

UNDERSTANDING NURSES' KNOWLEDGE, ATTITUDE, AND PRACTICES ABOUT ENDOSCOPY PROCEDURES IN NISHTAR HOSPITAL MULTAN

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Abstract: *This study explores nurses' knowledge, attitudes, and practices in gastrointestinal endoscopy procedures, focusing on nurses from Nishtar Hospital Multan. It explores their understanding and practical application of endoscopy protocols and their pivotal role in patient care and procedure management. In a cross-sectional study conducted at Nishtar Hospital Multan, data was collected from 150 nurses using a Likert scale questionnaire. The research considered participants willing to participate and provided informed consent. Data analysis was carried out using SPSS software. The demographic profile of the nurses revealed a predominantly female workforce (56%). Age-wise, the majority were under 45 years old (38%). About 80% held a diploma degree, indicating specialized training. A significant portion had eight years of work experience (82%). In terms of endoscopy experience, 72.7% had less than 10 years. Most received training (82%) and were vaccinated against Hepatitis B (82%). In terms of attitudes and practices, the nurses displayed a high level of agreement with key hygiene and infection control practices, such as handwashing, with 100% agreement in some cases. They also recognized the importance of infection prevention through measures like masks, gowns, and gloves. Furthermore, they acknowledged the significance of patient comfort and the need to provide information to patients during endoscopy. The study reveals that while nurses possess strong knowledge and positive attitudes toward endoscopy procedures, ongoing training and continuous assessment are necessary to ensure optimal practices. Nurses play a crucial role in patient care and procedural success, prioritizing their comprehensive education and training. Further research and periodic evaluation can drive improvements in their work's theoretical and practical aspects, ultimately enhancing patient outcomes and safety in endoscopy units.*

Keywords: Gastrointestinal Tract, Endoscopy, Nursing, Knowledge, Attitude, Practises

Introduction

Endoscopy procedures have become increasingly popular due to the rising demand for them. People are experiencing a range of gastrointestinal issues, from mild to severe, and endoscopy is a non-surgical process that thoroughly examines the digestive tract. An endoscope, a flexible tube with a camera and light attached to it, is used during this procedure. Images or videos of the procedure are displayed on a monitor. Upper endoscopy involves inserting the endoscope through the mouth into the throat, then into the esophagus, stomach, and upper part of the small intestine. Conversely, for lower endoscopy, the endoscope is inserted through the rectum and into the large intestine (colon) to examine that portion of the intestinal tract (Amer et al., 2015)

The main objective of endoscopy is to identify any abnormalities in the gastrointestinal tract. Symptoms such as stomach pain, a history of gastro ulcers, gastric inflammation, difficulty swallowing, bleeding from the digestive tract, or disrupted bowel movements, such as severe constipation or diarrhea, may necessitate an endoscopy procedure (Bertleff et al., 2009). Patients must prepare thoroughly for endoscopy, including gut preparation, which entails fasting or being NPO (Nil Per Oral) for 6-8 hours before the endoscopic procedure. Food ingestion can interfere with endoscope insertion during

endoscopy, causing reflux when the endoscope is inserted through the mouth (Alvarado and Reichelderfer, 2000)

In preparation for lower endoscopies to clear the colon or large intestine, patients are given laxatives the day before the procedure to clear their stool. Sedation is also important for most endoscopic procedures to enhance patient comfort and relaxation, administered via an intravenous route into the body's veins (Winslet, 2009). The sedation produces relaxation and sleep, with patients waking up within an hour. However, the side effects of sedatives are more delayed, making them unsafe for use in some cases. In special situations, such as with young children or for complex procedures, general anesthesia is given to put the patient completely to sleep. Gastrointestinal endoscopy is a significant instrument for identifying and treating GI tract disorders (Cowen, 2001).

GI endoscopy is crucial for diagnosing many diseases and allows for minimal application of invasive curable techniques that replace more aggressive interventions, such as surgical procedures. Such advancements have reduced the mortality rate and minimized hospitalization of patients with GI disorders during treatment procedures (Day et al., 2001)

To create and maintain a safe and secure environment free from the risk of spreading diseases to patients and healthcare workers, paramedical staff must stick to infection

control ethics when performing any GI endoscopy procedures, regardless of the setting (hospitals, clinics, ambulatory or mobile care centers, and healthcare offices) (El Shamaa, 2010) Nursing health professionals who work in endoscopy units and provide pre-operative and post-operative care to patients require precise training or learning courses to carry out their assigned clinical duties and manage the necessary materials and equipment effectively. Nurses play a critical and significant role in ensuring endoscopy's safe, high-quality preparation. (Tan et al., 2018) They are responsible for preparing the appropriate room having accurate instruments and necessary equipment for examining the upper or lower gastrointestinal tract. Nurses must also provide accurate information about the procedure to the patient to reduce anxiety and give clarifications regarding the modality of the endoscopic (Nelson, 2005; Passi et al., 2021).

