

Original Article

Quality of Educational Services and its Relation to Academic Satisfaction as Perceived by Nursing Students' at Saft Elhoria Technical Health Institute.

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Abstract

Background: Educational service quality significantly influences student satisfaction, and fosters a positive educational environment and enhances student satisfaction. It is vital for higher education institutions to remain competitive and growing. **Aim:** To assess the quality of educational service and its relation to academic satisfaction as perceived by nursing students at Saft Alhoria Technical Health Institute. **Design:** A descriptive correlational research design was utilized. **Settings:** The study was conducted at Saft Alhoria Technical Health Institute, El-Beheira Governorate. **Subjects:** All nursing students in the second year 530 of the academic year (2022-2023). **Tools:** Two tools were used: Tool I: Service Quality (SERVQUAL) Sheet, and Tool II: Nursing Students Academic Satisfaction Questionnaire. **Results:** less than half (47.6% & 45.7%) of studied nursing students had high and moderate levels of perceived educational service quality respectively. Also the majority (91.0%) of the studied nursing students reported a high perceived level of academic satisfaction. And there was a positive strong statistically significant association among total levels of academic satisfaction domains as perceived by studied nursing students ($p < 0.001$). **Conclusion:** There was a strong statistically significant positive association between total quality educational service and total academic satisfaction as perceived by studied nursing students ($p < 0.001$). **Recommendations:** Implement regular student surveys to assess satisfaction with the quality of educational services. Reusing of the research on a larger probability sample at different nursing colleges and universities to achieve generalizable results.

Keywords: Academic Satisfaction, Educational Service quality, Nursing Students.

Introduction

Education is a creative and active process that is both a basic human right and the fundamental of every society. Access to high-quality education, which is both acceptable and adaptable, is ensured under the right to education. In recent years, Egypt has been striving to improve educational services quality. ⁽¹⁾ Education contains all the characteristics of service activities. Educational services are heterogeneous, intangible, inseparable from participants in implementation, and variable.

Quality is at the heart of education, and a crucial factor influencing enrolment, retention, and achievement. High-quality education plays a vital role in national development, particularly given the increasing global competition in education and technology in the 21st century. ⁽²⁾ According to Parasuraman et al., service quality is defined as an attitude related to satisfaction derived from comparing expectations with actual performance. ⁽³⁾ Similarly, Terefe (2018) noted that all service quality attributes have a positive

correlation with customer satisfaction, which is further associated with customer loyalty. Furthermore, stated that high service quality leads to increased customer satisfaction and loyalty. ⁽⁴⁾

Significant strides and persistent challenges across various levels mark the quality of Educational Services (QES) in Egypt. QES is a continuous process that evolves with opportunity in the hands of the universities for constant improvement in service for the same students, thus providing sufficient time to the service providers to improve their standards level of service provision. ⁽⁵⁾ Besides, the QES includes three aspects: 1) Physical quality: involving learning facilities, accommodation, and general services; 2) interactive quality: focusing on academic instruction, guidance, and contact between staff and students; and 3) corporate quality: relating to appreciation, reputation, and value for money. ⁽⁶⁾

Moreover, Crawford and Shutler (1999) ⁽⁷⁾ identified five main reasons for the failure of higher education quality systems; struggling students (insufficient input), inefficient teaching methods (weak service delivery), decrease focus on performance standards and measurement, low staff motivation (internal customer satisfaction), and lack of attention to the development of students skills (quality potential). ⁽⁸⁾

Positive perceptions of service quality may lead to nursing student's satisfaction (NSs). Quality of educational services and NSs are distinct and inseparable. Perceived quality plays a key role in forming a positive image in the mind of students which ultimately leads to NSs. ⁽⁹⁾

Nursing student satisfaction can be understood as an intellectual and emotional response to the overall educational services received. It reflects a student's cognitive and emotional reaction to specific or ongoing services provided by the institution. This psychological response is a key indicator of service quality and is often seen as the outcome of how well the institution meets the students' needs and expectations. ⁽¹⁰⁾ It is a short-term attitude based on an evaluation of the educational experiences, services, and facilities offered by the institution. ⁽¹¹⁾

Main goal of NSs is to enhance their experiences and satisfaction, reduce institution dissatisfaction, and raise the institution's performance, which are the only causes influencing the attainment of progress. Consequently, improvement activities at institution are closely associated to NSs. The process of determining NSs must be viewed as a cycle of assessment, diagnosis, and implementing data that allows management to achieve progress with direct student support. ⁽¹²⁾ Understanding the relationship between the QES and academic satisfaction is crucial for nursing programs striving to improve student academic achievement.

