

Quality of Pediatric Nursing Clinical Training as Perceived by the Students at Technical Health Institute of Imbaba

Nermeen Atya Abed Elfatah¹ Prof. Dr. Iman Ibrahim Abd Al-Moniem², Prof. Dr. Randa Mohamed Adly³,

¹ Teaching Specialist At Technical Health Institute of Imbaba, Faculty of Nursing, Ain Shams University

² Professor of Pediatric Nursing & Vice Dean of Community Service and Environment Development Affairs, Faculty of Nursing, Ain Shams University

³ Professor of Pediatric Nursing, Faculty of Nursing, Ain Shams University

ABSTRACT:

Aim of the Work: The aim of this study was to assess the quality of pediatric nursing clinical training as perceived by the students at Technical Health Institute of Imbaba. **Research Design:** A descriptive study was conducted to achieve the aim of this study. **Setting:** The study was conducted at Technical Health Institute of Imbaba. **Subjects:** Purposive sample of students (n=120) who were enrolled in pediatric nursing department and specific in their clinical training in Neonatal Intensive Care Unit (NICU). While in this area, all students are responsible specific procedures on the neonates. The study sample excluded to previous academic (2016- 2017). **Tools of data collection:** Data were collected through using the following two tools, A structured Interviewing Questionnaire Sheet and Observational checklists. **Results:** This study revealed that, nearly half of the studied students had average level of total knowledge about the quality of clinical training, The majority of the studied students were agree with teaching skills of clinical instructors, personal characteristics of them and the role of clinical instructor as facilitator. The majority of them were competent regarding pediatric nursing procedures, In addition to there were statistically significant differences between knowledge of the students and their practices, opinions in this study. **Conclusion:** The current study concluded that less than half of the studied students had good level of knowledge about quality of clinical training and there were factors that affect on the quality of pediatric nursing clinical training as perceived by the students such as clinical instructor, learning environment and interpersonal relationship between students and the clinical instructors. **Recommendations:** Increase awareness of nursing students about the concept of quality in clinical training.

Keywords: Quality, Pediatric Nursing, Clinical Training, Technical Health Institute.

INTRODUCTION

Nursing education is a collaborative exchange between teacher and student that results in a change in knowledge, values and attitudes. The teaching-education process promotes information literacy competency and facilitates the development of critical thinking, communication skills, leadership qualities, and the commitment to lifelong personal and professional growth (Jones, 2010 and Johnson, 2011).

Education is the key of all progress and achievement. Meanwhile, educational preparation of nurses, who contribute primarily

to the health of the children and adults, needs constant attention keeping in mind the changing health needs of the society and needs of the children (Tanner, 2011).

Quality of nurse education depends significantly on the quality of the clinical experiences that nurse students' experience in the clinical environment. Learning in the practice settings is invaluable for the nurse students', which is why clinical placement normally accounts for 50% of the nursing curriculum (Henderson, 2014).

Clinical learning environment can influence the nursing students' learning both positively and

negatively. The experiences in a clinical nursing environment can have a profound impact on the students' learning. Positive experiences influences learning in a clinical learning environment, these include right application of theory to practice, effective mentoring and constructive feedback to the students (Papastavrou et al., 2010). Clinical learning environment includes everything that may surround the nursing students, including the clinical settings, staff and the patients (Papp et al., 2010). Clinical training is one of the most powerful training tools available to nursing nurse students to strengthen their understanding of academic concepts through practical application (Skaalvik et al., 2011).

The focus of nursing clinical training is the preparation of nurses who use critical thinking skills to provide comprehensive patient – centered care to a variety of clients. It is expected that nurses will function using evidence – based training a culturally competent and safe practice (LaRocco, 2011).

METHODS

Purpose of the study

The aim of the study was to assess the quality of pediatric nursing clinical training as perceived by the students at technical health institute of Imbaba.

Research Questions:-

- 1-What is the perception of the students about the quality of pediatric nursing clinical training?
- 2-What are the factors that affect on the Quality of pediatric nursing clinical training as perceived by the students?

