

Perception of Teachers and Students Regarding Educational Program in Technical Institutes of Nursing

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Abstract

Nursing education draws knowledge from disciplines. The science, humanities, and even the arts are considered important components of nursing curricula. Nursing education currently is witnessing an emphasis on the development of critical thinking, a call for greater creating and innovation in teaching. **Aim:** The aim of this study was to assess the perception of teachers and students regarding educational program in Technical Institutes of Nursing. Descriptive cross-sectional study was carried out in the Technical Institutes of Nursing affiliated to the Ministry of Health in Port said, Ismailia, and Suez governorates. **Subjects and Methods:** The subjects consisted of 50 nursing teachers and 402 nursing students in in five grades. A self-administered questionnaire for teachers and students, and an observation checklist for institution environment were used for data collection. **Results:** The study revealed that school vision and mission were not clear, with majority of students agreeing upon the recall and understanding levels of the objectives. For nursing subjects, the majority of students and all teachers agreed upon the recall, understanding, and application levels of the objectives. As for affective and psychomotor objectives, there was a majority students' agreement upon all objectives, but for teachers it was very low. Both students and teachers had low agreements upon the sufficiency of practical hours. Field visits were the lowest teaching methods in both groups. The majority of students and teachers perceived student evaluation methods as adequate. Opinions regarding institution environment and services were very low, and by observation, the most deficient facilities were microphones and sound systems, labs, library, and cafeteria. **Conclusion:** the cognitive objectives are mostly at the recall level, and teachers disagree upon affective and psychomotor objectives. Skills' training time and field visits are insufficient. The use of teaching media and methods are low, and institutions' environment and services are inadequate. It is **recommended** to forward these findings to nursing institutes and schools to review their curricula, teaching methods and media, as well as field visits and skills' training. The school environment needs serious changes to improve the teaching places and related resources.

Keywords: Nursing education, perception, curriculum, evaluation.

1. Introduction

Nursing education is undergoing a curriculum revolution that began in the 1980's and continues today. Nurse educators continue to struggle to refocus nursing curricula to help students learn caring philosophy, knowledge, and caring behaviors. Caring was a separate theme for the curriculum revolution and was viewed as central to the nursing process. The literature provides evidence of innovative approaches adopted in several specialties curricula with inclusion of outcome-based education, community-oriented education, problem-based learning, and initiatives to resolve the shortage of skilled educators for medical and nursing schools. The health care systems require to be updated through needs-based comprehensive curriculum design and innovative teaching methods (**Nair and Webster, 2010**).

The debate surrounding the need for reform in nursing education has been heard for well over ma decade. Recently, deficiencies in the quality of patient care, as well as patient safety issues, have led to calls for change in health professions education by nursing organizations. The rationale and scope of any proposed curricular revision or changes in teaching practices must be firmly grounded in a comprehensive review of the literature and based on current research findings (**Forbes and Hickey, 2009**).

The profession of nursing is both an art and a science. Although nursing practice intertwines the art and science of nursing, nursing education focuses on the scientific behavioral outcomes of learning content knowledge and nursing skills. The behaviorist scientific curricula of most nursing schools are not congruent with nursing practice. Therefore, the outcomes of nursing education do not pedagogically match the objectives of nursing practice. Nursing educators do not know how nursing students learn to intertwine art and science, the being of nursing (**Idczak, 2009**).

The National League of Nursing (NLN), an organization strongly supportive current nursing educational practices and trends issued a position statement recently: "Without adequate research to underlie changes that need to be made in the curriculum design, teaching/learning strategies and other components of the nursing educational experience, faculty may implement approaches that fail to adequately prepare graduates for practice in the fast paced, ever changing, unpredictable, ambiguous healthcare world (**NLN, 2008**).

Strategic planning is a very important business activity. It is also important in the public sector areas such as

education. Strategic planning is an organization's process of defining its strategy, or direction, and making decisions on allocating its resources to pursue this strategy, including its capital and people. In many organizations, this is viewed as a process for determining where an organization is going over the next year or more, typically 3 to 5 years, although some extend their vision to 20 years. In order to determine where it is going, the organization needs to know exactly where it stands, then determine where it wants to go and how it will get there. The resulting document is called the "strategic plan." Strategy narrowly defined, means "the art of the general". It is a combination of the ends (goals) for which the firm is striving and the means (policies) by which it is seeking to get there (*Gordon, 2010*).

In 2007, 20 secondary schools of nursing (MOH) have been converted to the professional institute. In 2008, professional institutes cover the entire provinces (Cairo, Alexandria, Ismailia, Port said Qaliubiya, Kafr El-Sheikh, Suez, Giza, Fayoum, Beni Suef, Minya, Sohag, Luxor). This program is five years in duration; the graduates of these programs hope the opportunity for admission to the nursing college at grade two if they have the average grade point (*MOH, 2009*).

2. Significance of the study

The total number of nursing technical institutes in Egypt 13; they have 276 schools, 251 girls and 25 boys according to MOH statistics. Its aim is preparing qualified Student for nursing services of high level of effectiveness and qualities (*MOH- 2007*). Meanwhile, nursing education programs are faced with the challenge of finding innovative ways to accommodate the growing interest in nursing programs. Educational programs in nursing are lacking the resources to adequately educate the numbers of students applying for admission (*Kommalage, and Imbulgoda, 2010*).

This study seeks to identify predictors of academic success in two-year public technical nursing schools. Meanwhile, this study synthesizes the recent nursing teachers' and students' perceptions related to curriculum and innovation in nursing education of secondary technical nursing institutes in Egypt. Synthesis of the recent literature in the field will assist faculty who are beginning curriculum evaluation and revision process in their own schools.

