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ASSESSMENT OF KNOWLEDGE AND PRACTICES AMONG UNDERGRADUATE NURSING STUDENTS REGARDING OSTOMY CARE

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Abstract

Background: *Ostomy care is a fundamental component of nursing practice that requires adequate theoretical knowledge and practical competence to ensure optimal patient outcomes, prevent complications, and improve the quality of life of individuals living with an ostomy. Undergraduate nursing students are expected to develop these competencies during their academic and clinical training. However, deficiencies in knowledge and clinical practice may adversely affect the quality of care delivered to ostomy patients.*

Objective: *To assess the knowledge and practices of undergraduate nursing students regarding ostomy care.*

Methods: *A quantitative cross-sectional descriptive study was conducted among 100 undergraduate nursing students enrolled in the 2nd and 6th semesters at the Lahore School of Nursing, The University of Lahore. Participants were selected through a convenience sampling technique. Data were collected using a structured, self-administered questionnaire consisting of demographic characteristics and standardized items assessing knowledge and practice regarding ostomy care. Data were analyzed using SPSS version 23, and descriptive statistics including frequencies and percentages were used to summarize the findings.*

Results: *Of the 100 participants, 50% were male and 50% were female, while 91% were aged 21–25 years. Regarding academic level, 51% were enrolled in the 6th semester and 49% in the 2nd semester. Assessment of knowledge revealed that 27% of students demonstrated poor knowledge, 53% had fair knowledge, and only 20% exhibited good knowledge regarding ostomy care. In contrast, assessment of practice showed that 71% of participants demonstrated competent practices, whereas 29% were classified as having incompetent practices. These findings indicate that although students generally demonstrated satisfactory practical skills, their theoretical knowledge remained moderate, highlighting a noticeable gap between knowledge acquisition and clinical practice.*

Conclusion: *Undergraduate nursing students demonstrated relatively better practical competence than theoretical knowledge regarding ostomy care. The findings underscore the need to strengthen undergraduate nursing curricula through targeted educational interventions, simulation-based learning, competency-based clinical training, and regular practical assessments to enhance students' knowledge and preparedness for providing evidence-based ostomy care in clinical settings.*

INTRODUCTION

An ostomy is a surgical procedure that creates an artificial opening in the human body, typically the abdominal wall, to divert the flow of bodily waste when normal excretory pathways are impaired. Ostomies are crucial interventions for individuals with conditions such as colorectal cancer, Crohn's disease, ulcerative colitis, and other gastrointestinal disorders. Proper care and management of ostomies are essential to ensure the health and well-being of these patients. (Massenga et al., 2019)

In the United States and Canada, around 800,000 people have a colostomy, and 120,000 new colostomies are produced each year. Colostomy complications affect up to 80% of patients. and these predominantly consist of Peristomal skin complications (Colwell,2018) An intestinal stoma has long been one of the most common life-saving surgeries performed around the world, and it is used to treat both congenital and acquired gastrointestinal diseases. Stomas can be used for a variety of purposes, including directing stool flow, protecting the anastomotic site, bowel decompression, or a combination of these causes. The most common ostomies performed in surgery are the colostomy and ileostomy (Massenga et al., 2019)

A stoma is created during several abdominal procedures done by general surgeons and others. It's commonly used to treat colorectal cancers, diverticulitis, trauma, intestinal obstruction, inflammatory colon disease, and a variety of other conditions. Colostomy cause physical and psychological changes in patients that necessitate extensive adaption. Students must educate patients with colostomy will need to adapt their lives and learn self-care in order to care for their stomas(Collado-Boira et al., 2021)

The reported occurrence of colostomy complications ranges between 21 to 70%. While there is always the possibility for occurance of complication is always present, It is most probable within the first few months of the stoma formation. Self-care teaching and preparation for life with a colostomy should begin as soon as feasible after surgery. Colostomy support groups and nurse counselling have been established to to improve long-term results and psychosocial adjustment while lowering complication rates (Shanmugan, 2019)

Colostomy knowledge can empower students to deal with stoma patients to encourage self-management and facilitate them in healthy coping and adjustment with stoma after surgery. Colostomy patient knowledge must include teaching concerning their disease, treatment, symptom management, thereby empowering stoma patients with the knowledge and self-care skills for themselves and minimizes the risk of post op complications (Qalawa, 2019)

