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ORIGINAL

Voices of Academia: Perceptions of Exam Question Formats among Students and Faculty

Voces de la Academia: Percepciones sobre los Formatos de Preguntas de Exámenes entre Estudiantes y Profesores

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ABSTRACT

Introduction: evaluation of students is a crucial aspect of teaching and learning in higher education, particularly in nursing education. Effective assessment methods should evaluate cognitive, psychomotor, and communication skills while promoting professionalism. This study aimed to examine the perceptions of nursing students and faculty members regarding their preferences for assessment methods, specifically comparing Multiple Choice Questions (MCQs) and essay questions, at the Faculty of Nursing, Northern Border University in 2022-2023.
Method: a cross-sectional comparative design was utilized, involving 80 nursing students from both genders and 53 faculty members. Data was collected through self-administered questionnaires assessing demographic information, preferences, and perceived challenges related to assessment methods.
Results: the study revealed a significant preference for MCQs, with 94,1 % of students favoring them over essay questions (9,4 %), and 88,7 % of faculty preferring MCQs as well, although they leaned towards short essays and case studies. Post-intervention, perceptions of assessment types improved markedly; poor perceptions of MCQs decreased from 69,4 % to 22,4 % ($p < 0,001$), and for essay questions from 74,1 % to 12,9 % ($p < 0,001$). Training in question formulation was significantly correlated with improved perceptions of MCQs ($p < 0,001$).
Conclusion: Both groups favored MCQs for their ease and reliability, while faculty expressed interest in integrating diverse assessment methods to enhance learning outcomes and evaluate student competencies effectively.

Keywords: Educational Measurement; Faculty; Perception; Education; Nursing.

RESUMEN

Introducción: la evaluación de los estudiantes es un aspecto crucial de la enseñanza y el aprendizaje en la educación superior, particularmente en la educación en enfermería. Los métodos de evaluación efectivos deben evaluar las habilidades cognitivas, psicomotoras y de comunicación, al mismo tiempo que promueven el profesionalismo. Este estudio tuvo como objetivo examinar las percepciones de los estudiantes de

enfermería y los miembros del faculty sobre sus preferencias en los métodos de evaluación, comparando específicamente las preguntas de opción múltiple (MCQs) y las preguntas de ensayo, en la Facultad de Enfermería de la Universidad de la Frontera Norte en 2022-2023.
Método: se utilizó un diseño comparativo transversal, involucrando a 80 estudiantes de enfermería de ambos géneros y 53 miembros del faculty. Los datos se recolectaron a través de cuestionarios autoadministrados que evaluaban información demográfica, preferencias y desafíos percibidos relacionados con los métodos de evaluación.
Resultados: el estudio reveló una preferencia significativa por las MCQs, con un 94,1 % de los estudiantes prefiriéndolas sobre las preguntas de ensayo (9,4 %), y un 88,7 % de los profesores también prefiriendo las MCQs, aunque mostraron interés en ensayos cortos y estudios de caso. Después de la intervención, las percepciones sobre los tipos de evaluación mejoraron notablemente; las percepciones negativas sobre las MCQs disminuyeron del 69,4 % al 22,4 % ($p < 0,001$), y para las preguntas de ensayo del 74,1 % al 12,9 % ($p < 0,001$). La capacitación en la formulación de preguntas se correlacionó significativamente con la mejora de las percepciones sobre las MCQs ($p < 0,001$).
Conclusión: ambos grupos favorecieron las MCQs por su facilidad y fiabilidad, mientras que el faculty expresó interés en integrar diversos métodos de evaluación para mejorar los resultados de aprendizaje y evaluar efectivamente las competencias de los estudiantes.

Palabras clave: Medición Educativa; Facultad; Percepción; Educación; Enfermería.

INTRODUCTION

Assessment and feedback are fundamental components of higher education.[1] Various forms of assessment are designed to develop the cognitive skills necessary for students, which are critical for their practical applications in field.[2] Recent trends in higher education research reveal a shift toward increased student engagement in the design of curricula and assessments.[3] This development necessitates a collaborative approach, where students and academic staff act as co-partners in the learning and assessment processes, fostering meaningful dialogue that enhances both curricula and educational outcomes.[4] At present, multiple-choice questions (MCQs) are the most employed assessment method in medical and paramedical education. High-stakes national and international examinations frequently utilize the MCQ format, often preferring it over other formats such as true/false questions, extended matching questions, or short essays. Careful construction of these questions is essential to mitigate any significant effects on student performance. Nevertheless, the most effective question type for accurately assessing the knowledge of students in medical disciplines, particularly those involved in direct patient care, remains unclear. Consequently, it is imperative to evaluate and compare different assessment techniques concerning student learning outcomes, as this could significantly enhance educational productivity.[5]

