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BARRIERS AND FACILITATORS TO PATIENT EDUCATION FROM A NURSING PERSPECTIVE IN A TERTIARY CARE HOSPITAL, LAHORE: A DESCRIPTIVE CROSS-SECTIONAL STUDY

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Keywords

patient education; nursing perspective; barriers; facilitators; tertiary care hospital; cross-sectional study; Lahore

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Abstract

Background: *Patient education is a core nursing responsibility that improves treatment adherence, self-care, and satisfaction, yet it is frequently reported as inadequate in tertiary care settings [5,8]. Evidence on the specific barriers and facilitators experienced by nurses in tertiary care hospitals in Lahore, Pakistan, remains limited.*

Objective: *To determine the barriers confronted by nurses in delivering patient education and to identify the facilitators that enable effective patient education in a tertiary care hospital in Lahore.*

Methods: *A descriptive cross-sectional study was conducted over six months among staff nurses at Sheikh Zayed Hospital, Lahore. Using Slovin's formula (N = 160, e = 0.05), a sample of 114 nurses was recruited through convenience sampling. Data were collected using a structured, self-administered questionnaire comprising demographic items, a 9-item barriers scale, and a 10-item facilitators scale, each rated on a 5-point Likert scale. Composite scores (range 1-50) classified barrier/facilitator identification as excellent (≥35), moderate (16-34), or poor (≤15). Data were analysed in SPSS v30 using descriptive statistics, chi-square tests, and one-way ANOVA.*

Results: *All 114 participants were female; 74.6% were aged 20-30 years, 51.8% held generic nursing qualifications, and 37.7% had 4 years of clinical experience. Shortage of nurses (mean = 4.32 ± 0.74) and time limitations (mean = 4.19 ± 0.79) were rated as the most significant barriers, yielding an excellent composite barrier score of 40.6/50. Raising interest in patient education (mean = 4.30 ± 0.76) was the most endorsed facilitator, with an excellent composite facilitator score of 41.6/50; the difference between barrier and facilitator scores was not statistically significant (p = 0.72). Barrier identification differed significantly by years of experience (ANOVA, p = 0.003) and by age for specific items (time limitations, p = 0.021; lack of trust, p = 0.034). Facilitator identification differed significantly by education level (p = 0.008-0.041) and was strongly associated with self-reported confidence among more experienced nurses (χ^2 = 12.5, p = 0.002).*

Conclusion: *Nurses demonstrated excellent awareness of both the barriers and facilitators to patient education. Staffing shortages and time constraints were the dominant barriers, while structured, skill-building approaches were the most valued facilitators.*

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Introduction

In tertiary care hospitals, where patients undergo complex procedures and receive high-acuity care, patient education is central to promoting treatment adherence, minimising risk, and enabling active involvement in care decisions[1]. Structured, nurse-led education has repeatedly been shown to improve patient outcomes in high-acuity settings, yet reviews consistently show that education delivered at the bedside is often inadequate, inconsistent, or rushed because it competes with immediate clinical priorities [2].

Barriers to patient education are commonly reported at three levels. Patient-level barriers include low health literacy, language and cultural differences, and limited motivation, which complicate nurses' efforts to communicate essential information [3].. Nurse-level barriers include insufficient training in teaching methodology, low confidence, and limited communication skills, particularly across cultural and language divides [4]. Organizational and environmental barriers , high patient-to-nurse ratios, overcrowded wards, lack of privacy, and absence of standardised teaching protocols further compress the time available for individualised education [5].Conversely, facilitators such as institutional support, clearly defined educator roles, access to standardised teaching materials and technology, active patient participation, and a collaborative team culture have been shown to strengthen patient education practice [6,7].

Studies from Pakistan and the wider region echo these findings. Nurses in Lahore have reported that heavy workload, limited resources, and weak institutional support constrain evidence-based and educational practice [8], while training and continuing education have been shown to increase nurses' confidence in delivering patient education [9]. A knowledge-practice gap in which nurses recognize the value of patient education but are unable to consistently apply it because of time and workload pressures has also been documented locally [10].Similar patterns of time pressure, staffing shortages, and resource limitations have been reported in Saudi Arabia [11], and in a recent mixed-methods systematic review spanning multiple health systems [12] suggesting that these challenges are not unique to any one setting but reflect a broader, systemic gap between the recognized importance of patient education and its consistent delivery in practice.