Edema, hemorrhage, ischemia, and necrosis are the most prevalent acute complications in colostomy patients. The first symptom mostly occurs after 15 days of surgery, the first symptoms appear. Retraction, mucocutaneous separation, peristomal necrosis, and peristomal fistula, stenosis, prolapse, granuloma, and dermatitis are some of the problems that might arise 15 days to months following surgery (Mehboob, 2020)

Colostomy patients have physical, psychological, and social consequences. Stoma patients have physical, psychological, and social consequences. Colostomy patients have physical issues included pain, leakage, skin issues, ballooning, mucocutaneous separation, and odor. Leakage, peristomal dermatitis, the requirement for stoma devices and garment adaption to the existence and location of the stoma are the most prevalent physical problems with the stoma, all of which have a major impact on the patient's day-to-day life. Partially or circumferential detachment of the mucosa from the peristomal skin is known as mucocutaneous separation. Infection, diabetes, corticosteroids, starvation, severe stoma strain, and stoma necrosis and improper self-care are all causes of the complications after colostomy. Mucocutaneous separation affects 13.7 percent to 19.7% of people (Tsujinaka, 2020)

Colostomy patients have physical, psychological, and social consequences. According to a retrospective examination of long-term defunctioning colostomy problems following colorectal surgery, the total complication rate in colostomy patients was 60%.(Andrews & Sharma, 2018)

Stoma is a relatively lengthy and difficult period. Mostly patients do not recognize how to treat stoma, which makes them feel panic and worry. After discharged from hospital and returning home is one of the most part of complicated time. According to a survey 49% of patients with stoma could not carry out self-care. It is essential for students to encourage the colostomy patients regarding self-care and self-management during the process of adaptation of stoma (Goldblatt, 2018)

In the initial few weeks after the creation of a stoma, colostomy patients have minimal understanding about stoma self-care. Patients with colostomies can benefit from student knowledge to improve their self-care abilities and reduce complications (Peristomal bleeding, stomal necrosis, stomal stenosis, dermatitis, mucocutaneous separation) (Abdelmohsen, 2020).

PROBLEM STATEMENT:

Nursing students should be well-versed on the epidemiological data and trends surrounding ostomies, since they will likely come into contact with these patients in their clinical rotations and in their future jobs as nurses. Examining nursing students' knowledge of ostomy statistics, such as incidence, prevalence, age groups impacted, and frequent underlying medical disorders, is the goal of this study.

Nursing plays a central role in the care and management of patients with ostomies. It is essential for nursing students to have a comprehensive understanding of their responsibilities in ostomy care, including stoma assessment, appliance application and maintenance, peristomal skin care, and patient education. This study seeks to assess nursing students' knowledge of these responsibilities, their confidence in performing these tasks, and their ability to provide psychosocial support to ostomy patients.

Similarly, Nursing education programs are responsible for preparing students for real-world clinical practice. To ensure safe and effective care for patients with ostomies, it is imperative to evaluate the preparedness of undergraduate nursing students. This study aims to identify any gaps in the curriculum or clinical training that may hinder students' ability to provide competent ostomy care. lately, it will explore students' attitudes and perceptions toward caring for patients with ostomies, as these can influence the quality of care they deliver.

SIGNIFANCE:

The possibility of better patient care is the main relevance. Comprehensive ostomy care education increases the likelihood that nursing students will treat ostomy patients with excellence. For those who have ostomies, this can therefore result in enhanced quality of life overall, decreased problems, and better health outcomes.

Patients with ostomies may have discomfort, infections, and other consequences as a result of inadequate understanding and practice in ostomy management. In order to protect patients and lower the possibility of unfavorable outcomes, it is essential to make sure nursing students are adequately trained to deliver quality care.

For this reason; graduate nursing students will be more prepared to tackle any obstacles they may encounter in their nursing jobs if they have a solid understanding of ostomy treatment. This evaluation advances their professional growth by strengthening them.

AIM OF STUDY:

Aim of study is to assess knowledge and practices among undergraduate nursing students regarding ostomy care.