According to Bloom's Taxonomy, it is important to assess three areas: the cognitive domain (knowledge), the psychomotor domain (practical skills), and the affective domain (attitudes). Various methods are used to evaluate medical knowledge, including long answer questions (LAQ), short answer questions (SAQ), oral exams, multiple choice questions (MCQs), and structured evaluations such as oral structured clinical evaluation (OSCE) and oral structured practical evaluation (OSPE).[6,7] Selecting appropriate teaching and assessment methods is vital.[8] Assessments drive learning in medical education, and students often have preferences for certain assessment types. Regardless of the methods chosen by the institution, it is essential to communicate these clearly to students during their education and before exams, helping them become familiar with the assessment tools.[9,10] Understanding the preferences of both students and faculty regarding exam formats such as multiple choice versus essay questions is crucial for developing effective teaching programs and implementing improvements at the college nursing, Northern Border University, thereby enhancing the educational experience and equipping students with necessary skills.

Multiple-choice questions (MCQs) are widely used for assessing undergraduate students due to their reliability and validity. They are easy to administer to large groups and can be graded quickly, minimizing the teacher's personal influence in the grading process. Students generally respond positively to MCQs for their assessments.[11] In contrast, essay exams require more time for grading, as students express their knowledge in written format. Consequently, these exams are typically reserved for smaller educational settings where the number of examinees is limited. An ideal assessment method should be reliable, valid, cost-effective, feasible, and acceptable to both students and educators, while also having a positive educational impact. However, no single assessment method is perfect; each has its own strengths and weaknesses.[12,13]

A study evaluating perceptions of Objective Structured Clinical Examinations (OSCE) found that both students and examiners had an overall positive view of this assessment method. Nonetheless, some challenges

were noted. To enhance the experience, practice OSCE sessions should be organized, followed by thorough orientation for students on the examination process. Additionally, the time allocated at each station should be reassessed prior to exams to help alleviate stress and improve the examination experience for future students. Examiners should also receive training in objective assessment techniques, and necessary materials should be readily available.[14]

Choosing assessment methods can enhance student engagement and improve their perception of instructors' responsiveness to different learning styles, all without leading to grade inflation.[15] Previous research indicated that while initial preferences for assessment methods were primarily based on factual recall, later clinical stages saw a shift towards methods that emphasize higher-order skills, such as critical thinking.[16] Higher levels of knowledge acquisition like interpretation and application can be effectively assessed using methods such as case presentations, essays, and extended matching type MCQs. Well-designed MCQs facilitate the assessment of application skills, promoting deep learning. Consequently, MCQs have become a crucial assessment tool for screening nursing students seeking admission to postgraduate programs.[17]

Effective assessment methods significantly impact student performance, and higher education institutions are encouraged to develop and implement strategies that enhance the learning process.[18] Considering this, it is essential for nursing education to consider the support and ease provided to students to mitigate any challenges they encounter with assessments. Therefore, the current study aimed to investigate the perceptions of students and faculty regarding preferences for exam formats, specifically, multiple choice versus essay questions. The study focused on two main objectives: first, assessing the perceptions of both students and faculty members regarding these two types of questions; and second, identifying the perceived difficulties and challenges associated with each format.

METHOD

Study Design

A cross-sectional comparative research design was employed in this study to effectively assess and compare the perceptions of nursing students and faculty members regarding assessment methods. The research was conducted at the Faculty of Nursing, affiliated with Northern Border University in Arar, Saudi Arabia, during the academic year 2022-2023.

Sample / Participant

The study sample included two groups: the researchers employed a non-probability convenience sampling design of 53 faculty members who are teaching the students in the college of nursing in different specialties at the Northern Border University and are willing to participate in the study. In addition, based on the sample size calculation formula listed below the study sample includes a convenience sample of 85 nursing students from various academic levels, both genders and willing to participate in the study during the academic year 2022-2023.

$$n = \left(\frac{Z_{1-\alpha/2} + Z_{1-\beta}}{ES} \right)^2$$

The standard normal deviate for α = Zα = 1,960, the standard normal deviate for ß = Zß = 1,2816, α = Standard normal deviate for α = 1,9600, Zß = Standard normal deviate for ß = 0,8416, B = (Zα + Zß)2 = 7,8489, C = (E/SΔ)2 =0,0947, N = B/C = 83, n= (1,96+0,84)/0,0947) ^2= 82,9037≈ 83. Sample size will be 83 participants to achieve a power of 80 % and a level of significance of 5 % (two sided), assuming the standard deviation of the differences to be 1,3 between pairs.[19]

Data Collection Instruments

Tool I: Faculty Members' Perception of Open-Ended vs. Multiple-Choice Questions

The researchers created a self-administered online questionnaire after reviewing relevant literature.[20,21,22] This tool assesses faculty members' perceptions of open-ended questions and multiple-choice questions (MCQs) and is divided into three parts: Part 1: demographic characteristics of the studied faculty member. This section gathers information on age, qualifications, academic position, years of experience, and participation in previous training programs related to exam preparation. Part 2 Preferred Question Types: This part includes questions about the faculty's preferred types of exam questions, the most used question types in theory and practical exams, and perceived challenges associated with essay and MCQ formats. The final section addresses the application of open-ended and MCQ questions in teaching and learning, focusing on their effectiveness, practicality, and strengths and weaknesses, using a 5-point Likert scale (5 = strongly agree, 1 = strongly disagree).