Nurses are the backbone of hospitals and other healthcare systems, playing a vital and effective role in managing several diseases. During endoscopic procedures, nurses have strong responsibilities regarding patient treatment and care. However, little research has been done on this topic in Pakistan, and the role of nurses and their data collection is absent (Salah Eldin Saad and Abdelwahab Abdallah Srour, 2019). The purpose of this study is to perform a KAP (Knowledge, Attitude, and Practices) study among nurses to assess their understanding and implementation of endoscopic treatments and protocols. The study group will consist of nurses from Nishtar Hospital Multan, and the data collected will highlight the significance of this subject.

The significance of this study lies in providing a broad range of information about endoscopy procedures among nurses. It aims to improve nurses' implementation and their role in maintaining the health status of patients undergoing endoscopic procedures and treatments.

The problem lies in the gap between the nurses' knowledge and their practices regarding endoscopic procedures, which negatively impacts patients with endoscopic complications. The study aims to provide comprehensive concepts that illustrate nurses' knowledge, attitude, and practices regarding endoscopy procedures in Nishtar Hospital Multan. It aims to design and implement evidence-based interventions to achieve better outcomes in endoscopic procedures.

The study's objectives are to assess nurses' knowledge and practices regarding endoscopic procedures and to identify associated factors towards effective endoscopy procedures..

Methodology

A cross-sectional study was conducted to assess nurses' knowledge, attitudes, and practices regarding endoscopy procedures. The study population consisted of 250 nurses from Nishtar Hospital Multan, out of which 150 participants were selected for the study. The study was conducted at Nishtar Hospital Multan, and a Likert scale closed-ended questionnaire was used for data collection. The collected data was analyzed using SPSS software.

Inclusion criteria for the study were all nurses from Nishtar Hospital Multan who were willing to participate and gave informed consent. Exclusion criteria were nurses who were unwilling to participate and those who were absent during the data collection process. The independent variables were knowledge, attitude, and practices, while the dependent

variable was endoscopy procedures. Slovia's sampling formula (Isip) was used to determine the sample size of 150 nurses for the study population out of 240.

Ethical considerations were taken into account, and permission was obtained from the ethical committee of the healthcare institution before data collection. Further written and verbal consent was taken from participants, and they were informed about the study's nature, purpose, and risks. Participants were assured that their participation would be confidential and that they had the right to withdraw from the study at any time. The collected data was analyzed systematically and logically, and a financial plan was expressed for future expenses.

Results

The data provided offers valuable insights into the demographic composition of the staff working in an endoscopic department. Data was collected from a total of 150 nurses of Nishtar Hospital Multan. The first key aspect examined is the distribution of staff members by age. There is a diverse representation of age groups among the staff. Approximately 31% of the staff members fall in the age group of 35 years, while a slightly smaller percentage (30.7%) is above 25 years but less than 35 years. Notably, 38% of the staff members are younger than 45, indicating a relatively youthful workforce within the department.

Gender diversity is also an important factor in this demographic analysis. The data shows that the department has a higher percentage of female staff members, making up 56% of the total workforce, while male staff members account for 44%. This suggests a significant female presence in the endoscopic department, which is relevant for understanding workforce gender dynamics.

Regarding qualifications, the data reflects a predominantly high proportion of staff members with a diploma degree, comprising 80% of the workforce. This indicates that most staff have received specialized training and education related to their roles. Furthermore, 14% of the staff hold an associate degree, and 6% have obtained a bachelor's degree, showcasing a range of educational backgrounds within the department.

Work duration in years provides another layer of insight. A substantial majority (82%) of the staff members have worked for 8 years, suggesting a seasoned workforce with significant experience. In contrast, 8% of the staff have 18 years of experience, and 10% have been employed for over 28 years. This distribution highlights the varied experience levels among the staff, with a notable emphasis on those with eight years of service.

