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Abstract

Background: Many factors influence the practice of nursing and the education of nursing students. The **aim** of this study is: to assess the factors affecting quality of education program for nursing students at Minia University. **Design:** A descriptive design was utilized for the purpose of current study. Setting: this study was carried out on the faculty of nursing Minia University. The **Sample** of student that participated in the study represented four academic levels (300students out of 964students) as follows: second level 91 out of 292, third level 79 out of 270, fourth level 70 out of 226 and internship student 60 out of 176. **Tool** of the study Data was collected through the utilization one tool that divided into two parts: part one: personal data and part two: Student self-assessment tool to assess the factors affecting quality of nursing education. **Results:** 2nd year students had high percentage regarding evaluation system, 3rd year student had high percentage regarding clinical infrastructure, while 4th year student had high percentage regarding incidental teaching and guidance and counseling and internship students had high percentage regarding change in curriculum and incidental teaching were present and very essential with statistical significance differences **Conclusion:** 2nd year students' determined 1st factor affecting quality of educational program was evaluation system, 2nd factor was qualified & experienced teachers, 3rd factor was physical facilities and 4th factor was change in curriculum. While, 3rd year students' determined 1st factor affecting quality of educational program was incidental teaching, 2nd factor was qualified & experienced teachers, 3rd factor was physical facilities and 4th factor was teaching methods. **Recommendations:** Apply different teaching methods and styles as peer teaching and develop national standard regarding requirement in nursing students as student aptitude, personality, intelligence, and ability to follow instructions
Keywords: Nursing students, Quality Factors, education

Introduction:

The quality of nursing education is one of the key elements of quality healthcare services. The health staff needs to growing, developing and be better distributed across settings of care to continue to meet the increasing and changing needs in community for access to high-quality healthcare services. Also, high-quality education and training in health service settings are necessary to prepare nursing students to enter the health workforce, enabling them to gain essential experience in the theory and practice of delivering quality services in advance of assuming direct responsibility for patient care (Willis commission on nursing education report, 2012).

Nurses have an important role in meeting the health care needs of a changing population. Therefore, it is necessary to invest in appropriate nurse education to meet these needs. Despite the rapid changes in nursing education, we still grapple with the same healthcare reform issues. The challenges for nursing are consistent globally and include a shortage of nurses, an ageing professional workforce and the financial constraints of funding nurse education. There was also concern that the principle of caring is no longer fully integrated into nursing curriculum and could be potentially overlooked in the future. (Jackson, Graham and Ross, 2017).

The challenge of education today is to offer school experiences that provide students with opportunities to develop the understandings, skills, and attitudes necessary to become lifelong learners, capable of identifying and solving problems and dealing with change. Moreover, students need to be able to communicate clearly, competently, and confidently from a broad knowledge base in order to make thoughtful and responsible decisions. Achieving these educational goals will provide students with the means to make connections between what they learn and how they live (Shinneh, 2015, RushSomit & Firth, 2015).

Many factors influence the practice of nursing and the education of nursing students. Historically, changes in society and the health care system influence nursing education curriculum. American Associations of College Boards of Nursing (AACN) (2012) discussed how changes in the complexity of the health care environment in today's society, along with scientific advances, and the changing needs of a diverse population influence nursing practice and health care. New technological discoveries and innovations effect information management and quality of nursing care. Additionally, the age, cultural, and lifestyle diversity of the population requires more critical thinking in order to apply nursing concepts to the care of those populations. This multiplicity of influences on the health care of individuals that requires nursing graduates from today's nursing education programs to be able to master complex information, coordinate a complex system of care, and use technology for providing care delivery.

Sass and Dama (2011) argued that in clinical nursing education, clinical learning environment, behaviors of the clinical educators and learning of appropriate clinical knowledge and skills have been found to influence nursing students' perception. According to Nahas and Yam (2001), many studies have shown stressors associated with going out into the clinical fields as fear of making mistakes, anxiety over possible criticisms from peers, being able to communicate with health personnel and patients, providing care for the seriously ill or terminal patients, attitudes of staff towards the nursing students.

Significance of the study

High-quality patient care is only feasible if nurses have received high -quality teaching during their course of study and their work years (American Associations of College Boards of Nursing, 2012). Nurses have a key role in

promoting health of the people they care for him. The competence of nurses is based on their education and knowledge and skills provided to patients (Fluit et al., 2010) Nursing development starts in a university environment and continues in a clinical setting, where they predominantly learn on the job (Gamil and Ali, 2012). Therefore, it became essential to assess possible factors influencing quality of nursing education to invest in appropriate nurse education

Aim of the study

The aim of the study is to assess the Factors Affecting Quality of Education Program for Students in Nursing Faculty

Subjects and Methods

Research Design

A descriptive design was utilized for the purpose of current study.