LITERATURE REVIEW

Knowledge plays a most important role in enhancing, educating and developing stoma care in colostomy patients. In the general surgical, medical, and outpatient clinics of King Abdul-Aziz University Hospital and King Fahad General Hospital, a quasi-experimental study was conducted. For the study, 50 people were chosen. The difference between before and after immediate was highly significance at p<. oo1 in all items of care immediate protocol. Furthermore, there was a statistically significant differentiation among immediate post and one

month after implementation of an educational protocol regarding self-care items such as emptying the pouch bag, nutritional instructions, quantity of stomal size measurements after 6 weeks of surgical treatment, and number of common complications, with p= 0.013, 0.019, 0.03, and 0.01 respectively (Abdulmutalib, Al Nagshabandi, & Alansari, 2018)

The knowledge of students should try patient to take control of the situation, and the students should make sure that the care procedures are not so complicated. To improve the impact of knowledge, students working with the person with a colostomy should recognize challenges and identify possible resources to overcome them. As a result, nurses and other health care professionals who work with people who underwent colostomy should expand their knowledge associated to care and understanding of the solutions of the issues that can arise during the colostomy adaptation process, as well as the consequences and alternatives that may help the patient restructure their lives (Santos, 2019)

According to a descriptive study conducted in 2018 to evaluate the self-care and care competences in colostomy patients. With regard to the self-care 96% (n = 48) participants had inadequate self-care about colostomy. In relation to the colostomy complications, only 4% (n = 2) of participants were partially aware and 96% (n = 48) of them were totally unaware. With regard to the frequency of changing the stoma bag or wafer/flange, the results showed that 48% (n = 24) of the participants did not know when to change the bag and 52% (n = 26) did not know when to change the wafer/flange. 62% (n = 31) of participants did not demonstrate self-care about the existing resources, 36% (n = 18) demonstrated partially, and only one participant (2%) demonstrated full self-care knowledge (Silva, 2018)

Colostomy is a chronic ailment, and knowledge improves patient outcomes in such cases. Self-care is defined as "the process of sustaining one's health through health promoting practices and controlling one's own health." knowledge enhances patient quality of life while also lowering hospitalizations, mortality rates, and complications. Better knowledge has been linked to a higher quality of life, better adaptability, and fewer issues in the patients. According to a study conducted in Italy to evaluate colostomy student knowledge. Patients exhibited lower self-care management and self-efficacy at the start of the study, according to the findings. Patients who received more information about self-care during their hospitalization had a significant improvement in self-care maintenance and monitoring (Giordano, 2020)

In 2019, a quasi-experimental study was conducted with one group pre and post testing. To investigate the effects of colostomy knowledge abilities in participants with colostomies, 44 individuals with stoma colon were randomly selected. The results demonstrated that there was a considerable difference in self-care before and after the educational intervention with a p-value of 0.05. Colostomy knowledge interventions have a positive effect on the progress of self-care among stoma patients by providing knowledge about disease management can enhance and give a positive impact on improving the health status of colostomy patients (Herawati, 2019)

A study was done to observe how a student/nurse's knowledge and intervention affected post colostomy rectal cancer patients' self-management abilities. The trial included 130 stoma patients who were divided into two groups, an interventional group (n=65) that received self-care skills along with predictive nursing care, and a control group (n=65) that received routine nursing. Following the intervention, the two groups were compared in terms of operational indications, Ostomy care abilities, dietary indicators, mental health, postoperative recovery, complications, and nursing satisfaction. After the intervention, the interventional group, compared to the control group, average blood loss, gastrointestinal tract recovery times, and hospital stay durations were shorter, colostomy knowledge and practical skill scores were greater, and the incidence of complications was reduced after the intervention. There was less intra operative bleeding in the interventional group than in the control group ($P < 0.05$). Patients in the

interventional group stayed in the hospital for less time in comparison to the control group (P < 0.05). The correct diet ratings in interventional group were greater than the control group (P 0.05). The Patients in interventional group had a lower incidence of postoperative complications in compare to the control group (P < 0.05). The knowledge scores in interventional group adherence to a healthy diet, active medication, and mastery of disease-related information ratings were all greater than the control group (P < 0.05) (Li, 2021)

OBJECTIVES

1: To assess the knowledge among undergraduate students regarding ostomy care.
2: To assess the practices among undergraduate students regarding ostomy care.

OPERATIONAL DEFINATION

KNOWLEDGE:
It is defined as the undergraduate nursing students regarding Ostomy care. This questionnaire will use Likert scale to identify the knowledge in the study so the always will give a score of 4, often will give a score of 3, sometime will give a score of 2, rarely will give a score of 1 and never will give a score of 0. So, knowledge will define as

- >75 % (> 31 out of 40) Good knowledge
- 50 % to 75 % (21 to 30) out of 40 Fair knowledge
- <50 % (≤ 20 out of 40) Poor knowledge

PRACTICE

This questionnaire will use Likert scale to identify the knowledge in the study so the always will give a score of 4, often will give a score of 3, sometime will give a score of 2, rarely will give a score of 1 and never will give a score of 0. So, practice will define as

- > 50 % (> 21 out of 40) Competent practices
- 0 % to 50 % (≤20 out of 40) Incompetent practices

MATERIAL AND METHOD

Study design:
This study was based on a cross-sectional descriptive approach.