Mubarak-Kol initiative's Technical Institute of Nursing project was born from Rotary club effort and donations in May 1996, and developed with the German Economic assistance to provide training for nurses in Egypt. The technical institute of nursing runs a post diploma. Training course is a three years degree program, similar to the higher institute of nursing degree. The main difference between its courses and government's programs lies in the teaching method and expected standards (*MOHP, 1999*). The admission requirement general secondary certificated or technical nursing school diploma with a grade point average of not less than 75%. The main objective of the program is to prepare technical nurses with high level of scientific knowledge and practice (*Proctor and Shehab, 2008*).

3. AIM OF THE STUDY

This study aim is to assess the perception of nursing teachers and students regarding educational program in Technical Institutes of Nursing through:

1. Identifying the nursing teachers' and students' perceptions about educational program (Mission, Vision, ILO's, Curriculum content, practices and services),
2. Identifying the theoretical and practical methods of teaching,
3. Identifying environmental facilities inside and outside the Technical Institutes of Nursing,
4. Identifying the factors which influence teaching processes.

4. Research Questions

1. What are the factors that influence the teaching process?

5. SUBJECTS AND METHODS

The aim of the current study was to assess the perception of nursing teachers and students regarding the educational program in the Technical Institute of Nursing. The methodology followed in carrying out the study is presented under four designs, namely technical, operational, administrative, and statistical designs.

5.1. TECHNICAL DESIGN

The technical design includes the research design, setting, subjects and sample, and data collection tools.

5.1.1 Research design

A descriptive design Or Descriptive cross sectional was utilized in this study.

5.1.2 Setting

The study was carried out in the Technical Institutes of Nursing affiliated to the (MOH) in Port said, Ismailia ,

and Suez governorates.

5.1.3 Population and Sampling

The study included two different populations, namely nursing institute teachers, and nursing students in these institutes. Total number of 452.

- Nursing teachers: this group included teachers in the study setting with the inclusion criterion of working for at least three years in the designated setting. Their total number was 50.
- Nursing students: this group consisted of students enrolled in the Technical Institutes of Nursing during the academic year of the time of the study in five grades of the institute. Their total number was 402.

5.1.4 Sampling and sample size

The study was carried out using a multi-stage stratified sampling technique. In the first stage, three governorates were selected, namely in Port said, Ismailia , and Suez governorates. In the second stage, seven institutes of nursing affiliated to the were selected from these governorates as follows:

- Port said governorate: three institutes: Port said General, al- Mabarah , and Al-Nasr institutes.
- Ismailia governorate: two institutes: Ismailia General and Health Insurance institutes.
- Suez governorate: two Institutes: Suez general and Health Insurance institutes.

Then students of the seven institutes covering all academic school grades. The sample size for the teachers was comprehensive. For students, the sample size was large enough to detect a positive perception of 50% or more among students, with 95% confidence level and 10% standard error, and 5% dropout rate. This was calculated based on the sample size equation for a single proportion with finite population correction (*Kish and Leslie, 1965*).

5.1.5 Tools for data collection

Two different tools were used for data collection. These were a self-administered questionnaire, and an observational checklist.

- **First tool: Self-administered questionnaire:** This questionnaire was used to assess the perception of nursing teachers and students regarding the educational program of the institute. The tool was designed by the researcher based on thorough review of related literature. It was reviewed by experts in nursing and in education for face and content validation. The tool consisted of seven parts:
 - *Part I:* socio-demographic characteristics:
 - For students: age, parents 'education and job, school year, institute, and governorate, and perception of nursing career and future.
 - For teachers : age, qualification, experience years, attendance of training courses, academic grade, institute, and governorate, etc.
 - *Part II:* Perception about Institute mission and vision, cognitive, affective, and psychomotor objectives of different subjects in various academic years, and skills training, with related problems.
 - *Part III:* Opinions about the different methods of teaching, e.g. lectures, discussion, demonstrating and media used. *Part IV:* Opinions about various students' assessment methods, written and practical.
 - *Part V:* Opinions about institute environment and facilities, e.g. class, library, lab, as well as safety measures, in addition to their opinions regarding the services provided to them by the institute.
 - *Part VI:* This was for students only and it assessed their opinions about their tutors.
 - *Part VII:* This part was for teachers only, and it was intended to assess their opinions about the factors affecting their perception of the training program.
- **Second tool: Observational checklist (appendix II):** It was used to assess the institutes' environment. It covered assessment of buildings, lecture rooms, library, lab, cafeteria, as well as the safety measures.

5.2 OPERATIONAL DESIGN

The operational design involves description of the ethical considerations, pilot study and fieldwork

5.2.1 Ethical considerations

An official permission was obtained from pertinent authorities. Before asking any subject, whether teacher or student for participation in the study, the aim and procedures of the study were explained, with emphasis on the confidentiality of any obtained information.. An informed verbal consent was secured from each subject after explanation of the rights to refuse participation and to withdraw at any time without giving reason, and without consequences.

5.2.2 Pilot study

A pilot study was conducted (10%) in a Nursing school and a Technical Institute of Nursing at Port said . The designed tools were tested to assess their clarity and applicability. The pilot also served to estimate the time required for filling in the sheets.

5.2.3 Fieldwork

Upon obtaining official permissions. Then, met with the teachers individually, explained the aim, and took their verbal consent to participate. The questionnaire was handed to them, with explanations about how to fill it. The researcher was present for any needed clarifications. The process took about 35 minutes for each teacher.