Tool II: Students' Perception of Open-Ended vs. Multiple-Choice Questions

The researchers designed a self-administered online questionnaire, informed by relevant literature, [20,21,22] to

assess students' opinions on open-ended questions and multiple-choice questions (MCQs). The tool is structured into three parts: demographic characteristics of the students. This section gathers data on students' college, age, gender, academic level, and the most common types of questions used in their theoretical and practical exams. In the second part, Preference for Exam Questions: In this part, students share their preferences for exam question types, indicating their preferred formats for theoretical and practical exams, any difficulties faced with MCQs compared to essay questions, and the types of questions they believe lead to higher scores and success. The final section assesses students' perceptions of MCQs versus essay questions through various statements rated on a 5-point Likert scale (5 = strongly agree, 1 = strongly disagree).

Validity & reliability of the tools

The data collection instruments were developed, translated, and modified, then assessed for validity by five experts in nursing and nursing education. Their recommendations were carefully considered before data collection began. The reliability of the instruments was measured using Cronbach's alpha, resulting in values of 0,901 for Tool I and 0,893 for Tool II, indicating high internal consistency. For the Exploratory Factor Analysis (EFA), a convenience sample of 93 students was utilized, which was excluded from the main study results to maintain statistical rigor. This sample provided adequate power for factor analysis and reliability testing. For construct validity, this sample ensured adequate statistical power for factor analysis and reliability testing in the overall validation research. The factor analysis confirmed the proposed factor structure, revealing significant loadings on the anticipated factors. Establishing construct validity is critical to ensure that the questionnaires accurately measure the intended perceptions and attitudes. The Kaiser-Meyer-Olkin (KMO) measure indicated suitability for factor analysis (KMO = 0,862), and Bartlett's Test of Sphericity was statistically significant (x^2 = 5305,660, $p < 0.001$), confirming strong correlations between variables.[23] The extracted components explained a total variance of 50,96 %, with Factor 1 contributing 27,83 % and Factor 2 23,13 %. Communalities for variables ranged from 0,350 to 0,975, and the Rotated Component Matrices exhibited strong loadings for the first two factors, suggesting a substantial and meaningful factor structure for the analyzed data.

A pilot study was conducted with eight students and five faculty members, representing 10 % of the planned sample size for the main study. This group was essential in verifying that the final questionnaires for Exploratory Factor Analysis (EFA) were well-structured and aligned with the research objectives. The primary aim of the pilot study was to evaluate the feasibility, applicability, and clarity of the assessment tools. Both students and faculty members reported no concerns regarding the questionnaire, indicating a positive reception. Importantly, the pilot study used a different sample from the EFA to maintain data integrity, which helped refine the assessment tools, reduce potential biases, and enhance the validity of the main study's findings.

Ethical Considerations:

The study followed the principles outlined in the "Declaration of Helsinki." An ethical agreement was obtained from the Northern Border University with the following number (HAP-09-A-043) with decision number (8/43/H). Administrative agreement was attained by the dean of the college. Written consent achieved from the participants before their inclusion in the study and after explaining the aim of the study. They were informed about their right to withdraw from the research at any stage, and the confidentiality of their data was assured.

Data collection

Data collection was done electronically via web-based questionnaire, the researchers share the links for all students and faculty members after explaining and clarifying the aim of the study and writing the aim and the consent for participation in Google survey. For many years, the College of Nursing at Northern Border University relied solely on multiple-choice questions (MCQs) for exams. The researchers assessed students' perceptions before introducing short answers and open-ended questions. Subsequently, we gradually incorporated short answer questions and case scenarios into the exams, then evaluated students' perceptions after they had practiced and been assessed with open-ended questions.

Data Analysis

The collected data was revised, tabulated and analyzed by using the SPSS package Version (23). Descriptive statistics using numbers and percentage, appropriate statistical tests as, simple frequency, mean and SD, Chi-square (x^2), and correlations used to estimate the statistically significant differences. Statistical significance was set at a p-value of less than 0,05.