Despite this body of evidence, few studies have specifically quantified the relative weight of individual barriers and facilitators, or examined how they vary by nurses' age, education, and clinical experience, within tertiary care hospitals in Lahore. This gap limits the ability of hospital administrators and policymakers to target interventions effectively. The present study was therefore designed to determine the most significant barriers confronted by nurses in delivering patient education and to identify the facilitators that enable them to do so effectively, within a tertiary care hospital in Lahore, and to examine associations between these perceptions and nurses' demographic and professional characteristics.

Objectives

- To determine the most significant barriers confronted by nurses in delivering patient education in a tertiary care hospital.
- To identify the facilitators that enable nurses to effectively educate patients in the hospital setting.

Methodology

This descriptive cross-sectional study was conducted over a period of six months, commencing after synopsis approval, at Sheikh Zayed Hospital, Lahore. The study population comprised staff nurses employed at the hospital. Nurses with a minimum of three years of clinical experience who provided informed consent were eligible for inclusion; senior nurses holding administrative positions, staff on any form of leave, and those who declined consent were excluded. The sample size was calculated using Slovin's formula, $n = N / [1 + N(e2)]$, where N (population size) = 160 and e (margin of error) = 0.05, yielding a required sample of 114 nurses, all of whom were enrolled using a convenience sampling technique.

Data were collected using a structured, self-administered questionnaire developed for this study and adapted from previously validated

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instruments assessing barriers and facilitators to nurse-led patient education. The questionnaire comprised three sections: demographic characteristics (age, gender, qualification, and years of clinical experience); a nine-item Barriers to Patient Education scale capturing workload, time constraints, communication difficulties, resource limitations, and knowledge gaps; and a ten-item Facilitators to Patient Education scale capturing the availability of educational materials, institutional support, professional development opportunities, and teamwork. All items were rated on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). For each domain, a composite score (range 1-50) was derived by multiplying the mean item score by 10 and classified as excellent identification (score ≥ 35), moderate identification (score 16-34), or poor identification (score ≤ 15). Questionnaires were distributed to consenting nurses after obtaining institutional permission, and all procedures complied with the requirements of the Institutional Review and Research Advisory Board (IRRAB) of SFINHS and the Sheikh Zayed Hospital nursing department.

Data were analysed using IBM SPSS Statistics version 30. Descriptive statistics (frequencies, percentages, and mean ± standard deviation) were used to summarise demographic characteristics and item-level responses, and results were illustrated using bar charts and tables. Chi-square and Fisher's exact tests were used to examine associations between categorical demographic variables (age group, education level) and individual barrier/facilitator items, while one-way analysis of variance (ANOVA) was used to compare composite barrier and facilitator scores across four groups defined by years of clinical experience (2, 3, 4, and ≥ 5 years). A p-value < 0.05 was considered statistically significant throughout.

Ethical clearance was obtained from the Institutional Review and Research Advisory Board (IRRAB) of the Sheikha Fatima Institute of Nursing and Allied Health Sciences, Lahore, in accordance with the ethical principles of the Declaration of Helsinki (2013). Written informed consent was obtained from all participants, confidentiality was maintained throughout data collection and analysis, and participation was entirely voluntary and caused no harm to respondents.

Results

All 114 participating nurses were female. Most nurses (74.6%) were aged between 20 and 30 years, 21.9% were aged 31-40 years, and only 3.5% were aged 41-50 years. Regarding educational qualification, 51.8% held a Generic Nursing qualification, 36.0% held a Post-RN qualification, 7.9% held a Diploma, and 4.4% held a Master's degree. In terms of clinical experience, 37.7% of nurses had 4 years of experience, 34.2% had more than 5 years, and the remainder was evenly split between 2 years (14.0%) and 3 years (14.0%) of experience (Table 1).

Table 1. Demographic characteristics of respondents

Variable	Category	Frequency (n)	Percentage (%)	P value
Gender	Female	114	100.0	-
Age	20-30 years	85	74.6	0.02
	31-40 years	25	21.9	0.31
	41-50 years	4	3.5	0.412
	Total	114	100.0	
Education level	Diploma	9	7.9	< 0.05
	Post-RN	41	36.0	
	Generic Nursing	59	51.8	

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	Master's	5	4.4	
	Total	114	100.0	
Years of experience	2 years	16	14.0	< 0.05
	3 years	16	14.0	
	4 years	43	37.7	
	≥ 5 years	39	34.2	
	Total	114	100.0	

All nine barrier items received predominantly Agree or Strongly Agree responses ranging from 71.0% to 88.6% across items. Shortage of nurses received the highest mean score (4.32 ± 0.74), with 50.0% of nurses Strongly Agreeing that it is a barrier, followed by time limitations (4.19 ± 0.79) and patient lack of physical/emotional preparation (4.09 ± 0.80). Inadequate knowledge and skills of nurses received the lowest, though still high, mean score (3.95 ± 0.91) (Table 2, Figure 2).