Significance of the study

Higher educational institutions in Egyptian have also shown a dependence on negative feedback even though Egypt has some of the most esteemed universities in the Middle East and Africa. However, the Ministry of Higher Education in Egypt has noted a decline in the quality of training provided by these institutions. This decline is primarily due to three main issues; inadequate educational resources, curricula, and academic freedom. Recent data highlights a positive increase in the percent of nursing graduates, with a percentage of the overall number of nursing universities graduates reaching 7439 in 2021, compared to 6591 graduates in 2020, reflecting a raise to 12%. As well as, the percent of graduates from technical nursing institute increased to 6738 in 2021 from 5151 graduates in 2020, signifying a raise to 30.8%. ⁽¹³⁾ Therefore,

this study aims to assess the quality of educational service and its relation to academic satisfaction as perceived by nursing students at Saft Alhoria Technical Health Institute.

Aims of the Study: Assess the quality of educational service and its relation to academic satisfaction as perceived by nursing students at Saft Alhoria Technical Health Institute.

Research question:

1. What is the level of quality educational service perceived by nursing students?
2. What is the level of academic satisfaction as perceived by nursing students?
3. What is the relationship between the quality of educational service and academic satisfaction as perceived by nursing students?

Materials and Method

Research design: A descriptive correlational research design was used to conduct this study.

Setting: This study was conducted at the Saft Alhoria Technical Health Institute, El-Beheira Governorate, and the Ministry of Health and Population (MOHP). It was established in 2022, includes two years of study, the graduate nursing student will have a technical diploma in nursing.

Subjects: It included all nursing students in the second year 530 of the academic year (2022-2023) who were enrolled during the time of data collection and accepted to participate in the study.

Tools: The study used two tools for data collection:

Tool I: Service Quality (SERVOQUAL) Sheet.

It was adapted from Kwadzo *et al.*, (2018)⁽¹⁴⁾. It consisted of five dimensions with 34 items to assess the level of educational service quality as perceived by nursing students. Which is divided as the following: tangible (9 items), responsiveness (6 items), reliability (5 items), and assurance (8 items), and empathy (6 items). Responses were valued by using a 5-point Likert scale, ranged from (1) "strongly disagree" to (5) "strongly agree". 75% or more indicate higher level of educational service quality as perceived by nursing students.

Tool II: Nursing Students Academic Satisfaction Questionnaire.

A structured self-administrated questionnaire was developed by the researcher after revising the appropriate literature from Martha-Martha *et al.*,⁽¹⁵⁾ Elseesy *et al.*, (2018),⁽¹⁶⁾ Kwadzo *et al.*, (2018)⁽¹⁴⁾ and Chen and Lo (2012)⁽¹⁷⁾. It involved 32 items to assess the level of academic satisfaction as perceived by nursing students, which is divided into four main domains as follows; curriculum and teaching (12 items), clinical training (6 items), institute facilities (8 items), and professional social interaction (6 items). Responses were valued by using a three-point Likert scale ranging from (1-3) as; (3) always, (2) sometimes, and (1) never. 75% or more indicate high satisfaction level.

Besides, a demographic characteristics sheet of nursing students was created by the researcher. It included items related to age, gender, marital status, and reason for joining the technical health institution of nursing.

Methods

- Formal permission was issued from Dean of the Faculty of Nursing, Damanhour University, to the main responsible authorities of the study settings, Saft Alhoria Technical Health Institute, after clarification of the purpose of the study.
- The two tools were translated into Arabic, the study tools assessed and ascertained for its content validity by five Experts in the field of nursing at the Faculty of Nursing Damanhour University. Three Professors specializing in Nursing Administration and two Assistant Professors from Nursing Education.
- A pilot study carried out to test the sequence of items, clarity and feasibility of the tool and to recognize barriers and challenges that may be faced during data collection. It was done on 10% of total sample=53 nursing students. This sample subsequently eliminated from the final study sample so; the number of the final study sample equals 477 nursing students.
- Reliability of tools was assessed using Cronbach's alpha test to measure internal consistency for the tools and indicated a value of 0.94 for the service quality sheet and 0.91 for the nursing student's academic satisfaction questionnaire.

Ethical Considerations

- Ethical approval was obtained from the scientific research ethical committee of the Faculty of Nursing – Damanhour University, prior to starting of the study.
- Written consent was taken from the study subjects after explain the aim of the study.
- Privacy of the study were assured during the study.
- All subjects have the right to decline to participate or withdraw from the study at any stage.
- Anonymity was maintained by using nurses' student code number instead of their names.
- Data confidentiality was maintained during conduct of the study.