Then, the researcher arranged with the teachers to meet the students in their classrooms. explaining its aim and objectives, and clarifying to them the process of filling the questionnaire. Then, the forms were filled by the students. The time to fill the questionnaire was 35 to 45 minutes. The researcher was there all the time to answer any questions.

After completion of the teachers and students' forms, the researcher started the process of observation. Using the observational checklist, the researcher assessed the institute environment. The procedure took about two to three hours to be completed for each institute.

The fieldwork for this study lasted for four months. It started in April 2010 and ended in July 2010.

5.3. ADMINISTRATIVE DESIGN

An official permission was obtained from the administration of Technical Institutes of Nursing at the Ministry of Health explaining the aim and procedures of the study.

5.3.1 Limitations of study

The researcher was faced with the limitation that some students were worried about expressing their opinions, especially in the part of evaluating the teachers. They were reassured about total confidentiality of the information, and the sheets were anonymous.

5.4. STATISTIC AL DESIGN

Data entry and statistical analysis were done using SPSS 14.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations for quantitative variables. Categorical variables were compared using chi-square test. Whenever the expected values in one or more of the cells in larger than 2x2 cross-tables, no test could be applied whenever the expected value in 10% or more of the cells was less than 5. Statistical significance was considered at p-value <0.05.

6. RESULTS:

Table 1. Distribution of students and teachers in the study sample according to their socio-demographic characteristics .

Socio-demographic characteristics	Frequency	%
Students socio-demographic characteristics (n=402)		
Age (years):		
<17	59	14.7
17-	210	52.2
19+	133	33.1
Father education:		
Illiterate	192	47.8
Basic/intermediate	185	46.0
University	25	6.2
Mother education:		
Illiterate	257	63.9
Basic/intermediate	131	32.6
University	14	3.5
Father job:		
Unemployed	29	7.2
Manual	265	65.9
Clerical	81	20.1
Retired	27	6.7
Mother job:		
Housewives	270	67.2
Technical	90	22.4
Clerical	31	7.7
Retired	11	2.7

Table 1 shows that more than one half of the students had their age between 17 and 18 years (52.2%); 47.8% and 63.9% of them had illiterate fathers and mothers, respectively. Also, about two-thirds of them had fathers with manual jobs (65.9%), and housewife mothers (67.2%).and demonstrates, about two-thirds of teachers' were 40 years or older (66.0%); 48.0% of them had nursing school diploma, and only 2 (4.0%) had a master degree.

Their experience was mostly seven years or longer (82.0%). All teachers had attended seminars and conferences, and almost all of them (98.0%) had fellowships for training; 52.0% of them reported that the choice of the subject to be taught was by their own will.

Table 2. Distribution of students according to their opinions about school entry and nursing career (n=402)

Items	Frequency	Percent
School entry:		
As per grade	135	33.6
Personal will	137	34.1
Family will	52	12.9
Better job opportunity	82	20.4
Think nursing study would help in:		
Providing care to patients and injured	31	7.7
Preserve community health only	18	4.5
Active participation in treatment and health promotion	353	87.8
Think nursing study would qualify to:		
Admission to Faculty of nursing	200	49.8
Work in hospitals and centers	179	44.5
Have a scientific certificate only	24	6.0

Table 2 shows, only 34.1% of the students chose school by personal will, and 20.4% for better job opportunity. The majority (87.8%) were thinking that nursing study would help them to actively participate in treatment and health promotion. Meanwhile, 49.8% thought that nursing study would qualify them to admission to the faculty of nursing.

Table 3. Distribution of students and teachers in the study sample according to their perception of school vision , mission and agreeing opinions about total objectives

Items	Group			
	Students (n=402)		Teachers (n=50)	
	No.	%	No.	%
Vision clarity:				
Low/Unsuitable	100	24.9	0	0.0
Average	122	30.3	17	34.0
High	180	44.8	33	66.0
Mission clarity:				
Low/Unsuitable	167	41.6	1	2.0
Average	109	27.1	20	40.0
High	126	31.3	29	58.0
Cognitive objectives:				
Recall	387	96.3	5	10.0
Understand	377	93.8	5	10.0
Apply	353	87.8	5	10.0
Analyze	93	23.1	3	6.0
Synthesize	48	11.9	0	0.0
Create	59	14.7	0	0.0
Total	77	19.2	0	0.0
Affective objectives	366	91.0	5	10.0
Relevant psychomotor	398	99.0	1	2.0

Table 3 indicates that only 44.8% of the students considered vision clarity as high, and 31.3% considered mission clarity as high. The corresponding figures for teachers were 66.0% and 58.0%, respectively.

Table 4. Agreeing opinions about total objectives among students and teachers

Group			
Students (n=402)		Teachers (n=50)	
No.	%	No.	%
387	96.3	5	10.0
377	93.8	5	10.0
353	87.8	5	10.0
93	23.1	3	6.0
48	11.9	0	0.0
59	14.7	0	0.0
77	19.2	0	0.0
366	91.0	5	10.0
398	99.0	1	2.0

Table 4 Concerning students and teachers' total agreeing opinions about various objectives of nursing subjects, Table demonstrates a majority of agreeing opinions among students upon the recall, understanding, and application levels of the cognitive objectives, and also upon affective and psychomotor objectives. On the other hand, teachers' agreeing opinions were very low, especially for the total cognitive, which as zero percent.

