

## CHALLENGES FACED BY NURSES IN EDUCATING UROLOGY PATIENTS FOR SELF-CARE MANAGEMENT IN PAKISTAN

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DOI: <https://doi.org/10.5281/zenodo.20068621>

### Keywords

Urology nursing, patient education, self-care management, nursing challenges, patient safety, Pakistan.

### Article History

Received: 13 March 2026

Accepted: 23 April 2026

Published: 07 May 2026

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### Abstract

#### **Background:**

Urological disorders necessitate effective self-care management to enhance patient outcomes, with nurses crucial in patient education. However, various barriers exist that can hinder education effectiveness, especially in resource-limited healthcare settings such as Pakistan. The study aims to evaluate the challenges faced by nurses in educating urology patients on self-care management and to explore the relationship between these challenges and specific demographic variables.

#### **Methods:**

A study was conducted with 135 nurses from urology units in public hospitals in Pakistan to assess their challenges and patient education practices. Nurses were chosen through systematic random sampling, and data was collected using a questionnaire that covered demographics, patient education, and challenges. The analysis used SPSS version 25, focusing on descriptive statistics and Chi-square tests, with  $p \leq 0.05$  as significant.

#### **Results:**

The findings revealed that 54.1% of nurses experienced high levels of challenges, with an overall mean score of  $3.61 \pm 0.64$ . The most significant challenges were workload and time constraints (Mean = 3.82) and resource limitations (Mean = 3.74). Patient-related barriers and communication issues were also notable. Nearly 46.7% of nurses demonstrated good patient education practices, while 44.4% showed average practices. A significant association was found between challenges and age ( $p = 0.002$ ), education ( $p = 0.001$ ), and experience ( $p = 0.003$ ), whereas gender showed no significant association ( $p = 0.488$ ).

#### **Conclusion:**

Nurses in urology units struggle with patient education for self-care due to system and resource limitations. Improving staffing, educational resources, and training programs is crucial for better patient outcomes.

### Introduction:

Urological disorders pose a significant global health challenge, impacting millions of individuals across various age groups. Common conditions include urinary tract infections, benign prostatic hyperplasia, urinary incontinence, kidney stones, and urological

cancers, leading to substantial morbidity and diminished quality of life. Long-term management is often necessary, emphasizing the importance of patient education and self-care. Nurses play a vital role in urology care, providing education, counseling, and support, which are crucial for enhancing patient

understanding and adherence to treatment plans, ultimately improving outcomes [1]. Self-care management is crucial in modern healthcare for chronic conditions, enabling patients to engage actively in their health through actions like medication adherence, hygiene, lifestyle changes, and symptom monitoring, which enhance health outcomes and lower hospital readmissions [2]. In urology, self-care includes catheter hygiene, pelvic floor exercises, fluid management, and recognizing complications. These practices are essential for preventing infections and improving quality of life. Effective educational interventions can significantly enhance patient knowledge and outcomes, emphasizing the need for well-structured and consistent educational strategies in urological care [3].

Nurses play a crucial role in patient education and self-care, particularly in urology, where they instruct patients on catheter care, bladder training, medication, and lifestyle changes for effective disease management. However, challenges such as heavy workloads, time constraints, lack of resources, and inadequate training hinder effective education delivery [4]. The complexity of urological conditions, often compounded by patients' comorbidities, cognitive limitations, or psychological distress, makes standardized education difficult. Research indicates that urological patients require tailored cognitive, psychological, and functional support for effective condition management [5]. Patient-related challenges include low literacy, cultural beliefs, and lack of motivation. In Pakistan, varying literacy rates hinder understanding of medical information and self-care [6]. This necessitates nurses to modify teaching methods. Communication barriers due to language differences, cultural norms, and gender sensitivity further limit effective education, especially in sensitive urology cases [7]. Additionally, structural challenges in the healthcare system, such as overcrowded public hospitals, high patient-to-nurse ratios, and limited resources reduce time available for personalized education and compromise care quality [8].

The availability and use of educational tools in Pakistan is limited, impacting patient education. Nurses primarily rely on verbal instructions, which may not ensure effective learning. Self-

care education for patients with urinary catheters is crucial to prevent infections and complications, yet many receive insufficient information, resulting in poor practices. Effective behavioral interventions like bladder training and pelvic floor exercises can alleviate urological issues and enhance outcomes but necessitate ongoing education and follow-up from nurses for success [9].

