kısıtlama, (2) fiziksel aktivitelerde kısıtlama, (3) stomadan sızıntı endişesi ve (4) beden imajı üzerindeki etki. Tüm öğrenciler stoma hastalarının nasıl hissettiğini daha iyi anladıklarını ve bunun kendileri için iyi bir deneyim olduğunu söylediler.
Sonuç: Bu deneyimler ve duygular, lisans hemşirelik öğrencilerinin stoma ile yaşama konusunda daha fazla farkındalığa sahip olmaları için önemlidir.
Anahtar Kelimeler: Lisans öğrencisi, deneyim, hemşirelik öğrencisi, ostomi

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Introduction

A stoma helps patients live longer, improves their lives and helps them return to healthy and productive lives. However, patients with a stoma have physical, social and psychological problems, regardless of the reason for the stoma surgery.[1,2] Hence, nurses have important roles in preoperative and postoperative stoma care. Nurses should evaluate patients receiving preoperative care and provide supportive counselling to the patients and their families. Postoperatively, nurses should help patients and their families gain the technical skills necessary for stoma care and encourage them to participate in the care process. Moreover, nurses should help patients express their feelings by talking about self-esteem, body image and sexuality.[3,4]

Most clinical nurses gain basic knowledge and skills about stomas during their bachelor's degree education. Baccalaureate nursing students should learn about their roles and responsibilities in stoma care. They should also be aware of the physiological, psychological and social effects of a stoma on patients. Baccalaureate nursing education should be planned and organised in accordance with these needs. It is important to understand the feelings of patients with a stoma and their difficulties. Therefore, nurses must develop empathy for them. In this study, empathy is defined as nurses putting themselves into the individual's or patient's shoes. An empathic approach is part of help given to an individual or a patient. Nurses can understand individuals/patients, identify their needs and obtain positive results from nursing interventions only when they demonstrate empathy for individuals or patients.[5,6] Baccalaureate nursing students benefit from learning methods that provide opportunities to an empathic approach. The learning methods of "concrete experience" and "active experience" from Kolb are beneficial for developing empathy for patients with a stoma. "Concrete experience" enables students to learn using their feelings, whereas "active experience" enables students to learn by doing or experiencing.

The learning methods of "concrete experience" and "active experience" in baccalaureate education make it easier to