Table 5. Students' agreeing opinions about total cognitive, affective, and psychomotor objectives of all subjects in different years

Objectives	Academic year					X ² Test	p-value
	1 (n=74)	2 (n=51)	3 (n=59)	4 (n=112)	5 (n=106)		
	%	%	%	%	%		
Cognitive:							
Basic	20.3	2.0	22.0	1.8	18.9	29.46	<0.001*
Medical			10.2	2.7	3.8	--	--
Nursing	35.1	0.0	25.4	15.2	17.9	27.03	<0.001*
Practical	0.0	0.0	0.0	0.0	0.0	0.00	1.00
Affective:							
Basic	78.4	66.7	54.2	66.1	27.4	57.47	<0.001*
Medical	0.0	80.4	78.0	21.4	40.6	137.17	<0.001*
Nursing	100.0	100.0	94.9	87.5	82.1	25.56	<0.001*
Psychomotor:							
Basic	85.1	86.3	84.7	82.1	70.8	9.41	0.052
Medical	0.0	94.1	93.2	86.6	70.8	210.08	<0.001*
Nursing	98.6	100.0	98.3	100.0	98.1	2.88	0.58

(*) Statistically significant at $p < 0.05$

Table 5 shows statistically significant differences for cognitive objectives in basic ($p < 0.001$) and nursing ($p < 0.001$) subjects. Both were lowest in the second year. As for affective objectives, there were statistically significant differences in all three subjects ($p < 0.001$). Basic was lowest in the fifth year, while medical was lowest in first year. Meanwhile, nursing subjects had 100.0% agreement in the first and second years. Regarding psychomotor objectives, the only difference of statistical significance was related medical subjects, which was lowest in the first year ($p < 0.001$).

Table 6. Opinions about teaching methods among students and teachers

Items	Group			
	Students (n=402)		Teachers (n=50)	
	No.	%	No.	%
Cognitive:				
Lecture	360	89.6	50	100.0
Lecture with media	183	45.5	24	48.0
Group discussion	337	83.8	48	96.0
Case study	235	58.5	42	84.0
Role playing	191	47.5	24	48.0
Field visits	147	36.6	24	48.0
Seminars	207	51.5	28	56.0
Brain-storming	331	82.3	48	96.0
Practical:				
Practical application	297	90.5	44	91.7
Repeat steps	290	88.4	42	87.5
Repeat experiment	273	83.2	41	85.4
Media:				
Overhead	65	16.2	6	12.0
Video	84	20.9	14	28.0
Audio	60	14.9	5	10.0
Books	287	71.4	46	92.0

Table 6 demonstrates a majority of agreeing opinions among students and teachers upon the lecture, group discussion, and brain-storming for theoretical presentations. Meanwhile, field visits were the lowest in both groups 36.6% and 48.0% respectively. As for practical, there were majority agreements in both groups upon all methods. Concerning the media, the agreements were low except for the booklet which was agreed upon by 71.4% of students, and 92.0% of the teachers.

Table 7. Opinions about student assessment methods among students and teachers

Evaluation	Group			
	Students (n=402)		Teachers (n=50)	
	No.	%	No.	%
Admission exam	280	69.7	33	66.0
Final exam:				
Written:				
Essay questions	355	88.3	46	92.0
Modified essay	364	90.5	48	96.0
Completion	351	87.3	49	98.0
True/false	348	86.6	49	98.0
Join	318	79.1	48	96.0
MCQ	335	83.3	47	94.0
Situation	194	48.3	22	44.0
Total written	339	84.3	46	92.0
Oral	321	79.9	44	88.0
Practical:				
Use checklist with model	223	68.0	28	58.3
Use checklist with patient	86	26.2	9	18.8
Encourage creativity	125	38.1	18	37.5
Total practical	95	29.0	16	33.3
Total evaluation	302	75.1	42	84.0

Table 7 Concerning students' total opinions about the methods of student evaluation, Table illustrates that the lowest percentages of agreeing opinions were related to total practical exam for students (29.0%) and teachers (33.3%). For written exams, the least percentages were for situation, 48.3% and 44.0%, respectively. Overall, the majority of students (75.1%) and teachers (84.0%) perceived the evaluation methods were adequate

Table 8. Opinions about institution environment among students and teachers

Institution environment	Group			
	Students (n=402)		Teachers (n=50)	
	No.	%	No.	%
INSIDE				
Building:				
Proper courtyard	156	38.8	30	60.0
Comfortable stairway	198	49.3	24	48.0
Emergency exits	138	34.3	18	36.0
Fire extinguishers	152	37.8	27	54.0
Training on fire extinguishers	43	10.7	2	4.0
Lecture rooms:				
Enough space	230	57.2	36	72.0
No crowding	218	54.2	35	70.0
Enough seats	227	56.5	33	66.0
Good lighting	232	57.7	31	62.0
Proper sound system	94	23.4	13	26.0
Enough windows	222	55.2	31	62.0
Good ventilation	242	60.2	31	62.0
Enough lecture rooms	226	56.2	30	60.0
Board suitably located	289	71.9	35	70.0
Lab:				
Enough space	136	41.5	16	33.3
Sufficient equipment	103	31.4	9	18.8
Updated models	83	25.3	7	14.6
Library:				
Enough recent books	79	19.7	11	22.0
Enough space	129	32.1	21	42.0
Photocopiers	44	10.9	5	10.0
Computers	158	39.3	29	58.0
Internet	34	8.5	0	0.0
Journal indices	67	16.7	1	2.0
No noise	85	21.1	11	22.0
OUTSIDE TRAINING SITES:				
Outside training settings available	218	66.5	38	79.2
Place for discussion with students	150	45.7	29	60.4
Means of transportation	126	38.4	22	45.8

(*) Statistically significant at $p < 0.05$

Table 8 indicates that the percentages of students and teachers' agreement about the adequacy of the inside environment were generally low. This was noticed both among students and teachers. The agreements related to lecture rooms were the highest, while those related to the library were the lowest, especially for the internet and journal indices. Also, regarding safety measures, the percentages were very low for students and teachers, 10.7% and 4.0%. Concerning outside environment, the percentages were similar to those of the lecture rooms, with the least agreement related to means of transportation.