Table 1 describes the demographic characteristics of faculty members and its association with total perception regarding multiple-choice questions versus essay questions; it shows that females are mostly (84,9 %). Nearly half of faculty members (47,2 %) are between 40 and under 50 years old, with teaching experience of 10 to 20 years. Furthermore, 47,2 % of faculty members are Assistant Professors and 39,6 % are Lecturers,

while 13,2 % are Professors and Associated Professors. Nearly two-thirds, 64,2 %, of faculty members attended training on question formulation. Just a small percentage of faculty informed obstacles with MCQ (15,1 %) or open-ended questions (11,3 %). Additionally, it shows a significant association between teaching experience and perception of MCQs versus essay questions. Attending training courses on question preparation is strongly associated with a good perception of MCQs versus essay questions, with a p-value ≤0.001. Faculty members who did not experience difficulties using multiple-choice questions were more likely to perceive evaluation procedures positively, with a p-value ≤0,05. Approximately 24 % reported difficulties with open-ended questions, yet expressed positive perceptions of MCQs, also with a p-value of ≤0,022.

Table 1. Relationship Between Faculty Demographics and Perceptions of Assessment Types

Variables	N (53)	%	Poor perception (n=12)		Average perception (n=16)		Good perception (n=25)		Chi-Square / Fisher's test	
			n	%	n	%	n	%	X^2	P
Age (Years)										
30 - > 40	20	37,7	4	33,3	8	50,0	8	32,0		
40 - > 50	25	47,2	6	50,0	6	37,5	13	52,0		
50 - > 60	8	15,1	2	16,7	2	12,5	4	16,0	1,483	0,830
Gender										
Male	8	15,1	2	16,7	4	25,0	2	8,0		
Female	45	84,9	10	83,3	12	75,0	23	92,0	2,230	0,328
Years of teaching experience as a faculty member										
< 10	17	32,1	8	66,7	9	56,3	0	0,0		
10 – 20	25	47,2	4	33,3	7	43,8	14	56,0		
> 20	11	20,8	0	0,0	0	0,0	11	44,0	28,671	<0,001**
The academic degree of a faculty member										
Professor	4	7,5	9	75,0	8	50,0	8	32,0		
Associated professor	3	5,7	0	0,0	0	0,0	3	12,0		
Assistant professor	25	47,2	3	25,0	6	37,5	12	48,0		
Lecturer	21	39,6	0	0,0	2	12,5	2	8,0	9,118	0,167
Attending a training course on how to formulate questions										
Yes	34	64,2	2	16,7	7	43,8	25	100,0		
No	19	35,8	10	83,3	9	56,3	0	0,0	28,631	<0,001**
Experiencing any difficulties when you are using multiple-choice questions										
Yes	8	15,1	4	33,3	4	25,0	0	0,0		
No	45	84,9	8	66,7	12	75,0	25	100,0	8,784	0,012*
Experiencing any difficulties when you are using open-ended										
Yes	6	11,3	0	0,0	0	0,0	6	24,0		
No	47	88,7	12	100,0	16	100,0	19	76,0	7,578	0,022*

Figure 1 indicates that nearly three-quarters (77,4 %) of faculty members favored multiple-choice questions (MCQs) as their preferred method of knowledge assessment. Short essays ranked as the second most popular option, utilized by 45,3 % in both theoretical and practical exams. Furthermore, 96,5 % of students noted that MCQs are the predominant assessment type in theoretical settings. In contrast, extended essays were the least favored, with only 22.6 % used in theoretical exams and 3,8 % in practical ones, according to faculty feedback. Students also reported that short essays were less frequently employed in theoretical exams (17,6 %) compared to practical exams (23,5 %). The most prevalent question format in practical exams was the Objective Structured Clinical Examination (OSCE), accounting for 56,6 %. Case studies were less favored overall (18,9 %), although they were more commonly used in practical exams (47,2 %) by faculty, which aligns with student responses indicating that case studies are more frequently applied in practical (16,5 %) than theoretical (5,9 %) exams. A significant majority of students (94,1 %) believe that MCQs offer better opportunities for achieving higher scores.

Table 2 demonstrates that nearly half of the faculty have an excellent perception of MCQs regarding their scope of application, effectiveness, and strength, with (54,7 %, 50,9 %,45,3 %, and 47,2 %) respectively. Conversely, essay questions have a slightly lower perception, with 43.4 % having a good perception of their

scope but only 37,7 % evaluating their effectiveness and practicality. While 45,3 % have a good perception of the strengths of essay questions, 54,7 % have a good perception of their limitations. It reveals that 47,2 % of faculty members perceive (MCQs) better than essay questions, demonstrating a largely positive opinion towards these assessment methods.