Research design A descriptive study was conducted in this study

Setting:- The study was conducted at Technical Health Institute of Imbaba. Because it's the largest technical institute in Egypt that receive students from rural and urban areas all over Cairo governorate.

Subjects:

Purposive sample of students (n=120) who were enrolled in pediatric nursing department and specific in their clinical training in Neonatal Intensive Care Unit (NICU). While in this area, all students are responsible to perform specific procedures on the neonates. The study sample excluded to previous academic failure (2016- 2017).

Tools of Data Collection: Data were collected through use of the following two tools:

A structured Interviewing Questionnaire Sheet

It was developed by the researcher based on scientific literature review. It included the following three parts:

First Part: The students' characteristics: as age, gender, marital status, attendance of training courses in pediatric nursing.

- Students' knowledge about the quality of clinical training as perceived by the students such as, the concept of quality of clinical training, factors affecting clinical training, importance and aim of clinical training, importance of theoretical content in clinical training, also the tool assessed the students' knowledge about the role of clinical instructor in clinical training and evaluation.

Scoring system: The right answer was scored one, and zero score for wrong answer. These scores were summed-up and accordingly the level of knowledge was categorized into the following:

- Score $\geq 60\%$ referred satisfactory level of knowledge.
- Score from $<60\%$ referred to unsatisfactory level of knowledge.

Second part: Students' opinions about the educational activities in their learning environment in pediatric nursing for theoretical experience, it included class rooms - audiovisual aids as well as the practical experience such as, lab, out patient area-

Surgical unit- Intensive Care Unit(ICU)-
Medicine unit- Neonatal Intensive Care
Unit(NICU).

Scoring system: Responses of the students were measured using likert type scale, the responses were ranged from agree, neutral and disagree. Accordingly, the response was scored as 0 (for disagree), 1(neutral) and 2 (for agree).

- Score < 50% referred to disagree.
- Score from 50 < 75% referred to neutral.
- Score from 75 ≤ 100% referred to agree.

Third part: Students' opinions toward the teaching activities of their clinical instructors. It included teaching skills, personal characteristics and their role as facilitator.

Scoring system: Responses of the students were measured using likert type scale, the responses were ranged from agree, neutral and disagree. Accordingly, the response was scored as 0(for disagree), 1(neutral) and 2(for agree).

- Score < 50% referred to disagree.
- Score from 50 < 75% referred to neutral.
- Score from 75 ≤ 100% referred to agree.

Observational checklists : This tool was adopted from American Academy of pediatric Committee on **Fetus and Newborn (2010); Bowden et al. (2009); Craige et al. (2010); Dierce (2010); Gura (2009) and Poole et al. (2010)** to assess the students' competency level related to their practices in pediatric nursing procedures as: vital signs, feeding (bottle feeding- gavage feeding), ventilator care (before, during, after connection), suction (tracheal suction - oropharyngeal suction), medication administration (intravenous therapy - cannula care), anthropometric measurements, daily care of the new born (bathing- eye care - cord care).

Scoring system: Each correct step was scored one grade, and that wrong step (not done or done incorrectly) was scored zero.

Total score:

- Score < 85% referred to incompetent level of practice.

Score ≥ 85% referred to competent level of practice.

Field work

To carry out the study, an approval was obtained from the Director of technical health institute of Imbaba. A letter was issued from the Faculty of Nursing, Ain-Shams University, explaining the aim of the study in order to obtain their permission and cooperation. Data was collected in the second semester in the academic year (2016-2017). The researcher was available 4 days from (Saturday to Tuesday) 9am to 1pm weekly that based on the students' schedule of clinical training. After explaining the study aim for the students, the questionnaire sheets were distributed for the students who accepted to participate in the study and collect the data by individual interview practical day, in between session (break time), during their training in clinical areas. As regards the assessment of student practices, it was done by the researcher using the observation checklists during the students' clinical training while each student takes 20 -30 minutes. The researcher selected the area of clinical training in Neonatal Intensive Care Unit (NICU) because this area is critical and the students care for High Risk Neonates (HRNs). Additionally, the students in this area were assigned to perform specific procedures that, assessed by the researcher.