Source population:
Data collected from students of BSN 2nd and 6th semester in university of Lahore.

Study setting:
This study was conducted in Lahore school of Nursing, The University of Lahore, Lahore.

Sample size:
Convenience sampling technique was used:
Sample size was 100

Inclusion criteria:
1: Aged between 20-25 students of BSN in university of Lahore.
2 Students of 2nd and 6th semester.
4: Male and Female students

Exclusion criteria:
1: Students of 8th semester, post RN and master students.
2: Students who have already obtained certification as ostomy nurses.

Data collection:
Data will be collected by using a structure questionnaire.

Data analysis:
Analyze the quantitative data using appropriate statically techniques such as descriptive statics', to examine the relation between variables. This data was analyzed by using SPSS (version 23) Data analyzed in percentage and frequency form by using bar chart.

Sampling:
A convenient sampling technique was used.

Research Collection:
The questionnaire was used as a research tool for researching study participants.

Data collection tool:
Two parts were used in this study, one for demographic data and other for determine the knowledge and practice of students.
Part I: Demographic Information such as student ID# Age, Gender, Academic year
Part II: Information will be measured by correct and incorrect knowledge questionnaire.it consist of 20 statements each correct answer will get score one (1), while each incorrect answer will get score zero (0). A 4-point scale of never often sometimes always is being used.

ETHICAL CONSIDERATION

The rules and regulations set by the ethical committee of university of Lahore will be followed while conducting the research and the rights of the research participants were respected.
• Written informed consent attached was taken from all the participants.
• All information and data collection were kept confidential.
• Participants was remained anonymous throughout the study.
• The subjects were informed that there are no disadvantages or risk on the procedure of the study.
• They were also be informed that they will be free to withdraw at any time during the process of the study.

RESULTS

The finding of this study is included in this chapter. It contains three section. First one contains demographics characteristics of participants. Second one contains overall knowledge of the participants and the third one contains practices of the participant
Section 1: Demographic data of participants
The frequency and distribution of socio-demographic of student characteristics are displayed in figure 1:1,2,3. Both male and female were 50%. According to age group 9% were between 18-20 and 91% were between 21-25. Students were single. Mostly students were from 6th semester. 51% of students were from 6th semester and 41% of students were from 2nd semester.

Variable	Category	Frequency	Percentage
Gender	Male	50	50.0%
	Female	50	50.0%
	Total	100	100.0

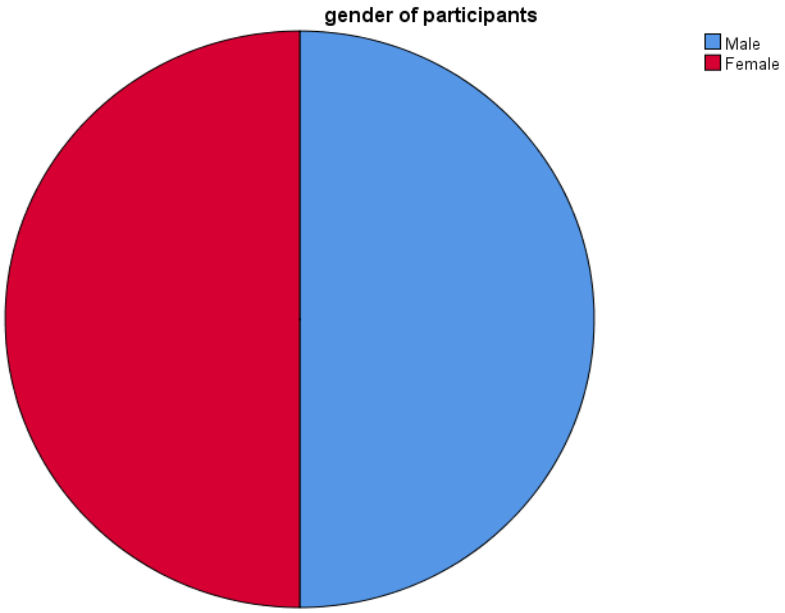

Figure 1:1

Variable	Category	Frequency	Percentage
Semester	2nd	49.0	49.0%
	6th	51.0	49.0%
	Total	100	