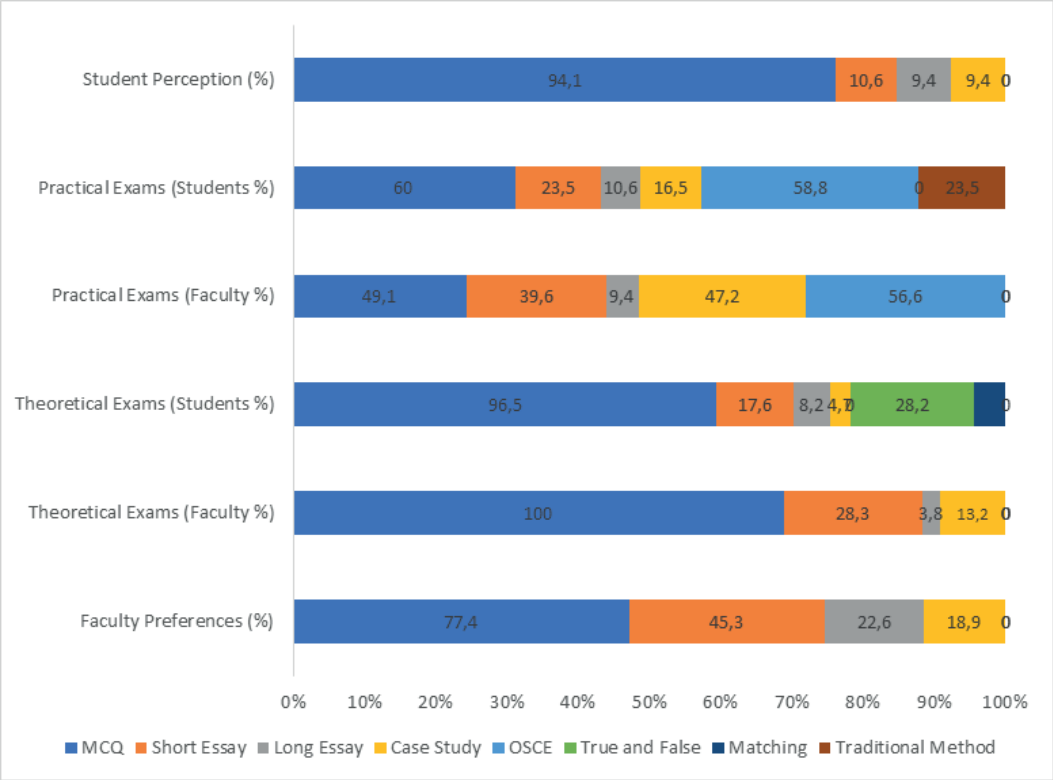

Figure 1. Faculty members' and students' opinion regarding the type of exam questions

Table 2. Faculty members' perception regarding multiple-choice questions versus essay questions

Variables	Poor perception		Average perception		Good perception	
	n (12)	%	n (16)	%	n (25)	%
Perception of multiple-choice questions versus essay questions						
The Scope of the Application of Multiple-Choice Questions in the Teaching and Learning Process	9	17,0	15	28,3	29	54,7
The Effectiveness and Practicality of Multiple-Choice Questions in Assessment	10	18,9	16	30,2	27	50,9
Strengths of Multiple-Choice questions	11	20,8	18	34,0	24	45,3
Limitations of multiple-choice Questions	14	26,4	14	26,4	25	47,2
Perception of essay questions						
Scope of Application of Open-Ended Questions in the Teaching and Learning Process	14	26,4	16	30,2	23	43,4
Effectiveness and Practicality of Open-Ended Questions in Assessment	13	24,5	20	37,7	20	37,7
Strengths of Essay questions	13	24,5	16	30,2	24	45,3
Limitations of Essay Questions	11	20,8	13	24,5	29	54,7
Total perception of multiple-choice questions versus essay questions	12	22,6	16	30,2	25	47,2

Figure 2 illustrates the demographic characteristics of the students, showing that over two-thirds (67,1 % and 68,75 % respectively) are females and within the 21-23 age group. The largest proportion of students (35,3 %) are in their fourth year, with third year and second-year students closely following at 31,8 % and 32,9 %, respectively.