Table 2. Assessment of barriers to patient education (N = 114)

No.	Barrier item	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	SD
1	Lack of appropriate educational facilities	2.6	5.3	12.3	48.2	31.6	4.01	0.82
2	Time limitations	1.8	3.5	8.8	46.5	39.5	4.19	0.79
3	Inadequate knowledge and skills	2.6	7.0	14.0	44.7	31.6	3.95	0.91
4	Patient lack of physical/emotional preparation	1.8	4.4	10.5	49.1	34.2	4.09	0.80
5	Lack of proper environment for patient education	2.6	5.3	11.4	47.4	33.3	4.04	0.84
6	Lack of trust between patient and staff	3.5	6.1	13.2	45.6	31.6	3.96	0.90
7	Discontinuity of nurses' collaboration & shifts	2.6	5.3	15.8	44.7	31.6	3.97	0.88
8	Patient education not a priority vs other duties	3.5	7.0	12.3	43.9	33.3	3.97	0.93
9	Shortage of nurses	1.8	2.6	7.0	38.6	50.0	4.32	0.74

SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree.

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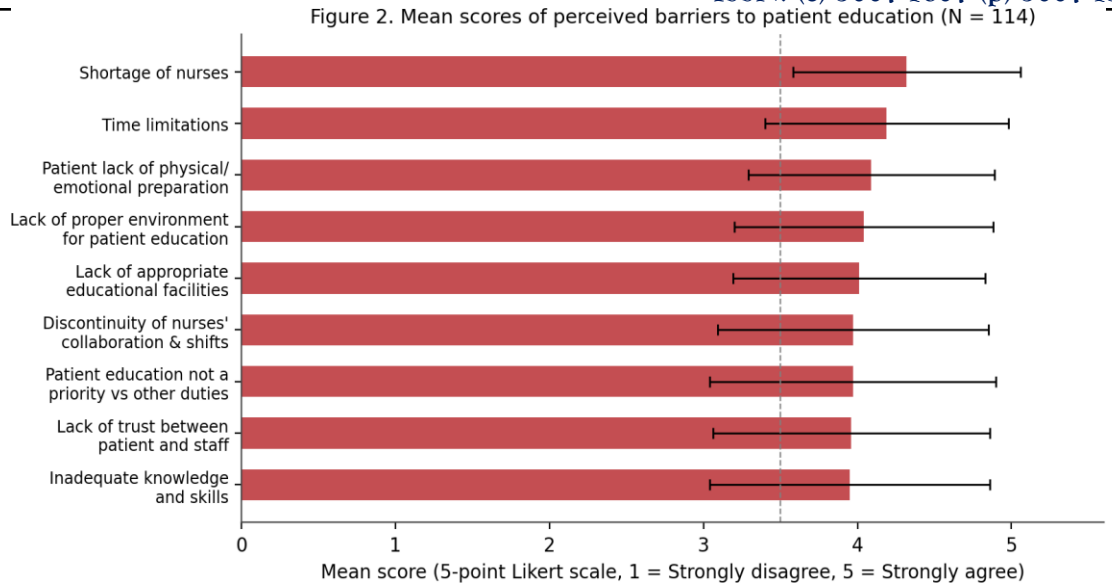


Figure 2. Mean scores of perceived barriers to patient education (N = 114)

All ten facilitator items were rated predominantly as Agree or Strongly Agree. Raising the interest of education received the highest mean score (4.30 ± 0.76, combined agreement 90.4%), followed by raising the participation of patients in learning (4.26 ± 0.77) and implementing education step by step (4.25 ± 0.78). Considering dedicated nurse educators for patients received the lowest, though still strongly endorsed, mean score (4.02 ± 0.87) (Table 3, Figure 3).