Endoscopy experience is crucial in this department, and the data reveals that most staff members (72.7%) have less than 10 years of experience in endoscopy. However, 27.3% of the staff members possess 10 or more years of experience, indicating a significant presence of seasoned professionals with extensive expertise in endoscopy procedures.

Training and vaccination status are also crucial factors in healthcare settings. The data shows that most staff members have received training (80.7%), demonstrating a commitment to ongoing professional development. Additionally, 82% of the staff members have been vaccinated against Hepatitis B (HBV), a positive sign of infection control practices within the department. (Table, Figure 1,2)

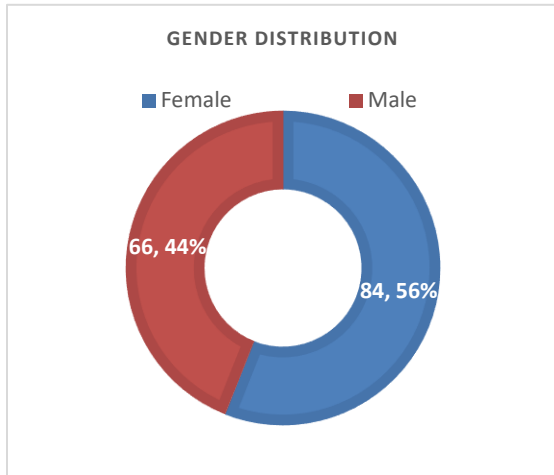


Figure 1: Distribution of gender in study group:

The table 2 presents a comprehensive overview of respondents' attitudes and beliefs regarding various hygiene and infection control practices within a healthcare setting. These practices are essential for maintaining a safe and clean environment, especially in medical facilities. The responses are categorized into "Yes," "No," and "Don't Know," offering insights into the level of consensus and uncertainty among the participants.

The first two statements, "Hand Washing After Using the Toilet" and "Hand Washing Before Drinking and Eating," garnered unanimous support. All 150 respondents (100%) agreed that hand washing is necessary in both cases, highlighting the importance of basic hand hygiene practices. This near unanimity indicates a strong commitment to fundamental infection prevention measures.

When it comes to more specific practices like "Hand Washing After Each Patient Care" and "Hand Washing After Each Endoscopy," there is a significant majority (88.7%) in favor of these precautions, though a small percentage (2.7%) expressed disagreement. The presence of uncertain respondents (8.7%) emphasizes the need for clear guidelines and education in healthcare settings to ensure consistent compliance with such practices.

The belief that "Nurses and Doctors Can Transmit Infections to Patients" is widely held, with 87.3% of respondents in agreement. However, a small portion (1.3%) disagreed, and 11.3% were unsure. This reflects a recognition of the potential role of healthcare professionals

in disease transmission, albeit with some variation in perspectives.

In the context of protective measures during endoscopy procedures, the majority of respondents supported the use of masks (82.7%), gowns (87.3%), and surgical gloves (86%) by nurses and doctors. However, these areas had varying degrees of uncertainty and disagreement, highlighting the complexity of balancing patient and healthcare worker safety with practical considerations.

The issue of "Prohibiting Eating and Drinking in Endoscopy Units" received significant backing from 96% of respondents, while 4% remained unsure. This emphasizes the emphasis placed on maintaining a clean and sterile environment during medical procedures.

Lastly, the respondents unanimously supported the "Strict Restriction on Smoking in Endoscopy Units," reflecting a universal acknowledgment of the health risks associated with smoking in medical settings. The table provides a comprehensive insight into respondents' perspectives regarding patient care and healthcare practices. In the first section of the table, it's evident that creating a comfortable environment for patients is widely valued, with 56% of respondents strongly agreeing and the remaining 44% expressing that it's important "Sometimes." Furthermore, the majority of respondents (35.3%) believe that patient dealing doesn't affect a patient's psychological state, while others are divided between "Sometimes" (23.3%) and "Disagree" (41.3%), revealing differing views on the emotional impact of patient interactions.

The table 3 also addresses specific healthcare practices. A notable proportion of respondents (58.7%) disagreed that fairness in endoscopic patient blocks would cause delays in nursing care, while 27.3% responded "Sometimes," and 14% agreed. This shows different opinions regarding the relationship between fairness and efficient healthcare delivery. Moreover, the majority (80%) believe that showing sympathy towards endoscopic patients with advanced cases is crucial, emphasizing the compassionate aspect of patient care.