Setting

This study was conducted in the faculty of nursing Minia University

Subjects

The sample included in the study was (300students out of 964students) nursing students, distributions for the four academic levels were: second level n=91 out of 292, third level=79out of 270, fourth level n=70out of 226and internship student n=60out of 176.2017-2018

Inclusion Criteria:

The inclusion criteria for this study sample include: nursing student at faculty of nursing from second academic levels to internship students

Exclusion Criteria:

The Exclusion criteria for this study sample include: nursing student in faculty of nursing at first academic level.

Setting of the study

The present study was carried out in Faculty of Nursing Minia University. Faculty of Nursing was built in 1995 by presidential decree number (184) higher institute of nursing which followed the Faculty of Medicine then issued presidential decree number (200) of 2000 turned to Faculty of Nursing. Faculty of Nursing consisted of five laboratories (one for pediatric Nursing department- one for medical \surgical Nursing department- one for Maternity and Gynecology Nursing department- one for Community Health Nursing department- one for Computer Unit)

The duration of the study for the Bachelor of nursing science degree in nursing is four academic years followed by one mandatory internship year under supervision of the Faculty. The academic year consist of two semesters· each is fifteen weeks. The faculty of nursing accept nursing students that have the general secondary degree final certificate (scientific section) and graduates who had associated degree of nursing.

Tool of the study

Data was collected through the utilization of the following tool that divided into two parts:

Part I: Demographic data sheet:

It will be used to collect data about the Personal characteristics of the study participants. It included items related to age, sex, and academic level.

Part II

Student self-assessment questionnaire to assess the factors affecting quality of nursing education develop by (Bhushan Josh, 2013) and modified by the researcher to be suitable for use. This part including 73 items classified into 14 main items as following (potentiality of student (5 items), change in curriculum (7 items), qualified and experienced teacher (13 items), teaching methods (8 items), physical facilities (9 items), clinical infrastructure (4 items) , constructive supervision (3 items) , incidental teaching (5 items), teacher student ratio (4 items), new technology (4items), evaluation system (5 items),and institutional polices (6 items).

Scoring system

The students' response 3-point scale (-present and very essential (3), not present and very essential (2), - not required (1)). The students' score was considered satisfactory if have 165 degree or more and unsatisfactory if have less than 165 degree.

Procedure:

An official permission was obtained from the Dean of Faculty of Nursing & Vice-dean for education and Student Affairs and from Academic Departmental Heads of Faculty of Nursing. An oral agreement was taken from the students who participate in the study after explaining the aim of the study. Confidentiality of obtained data was maintained and ensure for every student before starting data collection. Arabic translation of the study tool was done. Data was collected the student at the beginning of academic year after permission of the nursing educators.

Second year student's data were collected while they are in clinical area in two days also data was collected from third academic year students when they are in clinical area in (Suzan Moubarak Hospital), data was collected from fourth academic year students after dividing them into group while they are in clinical area (Minia University Hospital) after finishing clinical hours. Finally, internship academic year data were collected in clinical area (Minia University Hospital) and (Suzan Moubarak Hospital)

The time consumed to fill the questionnaire was between 20 to 30 minutes. The researchers stayed with the students until the questionnaire was completed to ensure objectivity of the responses and to ensure that all items were answered. Sampling started at the beginning of October 2017 to the end of February 2018

Validity and Reliability

The tool was tested for content validity by a jury of five experts in the field of the study in Nursing Faculty at Minia University, in Nursing Faculty at Assiut University and necessary modifications was done. The tool was tested for internal consistency by using Cronbach's' alpha test was 0.759.

Ethical considerations:

A written initial approval was obtained from the Research Ethical Committee of the Faculty of Nursing, Minia University. An official permission was obtained to collect necessary data from the Dean of Faculty of Nursing & Vice-

dean for education and Student Affairs and from Academic Departmental Heads of Faculty of Nursing.

The Students were informed that their participation in this study is completely voluntary and there is no harm if they choose not to participate and no individual information is shared outside of the research. Written informed consent was obtained from each participating nursing student after explaining the nature and benefits of the study. Each assessment sheet was coded and student names not appeared on the sheets for the purpose of privacy and confidentiality.

Pilot study:

Pilot study was carried out on a sample of 30 nursing students selected randomly from different academic years to

check and ensure the clarity of Arabic questionnaire identify the obstacle and problems that may encountered during data collection and to estimate the time needed to complete the questionnaire items.