Statistical analysis

- The collected data were organized, tabulated, and statistically analyzed using the statistical package for social science (SPSS) version 26 for Windows, operated on an IBM-compatible computer.

Results:

Table 1 illustrates that the majority (83.4%) of the studied nursing students fall within the age bracket of 20 years old, demonstrating a mean age of 20.01 ± 0.38 years. As far as their gender and marital status the majority (94.1% & 78.4%) of them were females and unmarried, respectively. As regards the reason for joining the technical health institution of nursing, more than half (55.3%) of studied nursing students expressed a self-desire to join the profession. Additionally, the highest percentage (62.1%) of the studied nursing students demonstrated a profound respect for the nursing profession.

Table (1): Distribution of the studied nursing students according to their demographic characteristics (n=477).

Demographic Characteristics		N.	%
Age (years)	19-	69	14.5
	20-	398	83.4
	≥21	10	2.1
	Min- Max 19-21 M±SD 20.01±0.38 years		
Gender	Male	28	5.9
	Female	449	94.1
Marital status	Married	103	21.6
	Unmarried	374	78.4
Reason for joining the technical health institution of nursing.	Self-desire	264	55.3
	Desire of parents	173	36.3
	A total score of the school	40	8.4
If self-desire, the reason is (n=264)	Respect the profession	164	62.1
	Help parents financially	43	16.3
	Working abroad	57	21.6

Table 2 interprets that the total mean score for all dimensions of quality educational service as perceived by nursing students was 126.63±16.84. The first ranking with the highest mean score of 20.18±3.01 with a mean percent 80.7% was related to the reliability dimension. While the last ranking with the lowest mean score of 28.88±4.84 with a mean percent of 64.2% was related to impaired tangibles dimension for the studied nursing students.

Table (2): Distribution of the studied nursing students according to their ranking and mean scores of quality educational service (n=477).

Dimensions of Quality Educational Service	Maximum score	Min-Max	Mean ± SD	Mean %	Ranking
Tangibles	45	12-42	28.88±4.84	64.2	5
Responsiveness	30	6-30	23.45±3.66	78.2	2
Reliability	25	8-25	20.18±3.01	80.7	1
Empathy	30	6-30	23.07±3.91	76.9	4
Assurance	40	8-40	31.05±4.59	77.6	3
Total	170	64-166	126.63±16.84		

Table 3 reveals that the total mean scores for academic satisfaction domains as reported by nursing students was 84.89±9.33. The first ranking with the highest mean score of 16.64±2.09 with a mean percent of 92.4% was related to the professional social interaction domain. While the last ranking with the lowest

mean score 20.20±3.06 with a mean percent of 84.2% was related to the Institute facilities domain for academic satisfaction as reported by nursing students.

Table (3): Distribution of the studied nursing students according to their ranking and mean scores of academic satisfaction domains (n=477).

Academic satisfaction domains	Maximum score	Min-Max	Mean ± SD	Mean %	Ranking
Curriculum and teaching	36	16-36	31.71±3.73	88.1	3
Clinical training	18	6-18	16.34±2.09	90.8	2
Institute facilities	24	8-24	20.20±3.06	84.2	4
Professional social interaction	18	6-18	16.64±2.09	92.4	1
Total	96	44-96	84.89±9.33		

Table 4 illustrates that there was a positive, highly statistically significant correlation between total levels of quality educational service dimensions and academic satisfaction domains as perceived by studied nursing students (p<0.001).

Table (4): Correlation matrix between total levels of quality educational service dimensions and academic satisfaction domains as perceived by studied nursing students (n=477).

Quality educational service dimensions	Academic satisfaction domains as perceived by studied nursing students					
		Curriculum and teaching	Clinical training	Institute facilities	Professional social interaction	Total academic satisfaction
Tangibles	r	0.511	0.400	0.652	0.381	0.455
	P value	0.000**	0.000**	0.000**	0.000**	0.000**
Responsiveness	r	0.561	0.514	0.647	0.495	0.535
	P value	0.000**	0.000**	0.000**	0.000**	0.000**
Reliability	r	0.701	0.584	0.865	0.564	0.641
	P value	0.000**	0.000**	0.000**	0.000**	0.000**
Empathy	r	0.666	0.557	0.778	0.530	0.628
	P value	0.000**	0.000**	0.000**	0.000**	0.000**

Assurance	r	0.613	0.529	0.739	0.516	0.569
	P value	0.000**	0.000**	0.000**	0.000**	0.000**
Total quality educational service	r	0.499	0.485	0.549	0.477	0.489
	P value	0.000**	0.000**	0.000**	0.000**	0.000**

** Highly statistical significance (p<0.001) **. (Correlation is significant at the 0.01 level (2-tailed).
r = strong

Table 5 It is evident that there was a highly statistically significant positive correlation between total quality educational service and total academic satisfaction as perceived by studied nursing students (p<0.001).