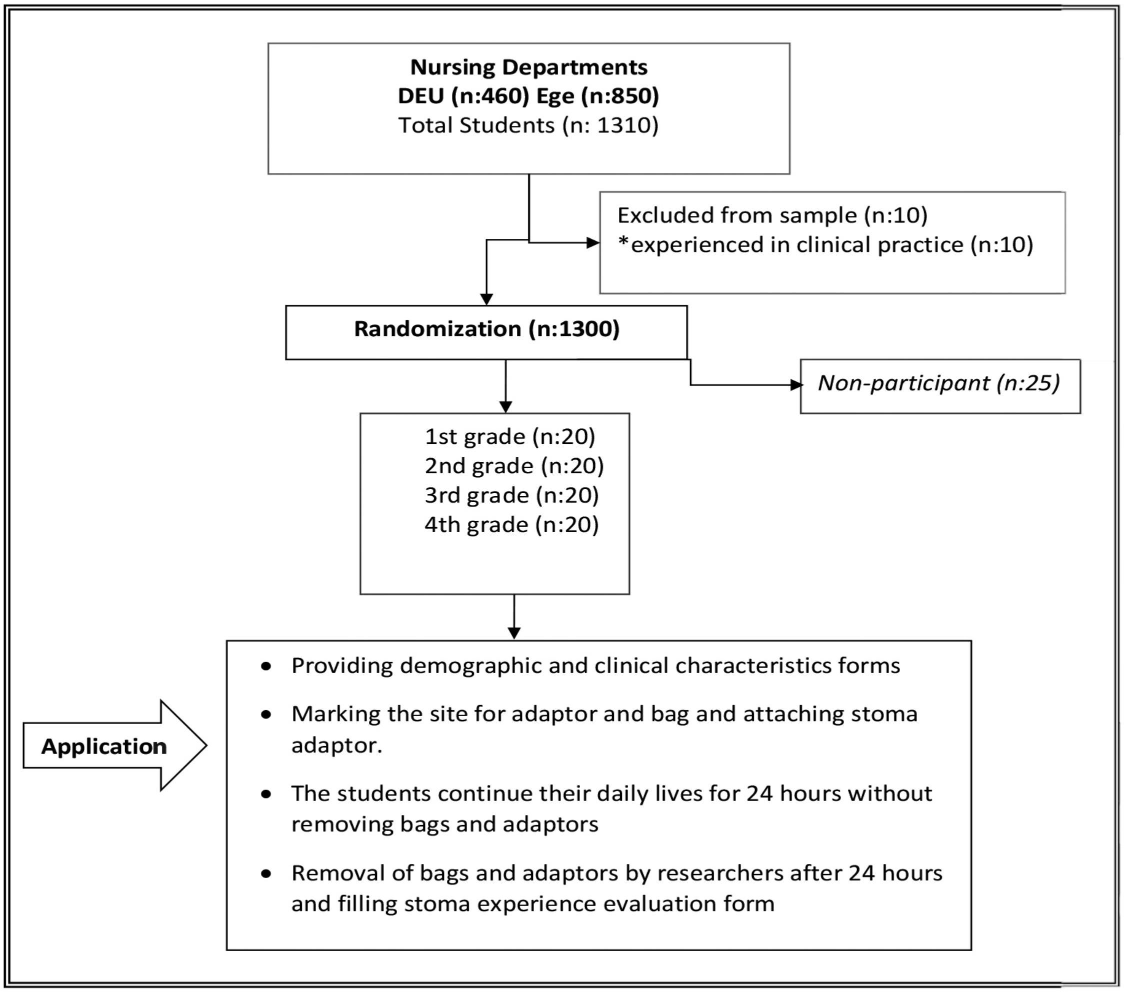

Figure 1. Study sample diagram

teach students how to develop an empathic approach to stoma care. Requiring students to live and continue their daily activities with a stoma bag and adaptor for 24 h effectively helps them understand the feelings of patients with a stoma.[7,8] Therefore, interventional studies are required to facilitate students' understanding and feeling regarding the experience of patients with a stoma. These studies will increase the awareness of nursing students about the lives of patients with a stoma. Nurses with a high awareness will improve the quality of stoma care.

To our knowledge, one study evaluated awareness and experiences of baccalaureate nursing students regarding how to approach patients with a stoma.[9] Thus, the present study was carried out to learn the experiences of baccalaureate nursing students after carrying a stoma bag for 24 h. Moreover, this study aimed to learn the degree of knowledge of students about stomas, to determine the physical, social and psychological effects of carrying a stoma bag and to learn their feelings about this experience.

Materials and Methods

Study Design

This quasi-experimental study did not employ a control group. This study aimed to determine the experiences of students carrying stoma bags for 24 h.

Study Population

The sample population was composed of nursing students from two universities located in Western Turkey. A total of 80 nursing students were chosen, regardless of gender, with 10 students each from first, second, third and fourth years. Forty students participated from each university.

Using Gpower 3.1, the estimated sample size was 80 students. This calculation was based on 80% power and 5% effect size. The sample group was determined by randomisation to avoid selection bias. Students who fit the sampling criteria were listed and numbered. The randomisation of students from each grade was made using a "random number table". New students were chosen again using a random number table in place of students who were not willing to participate in the study or could not be contacted.

Selection Criteria

Students who graduated from high school nursing education or worked in the clinic as nurses were excluded. In Turkey, the nursing education is implemented in two different educational programmes: at the high school and university levels.

Data Collection

Researchers collected data using a questionnaire prepared according to the literature. This form consisted of three sections. The first section had seven questions regarding demographic and descriptive characteristics (including age, gender, name of the school and class). The second section contained 16 yes or no questions about the students' degree of knowledge and experiences about stomas. The third section contained 13 questions about their experiences, ability to continue daily activities and feelings during the process. The questions were evaluated on a 3-point Likert scale (1, never; 2, sometimes; or 3, always). In one open-ended question, students were asked to express their feelings about living with stoma bags for 24 h. In this study, students completed the questionnaires in an empty, quiet and warm environment with sufficient lighting and enough chairs for the participants.

The researchers marked the stoma sites on the bodies of the students. Stoma adaptors were worn as a pouch after marking the sites. To protect the privacy of the students, they wore the stoma bags and adaptors in a private room and were removed by the researchers in the same room. To make it as realistic as possible, 25-50 mL of tap water was added to the stoma bags. The bags were then attached to stoma adaptors. After 24 h, the adaptors and bags were removed by the researchers.