Table 3. Assessment of facilitators to patient education (N = 114)

No.	Facilitator item	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	SD
1	Enhancing the knowledge and skills of educators	1.8	2.6	8.8	45.6	41.2	4.22	0.80
2	Raising the interest of education	0.9	2.6	6.1	46.5	43.9	4.30	0.76
3	Implementing the education step by step	1.8	1.8	7.9	47.4	41.2	4.25	0.78
4	Raising the participation of patients in learning	0.9	3.5	5.3	50.0	40.4	4.26	0.77

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5	Considering dedicated nurse educators for patients	2.6	4.4	14.0	46.5	32.5	4.02	0.87
6	More importance to evaluation of patient's education	1.8	5.3	12.3	47.4	33.3	4.05	0.86
7	Using education assistance devices	2.6	3.5	8.8	49.1	35.9	4.12	0.84
8	Planning suitable time and place for education	1.8	4.4	10.5	45.6	37.7	4.13	0.85
9	Considering information/guidelines to teach specific topics	2.6	5.3	11.4	44.7	35.9	4.06	0.89

SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree.

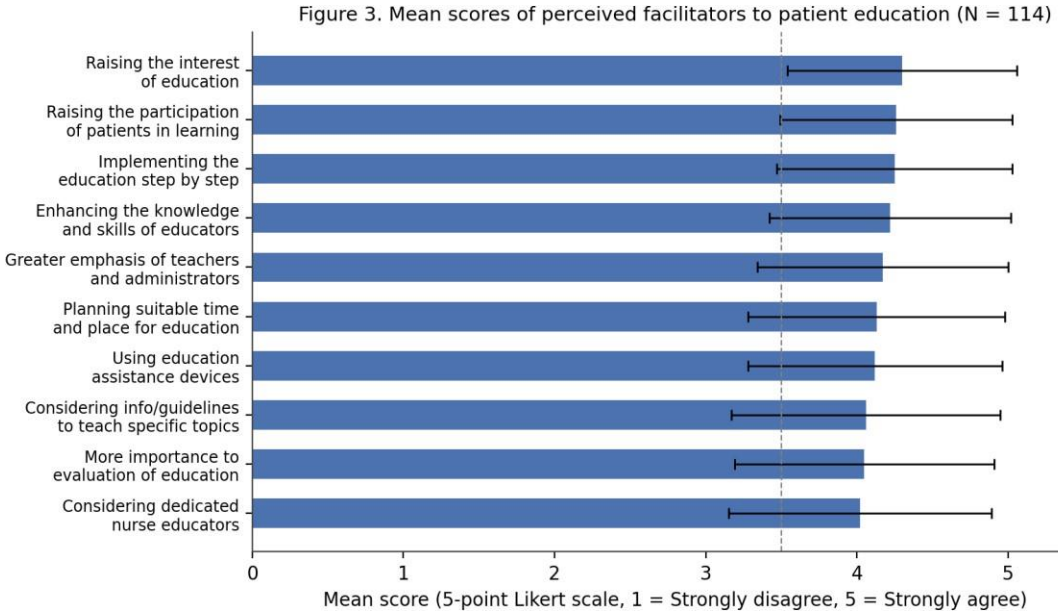


Figure 3. Mean scores of perceived facilitators to patient education (N = 114)

The composite barrier score (mean item score 4.06 ± 0.84, total 40.6/50) and composite facilitator score (mean item score 4.16 ± 0.83, total 41.6/50) both exceeded the excellence threshold of 35, indicating that nurses demonstrated a comprehensive level of awareness in both domains. Although facilitators scored marginally higher than barriers, this difference was not statistically significant (t-test, p = 0.72) Figure 4).

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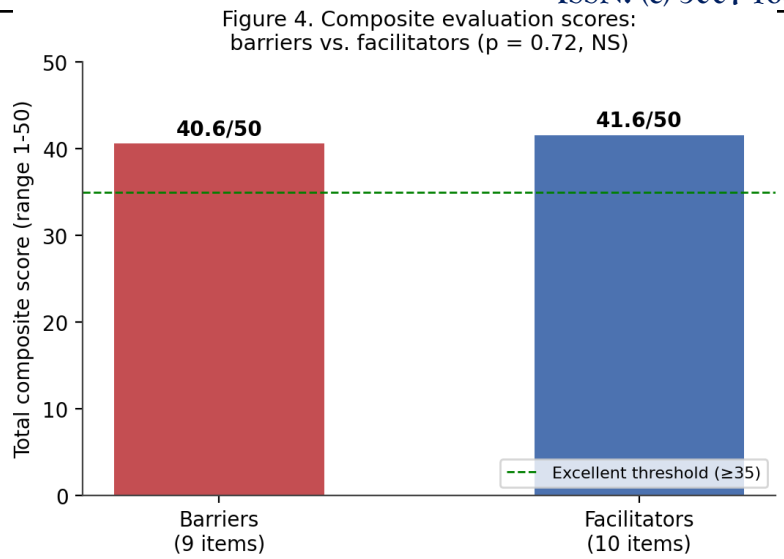