Ethical consideration:

Written approval was obtained from the students before inclusion in the study; a clear and simple explanation about the aim of the study and its expected outcome. It was given according to their level of understanding, physical and mental readiness. They secured that all the gathered data was confidential and used for research purpose only.

RESULTS

Figure 1: Number and percentage distribution of the studied students according their total knowledge about the importance of theoretical knowledge to clinical training (No=120).

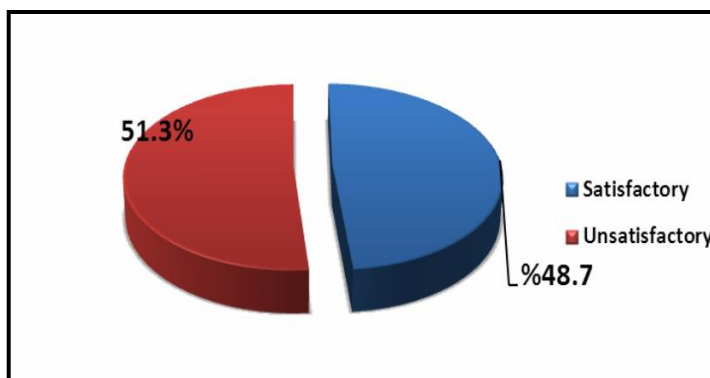


Figure (1): This figure shows that, 51.3% of the studied students had unsatisfactory level of knowledge about the importance of theoretical knowledge to clinical training, while 48.7% of them had satisfactory level of knowledge.

Figure (2): Number and percentage distribution of the studied students according to their total knowledge about quality of clinical training (No=120).

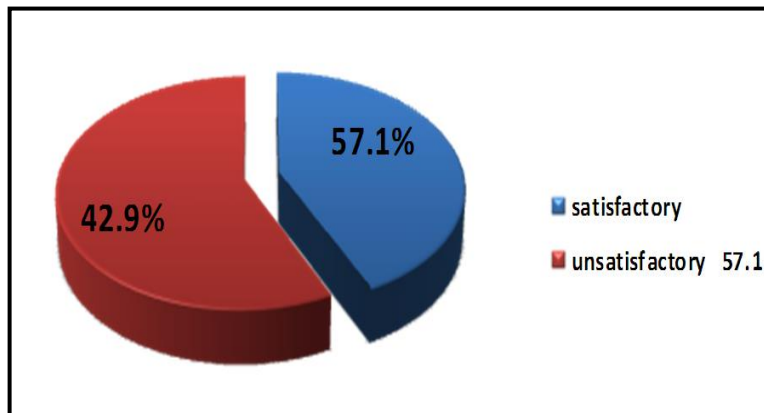


Figure (2): This figure shows that, 42.9% of the studied students had satisfactory level of knowledge about quality of clinical training, while 57.1% of them had unsatisfactory level of knowledge.

Figure 3: Number and percentage distribution of the studied students according to their total opinion about the effect of environment on quality of clinical training (No=120).

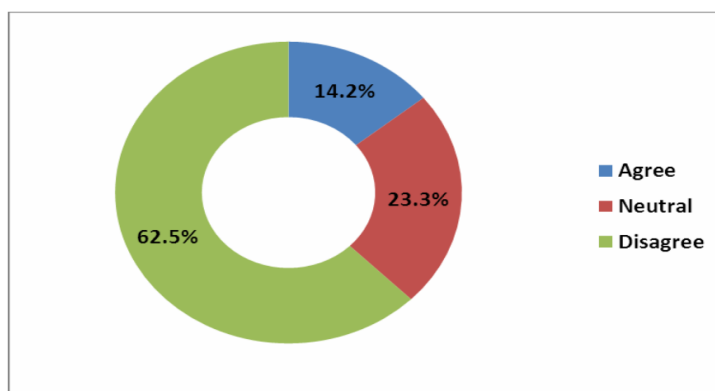


Figure (3): This figure shows that 62.5% of the studied students were disagree about the quality of clinical training, while 14.2% of them only were agree.