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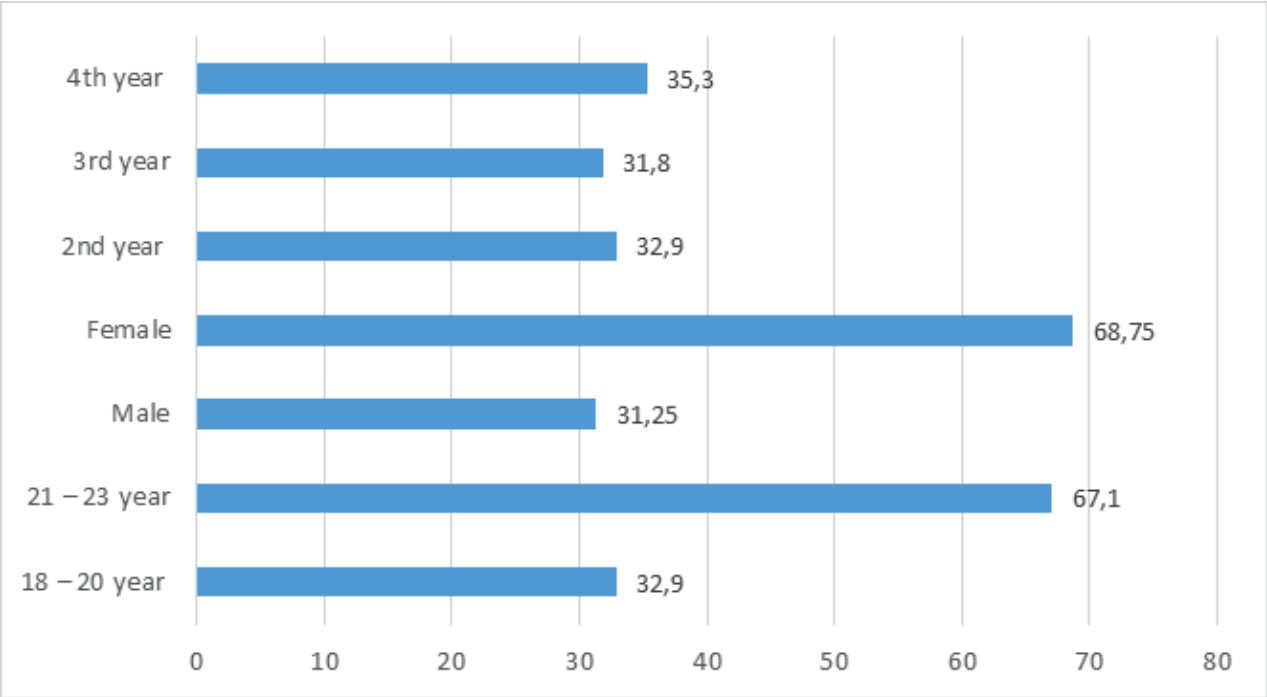

Figure 2. Demographic characteristics of the students studied.

Table 3 shows significant differences between student and faculty preferences in various aspects of assessment. Both groups favor multiple-choice questions (MCQs) for theoretical exams. However, faculty members show a significantly greater preference for short essays and case studies compared to students, with a p-value (<0,001). Additionally, faculty members favor Objective Structured Clinical Examinations (OSCEs) and traditional assessment methods (checklists) for practical exams, with a p-value (<0,05). In the case of short essays, case studies, and MCQs, faculty members demonstrate a stronger inclination towards these methods, indicating that they value assessments that require students to demonstrate deeper understanding and application of knowledge, supported by a p-value (<0,001).

Table 3. Comparison between faculty members and students regarding their opinions about the type of question preference

	Students		Faculty members		Chi-Square / Fisher's exact test	
	N (85)	%	N (53)	%	X^2	P
Preferred type of question for you in theoretical exam						
MCQ	80	94,1	47	88,7	1,316	0,251
Short Essay	8	9,4	29	54,7	34,147	<0,001**
Long Essay	4	4,7	6	11,3	2,125	0,145
Case Study	3	3,5	20	37,7	27,502	<0,001**
Preferred type of question for you in the practical exam						
OSCE	33	38,8	34	64,2	8,383	0,004*
Traditional method (checklist)	11	12,9	0	0,0	7,453	0,006*
MCQ	66	77,6	22	41,5	18,452	<0,001**
Short Essay	6	7,1	17	32,1	14,710	<0,001**
Case Study	5	5,9	23	43,4	28,406	<0,001**

Table 4 describes the difference in students' perceptions of MCQs and essay questions before and after an intervention. A significant shift in student perceptions was observed after the introduction of essay questions. The percentage of students with poor perception of MCQs dropped dramatically from 69,4 % to 22,4 %, while good perception increased from 11,8 % to 52,9 % (p-value <0,001). This shift suggests that exposure to diverse question types can positively influence students' views and may enhance their learning experience. The effect of essay questions displayed the most statistically significant change, whereas (71,8 %) of students had a

negative view of essay questions pre-intervention. In comparison, good perception improved from 10,6 % to 55,3 % post-intervention. The data proves a comprehensive enhancement in students' perception of different assessment methods (p-value <0,001).