Table 9. Opinions about services provided by institution among students and teachers

Items	Group			
	Students (n=402)		Teachers (n=50)	
	No.	%	No.	%
A bus is available for transportation to training sites	6	1.5	0	0.0
Institute organizes recreational trips for students	193	48.0	28	56.0
There are different recreational activities	101	25.1	18	36.0
Students and teachers get a meal	182	45.3	28	56.0
The meal provided is balanced	138	34.3	19	38.0
Students and teachers have health insurance	340	84.6	41	82.0
Students get a monthly allowance	181	45.0	28	56.0
The monthly allowance is adequate	55	13.7	13	26.0
There is a social worker	291	72.4	43	86.0
The social worker effectively solves students' problems	143	35.6	16	32.0

(*) Statistically significant at $p < 0.05$

Table 9 illustrates that for students, the services provided by the institution with the highest percentages were those of health insurance and social worker, 84.6%, and 72.4%. These were similarly the highest among teachers, 82.0% and 86.0%, respectively. On the other hand, both students and teachers' lowest percentages were related to availability of transportation to training sites, 1.5% and 0.0%, respectively.

Table 10. Teachers' opinions about factors affecting their perception of practical training in different years

Factors affecting teacher perception:	Academic year					X ² Test	p-value
	1 (n=5)	2 (n=11)	3 (n=12)	4 (n=12)	5 (n=10)		
	%	%	%	%	%		
Work organization	80.0	81.8	91.7	83.3	100.0	2.46	0.65
Work climate	80.0	45.5	58.3	83.3	80.0	5.37	0.25
Psychological state	80.0	81.8	58.3	91.7	100.0	7.52	0.11
Promotion	60.0	9.1	8.3	50.0	80.0	--	--
Total	100.0	63.6	75.0	91.7	90.0	5.20	0.27

(--) Test result not valid

Table 10 shows, no statistically significant differences could be revealed in teachers' total opinions about the factors affecting their perception of practical training throughout the five academic years

7. DISCUSSION

In Egypt, the (MOH) and the health committee in the parliament is in the process of proposing new policy solutions to the shortage of qualified nurses' problem. The new direction of the MOH is to focus on the low end of nursing education and upgrade nursing high school level education, which takes place in lieu of regular high school to technical institute level. The policy option currently being discussed is to convert 32 nursing high schools (3 years) into technical institutes (5 years) with the plan to increase the number of technical institutes to 60 schools by 2010 and completely eliminate the 3-year high nursing schools by then. Meanwhile, the WHO EMRO recommendation is not to extend the nursing high school education to 5 years but rather to open 2-year nursing technical institutes that accept students post high school (*Farag, 2008*).

This study aim was to assess the perception of nursing teachers and students regarding educational program in Technical Institutes of Nursing. This was achieved through identifying nursing teachers' and students' perceptions about educational program, the theoretical and practical methods of teaching, the environmental facilities inside and outside the Technical Institutes of Nursing, and the factors which influence teaching processes.

The technical institutes of nursing graduate nurses who are better qualified than secondary nursing school ones, but who are not highly trained and qualified as bachelor degree nurses. These institutions aimed at helping to solve the problem of shortage in nursing staff in Egypt as well as in many other countries with similar conditions. Thus, *Munjanja et al. (2007)* mentioned that the initial training programs, in Africa, created a lower level of nursing cadre, commonly referred to as "enrolled or auxiliary nurses" with entry requirements generally limited to primary and middle school education. Professional nurse or registered nurse training required completion of high school (12 years of basic education) and three years' professional training, encompassing a higher professional level with more depth of theory and science.

Almost one-half of the nursing teachers in the present study sample had nursing school diploma. This is attributed to that secondary nursing schools and technical institutes were started much earlier than faculties of nursing in Egypt. Thus, all their teaching staff consisted of graduates of these schools and institutions. Currently,

they are being gradually replaced by staff with a bachelor or higher degree in nursing. Bachelor or higher degree nurse teachers are expected to be more competent than those with lower degree qualification. In this respect, **Rohatinsky (2008)** demonstrated that nurse teachers with a baccalaureate degree perceived more benefits to mentoring, compared to their diploma-prepared colleagues.

It was noticed that all teachers in the present study sample had attended seminars and conferences, and almost all of them had fellowships for training. This could be viewed as a compensatory mechanism through which they improve their competencies in teaching, as well as in nursing professional skills. In congruence with this, **Dale and Maeder (2008)** emphasized the importance of the preparation and continuing education of teachers. Identifying and assessing what and how teachers learn during their professional development is an important component in assisting them to better teach their students.

Moreover, most of the present study nursing teachers had long years of experience. This would also compensate for their mostly lower levels of professional qualifications. In fact, experience years add to the competence of those working in teaching, especially in practical teaching as in the discipline of nursing. In agreement with this, **Rohatinsky (2008)** found that older more experienced nurses played a greater psychosocial function in the mentorship than did younger ones. Also, nurse teachers with prior mentoring experience were more willing to mentor.

According to the present study findings, many of the students reported choosing nursing career because of better opportunity for work, in addition to own or family will. This might be attributed to the fact that nursing high schools are of the vocational training type which offers some income during training and quick income after training because of ease of finding a job after graduation is a major advantage considering the high unemployment level in Egypt (**Farag, 2008**).