The final part of the table delves into medical procedures and monitoring. A unanimous consensus (100%) exists on recording medication, vital signs, and procedure reports, highlighting the significance of meticulous record-keeping in healthcare. Meanwhile, there is also strong support for practices such as monitoring vital signs, observing patients, and ensuring the proper positioning of patients during procedures. These results suggest a solid foundation of agreement regarding certain clinical practices crucial for patient safety and care

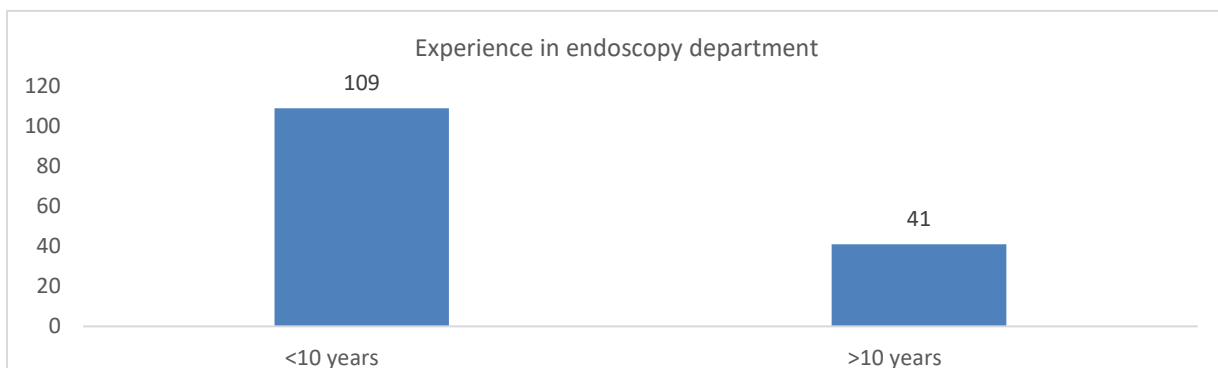


Figure 2: Nurses' experiences in the endoscopy department in years

Table 1: Demographic data of study population:

Variables	Construct	Frequency	Percentage
Age			
	> 25 years	46	30.7%
	35 years	47	31.3%
	< 45 years	57	38%
Sex			
	Female	84	56%
	Male	66	44%
Qualification			
	Diploma degree	120	80%
	Associate degree	21	14%
	Bachelor's degree	9	6%
Work duration (years)			
	8	123	82%
	18	12	8%
	> 28	15	10%
Endoscopy Experience			
	<10 years	109	72.7%
	>10 years	41	27.3%
Training			
	Yes	121	80.7%
	No	29	19.3%
Vaccination (HBV)			
	Yes	123	82%
	No	12	8%

Table 2 Knowledge and attitude of nurses towards endoscopy procedures

Statement	Yes	No	Don't Know
Is hand washing after using the toilet necessary	150 (100%)	0 (0%)	0 (0%)
Is hand washing before drinking and eating important	150 (100%)	0 (0%)	0 (0%)
Is hand washing after each patient care necessary	133 (88.7%)	4 (2.7%)	13 (8.7%)
Is hand washing after each endoscopy necessary	150 (100%)	0 (0%)	0 (0%)
Can nurses and doctors transmit infections to patients	131 (87.3%)	2 (1.3%)	17 (11.3%)
Should nurses and doctors wear masks during endoscopy	124 (82.7%)	1 (0.6%)	25 (16.7%)
Should nurses and doctors wear gowns during endoscopy	131 (87.3%)	0 (0%)	19 (12.7%)
Should nurses and doctors wear surgical gloves during endoscopy	129 (86%)	0 (0%)	21 (14%)
Should eating and drinking in endoscopy units be prohibited	144 (96%)	0 (0%)	6 (4%)
Should smoking in endoscopy units be strictly restricted	150 (100%)	0 (0%)	0 (0%)