Time constraints often hinder nurses' ability to provide patient education, especially in busy hospital environments. Insufficient involvement of family members, crucial in cultures like Pakistan, also limits effective self-care management [10]. Psychological factors such as embarrassment, anxiety, and depression can further affect patients' engagement in education and self-care for urological conditions. Empowerment-based education has been shown to enhance patient participation, focusing on building confidence and skills, allowing patients to take an active role in their care and improving overall outcomes [11].

In Pakistan, socioeconomic factors hinder self-care management due to limited healthcare access, financial constraints, and inadequate follow-up care [12]. Nurses must also focus on infection prevention, as poor hygiene and catheter care increase risks of complications like UTIs and sepsis; effective education is vital. Despite these obstacles, nurses significantly enhance patient outcomes through education and tailored support. The rising burden of urological diseases necessitates effective patient-centered educational interventions. This study investigates the challenges faced by nurses in educating urology patients about self-care management, aiming to identify barriers and improve nursing practices and patient outcomes in the context of these challenges.

### **Chapter 3: Methodology**

A quantitative, cross-sectional descriptive design was used to assess the challenges faced by nurses in educating urology patients for self-care management. This design is appropriate for examining perceptions, practices, and barriers at a single point in time. The study was conducted in the urology units of tertiary care public hospitals in Pakistan, where nurses are actively involved in patient education, catheter care, and postoperative management. The

target population included registered nurses working in urology wards who are directly involved in patient care and education.

A total of 135 nurses were selected using a systematic random sampling technique. The sampling interval (k) was calculated by dividing the total number of eligible nurses by the required sample size. Every *k*th nurse was selected from the sampling frame after a random starting point. Systematic sampling ensures representative and reduces selection bias in clinical settings [13]. the Inclusion Criteria for the study participant as: Registered nurses working in urology units, while have minimum 6 months of experience in urology care, and willing to participate. Nursing students and interns, nurses in administrative roles only, and nurses on leave during data collection as excluded from the study.

Data were collected using a structured, self-administered questionnaire consisting of three sections: *Section A: Demographic Data* i.e Age, Gender, Education level, Years of experience, urology-specific experience.

*Section B: Patient Education Practices:* Adapted from Patient Education Materials Assessment Tool (PEMAT) and nursing education frameworks. This section assessed: Communication skills, Teaching methods, and Patient understanding [14].

*Section C: Challenges in Patient Education:* Developed based on literature (Riegel et al., 2020; Villa et al., 2021), covering: Workload and time constraints, Resource limitations, Patient-related barriers Communication and cultural issues that were measured on a 5-point Likert scale: from 1 = Strongly Disagree to 5 = Strongly Agree [15, 16]. Total scores were categorized to interpret the level of challenges: here Low Challenges: Mean score < 2.5, Moderate Challenges: Mean score 2.5 – 3.5 and High Challenges: Mean score > 3.5. For sub-scales (e.g., workload, communication, resources), similar cutoff values were applied.

Higher scores indicate greater perceived challenges in educating patients for self-care.

A pilot study was conducted on 10% of the sample (n = 14) to assess feasibility and clarity. These participants were excluded from the final study. Internal consistency was measured using Cronbach’s alpha: Patient Education Practices Scale:  $\alpha = 0.86$ , Challenges Scale:  $\alpha = 0.89$ , and overall tool:  $\alpha = 0.91$ . Ethical approval was obtained from the Institutional Review Board (IRB), permission was taken from hospital administration, participants were informed about the study purpose, then written consent was obtained, and questionnaires were distributed and collected during duty hours.

Data were analyzed using SPSS version 25. the Descriptive Statistics ere calculated as Frequency and percentage for categorical variable, Mean and standard deviation for continuous variables. Chi-square test for association between demographic variables and challenges, Independent t-test / ANOVA where applicable, and  $p \leq 0.05$  considered statistically significant. Informed consent obtained from the participate and confidentiality were maintained, it was convey to the nurses that their participation as voluntary and right to withdraw ensured.