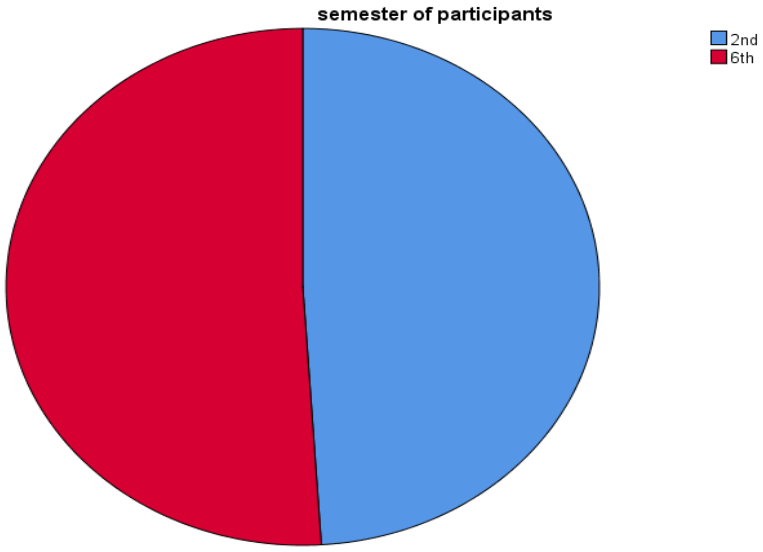

Figure 1:2

variables	Categories	Frequency	Percentage
Age	18-20	9	9.0
	21-25	91	91.0
	Total	100.0	100.0

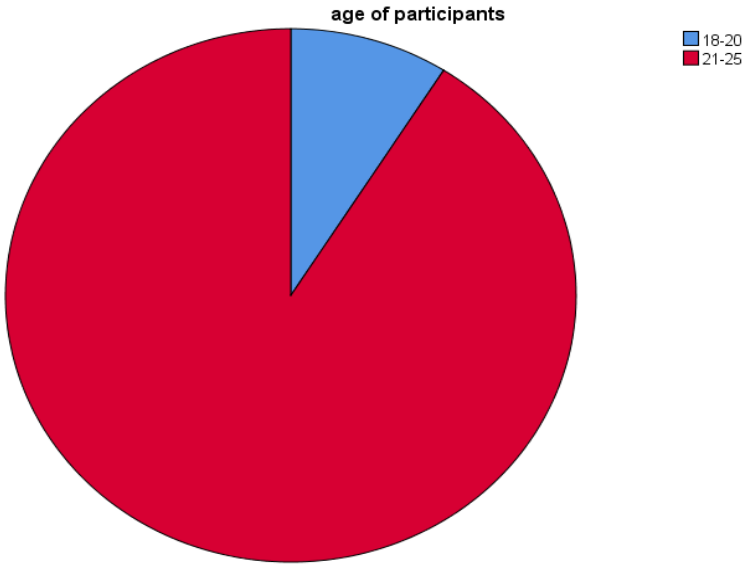

Figure 1:3

Likert scale use 4 Points never = 0, rarely = 1, sometimes = 2, often = 3 and always = 4. Figure 1:4 shows the frequency and percentage of the stoma care knowledge questionnaire regarding ostomy care. s. Regarding the checking Change your diet or fluid intake to decrease or to stop the problem revealed that never response 1% rarely response 34 % sometimes response 44% often response 9% and always response 12 %. The participants response Eating and drinking according to information received never response 1% rarely response 35% sometimes response 22% often response 12% and always response 30%. The participants response Check that the stoma appliance and the collecting bags are in good conditions before use never response 1%, rarely response 19%, sometime response 20%, often response 16% and always response 44%. The participants response to Check that the stoma appliance and the collecting bags are appropriate to your needs never response 2%, rarely response 11%, often response 21, sometimes response 31, and always response 35%. The participants response to When they happen, recognize changes in your stoma and the skin around the stoma? Never response 1%, rarely response 33%, sometimes response18%, often response 27 and always response 21%. The participants response to Change your diet or fluid intake to decrease or to stop the problem never response 4%, rarely response 20%, sometimes response 55%, often response 9% and always response 12%. The participants response to Change the way you manage the stoma and the skin around the stoma never response 1%, rarely response 22%, sometimes response 51%, often response 16% and always response 10%. The participants response Adjust the size of the stoma in a new stoma appliance never response 2%, rarely response 22%, often response 29%, sometimes response 18% and always response 29%. The participants response Monitor patient weight never response 1%, rarely response 17%, sometime response 18%, often response 19% and always response 45%. The participants response to Monitor the condition of filling of the collecting bag never response (0), rarely response 18%, sometimes response 22%, often response 10 and always response 50%