Table 3 Practices of nurses towards endoscopy procedures

Question	Agree	Sometimes	Disagree
Is it important to provide a comfortable place to the patient?	84 (56%)	66 (44%)	0 (0%)
Does patient dealing not affect the psychological state?	53 (35.3%)	35 (23.3%)	62 (41.3%)
Does fairness of endoscopic patient block delay in providing nursing care?	21 (14%)	41 (27.3%)	88 (58.7%)
Should sympathy be attached to endoscopic patients with advanced cases?	120 (80%)	0 (0%)	30 (20%)
Is it the patient's right to know the used articles and endoscopy environment?	118 (78.7%)	14 (9.3%)	18 (12%)
Is it necessary to explain the procedure to the patients?	114 (76%)	10 (6.7%)	26 (17.3%)
Do disinfecting tongue depressors not transmit infections?	49 (32.7%)	0 (0%)	101 (67.3%)
Is it important to improve nurse, patient, and relative relationships?	130 (86.7%)	20 (13.3%)	0 (0%)
Is it essential to position the patient properly for each procedure undergone?	116 (77.3%)	34 (22.7%)	0 (0%)
Is it essential to regularly check vital signs during the procedure?	119 (79.3%)	31 (20.7%)	0 (0%)
Is it essential to observe the patient?	133 (88.7%)	17 (11.3%)	0 (0%)
Is it essential to check whether the patient is connected with an IV line?	128 (85.3%)	22 (14.7%)	0 (0%)
Is it essential to perform suctioning from the mouth in case of secretions?	85 (56.7%)	63 (42%)	2 (1.3%)
Is it essential to record medication, vital signs from the start to the end of the procedure, and reports?	150 (100%)	0 (0%)	0 (0%)

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Discussion

Endoscopy nurses play an important role in providing safe, prime-quality endoscopy. Nurses have several tasks. Preparing the scrutiny space with the proper instrument and necessary devices for examining the higher or lower GI tract. It's also crucial that the nurse gives the patient the proper information concerning the procedure to alleviate anxiety and explain the modality of the scrutiny procedure. Throughout the procedure, the nurse must facilitate the endoscopist and, once indicated, the anesthetist. The nurse should reprocess the endoscopic instrument and the devices when the procedure is completed.

The present study assessed the knowledge, attitudes, and practices among nurses of Nishtar Hospital Multan. Several studies related to this topic were conducted, but the current study showed different results. In a past study by Amer et al., the majority of nurses were females, and this presently conducted study also revealed similar results that a large percentage of females were participants of this study (Amer et al., 2015). Moreover, again, one similarity emerged: 80% of nurses in the past study were diploma holders. In our study, 80% of female nurses have qualification status as diploma education. However, in the study of Amer et al., nurses have endoscopic work experience equal to 8-28 years, but in this present study, nurses showed different results; most of them have 8 years of experience. In the past study, only two-fifths of nurses received special training on endoscopy but in our study, all of them have received appropriate endoscopy training. In addition, in past studies, only four-fifths of nurses received vaccinations, while this study showed that most of them received HBV vaccination. In past studies, a fifth of nurses had satisfactory knowledge related to endoscopy precautions and measures, while in our present study, knowledge of nurses by having appropriate training is improved optimistically to a higher percentage. In a past study by Amer et al., poor knowledge of nurses in baseline was observed, while in the present study, this loophole is minimized. The present study showed similar results to Bertleff et al. who noticed that the knowledge results in progressive practice of nurses after training or education. (Bertleff et al., 2009) Ramsey and his colleague, based on their look at that, most of the nurses no longer acquire any unique training or in-service education regarding endoscope reprocessing practices. Most of the authors stated that training and education, including competency testing, are minimum annually. (Grota et al., 2021; Marshall, 1995) This facilitates professional nurses to stay updated on the most recent traits in nursing and to have the ability to control the needs of nursing practice. Educational applications and education guides are additives to workforce improvement. It is advocated that non-stop training in nursing is wanted to sell improvement of expertise, abilities, and attitudes of nurses and to enhance the nice of care given to their patients. Also, the fashioned education guides were essential in improving and updating nurses' expertise and performance.

Conclusion

The study has shown that nurses have a strong knowledge and positive attitude towards endoscopy procedures. However, ongoing training and continuous assessment are necessary to ensure optimal practices. Nurses play a critical

role in patient care and procedural success, prioritizing their comprehensive education and training. Further research and periodic evaluation can drive improvements in their work's theoretical and practical aspects, ultimately enhancing patient outcomes and safety in endoscopy units.

Declarations

Data Availability statement

All data generated or analyzed during the study are included in the manuscript.

Ethics approval and consent to participate.

Approved by the department Concerned.

Consent for publication

Approved

Funding

Not applicable

Conflict of interest

The authors declared an absence of conflict of interest.

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