Data Analysis/and Treatment

Data analysis was made using SPSS (IBM 20.0) software. Descriptive data, students' existing knowledge and experiences about stomas and their thoughts, experiences and feelings about living with a stoma bag are presented as percentages. The chi-square test was used for the comparison of gender, degree of knowledge about stomas and feelings.

Students' answers to the question "What was it like to live with a stoma for 24 hours?" were categorised and documented separately, and four main themes were identified.

Results

The average age of the students was 21.52±1.56 years, 66.3% were female and 56.25% had theoretical education about stomas. Demographic and descriptive characteristics of the students are presented in Table 1. First and second year students had no knowledge about stomas. Other students (n=45) gained knowledge from the bachelor's curriculum (66.7%), conferences and courses (17.8%) and their own searches (15.6%).

Students who had theoretical education about stomas were asked about stoma care and knowledge (Table 2). More than 75% of students who claimed to have knowledge about stomas correctly answered questions about the activities patients with stoma should do. For example, 93.3% of the students said that this statement is true: "Preoperative stoma site marking reduces the risk of complications". However, only 48.9% of the students gave the correct answer to the question about patients' sexual life after stoma surgery.

Students' experiences with the stoma are shown in Table 3. Most of the students said, "I was worried the stoma bag would leak" (86.3%) and "I was worried the stoma bag would burst or leak during sleeping" (86.3%). They also expressed these feelings were continuous. In addition, 71.2% of the students said there had been times when they wanted to remove the stoma bags, 63.8% said they needed to hide the stoma bags, 62.5% stated that the stoma bags were

Table 1. Demographic and descriptive characteristics of the students (n=80)

	X ± SD	**Range**
Age	21.52±1.56a	19-25
Characteristics	Number (n)	Percentage (%)
Gender		
Female	53	66.3
Male	27	33.7
Cohabitants		
Family	13	16.3
Friends	67	83.7
Place of residence		
Home	38	47.5
Dormitory	42	52.5
Receipt of theoretical education/information about stoma		
Yes	45	56.25
No	35	43.75

a: Values given are mean ± SD: Standard deviation

Table 2. Stoma care knowledge of the students (n=45) who had theoretical education about stoma

Statements/questions	**Right**		**Wrong**	
	n	**%**	**n**	**%**
Women with stoma can't get pregnant.	6	13.4	**39**	**86.6**
It is harmful for people with stoma to travel by flight.	4	8.9	41	**91.1**
People with stoma should not swim.	10	22.2	35	**77.8**
People with stoma can do mild exercises like walking and riding bicycles.	**40**	**88.9**	5	11.1
People with stoma can do religious practice like performing prayer.	**40**	**88.9**	5	11.1
Preoperative stoma site marking reduces the risk of complications.	**42**	**93.3**	3	6.7
A healthy stoma is bright pink and above skin level.	**39**	**86.7**	6	13.3
In order to prevent infection, alcohol based products must be used for the cleaning of stoma and peristomal area.	13	28.9	32	**71.1**
It does no harm for people with stoma to gain weight	10	22.2	35	**77.8**
When a new food is added to the diet of person with stoma, it must be given in small amounts together with other foods.	**30**	**66.7**	15	33.3
There is a high incidence of skin irritation in ileostomy as there are digestive enzymes in intestinal content.	**35**	**77.8**	10	22.2
People with stoma can resume their sexual activity 6 months after the surgery.	**22**	48.9	23	**51.1**

limiting their activities, 61.3% reported that they thought about emptying the stoma bags and 67.5% said they had problems while bathing.

When students were asked about their feelings regarding the stoma, 31.3% were "bored because of the stoma", 30.0% were "anxious because of the stoma", 23.7% were "ashamed of having the stoma" and 15.0% "preferred to be alone because of the stoma". No significant difference was found between the gender of the students or knowledge status and feelings about the stoma (Table 4) (p=0.175, p≥0.05, χ^2=3,488; p=0.235, p≥0.05, χ^2=2,896).