Ostomy care knowledge

Valid	Category	Frequency	Percentage
Knowledge	Poor Knowledge <50 % (< 20 out of 40)	27	27.0%
	Fair knowledge 50 % to 75 % (21 to 30 out of 40)	53	53.0%
	Good knowledge 75 % (< 31 out of 40)	20	20.0%
	Total	100	100.0

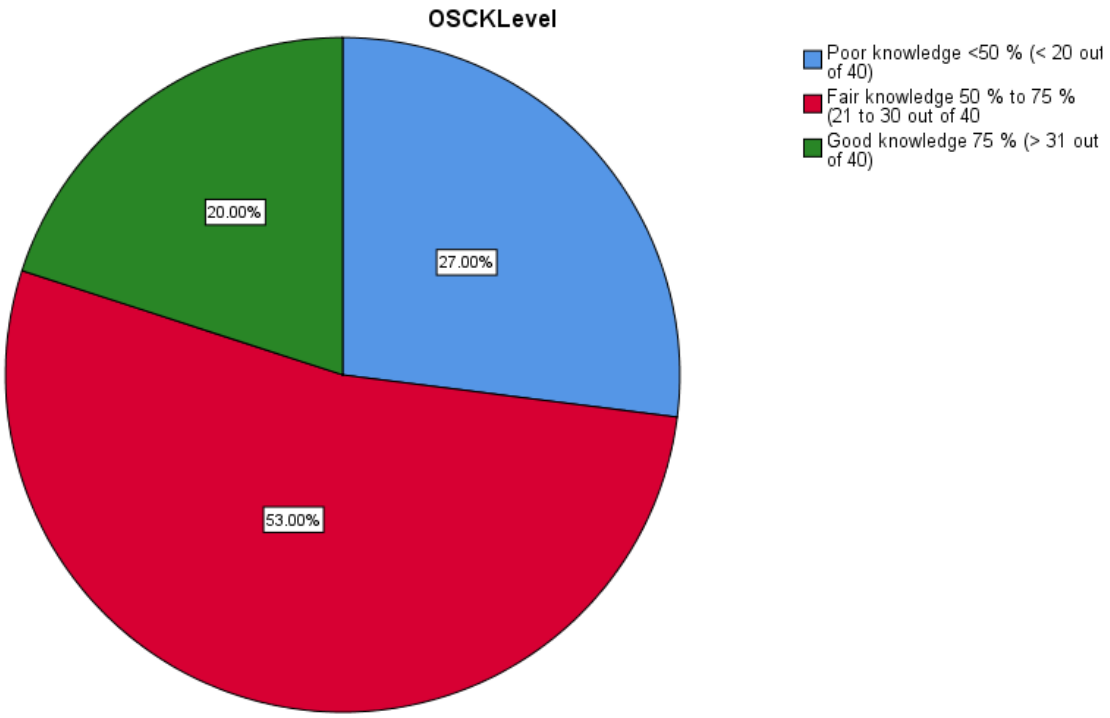

Figure 1:4

Figure 1:5 Check that the stoma appliance and the collecting bags are in good conditions before use never response 0%, rarely response 21%, sometimes response 21%, often response 11% and always response 52%. During substitution, remove the stoma appliance and the collecting bags from up to down never response 0%, rarely response 22%, sometimes response 32%, often response 11% and always response 35%. Monitor stoma appliance provision never response 0%, rarely response 16%, sometimes response 26%, often response 18% and always response 40%. Clean the skin around the stoma and stoma never response 0%, rarely response 14%, sometimes response 26%, often response 14% and always response 46%. Dry dabbing the skin around the stoma never response 2%, rarely response 29%, sometimes response 34%, often response 8% and always response 27%. Persist to monitor the stoma and the skin around the stoma condition never response 0%, rarely response 21%, sometimes response 40%, often response 14% and always response 25%. Fit a new stoma appliance from down to up by joining the lower edge of the stoma appliance to the lower edge of the stoma never response 0%, rarely response 21%, sometimes response 44%, often response 16% and always response 19%.