Table 4. Comparison of Students' Perceptions of Multiple-Choice Questions versus Essay Questions

Variables	Pre-implementation of open-ended questions		Post-implementation of open-ended questions		Chi-Square	
	n (85)	%	n (85)	%	X^2	P
Perception of multiple-choice questions versus essay questions						
Poor perception	59	69,4	19	22,4		
Average perception	16	18,8	21	24,7		
Good perception	10	11,8	45	52,9	43,461	<0,001**
Perception of essay questions						
Poor perception	63	74,1	11	12,9		
Average perception	14	16,5	24	28,2		
Good perception	8	9,4	50	58,8	69,585	<0,001**
Total level of Student perception						
Poor perception	61	71,8	15	17,6		
Average perception	15	17,6	23	27,1		
Good perception	9	10,6	47	55,3	55,312	<0,001**

DISCUSSION

The multiple-choice question (MCQ) format is widely utilized across various educational levels and specialties, serving as a key assessment tool for formal certifications and competitive exams. MCQs effectively evaluate factual recall, problem-solving abilities, and reasoning skills. High-quality MCQs promote critical thinking by requiring students to interpret, integrate, synthesize, and analyze medical knowledge and facts. Consequently, this assessment method significantly influences students' learning behaviors and is favored for its objectivity and the ability to efficiently score large groups of students.[24]

In recent years, there has been growing interest in understanding students' and faculty assessment preferences, as these preferences can impact learning processes and outcomes. Research indicates that students' perceptions of assessment methods significantly affect their approaches to learning and studying. Additionally, these preferences reflect their perceptions of the learning environment, their conceptions of learning, and their overall learning strategies. In assessing the implications of this study on nursing education, these findings are broad in scope as student and faculty preferences regarding multiple-choice questions or essay question formats found significant insights into assessment practices.[21]

The current study examined the perception of students and faculty members regarding exam questions preferences: multiple choice versus essay questions. The study verified that there is a notable percentage of faculty members expressed a good perception of the effectiveness and practicality of MCQs in assessment, with 54,7 % rating their application positively, while only 22,6 % held a poor perception. Additionally, faculty members with more than 20 years of teaching experience showed a higher tendency towards favorable perceptions of assessment methods compared to those with fewer years of experience. This suggests that experience may enhance educators' confidence in using diverse assessment types. Faculty members who attended training courses on formulating questions demonstrated a significantly better perception of both MCQs and essay questions, indicating that professional development can positively influence assessment practices. The results also indicated a discrepancy between student preferences and faculty perceptions, with students favoring MCQs for theoretical exams. In short essays, case studies, and MCQs, faculty members show higher preferences, suggesting that they are worth assessing methods that demand students to exhibit a more thoughtful insight and application of knowledge.

The study highlighted a diverse academic staff composition, with females representing the majority (84,9 %) and 47,2 % of faculty members being under the age of 50. The faculty's teaching experience varied, with most having between 10 and 20 years in the field. A significant portion of the staff had received training in question formulation; notably, only a small percentage (15,1 %) reported challenges in crafting effective assessment questions. This suggests that many institutions actively provide training to enhance faculty competencies in assessment writing. The diverse demographics of the faculty enhance the generalizability of the findings and offer a comprehensive perspective on assessment practices. In a related study by Gupta et al. (2020)[24],

academic staff, ranging from assistant professors to full professors across various disciplines, were examined, focusing on how faculty training influences the quality of multiple-choice questions. In that study, the average teaching experience among participants was reported to be ten years.

The results reveal a significant correlation between teaching experience and perceptions of multiple-choice questions (MCQs) compared to essay questions, underscoring the influence of professional experience on educational assessment methods. Faculty members who participated in training courses focused on question preparation demonstrated a notably positive perception of MCQs, supported by a p-value of ≤0,001. These findings suggest that well-structured training programs can enhance faculty confidence and competence in effectively utilizing MCQs. This aligns with existing research that emphasizes the benefits of training in improving the quality of assessments[25,26]. Furthermore, findings from Mustafa et al. (2022)[27] corroborate this by showing that health science faculty who engaged in learning and teaching instruction actively promoted student inquiry and provided timely feedback on learning progress.

The study reveals a significant statistical difference in assessment method preferences between students and faculty. Both groups favor multiple-choice questions (MCQs) for theoretical exams; however, faculty members also express a preference for short essays, case studies, Objective Structured Clinical Examinations (OSCEs), and traditional practical assessments. These preferences indicate that these methods require careful analysis and application of knowledge. These findings align with research conducted by Braga et al. (2024)[28], which identified differences in the perceived effectiveness of assessment techniques between students and faculty. While both groups agree on the use of various minor evaluations and single exams, there is a notable preference for the significance of short essays or reports. Conversely, a substantial gap exists regarding holistic assessments, with faculty members often viewing them as more accurate. Despite these differences, both groups largely concur with the importance of feedback efficiency, highlighting its critical role in the assessment process.

The results underscore the necessity of a balanced approach that considers the perspectives of both students and faculty members when designing assessments. This balanced approach, which considers the varying understandings, is crucial for the effectiveness of educational programs. It provides individuals with reassurance regarding the study's trustworthiness and enormous potential to influence the field of education greatly. Furthermore, Sariay (2017)[29] added that secondary school teachers use multiple-choice questions to improve students' understanding and long-term knowledge retention. Nevertheless, students doubt the reliability of these questions, as they do not just have the potential to be challenging examination subjects. Open-ended questions are more effective for evaluating high-level cognitive abilities like interpretation, understanding, and decision-making. Nevertheless, this method may distract attention from students with little cognitive understanding competence and weak reading abilities. Students know that open-ended questions may lead to losing attention and a lack of ability to spend time successfully during exams.

