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Significance of questioning in nursing education – insights from neophyte students of nursing colleges in Islamabad and Peshawar

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ABSTRACT

**BACKGROUND & OBJECTIVE:** Questioning is a fundamental pedagogical approach essential for cultivating creativity, intellectual curiosity, and critical thinking skills. Its significance is particularly pronounced in healthcare education, where it substantially influences life-and-death decisions. This study examined novice undergraduate nursing students' perspectives on the efficacy of questioning in classrooms at three nursing colleges in Islamabad and Peshawar.

**METHODOLOGY:** A descriptive qualitative study recruited twelve neophyte undergraduate nursing students from three nursing colleges using an extreme sampling strategy. The study duration was 6 months (May 2020 to October 2020). Teachers were approached to nominate the students who usually ask questions or do not ask questions. In-depth individualized interviews were conducted using a semi-structured interview guide by the primary researcher. Data was manually content analyzed. Ethical approval (Letter No 113-933-2020) and written informed was obtained.

**RESULTS:** The interviews of twelve nursing students revealed several advantages of questioning in relation to enhancing learning, building confidence, and strengthening interpersonal relationships. They also envisioned the application of questioning strategy in their clinical practice. Students' and teachers' training in asking and handling questioning is recommended respectively.

**CONCLUSION:** Questioning is a fundamental skill that contributes to the holistic development of nursing students and prepares them for their roles in patient care and healthcare team collaboration. Nursing educators should prioritize the development of questioning ability among students, particularly those from backgrounds where rote learning is prevalent.

**KEYWORDS:** Questioning Ability, Significance of Questioning, Nursing Students, Students' Perspectives.

INTRODUCTION

In the teaching and learning process, questioning is one of the most commonly used skills and the oldest one, and it originated with the great Greek philosopher Socrates<sup>[1]</sup>. Well-constructed and higher-level questions stimulate imagination and ignite curiosity for acquiring knowledge<sup>[2]</sup>. The higher-level questions challenge students' assumptions and clarify key learning concepts, which ultimately yield the desired answers and stimulate thinking and creativity<sup>[3]</sup>.

In addition, students' understanding of concepts and contents is enhanced when they are motivated to ask questions<sup>[2]</sup>. The effective use of questioning ensures students' engagement in learning, encourages peer learning by hearing different explanations of a concept presented by their peers, and enhances their confidence<sup>[4]</sup>. Questioning also helps to develop higher-order thinking, such as critical thinking<sup>[5-8]</sup>.

Higher-order thinking is strongly associated with the questioning technique<sup>[9]</sup>. Therefore, it is important to create a culture of questioning in the learning environment to

develop high-order thinking (HOT) in students. HOT is promoted not only through teacher questioning but also by encouraging students to ask questions. Therefore, students should be encouraged to ask questions instead of only answering teachers' questions and summarizing the learned content<sup>[10]</sup>.

Questioning is an important academic tool in all disciplines, but it is more significant for healthcare professionals because they require critical thinking (CT) to make effective decisions. CT can be developed by using questioning strategies. Furthermore, CT leads students to develop clinical reasoning and problem-solving skills, which are essential skills for a nursing professional<sup>[11]</sup>.

One of the outcomes of a nursing degree program is to develop critical thinking in students. However, nursing students in Pakistan commonly use rote-learning strategies to memorize the content and reproduce it on paper, which inhibits the development of critical thinking<sup>[5]</sup>. Moreover, Pakistani students may not be groomed well in questioning if they have studied in public sector schools in rural areas. The

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reason is that in rural and public sector schools, a didactic teaching methodology is most commonly used<sup>[12]</sup>. Most of the students joining the nursing profession have completed their basic education in public sector schools and are from rural areas. As a result, students who may not have had the opportunity to develop questioning ability at the school level may not have the insight into the importance of questioning in their professional career.