Monitor for leaks (faeces or urine) from the stoma appliance never response 3%, rarely response 25%, sometimes response 23%, often response 11% and always response 38%. Monitor the stoma state never response 2%, rarely response 15%, sometimes response, 26% often response 16% and always response 41%. Monitor the skin around the stoma state never response 1.0%, rarely response 19.2%, sometimes response, 26.3% often response 14.1% and always response 39.4%.

Variable		Frequency	Percentage
Practice	In competent 0 % to 50 % (<_ 20 out of 40)	29	29.0
	Competent > 50 % (> 21 out of 40)	71	71.0
	Total	100	100.0

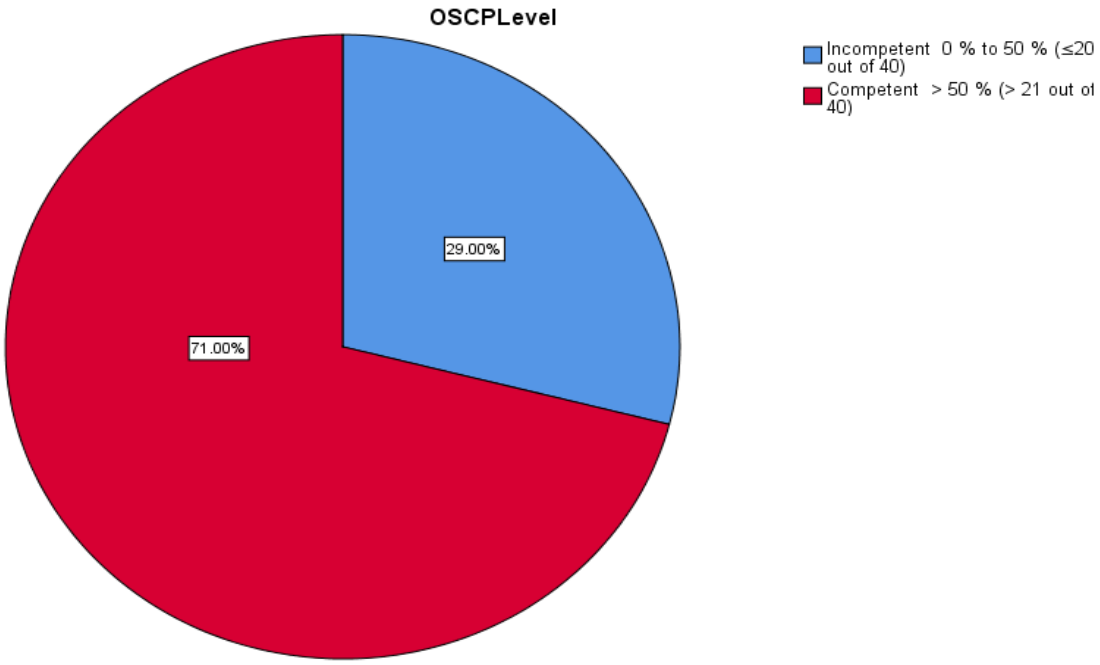

Figure 1:5

DISSCUSSION:

The aim of this study was to assess the knowledge and practice among undergraduate nursing students regarding ostomy care. This goal was accomplished through assessing students' knowledge and practice regarding ostomy care. The conclusion was divided into two parts: the first part linked to the demographic features. The findings relating to knowledge about ostomy care were discussed in the second section and the findings relating to practice were discussed in the third section. Both male and female were 50%. According to age group 9% were between 18-20 and 91% were between 21-25. Students were single. Mostly students were from 6th semester. 51% of students were from 6th semester and 41% of students were from 2nd semester.

