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BARRIERS TO EFFECTIVE CURRICULUM IMPLEMENTATION IN NURSING EDUCATION: PERSPECTIVES OF NURSING FACULTY IN SINDH, PAKISTAN

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Abstract

Nursing professional significantly enhance patient care, and reduce the disease morbidity and mortality. Nursing faculty actively contribute to curriculum development, ensuring it encompasses all dimensions of health. During nursing education, nursing faculty provides structured curriculum through which students experience both academic and clinical skills under the supervision of nursing faculty.

Objectives: *This study determined the barriers to effective curriculum implementation in nursing education perspectives of nursing faculty in Sindh, Pakistan.*

Methodology: *For this study analytical cross sectional research design was used and conducted from February to March, 2025 at three public nursing colleges of Sindh, Pakistan. Using purposive sample technique, 65 nursing faculty were enrolled.*

Results: *Among the total study participants, 37 (56.92%) were male and 28 (43.08%) were female. Among the respondents, 41 (63.1%) reported receiving additional responsibilities beyond their assigned subjects, a finding that was statistically significant ($p = .001$). Unfair distribution of subjects also showed a significant association ($p = .04$). Furthermore, the availability of skills laboratory facilities demonstrated a highly significant association ($p = .001$), indicating that inadequate skills lab resources represent a major barrier to effective curriculum implementation. In addition, issues such as poor curriculum interpretation, lack of interest due to personal factors, and communication gaps were noted. Poor lecturer preparation was reported by 22 (33.8%) participants, while 43 (66.2%) did not perceive this issue; this variable also showed a statistically significant association ($p = .002$).*

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Conclusion: *The current study highlights the barriers faced by nursing faculty in implementing nursing curricula across selected three public nursing colleges in Sindh, Pakistan. In addition, these challenges require immediately intervention.*

INTRODUCTION

Nursing education has evolved significantly since the post-Victorian era. In earlier times, nursing education was considered inadequate, as the curriculum was largely designed by medical professionals.[1] Nursing faculty actively contribute to curriculum development, ensuring it encompasses all dimensions of health. [2,3] Nursing education consist of a structured curriculum through which students acquire both academic and clinical skills under the supervision of trained & experienced nursing faculty. [4] Further lack of concepts or unclear phenomena leading to limited skills , and leads to difficult enhancement of students' educational experiences in class and clinical settings. [5,6] The implementation of the curriculum plays a central role in fostering professional nursing competence, as it creates opportunities to acquire in-depth knowledge, develop problem-solving skills, and strengthen critical thinking abilities, ultimately preparing each student to contribute as a future teacher.[7,8]

Moreover, one of the significant roles nursing faculty perform is to implement the nursing curriculum, - a vital position in nursing process. [9] According to the World Health Organization (WHO), nurses and midwives constitute more than 50% of the global health workforce. [10,11] Nurses involves in primary care, patient treatment, community health education, disease and infection control, and overall functioning of healthcare systems.[12] Despite this significance, and persist challenges nursing profession provides uninterrupted and diligent services in the health care setting. [13,14] . The United Nations Children's Emergency Fund (UNICEF) reported that approximately 90% of nurses in Pakistan require enhanced academic preparation and advanced clinical skills, supported by real-life clinical scenarios and simulation-based training, in order to promote comprehensive learning and ensure safe nursing practice.[15,16] Additionally, nursing students often experience fear while performing procedures, which they can otherwise execute more confidently in the absence of faculty supervision. Nevertheless, the importance of quality nursing education and training cannot be overstated. [17]

Despite this, multiple challenges remain within the nursing education profession, including limited faculty development opportunities, inexperienced educators, and lack of confidence and leadership skills, insufficient subject knowledge, ineffective teaching methods, unclear content delivery, excessive workloads, rigid schedules, administrative hurdles, inadequate funding, and resource constraints. [18,19] There is need to identify these barriers. Even though, some researchers in different contexts have identified a few barriers in implementing nursing curriculum. However, identifying such barriers in resource-constraint countries like Pakistan would definitely help to improve nursing standards thereby providing quality of care to patients. Further, the aim of this study is to provide essential information which is associated with barriers, and challenges to implement the nursing curriculum in the class, and clinical settings by nursing faculty, (Nursing, & Clinical Instructor). Moreover, understanding these barriers will help for the improvement of educational institutions, support the nursing faculty, optimize teaching methodologies and increase optimal educational experiences for nursing students. In addition, this study identified the Barriers to effective curriculum implementation in nursing education.