Most of the existing literature in nursing<sup>[13,14]</sup>. Focuses on the teachers' questioning skills in the clinical setting. Very little is known about the nursing students' questioning abilities<sup>[14]</sup> while to the best of the researcher's knowledge no study was found with regard to students' questioning in the classroom setting. Therefore, this study aimed to explore the neophyte undergraduate nursing students' perspective on the significance of asking questions in a classroom of three nursing colleges in Islamabad and Peshawar.

## METHODOLOGY

Institutional review board approval through letter number 113-933-2020 was obtained. Written informed consent was obtained from students after being briefed about the study's purpose, time commitment, rights, confidentiality, and data safety. Anonymity was maintained using codes instead of names.

The descriptive qualitative study design was used to explore the neophyte undergraduate nursing students' perspective on the significance of students' questioning in the classroom. The participants were first-year Bachelor of Science in Nursing (BSN) students from three nursing colleges: one private, one semi-private, and one public. Private and semi-private colleges were in Islamabad, whereas public colleges were in Peshawar. These colleges are regulated by the Pakistan Nursing Council but differ in infrastructure and student population. All the students were included in this study. The study's duration was six months May 2020 to October 2020.

The researchers used an extreme sampling method, a subtype of purposive sampling<sup>[15]</sup>. This involved selecting participants from both ends of the spectrum regarding questioning ability. Specifically, students who actively asked questions and those who did not were chosen. Four students from each college, a total of twelve nursing students, were recruited. To ascertain the status of students' question-asking behavior, three instructors who had been teaching BSN first-year courses were consulted to identify 10 students, with five from each end of the extreme. Among these instructors, two specialized in nursing, and one in basic sciences. The lists of identified students from each extreme and institution were analyzed for commonalities. From the 10 nominated students, four individuals who were recommended by at least two instructors were selected for interviews. Gender representation was also considered during student selection.

Individual interviews were conducted either in person or online. Online interviews were conducted using Google Meet, while face-to-face interviews took place at the colleges. All interviews were audio recorded, and a semi-

structured interview guide with both planned and unplanned prompts was used. The interview guide was developed by the researchers based on a literature review and expertise in research in qualitative descriptive design and questioning phenomena. Field notes were taken to capture nonverbal cues. Most interviews were conducted in Urdu and later translated into English.

The data were manually analyzed using content analysis by the primary investigator (PI) in consultation with an experienced qualitative research supervisor. The analysis followed the steps outlined by Creswell and Creswell<sup>[16]</sup>. Responses from participants were reviewed and coded to capture both obvious and underlying meanings. Field notes were incorporated into transcripts, and coding led to the creation of categories and subcategories.

Trustworthiness measures were implemented to ensure study quality. Credibility was ensured by including participants from both questioning extremes, asking planned and unplanned interview probes for deeper understanding, and validating data codes and categories with the research supervisory team. Dependability and conformability were maintained by using the following measures. Audio recordings were reviewed before transcription, and transcriptions were cross-verified with recordings. Clarifications were sought during and after the interviews. The transferability of the study findings was ensured by a detailed description of the study participants' characteristics and research methods. Field notes were integrated into narrative analysis to maintain the authenticity of the study.

## RESULTS

The findings of the study are organized in two sections, the characteristics of the participants and their response. Participants or students refer to the participants of the study. The participants' codes consist of two types of information: AQ refers to students who asked questions and NQ refers to students who did not ask questions while the numeric code refers to the serial number of the participants.

Most of the interviews were conducted in Urdu language while a few were conducted in English. These interviews have been translated into English. Therefore, grammatical corrections have been made in the quotes to improve readability without affecting the true essence of interviews and their meanings.

### Characteristics of Participants

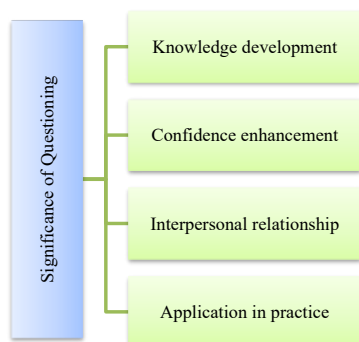
A total of 12 students from three colleges participated in this study. Six female and an equal number of male participants were recruited from each college. Most of the students (10) in both extremes had a public sector schooling background, studied in a segregated educational system, and had residences in rural areas.