Meanwhile, the majority of the nursing students in the present study had the opinion that nursing study would help them to actively participate in treatment and health promotion. This rather humanistic feeling could be the motive to pursue the nursing career. In line with this finding, **Stevens and Walker (2009)**, in their study of high school student's opinions of nursing, found that the opinion of caring for an ill individual was significantly correlated with interest in nursing as a career. Furthermore, a study on North Dakota high school students showed that more students interested in nursing as a career have taken care of an ill person (**Bureau, 2010**). Thus, it is likely that students who are interested in nursing-type careers are more willing to care for someone.

Concerning students and teachers perceptions of school vision and mission, the present study showed that they were clear and suitable for almost the teachers. Meanwhile, about one third of the students viewed vision as unclear, and mission as unsuitable. The findings are expected since teachers are more acquainted with the notions of mission and vision, especially in this era of accreditation. The awareness and understanding of the school mission and vision are essential to enable students as well as teachers to focus their attention on school programs and curriculum. In agreement with this, it has been highlighted that the student must identify visions or goals so that the mentor can work with to achieve those goals (**Provident, 2009**).

In this same respect, **Edgley and Avis (2008)** clarified that the expansion of the activity base of health and nursing requires not only adequate and permanent training, but also the development of continuous knowledge construction processes, with clear vision. Furthermore, **Rohatinsky (2008)** suggested that the students also have roles and responsibilities in the learning relationship.

The present study students' opinions about cognitive objectives of different subjects revealed that recall and understanding levels were overwhelming. On the other hand, higher cognitive level as analysis, synthesis and creativity were very low. This varied among years and subjects, with no specific trend of increase or decrease throughout the five academic years. However, nursing subjects were reported to have higher grade cognitive objectives such as application and to a less extent analysis. These findings are alarming since dependence on recall levels in a practical profession like nursing would have a negative impact on the quality and competencies of the graduates. In agreement with this, **Waterman (2007)** revealed a gap in nursing education research, with little information on how one constructs a curriculum, formal or informal, to teach it.

As far as the opinions about affective objectives of nursing subjects in the five academic years, a wide discrepancy was revealed between teachers and students. While the majority of the students agreed upon the agreement upon all objectives in all five years, teachers' agreements were very low, especially in the last two years. This could be explained by that students are not quite aware of what constitutes an effective objective in a study subject. Conversely, teachers who are more knowledgeable about this issue could have a better judgment regarding the presence or absence of affective objectives.

According to the present study teachers' opinions regarding affective objectives, these objectives are mostly absent, and the nursing schools curricula are deficient in this aspect. This could be attributed to the construction of these curricula, as well as the dependence on medical staff for teaching in these nursing institutions for long time. Consequently, the curricula and the teaching do not reflect the humanistic concepts and principles underlying the nursing profession.

On the same line, **de Almeida and Chaves (2009)** clarified that recognizing only biological and physiological

needs is not enough to completely meet the needs of human beings. Thus, psychological needs were proposed, as they are self-expression and self-respect, affect, sympathy and social relationships. As a result of this, it became harder to assess the presence or lack of humanization in care, since there is no universal human being, given that values are both individual and cultural. Moreover, these authors added that the curricula for future healthcare professionals have placed little value on content pertaining to humanization of healthcare, at the same time placing excessive value on technical expertise, which focuses exclusively on the biological aspects of human beings.

Also in congruence with the foregoing present study findings, *Munjanja et al. (2007)* reported that there is a general perception in sub-Saharan Africa that curricula used in training nurses and midwives are based mainly on a medical model, and are too westernized for nursing and midwifery requirements in Africa. Thus, a major concern is being voiced in various forums that nursing and midwifery in Africa have not responded adequately to the nursing care concept. Therefore, there is a perception that most curricula for training nurses were inappropriate for the health conditions in Africa. The quality and appropriateness of training will have implications for how productive nurses will become, and the new competency-based and problem-solving curricula are welcome developments.

According to the present study findings, a major difference was detected between nursing students' and teachers about the psychomotor objectives of nursing subjects in the five academic years. Again, there was a majority agreement upon all objectives in all five years among students, while teachers' agreement was very low. This might be explained by that students could be satisfied with the practical training they have, which provides them with some skills that they think are enough to prepare them for serving patients and communities. Conversely, teachers could have a more critical view of the content of the curricula regarding psychomotor aspects. They could have the opinion that the related objectives are deficient or not sufficient to achieve the nursing goals and mission. In congruence with this, it has been emphasized that the balance between theory and practical training has also been questioned and concerns still remain about how nursing education could be made more responding to needs (*Munjanja et al., 2007*).

The current study students' total opinions about cognitive, affective, and psychomotor objectives of all subjects demonstrated some statistically significant differences among the five years for basic and nursing subjects. There was a generally decreasing trend with higher academic years, which indicates that as students mature, they become more aware of judging about the presence or absence of the respective objectives in their curricula.

As regards practical training, the present study indicated a generally good agreement upon all types of skills training among nursing students and teachers. The highest agreement in the two groups was about observation, whereas the lowest was upon mastering. This relatively high agreement upon the types of skills training, which is incongruent with the low agreement upon objectives among teachers imply that practical training is done without clear affective and psychomotor objectives. This would lead to graduates not mastering skills, and who could respond only to patients' biological needs, while neglecting other important psychological and affective needs. In line with this, *de Almeida and Chaves (2009)* highlighted that humanized care is that type of care in which not only the technical and scientific aspects of care are practiced, but also the rights, individuality, dignity, autonomy and the subjectivity of patients are attended to.

Although the agreement of the present study subjects upon skills training was high, they had the opinion that the time allocated to this training was insufficient. This has been noticed among both students and teachers. This might explain why the training is deficient in terms of affective and psychomotor objectives. In fact, the short time allocated for the skills training could allow only for technical training on the skill, with no time left to achieve the related affective and psychomotor components. The negative impact of this deficiency on the graduate competency to provide quality care is obvious.