Methodology:

This was an analytical cross-sectional study conducted from February to March 2025 at three public nursing colleges in Sindh, Pakistan, the College of Nursing Female Nawabshah, the College of Nursing Female Sanghar, and the College of Nursing Female Mirpurkhas, located in Sindh province of Pakistan. A total of 65 nursing faculty members were selected using purposive sampling technique. Nursing faculties; nursing instructor, and clinical instructor, (Nursing Lectures) who activity involved were enrolled in this study. Both male and female faculty

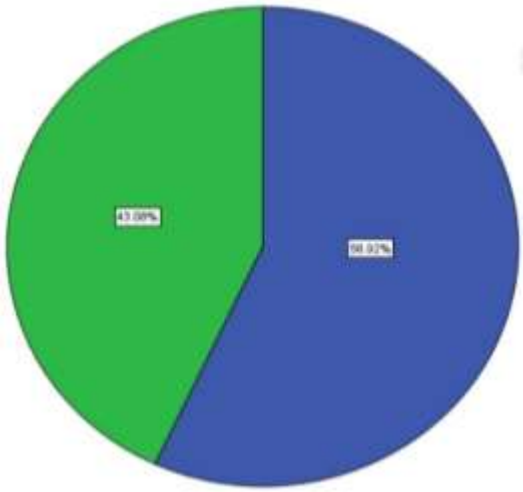
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members had one year of teaching experience in a nursing college, and possessed at least a Bachelor's degree in Nursing (BScN, MSN, or PhD), along with a Diploma in Teaching and Management were enrolled. Further less than one year of teaching experience, those holding only a diploma in nursing, and non-nursing faculty employed at nursing colleges were excluded from study. The ERC and IRB approved from Peoples University of Medical & Health Sciences Nawabshah, Sindh, Pakistan vide letter No. 533. The formal written informed consent was obtained from all participants, and also informed of their right to withdraw at any stage without consequences. In addition, Confidentiality and anonymity of participants were ensured during and after data collection. Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 21. Descriptive statistics, including frequencies and percentages were calculated for categorical variables, while means and standard deviations were reported for continuous variables. For inferential statistics, the chi-square test and Fisher's exact test were applied to assess associations between nominal and categorical variables. The research instrument comprises 04 items related to administrative barriers, 12 items addressing resource barriers, and 09 items pertaining to personal barriers. The research instrument comprised 25 dichotomous items with two response options ('Yes' and 'No'). Responses were coded numerically (Yes = 1, No = 0). Item scores were summed to generate a total score, with higher scores reflecting a higher level of the construct under study. The instrument was pretested for clarity and reliability prior to data collection. Face validity of the instrument was established through expert review. Subject-matter experts evaluated each item for clarity, appropriateness, and relevance to the study objectives. For the validity and reliability of the study, a pilot study was conducted, in which 25% of study were enrolled, the Cronbach's Alpha measured 0.70.

Results:

Figure No. 01. Distribution of Gender among study subject:



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Figure No. 01. Among all study participants, 37 (56.92%) were male, while 28 (43.08%) were female.

Table No.01. Distribution of educational of Study Subjects:

	Item	Frequency (percentage)
1.	BSN	51 (78.4)
2.	MSN /MSPH	11 (16.9)
3.	Others (Ph.D) Enrolled	03 (4.6)

Table No.01. Distribution of educational of Study Subjects: The educational qualification of the respondents shows that the majority, 51 (78.4%), had Bachelor of Science in Nursing (BSN), 11 (16.9%), Master of Science in Nursing (MSN) or a Master of Science in Public Health (MSPH).

Table No. 02. Administrative Barriers (n=65)

S.No	Item	Yes	No	*F* test
1.	Additional Responsibilities Except Subject	41 (63.1)	24 36.9	.001
2.	Over Burden of Subjects	39 (60.0)	26 (40.0)	.451
3.	Rude Behavior related to Faculty / Administration	16 (24.6)	49 (75.4)	.620
4.	Unfair distribution of subject	40 (61.5)	25 (38.5)	.04

1.1 **Additional Responsibilities except Subject:** Out of 65 respondents, **41 (63.1%)** reported that they were given additional responsibilities apart from their subject, while **24 (36.9%)** stated that they were not, and found to be statistically significant (***p* = .001**).

1.2 Overburden of Subjects: A total of **39 (60.0%)** participants felt they were overburdened with subjects, compared to **26 (40.0%)**.

1.3 Rude Behavior with Faculty/Administration: Only **16 (24.6%)** respondents reported experiencing rude behavior from the faculty or administration, while a majority of **49 (75.4%)** did not report such experiences.