Moreover, the findings indicated that faculty members who did not have difficulties with multiple-choice questions (MCQs) were more likely to evaluate these assessment methods positively, with a statistically significant p-value of ≤0,05. This association suggests that the level of understanding and the ease of practice are vital factors that affect faculty members' preferences. Yada et al. (2022)[30] emphasize that teachers' self-efficacy is crucial and significantly linked to effective educational practices. Furthermore, strong teacher self-efficacy is correlated with their favorable views toward education.

The study indicates that multiple-choice questions (MCQs) are the predominant form of assessment utilized in both theoretical and practical exams, while case studies and short essays are less frequently employed in theoretical assessments. Some nursing students believe that essay questions can enhance their chances of achieving better scores; however, the majority feel that MCQs provide greater opportunities for higher marks. This preference is consistent with findings from Holzinger et al. (2020)[21], which revealed that most students favored MCQs over oral examinations and short answer questions (SAQs). Further studies supporting this perspective, research by Amin et al. (2011) and Ibrahim et al. (2015)[31,32] also found that a significant number of students preferred the MCQ format to SAQs and oral exams. This preference stems from the perception that MCQs are easier to prepare for and have a higher likelihood of being passed, which aligns with conclusions drawn in other studies.

On the other hand, Gupta et al. (2016)[24] stated that 59,5 % of students prefer multiple-choice (MCQs) over essay questions, with 60 % unable to receive partial mark credits on MCQs. However, 60,8 % can achieve higher grades on essay questions. Most students find MCQs simpler and easier to understand, while 82,9 % find it challenging to remove incorrect choices, affecting their learning. Moreover, 65 % find MCQs more complex and require a deep understanding of the topic, while 62,5 % find essay questions more complicated and require thorough comprehension. 54,5 % find essay questions more equitable, reflecting their knowledge and areas for improvement. Both types of questions require careful study and significantly improve the learning process, and students believe both should be included in assessments due to their evidence and disadvantages.

Our study demonstrated no significant relationship between age, gender, and perception of essay questions; only later-year (3rd and 4th year) students have a better perception than first-year students. This agrees with a study done by Almakadma et al. (2023)[33], revealed that their study comprised 191 183 female students (48,9 %)

and male students (51,1 %). Out of all the academic years, year four students had the highest response rate, with 88 students at 23,5 %. The composite GPA of 310 (82,8 %) students who participated in the study ranged from 3,1 to 4,0 out of 4,0. In contrast, Holzinger et al. (2020)[21] noted notable gender differences regarding the oral examination format, with female students demonstrating more positive attitudes than male students. The correlation value for female and male students' perceptions of oral examination is r = 0,60 and r = 0,34, respectively.

This study highlights the importance of fostering a supportive organizational climate for assessment integrity. Notably, students further along in their degree programs demonstrated a more favorable response to essay questions, suggesting a developmental aspect of assessment preferences. Institutions should consider this factor when making decisions about curriculum design.

Study limitations

The primary limitation of our study was the small participant pool, which may not adequately represent the broader population of educators and students. Conducting research at a single university further restricts the generalizability of the results. To enhance applicability, future research should involve a larger, more diverse sample from various institutions in Saudi Arabia. Another significant limitation is the reliance on self-reported perceptions, which may lead to bias as participants could provide socially desirable responses. Longitudinal studies could offer deeper insights into how perceptions evolve over time, while integrating qualitative methods like interviews or focus groups could enrich the data and uncover underlying factors influencing multiple-choice questions versus essay questions preferences.

CONCLUSION

Based on the findings of this study, it can be concluded that regarding theoretical exams, faculty members and nursing students prefer MCQs but faculty members preference also short essays and case studies, and in practical exams faculty members prefer (OSCEs) and traditional methods (checklist) pre intervention. While there is improvement of students' perceptions of multiple-choice questions versus essay questions from pre-intervention to post-intervention, Additionally, no statistically significant association exists between age, gender, and perception and the data proves a comprehensive enhancement in students' perception of different assessment methods. Therefore, the researchers recommended the following: Continuous training and educational programs must be designed for students and faculty members about different types of assessment. The use of MCQs in assessment may be used as a learning tool as well as an assessment method. This may be more widely used in undergraduate nursing training. Additionally, the emphasis on higher domains for nursing students' assessment incorporating critical thinking should increase as the students' progress through their medical courses.

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CONFLICTS OF INTEREST

There are no conflicts of interest.

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