Figure 4: Distribution of the studied students according to their total level of competency in pediatric nursing procedures (No=120).

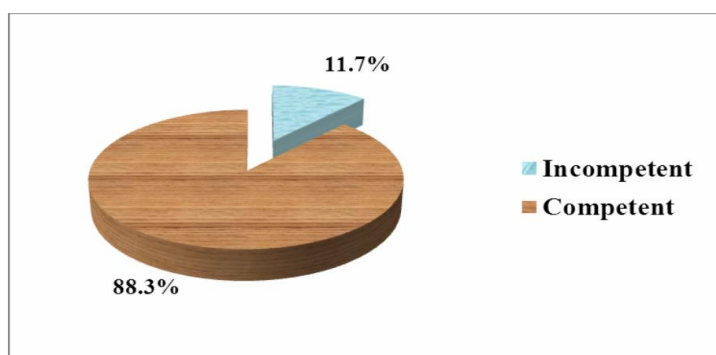


Figure (4): This figure shows that 88.3% of them were competent in pediatric nursing procedures, while 11.7% of them were incompetent.

Table 21: The relation between the studied students' opinions and their practices in the clinical training (N=120).

Opinion Practice	Agree		Neutral		Disagree		X ²	P Value
	No	%	No	%	No	%		
Competent	12	10.0	20	16.7	74	16.6		
Incompetent	5	4.2	8	6.7	1	0.8	20.73	0.0001

(*) Statistically significant at $p < 0.05$

Table (22): This table illustrates there was statistically significant differences between the opinions of the studied students and their practices in the clinical training ($P < 0.05$).

Table 22: The relations between the studied students' knowledge with their the competency level and opinions related to clinical training (N=120).

Knowledge						
Items	Unsatisfactory		Satisfactory		X ²	P Value
	No	%	No	%		
Practices						
Competent	43	35.8	63	52.5	8.51	0.01
Incompetent	8.5	7.1	5.5	4.6		
Opinions						
Agree	3	2.5	14	11.7		
Neutral	8.5	7.1	19.5	16.3	21.34	0.0003
Disagree	40	33.3	35	29.2		

(*) Statistically significant at $p < 0.05$

Table (22): This table illustrates that, there were statistically significant differences between the knowledge of the studied students with their practices, opinions regarding to clinical training ($P < 0.05$).

DISCUSSION

Regarding the results of present study the total knowledge of the studied students about the importance of theoretical knowledge in clinical training shows that, nearly half of the studied students had satisfactory level of knowledge about theoretical. The finding of the current study is an accordance with the result of study by **Duffy and Halloran,(2011)** who studied meeting the challenge of multiple academic roles through a nursing center practice model and mentioned that, the common indicators of student failure: as inconsistent clinical performance, lack of interest or motivation, limited practical, interpersonal and communication skills, lack of theoretical knowledge, lack of insight into weaknesses. Therefore the researcher emphasizes on the importance of theoretical knowledge and practical part that affecting the

performance student in their training. Regarding the students' opinion about the educational activities that they exposed in their learning environment include (lab- class rooms - audio visual media- clinical setting. it was found that table nearly half of them were disagreed about the lab place suitability, available place for review & available computers inside the institute, while half of the studied students were natural agreed with available technology instruments, available lighting inside lab & enough ventilation respectively. These finding were supported by **Mouawad, (2016)** who studied opinions of students versus teachers towards clinical teaching methods of pediatric nursing course in technical health institutes and mentioned that regarding the available resources in skill labs, practical places, the current study reveals that, half of two thirds of students see that the laboratory is not well equipped and there are no enough devices for training. Also the finding of

this study are congruent with **Cheek et al., (2012)** who studied application of computer technology and emphasized the importance of equipping of the educational setting with advanced educational equipment and media. While, the role of the lab has also been clarified by **Hilton, (2010)**, who studied clinical skill laboratories and mentioned that the lab gives more time to practice psychomotor skills, increases students confidence, and may in the long term bridge the gap between theory and practice. Therefore, the lab should be equipped with adequate materials to allow a number of students to have the opportunity to see the demonstration of nursing procedures.