1.4 Unfair Distribution of Subjects: A total of **40 (61.5%)** faculty members believed that there was unfair distribution of subjects, while **25 (38.5%)** said no, found **statistically significant (*p* = .04).**

Table No. 03. Resources Barriers (n=65)

S.No	Item	Yes	NO	*F* test
1.	Availability of Reference book	10 (15.4)	55 (84.6)	.011
2.	Shortage of Faculty	28 (43.1)	37 (56.9)	.80
3.	Skills Lab fully equipped	12 (18.5)	53 (81.5)	.001

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4.	I.T / Computer lab availability	6 (9.2)	59 (90.8)	.033
5.	Improper facilitation of Teaching gadgets	15 (23.1)	50 (76.9)	.45
6.	Transportation issues for academic activity	13 (20.0)	52 (80.0)	.54
7.	Improper faculty accommodation	41 (63.1)	24 (36.9)	.56
8.	Insufficient time to implement curricula	21 (32.3)	44 (67.7)	.041
9.	Lack of training / Workshops	23 (35.4)	42 (64.6)	.05
10.	Poor faculty monitoring	34 (52.3)	31 (47.7)	.56
11.	Strategies to evaluate the content	23 (35.4)	42 (64.6)	.56
12.	Irrelevant curriculum content	7 (10.8)	58 (89.2)	.63

01. **Availability of Reference Books**: Only **10 (15.4%)** respondents reported that reference books were available, while a large majority stated no **55 (84.6%)** . This difference was found to be statistically significant **(p = .011),** indicating that lack of reference books is a key resource barrier.

02. **Shortage of Faculty**: A total of **28 (43.1%)** participants reported a shortage of faculty, compared to **37 (56.9%)** who did not perceive, and found not **statistically significant (*p* = .80).**

03. **Skills Lab Fully Equipped**: Only **12 (18.5%)** faculty members believed the skills lab was fully equipped, strongly significant association **(*p* = .001) ,** suggesting inadequate skills lab facilities are a major barrier.

04. **IT/Computer Lab Availability**: Very few respondents **6 (9.2%)** reported the availability of IT/Computer labs, while **59 (90.8%)** indicated unavailability. This finding was statistically significant **(*p* = .033)**, showing limited access to IT resources as a serious challenge.

05. **Improper Facilitation of Teaching Gadgets**: subjects **15 (23.1%)** reported improper facilitation of teaching gadgets, while **50 (76.9%)** did not. The difference was **not statistically significant (p = .45).**

06. **Transportation Issues for Academics activity**: A total of **13 (20.0%)** reported transportation issues, compared to **52 (80.0%)** who did not face such problems. This finding was **not significant (*p* = .54).**

07. **Improper Faculty Accommodation**: The majority of respondents **41 (63.1%)** reported improper faculty accommodation, while **24 (36.9%)** did not. This result was **not statistically significant (*p* = .56).**

08. **Insufficient Time to Implement Curricula**: Among over all study, **21 (32.3%)** faculty reported insufficient time to implement the curriculum, while **44 (67.7%)** disagreed. This finding was **statistically significant (*p* = .041)**, highlighting time shortage as an important barrier.

09. **Lack of Training/Workshops**: A total of **23 (35.4%)** respondents indicated a lack of training/workshops, and found significance **(*p* = .05)**, suggesting it is a relevant issue.

10. **Poor Faculty Monitoring**: More than half **34 (52.3%)** agreed that there was poor faculty monitoring, while **31 (47.7%) were against, and these** findings was **not significant association (*p* = .56)**.

11. **Strategies to Evaluate the Content**: Among participants **23 (35.4%)** respondents stated there were no proper strategies to evaluate the content, while **42 (64.6%)** did not report this problem. The difference was **not significant (*p* = .56).**

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12. **Irrelevant Curriculum Content**: Only 7 (10.8%) reported irrelevant curriculum content, while 58 (89.2%) disagreed. This was also **not significant** (p = .63).

Table No. 04. Personal Barriers (n=65)

S.No	Item	Yes	No	*F* test
1.	Curriculum is poorly interpreted	12 (18.5)	53 (81.5)	.63
2.	Lack of Interest due to personal factors	16 (24.6)	49 (75.4)	.001
3.	Poor Understanding of curriculum	17 (26.2)	48 (73.8)	.63
4.	Lack of communication with others	7 (10.8)	58 (89.2)	.71
5.	Poor lecturer Preparation	22 (33.8)	43 (66.2)	.002
6.	Inappropriate teaching Methodology	18 (27.7)	47 (72.3)	.041
7.	Evaluation of assigned Subject	54 (83.1)	11 (16.9)	.38
8.	Social constraint related to Evaluation	27 (41.5)	38 (58.5)	.021
9.	Implementation of Extra-curricular activities	7 (10.8)	58 (8)	.013

Personal Barriers (n = 65):

1. **Curriculum is Poorly Interpreted**: Only 12 (18.5%) respondents felt that the curriculum was poorly interpreted, while 53 (81.5%) did not agree. The result was not statistically significant (p = .63).

2. **Lack of Interest due to Personal Factors**: A total of 16 (24.6%) respondents reported lack of interest due to personal factors, compared with 49 (75.4%) who did not, and found strongly significant association (p = .001), showing that personal factors influence faculty's interest in curriculum implementation.