### Findings of the Interviews

Students' interviews were content analysed manually. All the students were able to recognize the importance of questions in their learning and personal development; one of the students stated that questioning is "A key to opening the lock of learning" (AQ-2). They not only identified the

benefits of asking questions but they also demonstrated awareness about the consequences of not asking questions; one of the participants explained, “Whenever I feel difficulty in understanding, I question. I have internal feelings and motivation. I feel that if I do not ask at this point then I might face difficulties in future” (AQ-5). Students’ perspectives about the significance of questioning were categorized into four categories which are shown in Figure-I.

**Figure-I: Categories of significance of questioning.**



#### **Knowledge Development:**

Most of the students asserted that questioning plays an important role in the clarification of their concepts and assumptions, which remain unclear or unchallenged during a teaching session. The clarification of concepts and assumptions improves their thinking ability, which contributes to developing their cognitive skills and in-depth understanding of the content. In addition, a student highlighted the significance of questioning for students who usually remain quiet in the class:

It helps those students to clarify their concepts who are very quiet in class. It gives them a chance to participate in class. Sometimes as a student, I did not realize that the concept was not clear to me. When other students ask questions, it adds to my knowledge as well (NQ-11).

Students verbalized that despite clarification and elaboration of concepts taught in the class, some gaps remained in their knowledge and understanding. With questions from students, generally, the teacher provided some additional information relevant to the concepts, which students found useful. One of them expressed his views, “After asking a question, the teacher explained a few related concepts, which were not covered in detail during the session. That helped the other students to get clarity in their concepts as well” (AQ-9).

A few students were also able to foresee the negative implications of not having the ability to question during their professional careers. They had the insight to improve their understanding through questions for the sake of safe clinical practice; as a participant said:

From a professional point of view, as a nurse, if I am not satisfied with the learned concepts, how can I satisfy my patient? I do not want my patient should suffer because of a lack of my understanding of concepts. I have to be honest with my profession. I can progress if I will have good knowledge and skills (AQ-10).

#### **Confidence Enhancement:**

Most of the students reflected that self-confidence, affirmation of doubts in learning, and teachers’ encouragement are essential elements for confidence enhancement. They believe that certainty about the content and formation of the questions improved their self-assurance. A few students reported that occasionally, they had doubts about their understanding of the concepts, which they verified with their teachers through questions. This affirmation of understanding assisted them in gaining knowledge, which resulted in enhancing their confidence, as expressed by one of the students, “We have doubts in our understanding of the concepts. After questioning, the teacher explains the concepts, which helps us affirm our understanding. It helps to improve our learning and enhance our confidence” (AQ-9). Furthermore, a few students were able to reflect on the benefits of questioning for their ability to express thoughts and feelings; as verbalized by another student, “Questioning helps to improve our communication or conversation skills” (NQ-4).

Most of the participants admitted that self-confidence alone was not enough to ask questions. When they were encouraged by their teachers to ask questions, their confidence got a boost; for example, one of the participants acknowledged:

When I asked a question the first time, my breathing increased and I was wondering what the teacher would think and how she would respond. After receiving a positive response from the teacher, I got the courage to ask questions again. My voice tone became better in subsequent attempts. I realized that it is easy to ask questions.... I will say questioning is one of the basic steps in building confidence (NQ-11).

The participants’ narratives were also supported by the researcher’s observation during the interviews. Students who were from the AQ extreme responded well to the interview questions compared to those who were from the NQ extreme. Moreover, the former were able to articulate their thoughts more clearly.