Figure 4. Composite evaluation scores: barriers vs. facilitators

Chi-square and Fisher's exact tests showed that perception of specific barrier items varied significantly by age: younger nurses (20-30 years) reported time limitations more frequently ($p = 0.021$), whereas older nurses (31-50 years) reported lack of trust more often ($p = 0.034$); shortage of nurses was perceived similarly across age groups ($p = 0.412$) (Table 5). Facilitator endorsement varied by education level: nurses with Post-RN and Master's qualifications more strongly endorsed enhancing knowledge and skills of educators ($p = 0.008$), and Diploma-level nurses were less supportive of step-by-step education ($p = 0.041$), while endorsement of raising patient participation did not differ significantly by education ($p = 0.276$) (Table 6). Self-reported confidence as a facilitator was strongly associated with years of experience: only 31% of nurses with 2-3 years of experience reported confidence, compared with 90% of nurses with more than 5 years of experience ($\chi^2 = 12.5$, $p = 0.002$) (Table 7).

Table 5. Association between age group and selected barrier items

Barrier item	Significant association	Test used	P value
Time limitations	Younger nurses (20-30 years) reported more frequently	Chi-square	0.021
Lack of trust	Older nurses (31-50 years) reported more often	Fisher's exact	0.034
Shortage of nurses	No significant difference	Chi-square	0.412

Table 6. Association between education level and selected facilitator items

Facilitator item	Significant association	Test used	P value
Enhancing knowledge/skills	Stronger agreement among Post-RN & Master's nurses	Chi-square	0.008
Raising patient participation	No significant difference	Chi-square	0.276
Step-by-step education	Diploma nurses less supportive	Fisher's exact	0.041

Table 7. Years of experience vs. confidence as a facilitator

Years of experience	Reported confidence (n)	Did not report confidence (n)	Total (n)	P value
2-3 years	10	22	32	$\chi^2 = 12.5$, P = 0.002

Frontier in Medical & Health Research

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4 years	30	13	43	
> 5 years	35	4	39	
Total	75	39	114	

Discussion

This study set out to determine the barriers and facilitators to patient education as perceived by nurses in a tertiary care hospital in Lahore, and the findings confirm that nurses in this setting possess an excellent, comprehensive awareness of both domains, with composite scores of 40.6/50 for barriers and 41.6/50 for facilitators. Shortage of nursing staff and time limitations emerged as the two most critical barriers, a pattern that closely mirrors findings from elsewhere in Pakistan and the wider region. Time constraints have consistently been cited as a major impediment to patient education in earlier Lahore-based and national studies [13 14], and similar time pressure linked to heavy workload has been reported in Cameroon [15].In our sample, the fact that shortage of nurses received the single highest mean score (4.32 ± 0.74) suggests that staffing constraints, rather than knowledge deficits, are now the dominant obstacle to patient education delivery in this hospital.

Staffing-related barriers identified here are consistent with findings from Saudi Arabia, where nurse shortages were identified as a key constraint on patient education delivery [16] and with local evidence that nurse shortages increase the patient load per nurse and reduce the time available for individualized teaching, producing discontinuity of education across shifts [17]. Discontinuity of nurses' collaboration and shifts was similarly endorsed by our participants (mean = 3.97 ± 0.88), reinforcing that fragmented staffing and handover practices - not merely individual nurse effort - undermine consistent patient education.

Resource-related barriers were also prominent in our findings, with a lack of appropriate educational facilities (mean = 4.01 ± 0.82) and a lack of a proper environment for patient education (mean = 4.04 ± 0.84) both strongly endorsed. This aligns with evidence from Palestinian hospitals, where the absence of printed materials and audiovisual resources hindered patient education [18], and with earlier Lahore-based research showing that limited access to up-to-date teaching material constrained nurses' ability to educate patients effectively [19]. Taken together with our facilitator findings - in which using education assistance devices (mean = 4.12 ± 0.84) and planning suitable time and place for education (mean = 4.13 ± 0.85) were both strongly endorsed - this suggests that investment in physical space, printed and multimedia materials, and protected teaching time would directly address two of the barriers nurses rated most highly.