In agreement with the foregoing, *Merriam (2010)* clarified that since nursing is a practice-based profession clinical education is an essential part of undergraduate nursing curriculum. Therefore, clinical placements should provide students with the opportunity to experience nursing in the real world, and ideally should enable them to put theory into practice. Moreover, the success of the nursing program is largely reliant on the effectiveness of the clinical experience.

According to the present study results, lectures were the most commonly used teaching method for theory, along with some group discussion and brain-storming. This could be due to that lectures are the traditional method to which teachers are used, and which is easier for them. However, teachers who prefer delivering information through lectures require students to listen carefully and well. Nonetheless, their reliance on auditory methods suggests that students already know how to listen, while in reality, few of them know how to listen (*Gül, 2008*).

On the same line, it has been shown that the average adult spends about one-half of available communication time listening. Students, however, are in listening situations much longer; some estimate 65 to 90 percent. One might presume that the longer time translates into effective practice; however, most people have never been taught the skill of listening. As a result, most listen ineffectively, including the educators who demand their students do it (*Moredich and Moore, 2007*).

The introduction of some innovative approaches as brain-storming and group discussions by teachers in the present study could be related to attendance of most teachers for training courses in education, along with the new trends in education in all health institutes. It is anticipated that these approaches will produce graduates able to cope more effectively with health problems (*Mogwe, 2004; Mpemi, 2008*). On the same line, it has been shown that technology in the classroom provides many opportunities for enhancing communication, discussion and interactivity between the instructor and students (*Royse and Newton, 2009; DeBourgh, 2008*). Technology involves the students to apply knowledge to simulation, practice takes place in a safe environment that facilitates clinical decision making, by allowing clarification of the material from instructor providing rich feedback, without fear of any harmful real-life consequences *DeBourgh (2008)*.

The use of group discussion approaches by some of the teachers of the present study would provide some hope in helping students to develop the skills of communication as well as reasoning. In congruence with this, *Forneris and Peder-McAlpine (2008)* and *Holmes et al. (2009)* suggested that encouraging student nurses to take up a position of accepting, without question, certain truths about concepts would limit their potential to discover new knowledge.

Moreover, ongoing dialogue and reflection between student nurses and nurse educators contributes to edifying conversations about their thinking processes in practice (*Forneris and Peden-McAlpine, 2008*). Therefore, students must be encouraged to reveal their subjective thinking, and nursing educators need to facilitate undergraduate nursing students' understanding of philosophical thinking. This contributes to self-directed, self-disciplined, self-monitored and self-corrective thinking in nursing practice (*Kennison, 2008*).

The lack of use of innovative approaches to teaching, as found in the present study is in agreement with *Loredana (2009)* who claimed that many nurse educators are adopting concept-based rather than content-heavy curriculum; this would deprive students from critical thinking, which facilitates student nurses' practice within the diversity of human health experience. Therefore, they graduate with limited abilities for interpretation, analysis, evaluation, inference, explanation, and self-regulation. Thus, *Riddell (2007)* view that today critical thinking is a concept linked to competent nursing practice.

Conversely, field visits were the least used teaching methods as reported by nursing students and teachers in the current study. This constitutes a major deficiency since the experience students gain from such visits can serve cognitive, affective, as well as psychomotor objectives. In agreement with this, *Ngcongco (2009)* have emphasized the role of communities in training nurses and midwives in community-based and focused programs. Concerning the teaching media used, there was an agreement of most of the current study nursing students and teachers upon the use of booklets. Other media were much less used. The situation is similar to that of the use of lectures, as booklets are the traditional methods used by the majority of teachers in various institutions. Therefore, the teaching media had the least total agreement among students and teachers, compared to theoretical and practical teaching methods.

The current study has also investigated nursing students and teachers' opinions regarding students' assessment or evaluation methods. Although the majority of both groups perceived the students' evaluation methods were adequate, low percentages of agreement were revealed regarding practical exams, and the situation exams in written assessment. This could be attributed to the known difficulties encountered in the assessment of performance with the related bias. In agreement with this, *Sergent (2008)* mentioned that among the factors that affected the type of students' assessment tools is the lack of teacher knowledge to do more than offer low level questions or challenge to the students' knowledge. On the same line, *Phillips and Duke (2010)* examined the questioning skills of teachers and found that they primarily used lower order questions. Therefore, they recommended development of teachers' abilities in undertaking valid students' assessment.

Also, the preparation of theoretical exams based on situations is a difficult task, and many of the teachers in the present study might not have enough skills and experience to do it. In line with this, *Redfern et al. (2007)* emphasized that assessment of clinical competence is difficult particularly when it moves beyond attainment of a simple skills to one that incorporates cognitive, affective, and psychomotor elements. Additionally, *Dolan (2009)* clarified that practice assessment tools are difficult to design and to be standardized because of the diversity in curriculum models, placements, academic standards, as well as in the skills and competency acquired by the students and the range of competencies specified.

In view of the difficulty of assessment of practical skills and competencies, new assessment methods have been developed and recommended. For example, the OSCE can improve the validity and reliability of student assessment in practical areas (*Koeppen et al., 2008*). Also, simulated practice assessments are a valid and cheaper proxy measure (*Redfern et al., 2007*). However, there is no consensus on this, and *Watson et al. (2008)* argued that simulations are not good tools for valid assessment of competence.