**Result:**

This section presents the analysis and interpretation of data collected from 135 nurses working in urology units. Descriptive and inferential statistics were applied to identify the level of challenges and their association with demographic variables

**Demographic Characteristics**

The majority of respondents were female (86.7%), reflecting the typical gender distribution in nursing. Most nurses were aged 31–40 years (45.9%) and had Post-RN qualifications (60.7%). A substantial proportion had more than 6 years of experience, indicating a relatively experienced workforce (see table 1).

Table 1: Demographic Characteristics		
Category	Frequency (n)	Percentage (%)
<b>Gender</b>		
Male	18	13.3

Female	117	86.7
<b>Age</b>		
21-30 years	40	29.6
31-40 years	62	45.9
41+ years	33	24.4
<b>Education</b>		
BSN	18	13.3
Post RN	82	60.7
Diploma	35	25.9
<b>Experience</b>		
1-2 years	20	14.8
2-5 years	28	20.7
6-10 years	42	31.1
11+ years	45	33.3

### Overall Level of Challenges and Patient Education Practices

More than half of the nurses (54.1%) reported high levels of challenges, with a mean score of 3.61. This indicates that nurses face considerable difficulties in educating urology

patients for self-care management. Nearly half of the nurses (46.7%) demonstrated good patient education practices, but a significant proportion (44.4%) showed only average practices, indicating room for improvement (see table 2).

	Low (<2.5)	Moderate (2.5-3.5)	High (>3.5)	Mean ± SD
<b>Level of Challenges in Patient</b>				
Frequency (n)	10	52	73	3.61 ± 0.64
Percentage (%)	7.4%	38.5%	54.1%	
<b>Level of Patient Education Practices</b>				
Frequency (n)	12	60	63	3.47 ± 0.59
Percentage (%)	8.9%	44.4%	46.7%	

### Domain-Wise Analysis of Challenges

The highest challenges were reported in **workload and time constraints (Mean = 3.82)**, followed by **resource limitations (3.74)**. This

indicates that system-related factors are the most significant barriers. Patient-related and communication challenges were also notable but slightly lower (see table 3).

Domain	Mean	SD	Interpretation
Workload & Time Constraints	3.82	0.58	High
Resource Limitations	3.74	0.62	High
Patient-Related Barriers	3.55	0.60	Moderate-High
Communication Barriers	3.41	0.55	Moderate

### 4.6 Association between Demographics and Challenges

There is **no significant association** between gender and challenges ( $p > 0.05$ ), indicating similar perceptions among male and female nurses. A **significant association** exists between age and challenges ( $p < 0.05$ ). Younger nurses

reported higher challenges, possibly due to limited experience. Education level is significantly associated with challenges. Nurses with higher education (BSN) reported fewer challenges compared to others. Experience is significantly associated with challenges ( $p < 0.05$ ). Less experienced nurses reported higher

levels of difficulty in patient education (see table 4).

Table 4: Association between Demographics and Challenges				
	Low	Moderate	High	p-value
<b>Gender</b>				
Male	2	6	10	0.488
Female	8	46	63	
<b>Age</b>				
21-30	2	10	28	0.002
31-40	6	24	32	
41+	2	18	13	
<b>Education</b>				
BSN	4	8	6	0.001
Post RN	4	30	48	
Diploma	2	14	19	
<b>Experience</b>				
1-2 years	0	6	14	0.003
2-5 years	2	10	16	
6-10 years	4	18	20	
11+ years	4	18	23	

### Discussion

The study identified challenges for nurses in educating urology patients about self-care in Pakistan's public hospitals, primarily workload, time constraints, and limited resources, with significant demographic associations, except for gender, which showed no significant impact.

The study reveals that over half of the nurses face significant challenges in delivering patient education, aligning with existing literature. Key difficulties include continuous interaction, individualized teaching, and reinforcement, especially in resource-limited settings [15]. Additionally, a study highlight barriers like limited time and high workload [17]. In Pakistan, these issues are intensified by overcrowded hospitals and inadequate staffing, resulting in high patient-to-nurse ratios that hinder effective patient education. The challenges noted reflect broader systemic healthcare issues [18].