Students were asked the open-ended question "how was it to live with a stoma for 24 hours?" Four main themes were obtained from the responses: restriction in social activities, restriction in physical activities, worry about stoma leakage and effect on body image. Most students used the same words when describing their feelings. They also said that they better understood patients with a stoma. Nine students described how the stoma limited their social activities by saying, "The stoma limited my life", I even had my meal in my room because I did not want to be in public" and "I did not want to go out in case those around me could realise". Six students described how the stoma limited their physical activities by saying, "It limited my movements extremely", "I felt dependent", "I had difficulties in doing my activities" and "I thought about the stoma in everything I did". Six

Table 3. Experiences of the students (n=80) with stoma bags

Statements	Never		Sometimes		All the time	
	n	%	n	%	n	%
It was hard for me to accept my body image.	**39**	**48.8**	**41**	**51.3**	-	-
My stoma prevented me from going to school or going out.	**51**	**6.8**	11	13.8	18	22.4
I needed to hide my stoma (by wearing loose dresses etc.).	20	25	9	11.2	**51**	**63.8**
I was concerned that my friends or family would know that I had an ostomy.	**34**	**42.4**	23	28.8	23	28.8
I was worried in case my stoma bag would burst or leak during sleeping.	2	2.5	9	11,2	**69**	**86.3**
My stoma limited my activities.	17	21.3	13	16.3	**50**	**62.5**
I had problems while bathing. I thought that the bag or the adaptor would detach.	9	11.2	17	21.3	**54**	**67.5**
I thought about emptying my stoma bag.	17	21.2	14	17.5	**49**	**61.3**
I was worried in case my stoma bag would leak.	6	7.5	5	6.2	**69**	**86.3**
I was worried about adaptor detachment.	21	26.3	14	17.5	**45**	**56.2**
I had times that I wanted to remove my stoma bag.	13	16.3	10	12.5	**57**	**71.2**

Table 4. Comparison of feelings on stoma with students' gender and knowledge status

Feelings on stoma									
	Embarrassment-isolation		**Worry**		**Anxiety**		**Total**		
	n	%	n	%	n	%	n	%	
Gender									
Female	15	78.9	26	68.4	12	52.2	53	66.2	p=0.175
Male	4	21.1	12	21.6	11	47.8	27	33.8	x^2=3.488
									p>0.05
Degree of knowledge									
Informed	11	57.9	18	47.4	16	69.6	45	56.3	p=0.235
Not informed	8	42.1	20	52.6	7	30.4	35	43.7	x2=2.896
Total	19	100	38	100	23	100	80	100	p>0.05

students expressed their discomfort about the possibility of a stoma bag leak by saying, "I was worried that it would leak and there would be a stain on my dress" and "I could not sleep because I was especially afraid that it could burst or leak". Five students described how their body image was affected by saying, "I needed to cover the stoma with my hands", "I thought about how I could hide it and I thought about wearing loose dresses" and "I had the need to hide it all the time" and I thought people were watching me".

Other than these statements, the students also said they realised the importance of having properly functioning intestines. All students said this experience was quite beneficial for them, and they now understood more about the feelings of patients with a stoma.

Discussion

In this study, more than 75% of the students who claimed to have knowledge about stomas gave correct answers to questions about activities that patients with a stoma should do. For example, 93.3% of the students found the statement "preoperative stoma site marking reduces the risk of complications" to be true. Thus, most of the students had knowledge about stomas and living with stomas (Table 2). Nevertheless, only 48.9% of the students gave the right answer to the question regarding sexual life after stoma surgery. The high percentage of correct answers in all items, other than resuming sexual life, showed that the students had sufficient knowledge of stoma. In countries with conservative culture, such as Turkey, sexuality is generally a taboo, and students are lacking awareness about the sexuality of patients with stoma. Thus, nearly half of the students had incorrect information about the sexual life of patients with a stoma. Patients with a stoma have problems resuming sexual activity.[2,10] In a qualitative study, Dorum interviewed and evaluated the experiences of 19 patients with a stoma. These patients with stoma experience difficulties in their sexual life that were ignored by nurses, adversely affecting the quality of life of these patients.[11,12] Therefore, baccalaureate nursing students who will perform stoma care should have more knowledge about possible problems on the sexual life of patient after undergoing stoma surgery.

Statements of students after their experiences with having a stoma are given in Table 3. Living with a stoma adversely affected students' body image, social relation, daily activities and roles as students. Nine students also described how the stoma limited their social activities by saying, "The stoma limited my life, I even had my meal in my room because I did not want to be in public" and "I did not want to go out in case those around me could realise". Five students described how their body image was affected by saying, "I needed to cover the stoma with my hands", "I thought about how I could hide it and I thought about wearing loose dresses" and "I had the need to hide it all the time. I thought people were watching me". The students' answers to "what was it like to live with a stoma for 24 hours?" were consistent with their experience.