Students were both male and female. Male students were 50% and female were also 50%. A study conducted by Tofthagen et al. (2017) implemented an educational intervention focused on enhancing nursing students' understanding of ostomy care. The results indicated a significant increase in students'

knowledge and confidence levels in managing ostomies after the intervention. Present concrete evidence from my study indicating the positive impact of your interventions or methodologies. Whether it's an increase in students' confidence levels, demonstrable improvement in knowledge. Studies by Coyne et al. (2018) and Ballantyne et al. (2019) demonstrated the positive impact of simulation exercises on improving students' confidence, skills, and overall competence in managing ostomies. These studies revealed that simulation-based education significantly enhanced students' ability to handle ostomy care challenges in clinical settings because living with a stoma for the rest of the life after a surgery is extremely difficult, and everyone will have a different experience due to lack of self-care practices. Colostomy patients face a variety of complications including skin burns, ulcers, infection, intestinal protrusion, stoma hernia, and nutritional issues. Interventional education regarding self-care given by undergraduate nursing students in colostomy patients may improve self-care abilities, and self-management in terms of determining the color of the stoma and the skin around it, determining its size, and cutting the size of the stoma bag. Nursing students and nurse have a vital role in presenting such therapies, and the positive outcomes can motivate patients to take charge of their own stoma care and management (Khalilzadeh Ganjalikhani, 2019). For instance, research by Hsieh, Chao, & Chen (2020) utilized structured questionnaires and competency checklists to assess students' theoretical knowledge and practical skills in ostomy care. Their study found that while students had theoretical knowledge, their practical skills were lacking, highlighting areas for improvement in the curriculum. But present study reveals that student's practical skills are far better than their theoretical knowledge.

Furthermore, research by Lai et al. (2019) highlighted the need for more clinical exposure and practical experiences for nursing students to better prepare them for managing ostomies in real-world settings. Approximately, 700,000 Europeans have colostomy surgery to remove or redirect diseased or damaged sections of their colon as a result of disease, heredity, or trauma. A significant number of individuals are nonetheless having to live with a permanent abdominal stoma for the rest of their lives. Patients must learn to manage their colostomy self-care and appliances, as well as adjust to their new body image. They have to deal with stool leaks, smells and gas, peristomal dermatitis, and other complications as a result of their lack of self-care. Ongoing research attempts to improve colostomy equipment and find creative technical techniques to recover control over body waste discharge while avoiding the issues that come with wearing a stoma pouch. (Lehur, 2019). So, in this regard it is vital for the student to give education to patients. Your study could be fixing these issues by giving better ways for students to learn.

CONCLUSION:

In conclusion, the assessment of knowledge and practice regarding ostomy care among undergraduate students reveals both strengths and areas for improvement. While there are some students who have demonstrated a commendable understanding of ostomy care principles, there still exists a notable gap between theoretical knowledge and practical application. Encouragingly, educational interventions, simulations, and hands-on experiences could bridge this divide, enhancing students' confidence and competence in providing optimal ostomy care. Continued emphasis on comprehensive education and clinical exposure is pivotal to equip future healthcare professionals with the necessary expertise and empathy required to support individuals with ostomies effectively.

While talking about knowledge 27% of students have poor knowledge, while 53% have fair knowledge, and 20 % have a good knowledge regarding ostomy care. If we look at the practice diagram, 29% are incompetent regarding ostomy care and 71% are competent regarding ostomy care. This shows that students practices are far better than their knowledge. This is the area that warrant further attention and improvement. Addressing this gap through targeted education can enhance overall competency among future

nursing professional in providing effective care. Therefore, ongoing education regarding ostomy practice is essential to meet the diverse need of patient with ostomies in their future clinical practice.

In summary, after examining the results of undergraduate students regarding ostomy care, the research concludes a mixture of both good and average results. The study has proved that some students are doing well in practices rather than knowledge. However, there are areas where everyone could do better. By giving students more targeted knowledge and hand on practice, we can make sure they are really ready to help patients with ostomies. It's important to keep checking and improving how we teach. This practice would ensure a confident and skilled healthcare worker especially dealing with ostomies.

RECOMMENATION:

For future, it is recommended to organize a practical session where students would demonstrate their skills in ostomy care. This can involve applying and changing ostomy appliances, assessing skin integrity, addressing complications, and providing patient education. Furthermore, design a written test comprising multiple-choice, true/false, and short-answer questions related to ostomy care. The goal is to ensure that students learn basic practical skills in order to improve healthcare among patients. Lastly, it is imminent to keep teaching students about ostomies in different classes as it will improve their learning and knowledge regarding ostomies.

LIMITATION:

Assessment of knowledge and practice regarding ostomy care among undergraduate nursing has its limitation. One limitation is potential gap between theoretical knowledge and practical application. Students may excel in understanding concepts setting but struggle to apply them in real-life situation, especially with sensitive topics like ostomy care. Another limitation is the challenges of evaluating communication skills in assessments. Effective communication is crucial in nursing, particularly when dealing with patients with ostomies. Only one institute was used in this study.

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