Regarding students' opinions about teachers in theoretical and practical sessions, the present study revealed variations in these opinions. The least agreements were upon their use of appropriate media, and their providing of feedback to students. In total, there was higher agreement upon theoretical teachers' adequacy, compared to practical. The findings support the previous findings related to low agreement of students upon the teaching

media used. Moreover, the variation among students could be explained by that students have differing learning styles and ways of processing information), and also by their personality characteristics, which may also describe different preferences. Additionally, the size of the class may confound students' evaluation of their teacher's mode of instruction (*Elsheikha and Kendall, 2009*).

As for the lack of feedback, as demonstrated in the present study, the finding reveals a lack of an important communication means between the mentor or teacher and the student. This result is incongruent with what has been recognized as a mentor role in nursing. This includes the roles of socializer, educator, supervisor, supporter, and challenger. The mentor must help the student to establish goals, plan and implement learning experiences, and evaluate those experiences through provision of feedback. Moreover, through giving constructive feedback, the mentor provides support to the student and challenged him/her when necessary. On the other hand, the student must be willing to ask questions and accept constructive feedback (*Provident, 2009*).

Furthermore, the lack of communication between mentor and student can be deleterious to the learning process, and can have a negative impact on both partners. If there is miscommunication, negative coping strategies will be used by both the teacher and the student. When teachers' own psychological needs are not met, they usually deal with students' misbehavior in negative ways. When students do not get their needs met, they usually fall into predictable distressed behavior to get what they need, with or without their conscious awareness (*Gilbert, 2005*).

In the present study, both students and teachers' opinions about the environment of the institution were low. Except for lecture rooms, which were highest, other important learning facilities were lacking as the library, access to the internet, and journal indices. Moreover, the safety measures were very deficient. These conditions of the environment could have a negative impact on the learning process as the learning environment could have a major influence on the learning process, and on students' opinions about it. The opinions of students and teachers were further confirmed through direct observation of the institutions' environment. This demonstrated mostly poor to average facilities.

In congruence with this, *Kommalage and Imbulgoda (2010)* stated that the classroom environment provides an external situational factor that either supports or frustrates the expression of students' needs. Moreover, nurse educators should strive to create a stimulating learning environment as a teaching strategy (*Meedzan and Fisher, 2009*). Hence, learners need a supportive classroom environment, one that caters to their learning preferences (*Koh et al., 2008*).

The present study solicited teachers and students' opinions about practical training problems. Many problems were identified in relation to students, teachers, and setting. Time management was an important problem cited by both teachers and students. The problem is certainly related to the increasing numbers of students, which outnumber the available facilities and time allocated. In line with this, *Hirsh et al. (2007)* mentioned that the rapid expansion in student numbers is a primary cause that compromised the educational program and is consistently cited as the critical factor that affected the quality of learning in practice. Hence, there was a strong view that quantity was at the expense of quality because it was not matched with additional resources to accommodate the wide variation in student ability. Additional resources are required to ensure all the students had sufficient time in the skills laboratories to rehearse, and or, consolidate skills (*McKimm et al., 2009*).

Concerning teachers' opinions about the factors affecting their perception of the training program, the present study revealed a number of factors of importance. These were mainly related to lack of facilities as a rest area, feeling respect and recognition from peers and students, presence of a staff development program, and taking their viewpoints into account in meetings. All these factors reflect teachers' feelings of not having their basic needs met. These feelings would lead to frustration, and consequently would decrease their commitment to work. In agreement with this, it has been mentioned that the quality of attitudes and feelings among teachers is effective in creating working peace and harmony, with the expected job performed successfully (*Gül, 2008*).

According to the present study findings, the services provided by the institutions to students and teachers were deficient in their opinions. While some services were satisfactory, as health insurance and social worker, other like availability of transportation to training sites, were very low. The lack of services increases the number of unmet basic needs, which would lead to dissatisfaction among students and teachers. In congruence with this, *Klieme et al. (2008)* stressed that a positive clinical learning environment, with provision of pertinent services, is an imperative for the success of education

8. CONCLUSION

Based on the study findings it is concluded that for most students and many teachers the nursing school vision and mission are not clear. The cognitive objectives are mostly at the recall level, while the analysis, synthesis and creativity levels were very low for both students and teachers for all subjects and in all years. Some of the nursing subjects' objectives reach understanding and application levels. The majority of students agree upon affective and psychomotor objectives, while teachers' agreement is very low. While skills' training is highly agreed upon, the sufficiency of practical hours is low, and the field visits as well. Teaching media use is also low

except for booklets. Meanwhile, students' evaluation methods are adequate. For both groups, institution environment and services are viewed as inadequate, which is confirmed by direct observation.

9. RECOMMENDATIONS In view of the study findings, the following recommendations are proposed:

9.1 To the (MOH):

- The curricula of the nursing institutions and schools need to be revised, especially the cognitive objectives that should be changed to fulfill higher levels of cognition as synthesis and creativity.
- The curriculum should give more time for practical and skills' training since the nursing profession is an applied science.
- The institutions' environment needs serious changes to improve the teaching places and related resources as the library and the lab, in addition to important recreational services as the cafeteria and restrooms.

9.2 To nursing institutions:

- The study findings must be forwarded to nursing institutes and schools participating in the study, and also to similar settings, with the precaution of keeping confidentiality and not indicating any setting name.
- Nursing institutions and schools must have clear and written vision and mission that must be posted and made available to both students and teachers, with awareness workshops
- The teaching methods that depend mainly on lectures must be reconsidered, with more interactive methods as problem solving sessions and small group discussions with debriefing session.
- The teaching media should include means other than traditional booklets, which are useful to fulfill low level of cognitive objectives only.
- More emphasis should be given to field visits as an important learning activity that links students to the community, and narrows the gap between theory and practice.

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