3. **Poor Understanding of Curriculum**: Only 17 (26.2%) respondents reported poor understanding of the curriculum, while 48 (73.8%) did not. This finding was not statistically significant (p = .63).

4. **Lack of Communication with Others**: Only 7 (10.8%) respondents stated that they lacked communication with others, whereas 58 (89.2%) disagreed. The difference was not significant (p = .71).

5. **Poor Lecturer Preparation**: A total of 22 (33.8%) participants reported poor preparation on the part of lecturers, while 43 (66.2%) did not, and these findings statistically significant (p = .002), indicating that lecturer preparation is a strong personal barrier.

6. **Inappropriate Teaching Methodology**: About 18 (27.7%) reported inappropriate teaching methodology, while 47 (72.3%) disagreed. The difference was statistically significant (p = .041), making it another important barrier.

7. **Evaluation of Assigned Subject**: A majority 54 (83.1%) reported that evaluation of assigned subjects was conducted, while only 11 (16.9%) disagreed. This result was not significant (p = .38).

8. **Social Constraints Related to Evaluation**: A total of 27 (41.5%) respondents experienced social constraints related to evaluation, whereas 38 (58.5%) did not, and statistically significant (p = .021).

9. Implementation of Extra-Curricular Activities: Only 7 (10.8%) respondents reported implementation of extracurricular activities, while 58 (89.2%) did not, and statistically significant (p = .013).

Discussion:

The findings of this study highlighted several important barriers faced by nursing faculty in relation to curriculum implementation, available resources, and institutional support. A substantial proportion of

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faculty members reported that they were assigned additional responsibilities outside their area of domain, and this study reported a finding significant association (p = .001) with study variables. Moreover, the workload allocation, potentially affecting teaching quality, and faculty performance in class and clinical settings, The perception of being overburdened with subjects, also reinforces concerns related to workload distribution. [20,21] Similarly, more than half of the faculty reported unfair distribution of subjects, and this pattern was statistically significant (p = .04). These findings collectively point to inefficiencies in academic management and workload planning, which likely contribute to faculty stress and reduced effectiveness in curriculum delivery. Additionally, resource constraints emerged as a critical barrier to curriculum implementation during nursing education. [19,20,21] The most notable issue was the lack of reference books, with only indicating availability, and this difference was statistically significant (p = .011). The absence of essential learning materials undermines evidence-based teaching and limits students' academic development. [11,17,22] Similarly, inadequate skills laboratory resources were highlighted, with limited investigated reporting that the lab was fully equipped , and also found strongly significant association (p = .001), indicating a major deficit in practical training facilities, which are essential for competency-based nursing education.[18,23,24] Information technology resources were also found insufficient, more than nineteen one percent reported availability of IT or computer labs, a statistically significant finding (p = .033). Limited access to digital tools restricts opportunities for e-learning, simulation-based training, and modern pedagogical methods, aligning with challenges reported in similar studies in low-resource academic settings.[22,25] Contrarily, certain institutional challenges did not reach statistical significance, including faculty shortages (p = .80), transportation difficulties (p = .54), improper faculty accommodation (p = .56), and lack of facilitation of teaching gadgets , and not statistically significant, these issues still represent practical challenges that may indirectly affect faculty satisfaction and performance. [24,26] Approximately large number of faculty reported insufficient time to implement the curriculum, which was statistically significant (p = .041) , these findings emphasizes the structural pressures that obstruct lesson planning, assessment, and instructional delivery. Additionally, the lack of training or workshops was reported of respondents and was also significant (p = .05), which indicating a meaningful gap in professional development opportunities.[22,27,28] Furthermore , pedagogical strategies and curriculum relevance may need improvement, they were not perceived as primary barriers compared to workload and resource-related challenges.[25,29,30] These challenges reflect both structural and operational gaps within the academic environment that may hinder the delivery of quality nursing education. [31,32] In this study, the most significant barriers to effective curriculum implementation lie in workload distribution, resource availability, time limitations, and insufficient training opportunities. Addressing these concerns through stronger administrative support, investment in teaching resources, and structured workload policies may substantially enhance the quality of nursing education and support faculty performance.

Conclusion:

This study highlighted the barriers faced by nursing faculty in implementing nursing curricula across selected colleges in Sindh. In addition, these challenges require immediately intervention; structured faculty development programs, provision of adequate resources, reduction of administrative overload, and regular curriculum review by regulatory bodies.

limitation:

This study conducted only three selected public colleges of nursing in Sindh, Pakistan, for generalizability there is need to conduct same study in the different public and private colleges to find out common barriers among the nursing faculties.

Conflict of Interest:

No any conflict of interest among authors.

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