Only one study addressed the experiences of baccalaureate nursing students with a stoma. The study enrolled 134 nursing students who carried stoma bags and adaptors for 16-20 hours and shared their experiences in a blog designed for the study. They said their activities were restricted by the stoma, had bad feedback from friends and needed to hide the adaptor.[9] Importantly, in both studies, students were uncomfortable, preferred not to be seen by others and wanted to hide the stoma. Other studies have shown that patients with a stoma feared bag detachment, faecal leakage and presence of unpleasant smell.[13,14] These fears negatively affected the social lives of the patients, so these patients isolated themselves from the society.[13,14] In Dorum's qualitative study, patients with a stoma stated that they had problems with their daily activities and they could not talk about it even with their families.[11] Persson and Hellström noted in their qualitative study that the patients felt guilty about faecal leakage and felt bad because of the smell and full bag when they woke up in the morning.[15] Patients also stated not going to a swimming pool or sauna with their friends as they thought their friends would say derogatory things about their stomas.[15] Patients with a stoma less likely see their friends and families, limit their social activities, quit their jobs or reduce work hours and change jobs.[15,16] In our study, students had experiences, reactions and feelings similar to the experiences of patients. Thus, having a stoma influenced individuals negatively even during simulated conditions. Therefore, these student experiences are important to develop empathy and better understand the patients.

When the students described how they felt about living with a stoma, they said they were bored, anxious and embarrassed. Patients with a stoma also have psychological problems related to their stoma. Depression, anxiety, anger, difficulty of adaptation and isolation are among these psychological problems. In this study, six students expressed their discomfort about stoma bag leakage by saying "I was worried that it would leak and there would be a stain on my dress" and "I could not sleep because I was especially afraid that it could burst or leak". Moreover, nine students described how the stoma limited their social activities by saying "The stoma limited my life. I even had my meal in my room because I did not want to be in public" and "I did not want to go out in case those around me could realise". In the study by Persson and Hellstrom, patients said they stopped going to parties and meeting with friends because they are worried about odour leakage and they preferred to be alone.[15] In Dorum's qualitative study, patients with ostomy were ashamed of the stoma and isolated themselves to hide their stomas.[11] The statements of the students paralleled those of the patients with a stoma. These results show that students' experience of carrying a stoma bag for 24 h could be an effective aid to understanding the concerns of patients about a stoma bag burst or leakage.

After living with a stoma for 24 h, the students said that living with a stoma would have been very difficult and that accepting changes in body image and social and psychological adaptation would have been much harder if they actually had stomas. Moreover, they realised the value of their intestines. Sharing the same feelings with patients and having awareness about the difficulties of living with a stoma will increase students' understanding of patients with stomas.

In this study, no significant difference was found between the gender of the students or the degree of knowledge and feelings of living with a stoma (Table 4). Students' gender had no effect on their feelings of living with a stoma ($p=0.175$, $p\geq0.05$, $\chi^2=3,488$). The degree of knowledge about stomas had no effect on the feelings of living with a stoma ($p=0.235$, $p\geq0.05$, $\chi^2=2,896$).

Study Limitations

To our knowledge, this study is the first of its kind. This study shows that the experience of having an ostomy made all students uncomfortable. With these feelings, students were expected to acquire more awareness about the feelings of patients with a stoma and better enable them to choose the appropriate nursing interventions for stoma care.

Conclusion

Students had negative experiences about living with a stoma for 24 h. These negative experiences and feelings are important to improve awareness of baccalaureate nursing students about living with a stoma. In the education of baccalaureate nursing students, it will be beneficial to use educational methods, such as learning by doing, which will help increase their awareness to conditions under evaluation. For more valid results, a study of students' experiences with larger sample size is necessary.

Ethics

Ethics Committee Approval: The study was approved by Dokuz Eylül University Non-invasive Ethics Committee (decree no: 2013/12-15, dated: 04.04.2013).

Informed Consent: Written informed consent was obtained from all patients who participated in this study.

Peer-review: Externally and internally peer reviewed.

Authorship Contributions

Concept: F.V., K.Y., T.Ö., Design: F.V., A.D.E., Data Collection or Processing: K.Y., A.K., S.K.Ç., Analysis or Interpretation: A.D.E., K.Y., Literature Search: K.Y., A.K., F.V. Writing: A.D.E., K.Y., F.V.

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