#### **Interpersonal Relationship:**

Most of the students expressed their views that questioning promotes interpersonal relationships in academic as well as clinical contexts. They articulated that questioning promotes a positive relationship with class fellows; one of the students expressed, “A few classmates have made friends with me because they share their questions with me to ask the teacher on their behalf” (AQ-1). In addition, most of the students stated that through questioning, they could develop a good relationship with teachers because teachers have positive feelings and attitudes toward those students who show interest in class by asking questions. One of the students stated:

When a teacher observes any student asking questions in the class; the teacher feels good about that student. The teacher considers students to be attentive in their lecture and respond well to the content s/he is teaching. The teacher will have a positive attitude toward that student, which helps to improve the teacher-student relationship (AQ-1).

Most of the students described questioning also promoting relationships in clinical contexts such as hospitals. Students verbalized that asking questions tends to improve communication within the healthcare teams. They felt that they could enhance their clinical learning by asking questions to senior members of the healthcare team. Furthermore, it promotes team collaboration by enhancing understanding of professional tasks. One of the participants stated: Questioning's benefits are not only in the student's life but in their professional life too. It helps to improve our interaction with other healthcare team members. Moreover, it strengthens group collaboration. My clinical learning will be compromised if I do not ask questions (AQ-4).

#### **Application in Practice:**

A few participants were able to identify the benefits of questioning in evaluating teaching and learning objectives, transferring the questioning skills to future students, and assessing patients. Some of the participants articulated that questioning largely helps the teachers to assess whether the students have acquired the desired knowledge and skills. They acknowledged that questioning assists teachers in identifying gaps in the student's learning. Teachers are better able to address those gaps more quickly during the session or later on. Along with the evaluation of students' learning, questions from the students enable teachers to evaluate and assess whether the session objectives have been achieved successfully. One of the students stated, "Questioning also allows the teachers to know whether they are achieving their teaching goals" (NQ-11).

A few participants were able to foresee the advantages of questioning in their future endeavors. They were enthusiastic about promoting their students' ability to question when they will become nurse educators. One of them envisioned such a prospect: "If I become a teacher, I will be able to improve the questioning ability of my students" (AQ-2).

In their clinical roles, the participants emphasized the significance of questioning in patients' assessment, as one of the participants verbalized, "If a patient is not able to tell me about his/her disease, through questioning, I will get more information about disease" (AQ-1). A few participants were able to anticipate the benefits of questioning in interacting with the patient's family members and in communicating their assessment to other healthcare professionals. One of the participants asserted, "If I am shy, how will I deal with the patient's family?" (NQ-3). Likewise, a participant admitted the potential negative implications in practice because of an underdeveloped ability to ask questions:

When I will deal with patients and their families, I will feel hesitant and find difficulty in inquiring about my patient's health. Moreover, I will face difficulty in dealing with their questions and teaching them. I will feel challenges in communicating the patient's condition to healthcare team members like doctors and fellow nurses (NQ-7).

#### **DISCUSSION**

This study was conducted to inquire about the perspective of neophyte undergraduate nursing students on the significance of questioning. The participants of this study identified

several advantages of questioning about enhancing learning, building confidence, and strengthening interpersonal relationships. Although the participants of this study had not been exposed to clinical practice until the time of the study, interestingly they were able to envisage the use of questioning during patient care.

It is worth mentioning that the significance of questioning was not only identified by students who could ask questions, but students who usually did not ask questions in the class also considered it to be a useful skill. That demonstrates that these students did not lack cognitive ability but seemed to have a level of difficulty expressing themselves. This finding warrants the teachers engaging and encouraging all the students to participate in class, particularly those who are too shy to participate.

Concurrent with the findings of studies by Pedrosa-de-Jesus and Watts<sup>[17]</sup>, the participants in this study also explained the role of questioning in identifying and clarifying assumptions leading to concept clarification. They described questioning to be an effective strategy for a deep understanding of concepts.

Interviewing the patient is an important part of patient assessment. Nurses' questioning ability facilitates them to gain comprehensive health information from patients. Healthcare providers, especially nurses, who lack this ability, face difficulty in taking patient's health histories<sup>[18]</sup>. It was noteworthy that despite their status as novice nursing students without exposure to the clinical environment, the participants demonstrated the ability to associate nurses' questioning skills with coordination and collaboration among the healthcare team. They thought that questioning would help them to obtain information from patients, their family members, or other healthcare workers.