Table (5) **Correlation between total perceived quality educational service and total academic satisfaction among studied nursing students (n=477).**

Variables	Total academic satisfaction	
	r	P value
Total quality educational service	0.579	0.000**

** Highly statistical significance (p<0.001)

Discussion:

The findings of the present study demonstrated that the majority of the studied nursing students were around the age bracket of 20 years old. In the terms of gender and marital status the majority of them were females and unmarried. As regards the reason for joining the technical health institution of nursing, more than half of the studied nursing students expressed a self-desire to join the profession. Moreover, the highest percentage of the studied nursing students demonstrated a profound respect for the nursing profession.

From the investigator's point of view, regarding age, this might be due to the normal sequence for their study years and female students have different gender characteristics and may have different opinions, and perceptions, especially in educational issues. As regards the reason for joining the technical health institution of nursing is seen as a caring, respected career with opportunities for personal fulfillment, and nursing students feel a genuine passion for helping others. Furthermore, Technical Health Institutions might have a strong reputation for attracting students by providing job security and stability.

Regarding quality educational service as perceived by the studied nursing students. The findings of the present study proved that less than half of the studied nursing students had high and moderate

levels of perceived educational service quality. While, the lowest percentage of studied nursing students reported a low perception level of the educational service quality.

This result was parallel to **Qin et al.**, (2022)⁽¹⁸⁾ at Wuhan University, who stated that a moderate level of perception of educational service quality. Also, **Aboubakr and bayoumy** (2022)⁽¹⁹⁾ Taibah University Medical Sciences showed that the perception of education service quality was relatively moderate. Also, **Bosu et al.**, (2018)⁽²⁰⁾ indicated that students perceived the level of service quality, and their level of satisfaction was moderate.

Regarding ranking and mean scores of quality educational service dimensions among nursing students. The finding of the current study clarifies that the highest mean score was related to the reliability dimension. While the lowest mean score was regarding the tangibles dimension as perceived by studied nursing students. This result might be due to the institution's consistent delivery of education, fostering trust among students. This focus on education rather than infrastructure upgrades may lead to higher ratings for reliability and lower ratings for tangibles.

This result was consistent with **Bui et al.**, (2023)⁽²¹⁾ in Vietnam who stated reliability was the highest-scoring dimension. Similarly, **ElSeesy et al.**, (2018)⁽¹⁶⁾ at Alexandria University in Egypt showed perceptions of educational service quality were relatively high and found reliability to be the highest scoring dimension. Also, **Bui et al.**, (2023)⁽²¹⁾ in Vietnam who stated tangibles was the lowest-scoring dimension. Furthermore, this result was parallel to **Magasi et al.**, (2022)⁽²²⁾ in Tanzania higher education who reported that about half of students satisfaction with tangibles.

Academic satisfaction as perceived by the studied nursing students. The finding of the current study revealed that the majority of the studied nursing students reported a high level of satisfaction with their academic experiences. In contrast, only a small percentage of them reported moderate and low perceived levels of academic satisfaction, respectively. At the same time, the majority of the studied nursing students reported a high perceived level of professional social interaction domains of academic satisfaction. While a small percentage of them reported a low perceived level of institution facilities' domain of academic satisfaction.

This result may be related to the use of unfolding case studies in teaching and learning, which improved students' satisfaction and self-confidence in learning, and competent and supportive institutions can significantly contribute to a positive learning environment. Moreover, Support services such as counseling and academic advising may be available to help students. Furthermore, clear communication channels between institutions and students, as well as constructive feedback on academic performance, can contribute to a positive experience.

This result was parallel to **Tomas and Muronga** (2022)⁽²³⁾ in Namibia who reported that the majority of the respondents were generally satisfied with the nursing program. Also, **Ahmed et al.**, (2021)⁽²⁴⁾ state that the majority of studied nursing students had high satisfaction levels. As well as **El Seesy et al.**, (2021)⁽²⁵⁾ found most participants were satisfied with the program design and delivery.