Statistical analysis:

Statistical analysis was done by using Statistical Package for the Social Science (SPSS 20.0). Quality control was done at the stages of coding and data entry. Data were presented by using descriptive statistics in the form of frequencies and percentage for qualitative variables, and mean & standard deviation (SD) for quantitative variable. Comparison between two variables was done using t-test and difference between more two variables used ANOVA test.

Results

Table (1): Percentage Distribution of nursing students according to their personal characteristics (n= 300)

personal characteristics	Nursing students (n= 300)	
	No.	%
Gender		
Male	142	47.3
Female	158	52.7
Age / years		
18	117	39.0
21- 23	183	61.0
Mean ± SD	21 ± 1.7 years	
Academic year		
2 nd	91	30.3
3 rd	79	26.3
4 th	70	23.4
Internship student	60	20.0

Table (1) shows that 52.7% of nursing students were females, 61.0% of them aged between 21 – 23 years and 30.3% of them were in the 2nd academic year.

Table (2): Mean scores of factors affecting quality of education program among nursing students and personal characteristics (n = 300).

personal characteristics	Factors of quality education	t	P – value
Gender			
Male	171.9 ± 7.9	1.053	.293
Female	172.9 ± 8.0		
Age / years			
18	170.2 ± 8.1	3.884	.0001**
21- 23	173.8 ± 7.7		
Academic year			
2 nd	168.9 ± 7.2	F 12.107	.0001**
3 rd	172.1 ± 9.1		
4 th	174.6 ± 6.6		
Internship students	175.8 7.1		

** P ≤ 0.001 (high significant) T-test: P – value based on paired sample t-test

Table (2): indicates that there were a highly statistical significance differences between total mean scores of factors the Factors Affecting Quality of Education Program for Students in Nursing Faculty and nursing student age and their academic years. and nursing student age and their academic years.

Table (3): Frequency distribution of nursing students' according their totality of factors affecting quality of education program among nursing students

Factors affecting quality of education	2 nd year			3 rd year			4 th year			Internship students			P – value
	PVE	NPE	NA	PVE	NPE	NA	PVE	NPE	NA	PVE	NPE	NA	
	%	%	%	%	%	%	%	%	%	%	%	%	
1. Potentiality of student	44.0	56.0	.0	43.0	57.0	.0	30.0	70.0	.0	35.0	65.0	.0	.234
2. Change in curriculum	59.3	40.7	.0	44.3	55.7	.0	52.9	47.1	.0	83.3	16.7	.0	.000**

Factors affecting quality of education	2 nd year			3 rd year			4 th year			Internship students			P – value
	PVE %	NPE %	NA %	PVE %	NPE %	NA %	PVE %	NPE %	NA %	PVE %	NPE %	NA %	
3. Qualified & Experienced teachers	68.1	31.9	.0	68.4	31.6	.0	67.1	32.9	.0	56.7	43.3	.0	.437
4. Teaching methods	59.3	40.7	.0	62.0	38.0	.0	54.3	45.7	.0	58.3	41.7	.0	.815
5. Physical facilities	62.6	37.4	.0	64.6	35.4	.0	57.1	42.9	.0	76.7	23.3	.0	.128
6. Clinical infrastructure	39.6	60.4	.0	55.7	44.3	.0	54.3	42.9	2.9	40.0	60.0	.0	.026**
7. Constructive supervision	37.4	62.6	.0	38.0	59.5	2.5	41.4	58.6	.0	53.3	46.7	.0	.128
8. Incidental teaching	31.9	68.1	.0	87.3	12.7	.0	90	10	.0	80	20	.0	.000**
9. Teacher student ratio	54.9	45.1	.0	40.5	59.5	.0	50.0	50.0	.0	45.0	55.0	.0	.276
10. New technology	46.2	53.8	.0	45.6	51.9	2.5	57.1	42.9	.0	41.7	58.3	.0	.166
11. Evaluation system	95.6	4.4	.0	43.0	57.0	.0	52.9	47.1	.0	43.3	56.7	.0	.000**
12. Guidance and Counseling	36.3	63.7	.0	51.9	48.1	.0	68.6	31.4	.0	56.7	43.3	.0	.001**
13. Opportunity of self-development	44.0	56.0	.0	40.5	58.2	1.3	38.6	61.4	.0	35.0	65.0	.0	.661
Total factors scores	63.7	36.3	.0	74.7	25.3	.0	90.0	10.0	.0	91.7	8.3	.0	.000**

Table (3): presents that 2nd year students there are high percentage regarding evaluation system, 3rd year student had high percentage regarding clinical infrastructure, while 4th year student had high percentage regarding incidental teaching and guidance and counseling and internship students had high percentage regarding change in curriculum and incidental teaching were present and very essential with statistical significance differences (P – value ≤ 0.000, .026, .000, .001 & .000 respectively).