The facilitator most strongly endorsed by our participants was raising interest in education (mean= 4.30 ± 0.76), followed closely by raising patient participation in learning and implementing education step by step. This emphasis on structured, patient-engaged teaching approaches is consistent with evidence that active patient participation - asking questions and expressing a desire to learn - makes educational communication easier and improves outcomes [20]. It also parallels findings that continuing education and training strengthen nurses' confidence in delivering patient education: earlier work in Lahore found that nurses who received training in patient education felt more confident meeting patients' educational needs [1], a pattern reflected in our own results, where enhancing the knowledge and skills of educators was the fourth most strongly endorsed facilitator (mean = 4.22 ± 0.80) and was significantly more supported by Post-RN and Master's-qualified nurses ($p = 0.008$) than by Diploma-level nurses.

A particularly notable finding was the strong association between years of clinical experience and both barrier identification (ANOVA, $p = 0.003$) and self-reported confidence as a facilitator ($\chi^2 = 12.5$, $p = 0.002$): nurses with two to three years of experience were markedly less likely to report confidence (31%) than those with more than five years of experience (90%). This experience-linked gradient echoes a broader theme in the regional literature - a

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persistent gap between nurses' theoretical recognition of the importance of patient education and their practical ability to deliver it, generally attributed to time and workload constraints rather than to a lack of motivation [21]. Our findings suggest that less experienced nurses may benefit disproportionately from structured mentorship and stepwise training in the early years of practice, when confidence in teaching patients has not yet been consolidated through clinical exposure.

Institutional support emerged, both directly and indirectly, as a unifying thread across our results. Greater emphasis of teachers and administrators on patient education was the second-highest rated facilitator overall (mean = 4.17 ± 0.83), echoing evidence that hospital leadership and institutional policy strongly shape nurses' confidence and consistency in delivering education [22]. Earlier work in Lahore similarly found that formally incorporating patient education into nurses' job descriptions and performance appraisals increased the likelihood that it would be prioritised in daily practice rather than treated as an optional add-on [4], a conclusion reinforced by our finding that patient education not being prioritised relative to other nursing duties was itself rated as a significant barrier (mean = 3.97 ± 0.93).

Overall, our findings support a broader, systemic interpretation of the barriers to patient education rather than one centred on individual nurse deficiencies: staffing levels, time allocation, physical infrastructure, and institutional prioritisation were rated as more pressing concerns than nurses' own knowledge and skills, which received the lowest barrier score of all nine items (mean = 3.95 ± 0.91). This is consistent with a recent mixed-methods systematic review, which concluded that organisational and environmental factors, more than individual nurse competence, most often determine whether patient education is delivered consistently across health systems [23].

Addressing this gap will therefore require action beyond individual training, extending to staffing establishment, dedicated teaching time within nursing schedules, and formal recognition of patient education as a core, evaluable component of nursing practice.

Limitations

- The relatively small, single-site sample of 114 nurses recruited by convenience sampling may not be representative of nurses in other tertiary care hospitals or regions.
- The cross-sectional, single-institution design limits generalisability, as the barriers and facilitators identified at Sheikh Zayed Hospital may differ from those in other facilities with different staffing models or resources.
- Data were entirely self-reported, which may introduce social desirability or recall bias and may not fully reflect nurses' actual teaching practices.
- The study relied solely on quantitative Likert-scale data; the absence of a qualitative component limits the depth of understanding of why specific barriers and facilitators are experienced as they are.

Recommendations

- Formally incorporate patient education into nursing job descriptions, clinical protocols, and performance evaluations so that it is recognised as core nursing practice rather than an optional task.
- Address nurse staffing shortages and allocate protected time within nursing schedules specifically for patient education activities.
- Invest in structured educational resources - printed materials, multimedia and assistive devices, and a suitable physical environment - to support standardised, high-quality teaching.
- Provide continuing education and stepwise mentorship in patient education skills, particularly targeted at nurses in their first few years of clinical practice.
- Offer cultural competence and communication training to help nurses address language and cultural barriers to patient understanding.
- Undertake further mixed-methods and multi-site research to explore the qualitative drivers of these barriers and

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to evaluate the impact of staffing, policy, and technology-based interventions on patient education outcomes.

Conflict of Interest

The authors declare that they have no conflict of interest related to this study.

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Ethical Approval

Ethical approval was obtained from the Institutional Review and Research Advisory Board (IRRAB), Sheikha Fatima Institute of Nursing and Allied Health Sciences, Lahore. Written informed consent was obtained from all participants in accordance with the Declaration of Helsinki (2013).

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