Regarding ranking and mean scores of academic satisfaction domains as reported by nursing students. The finding of the present study confirmed that the highest mean score was related to the professional social interaction domain. While the lowest mean score was related to institute facilities domain for academic satisfaction as reported by nursing students.

This result might be due to strong relationships and interactions with institutions, peers, and healthcare professionals this fosters a sense of community and belonging, reducing stress and making learning more engaging these interactions are vital for their learning experience and professional development. Effective communication channels for students conversely, the low mean score in the institute facilities domain indicates dissatisfaction with the facilities provided by the nursing institute, which could encompass various issues such as inadequate infrastructure, insufficient resources, outdated technology, or poorly maintained facilities and budget.

This result was parallel to **Batista *et al.***, (2021) ⁽²⁶⁾ who indicated high academic satisfaction with the professional social interaction and curriculum and teaching with their nursing faculty. Similarly, **Narayanan and Sanda** (2020) ⁽²⁷⁾ in Bahrain at the College of Health Sciences stated that the majority of students were satisfied in the area of positive professional social interactions with their nursing faculty & felt trusted by their nursing faculty. The same level of satisfaction was obtained in the area “Nursing faculties were positive role models of professional nursing”. Also, **Chen & Lo** (2015) ⁽²⁸⁾ in the United States confirmed that the students rated their satisfaction with the nursing program as close to “satisfied” in areas of social interaction.

This result was in line with **Wijaya *et al.***, (2023) ⁽²⁹⁾ at Wiraraja University who demonstrated that educational facilities and education costs had a significant effect on student satisfaction. Educational facilities have the lowest statistical value. Additionally, **El Seesy *et al.***, (2021) ⁽²⁵⁾ at the Faculty of Nursing in Jeddah, Saudi Arabia found lowest satisfaction score was associated with the support and resources, lower levels of satisfaction were noted regarding academic support and resources provided by the faculty to the student,

Regarding correlation between study variables. The finding of the current study pointed out that there was a highly statistically significant positive association between total quality educational service and total academic satisfaction as perceived by studied nursing students. This may be related to many factors like qualified staff and maintaining open communication with students, engaging teaching methods, relevant curriculum, inclusive institutional culture, peer support, and career guidance. These elements combine to create a fulfilling educational environment for students, enhancing their overall satisfaction with their academic experience.

This result agreed with **Sart** (2024) ⁽³⁰⁾ who reported that the perception of service quality is significantly positively correlated with satisfaction. Also, **Hoque *et al.***, (2023) ⁽¹⁾ stated Service quality is found to influence student satisfaction positively. As well as **Zygiaris *et al.***, (2022) ⁽³¹⁾ presented that there is a significant association between service quality and customer satisfaction. Furthermore, **Lee and Seong** (2020) ⁽³²⁾ presented that Service quality; encompassing tangibles, responsiveness, reliability, assurance, and empathy has a positively influence satisfaction level. As well as **Maknun** (2016) ⁽³³⁾ confirms that there is a

positive relation between dimension of service quality and students' satisfaction.

Conclusion:

The results of the current study demonstrated that less than half of studied nursing students had high and moderate levels of perceived educational service quality. Additionally, the majority of the studied nursing students reported a high perceived level of academic satisfaction. Moreover, there was a strong statistically significant positive association between total quality education service and total academic satisfaction among nursing students.

Recommendations:

In the light of the findings of the present study, the following recommendations are proposed:

A. For Institutional Administration:

1. Enhance staff member's capabilities through continuous training on supervision, communication, and evaluation.
2. Provide ongoing professional development for staff on teaching, learning, and student services to enhance their ability to support students with diverse needs.
3. Maintain infrastructural facilities for a positive impact on service quality.
4. Implement regular student surveys to assess satisfaction with the quality of educational services.

B. For Institution Staff:

1. Foster a culture of respect in interactions between the lecturers and administrative staff with students.
2. Encouraging open communication and actively listening to students' concerns creates a positive and supportive learning environment.
3. Empower students to express their viewpoints and contribute to the evaluation of different clinical rotations.

C. For Nursing Students:

1. Seek guidance from the skilled administrative team for effective support.
2. Leverage the professionalism of the lecturers for a rewarding educational experience.

For Further Studies:

1. Reusing of the research on a larger probability sample at different nursing colleges and universities to achieve generalizable results..
2. Study on assessing the clinical learning environment in nursing education for improving student motivation and self-esteem.
3. Relationship between quality of educational services and nursing students achievement and loyalty.

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