Discussion

Students are the key assets of universities. The students’ performance plays an important role in producing best quality graduates who will become great leaders and manpower for the country thus responsible for the country’s economic and social development. Academic achievement is one of the major factors considered by employers in hiring workers especially for the fresh graduates. Thus, students have to put the greatest effort in their study to obtain good grades and to prepare themselves for future opportunities in their career at the same time to fulfill the employer’s demand. Continuous improvement of the quality of the teaching learning process through the analysis of the assessment tools and their results, traditional lectures were used to explain the process of nursing. (Conzalez-chorda & Macio-Soler, 2015) so the current study was assessed the factors affecting quality nursing education from nursing student's self-assessment

Regarding personal characteristics of studied nursing student more than half of them was female, aged between 21 – 23 years, and near to one third of them in second year in the Faculty of Nursing, this result due to the majority number of nursing student is female than male.

Nursing student aged between 21- 23 years and internship students had higher scores than other age and year’s student with a highly statistical significance difference that’s due to they had one month training courses before beginning internship year.

Regarding teacher student ratio more than half of the 2nd years nursing student and 4th years of nursing students mentioned that it was present and very essential factors affecting quality of educational program.

This result in the same line with Essays, (2013) who mentioned that student: staff ratios (SSRs) may seem to be a direct consequence of funding levels, institutions in practice spend funds on buildings, on administration, on ‘central services’, on marketing, on teachers undertaking research, and so on, to very varying extents, rather than spending it all on teaching time. Low SSRs offer the potential to arrange educational practices that are known to improve quality of educational outcomes. Also, Hosseini et al., (2017) assessed factors affecting the quality of clinical educational services

from the point of view of Operating room, Nursing and Midwifery Department Students in Isfahan reported that providing internship course at the beginning of internship to students is useful in development of educational goals as the base for clinical evaluation.

The current results suggest empirically that the use of new technology has a positive effect on academic performance of student nurses. Nearly to half of the fourth year’s student mentioned that new technology were present and very essential factors affecting quality of educational program

In the same line the study done by Dube & Mlotshwa (2018) described the perceptions of enrolled student nurses on factors influencing their academic performance in a private nursing school in KwaZulu-Natal, South Africa showed that phone calls, emails and electronic discussion boards classroom computer technological gadgets and internet services were reported to have a positive influence on the academic performance of 74% (n = 74), 80% (n = 80) and 70% (n = 70) of the respondents, respectively.

The current study of mean scores of guidance and counseling was higher among 4th year nursing students than others years students with statistically significance differences. This result in the same way with, Dale, Leland, & Dale (2013) explored bachelor students’ in nursing perceived to be important for having good learning experiences in clinical studies in medical and and surgical wards at the local public hospital the students wanted supervision and guidance as well as their need to take on challenges. Thus, having enough time for feedback carried out in a respectful, friendly, and supportive way may result in good learning experiences and growth for the students, even in problematic situations. Also, Hajihosseini et al., (2017) explored that teachers’ and postgraduate nursing students’ experience of the educational environment in Iran mentioned that guiding the students in research leads to a proper learning experience and prevents their confusion.

The current study presented that no statistical significance differences between different year’s students regarding opportunity of self-development. In the same line with the study done by Hirsch et al., (2015) who mentioned

that the social/professional interaction factor was the last factor affecting on the quality of education (3.28).

Conclusion

Highest common factors affecting quality of education program among 2nd year nursing students were evaluation system, qualified & experienced teachers, physical facilities, and change in curriculum respectively. While, among 3rd year students' were incidental teaching, qualified & experienced teachers, physical facilities and teaching methods respectively. Regarding 4th year students' were incidental teaching, guidance and counseling, and qualified & experienced teachers respectively. In additional, among internship students' were incidental teaching, change in curriculum, and physical facilities respectively.

Recommendations

Based on the study findings, the following recommendations are proposed:

- Developing of educational plan to increase clinical infrastructure in the faculty to be appropriate with increasing nursing student number.
- Applying different teaching methods and styles as peer teaching.
- Updates student curriculum to be competency-based education.
- Developing national standard regarding requirement in nursing students as student aptitude, personality, intelligence, and ability to follow instructions.
- Updates student curriculum every 2 years as minimum or 5 years as maximum duration and reflect philosophy and graduate competencies.
- Applying critical thinking, correlation between theory and clinical practice in the educational program.
- Applying safety system to prevent and protect student and client during training.

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