Congruent with study findings<sup>[19]</sup>, this study reported an enhancement in confidence as a result of questioning. Students' confidence can be developed or enhanced through the support and motivation of teachers and peers in the learning environment. If the teachers and/or peers were supportive, they continued to practice questioning without feeling insecure. Consequently, their confidence and questioning ability were enhanced.

Pedrosa-de-Jesus and Watts<sup>[17]</sup> reported that asking questions seemed to improve interpersonal relationships among peers who helped each other in their learning. Participants in this study acknowledged that questions by their peers contributed to their learning.

Students from private and public sector universities elucidated the advantages of questioning in their educational process. However, public university students emphasised the significance of questioning in clinical settings, whereas private university students accentuated the importance of questioning in fostering interpersonal relationships with peers and faculty. This disparity may be attributed to public university students having greater exposure to clinical practice compared to their counterparts in the private sector.



In this study, the participants' narratives directly or indirectly revealed the need for teachers to give equal opportunity to their students for class participation. Students who did not have the confidence to ask questions clarified their concerns by requesting their peers to ask questions on their behalf. Although this practice developed the confidence of students who could ask questions, it did not help those who did not have the ability. This study revealed that the confidence of quieter students would not be built through continued dependency on other students. As a result, they would continue to lack confidence in their clinical practice, where they are expected to work independently. Therefore, teachers could play a major role in building students' confidence in asking questions.

The role of questioning in developing higher-order thinking, such as critical thinking and problem-solving, is extensively discussed in the study<sup>[20]</sup>. However, it was disconcerting to see that the participants did not mention the terms 'critical thinking' and 'problem-solving' in their narratives. Two reasons could explain this finding. One of the participants may not have been used to these terms in high school. Second, they might not have been familiar with those terms in their nursing schools but used rote learning strategies to memorize the content<sup>[21]</sup>. Well-constructed high-level questions enhance higher-order thinking in students<sup>[6]</sup>, which encompasses thinking such as critical thinking (CT), problem-solving, and clinical reasoning. Through questioning, students can acquire additional information about the issues they are confronting, which facilitates effective resolution of these issues. Inquisitiveness is a key component of CT; therefore, questions play a pivotal role in enhancing CT<sup>[22]</sup>.

This study has two primary limitations: 1) Two different methods of data collection were employed: face-to-face interviews and Google Meet interviews. It is possible that the researcher may have missed some non-verbal cues from participants during Google Meet interviews. 2) Students were nominated by teachers, which may not provide a true representation of each extreme. It would have been preferable if the researcher had selected students after classroom observation. Observation may have enhanced the rigor in the study.

Although in the current study, students expressed appreciation for the questioning culture in all three nursing colleges; this may not be an accurate assessment of this culture. Therefore, it is recommended that the perceptions of BSN-III or IV students regarding the questioning culture in nursing colleges be explored in future studies, as they have spent more time in the college environment. Based on the findings of this study, an interventional study should be designed to develop and promote students' questioning ability. This study focused on students' questioning in the classroom setting; thus, further research exploring this ability in the clinical setting is necessary. Teaching and learning is a bidirectional process in which students and teachers participate equally. It is recommended to explore the teachers' perspective on the questioning ability of the students.

## CONCLUSION

In light of these findings, educators and nursing programs should prioritize the development of questioning ability among students, particularly those from backgrounds where rote learning is prevalent. Encouraging active participation, fostering a supportive learning environment, and explicitly teaching critical thinking through questioning can empower nursing students to become more effective and confident healthcare professionals. Ultimately, this study reinforces the importance of questioning as a fundamental skill that contributes to the holistic development of nursing students and prepares them for their roles in patient care and healthcare team collaboration.

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#### *Authors' Contribution:*

**Muhammad Ishtiaq:** Substantial contributions to the conception, design of the work and the acquisition.

**Raisa Gul:** Drafting the work and reviewing it critically for important intellectual content.

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