The study highlights high mean scores for workload and time constraints (Mean = 3.82) among nurses, indicating significant burdens from clinical responsibilities. This aligns with a study conducted in 2020, revealing a direct link between increased workload, reduced patient education, and compromised care quality. Key nursing duties, such as catheter management and postoperative care, limit time for patient

education, often resulting in hasty or incomplete instruction that hinders self-care [19]. Additionally, Aiken et al. (2021) found that inadequate staffing correlates with poorer patient outcomes, reinforcing the urgency to address workload issues to enhance patient education practices.

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Patient-related barriers, such as low literacy, lack of awareness, and cultural beliefs, present significant challenges in health literacy (Mean = 3.55). These barriers hinder effective communication, particularly in Pakistan, where patients may feel embarrassed discussing urinary issues, limiting their engagement in educational sessions [20]. Effective patient

education relies on both information delivery and patient motivation; without understanding or confidence, the effectiveness is diminished [21]. Communication barriers (Mean = 3.41) pose significant challenges in urology, including language differences, insufficient skills, and time constraints. Effective communication is crucial for patient education and outcomes. Due to the sensitive nature of conditions, nurses must utilize culturally appropriate strategies, but heavy workloads and limited training may hinder this [22].

The study revealed that 46.7% of nurses showed good patient education practices, with a mean score of  $3.47 \pm 0.59$ , indicating significant efforts despite challenges. Bastable (2021) supports that nurses are crucial educators in healthcare. However, many nurses display average practices, highlighting the necessity for improved training and institutional support [23].

The study identifies a significant correlation between age, experience, and reported challenges among nurses, with younger and less experienced individuals facing more difficulties. This supports Benner's Novice to Expert Theory that asserts clinical competence grows with experience. Additionally, education level plays a crucial role; BSN-qualified nurses report fewer challenges, aligning with AACN recommendations that advocate for advanced education to enhance critical thinking and patient care. No significant impact of gender on challenges was found, suggesting that professional responsibilities are more influential than gender differences.

Resource limitations are a major challenge in nursing education, with a Mean score of  $3.47 \pm 0.59$ . Nurses identified a lack of educational materials and supportive tools as barriers to teaching, which aligns with WHO reports highlighting resource shortages in low- and middle-income countries. In urology care, patients need comprehensive instructions, and the absence of educational aids forces nurses to rely on verbal communication, often inadequate for effective learning. Furthermore, structured education programs and standardized protocols are essential for improving patient outcomes; their absence in many Pakistani hospitals leads to inconsistent patient education.

Communication barriers in healthcare, particularly in urology, pose significant challenges (Mean = 3.41). Factors include language differences and limited time for interaction. Effective communication is vital for patient education and outcomes. High workloads and inadequate training further hinder nurses' ability to implement culturally appropriate and patient-centered communication strategies.

The study revealed a significant correlation between age, experience, and challenges ( $p < 0.05$ ), with younger, less experienced nurses facing more difficulties, supporting Benner's Novice to Expert Theory. Experienced nurses excel in managing complex patient education, a study highlighting the need for mentorship for junior nurses. Education level also played a role; BSN-qualified nurses encountered fewer challenges, aligning with AACN (2021) recommendations that stress higher education's benefits on critical thinking and communication skills. Advanced education leads to evidence-based practices, enhancing patient outcomes. No significant gender differences in challenges were found ( $p > 0.05$ ), indicating professional responsibilities outweigh gender factors.

This study identifies key challenges faced by nurses in educating urology patients for self-care management, highlighting several limitations. It employs a cross-sectional design, restricting causal inferences and reflecting perceptions at a single moment. Conducted in selected public sector hospitals, its findings may not apply to private facilities or other regions of Pakistan due to varying healthcare contexts. Data collection via self-administered questionnaires may introduce response bias, with participants potentially over or underreporting behaviors. Systematic sampling in one clinical setting limits representation of diverse nursing specialties, and the moderate sample size ( $n = 135$ ) affects generalizability. Additionally, the study focuses solely on nurses' perspectives, omitting patient views, which could enrich the understanding of educational effectiveness and self-care practices.

### Conclusion

The study reveals that nurses in urology units in Pakistan encounter significant challenges in

educating patients for self-care management, predominantly due to workload, time constraints, and resource limitations. Despite these challenges, their patient education practices remain moderate to good. Factors such as age, education level, and clinical experience impact their effectiveness, while gender has no significant influence. The findings emphasize the necessity for institutional support, improved staffing, and professional development to enhance patient education quality and outcomes in urology care.

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