Concerning the studied students' opinions about classrooms, audio visual media and courses, the finding of the study showed that, nearly half of them were disagreed with classrooms and audio visual media. This result can be explained by **Leino, (2012)**, who studied "Professionalization of Nursing" and mentioned that lack of facilities hinders the student opportunities to study efficiently. Therefore, laboratories and library resources need to be continuously improved and updated. On the same line, **Ironside, (2012)**, who studied thinking in nursing education and emphasized that the limitation of laboratory and classroom strategies. They need to be supplemented with contextual experiences. However, providing the students with opportunities to practice critical thinking in actual clinical situations is difficult because the context of care is rapidly changing and the schools of nursing continue to allocate limited resources to practical training. From the researcher experience that, limited facilities in technical institutes can affect on the students' satisfaction with their clinical achievement.

As regarding the students' opinions about clinical training in their clinical settings, the results showed that nearly more than half of the studied students were agree with their practices in all areas of their clinical training namely (pediatric surgical unit- Intensive Care Unit (ICU) - Neonatal Intensive Care Unit (NICU) - pediatric medicine unit- out patient clinic - urology department). This finding is not supported with **Mohamed, (2013)** who

reported that negative opinion was indicated by nursing faculty as regards their opinion about clinical training of students in the hospital in relation to the availability of facilities for proper training. While, the most common problems faced by student- nurses, as reported by the studied nursing faculty, were the shortage of facilities, lack of cooperation of the hospital staff, over -crowdedness, and poor student - patient interaction. From the researchers' point of view, clinical training in hospitals and availability of facilities that affect on the performance of the students.

Regarding the studied students 'total level of competencies regarding pediatric nursing procedures in NICU, it was found that the majority of them were competent regarding the pediatric nursing procedures. These finding were supported by **Mouawad, (2016)** who studied opinions of students versus teachers towards clinical teaching methods of pediatric nursing course in technical health institutes and mentioned that regarding to teaching clinical skills, the study revealed that two third of studied students and three quarter of clinical instructors were agree toward the clinical instructors are using an effective introduction, having close observation to each student, encouraging and motivating students to hold the nursing work asking questions also commenting positively on the students' performance. The researcher believes that although there were positive results regarding the pediatric students' performance, competency in pediatric nursing procedures was found because of good communication between hospital staff and the students, gaps in patient care is reduced and feeling a sense of warmth of clinical instructor. Therefore, there are more students that need more sufficient clinical training for pediatric nursing procedures during their study in the institute and curriculum development.

There was statistically significant differences between the opinions of the studied students and their practices regarding to quality of clinical training ($P < 0.05$). This finding was in agreement with **Hassan et al., (2012)**, who studied effectiveness in clinical teaching perceived by nursing faculty and students and revealed that there are significant differences

between the students, and the educators, perception in almost all the items related to teaching ability, nursing competency, personality traits, and interpersonal relations of the effective clinical educator. On the contrary, this study was not supported with **Li, (2013)** who studied perception of effective clinical teaching behaviors in a hospital-based nurse training programme and studied the opinions of effective clinical teaching behaviors and factors between nurse- educators and nurse- students. The author could not find any statistically difference between the two groups.

Regarding relation between knowledge of the studied students and their practices, opinions of quality clinical training there were statistically significant differences between knowledge of them and their practices, opinions in this study. The finding study was supported with **Lofmark et al., (2011)** who studied in competence of newly graduated nurses in examining clinical practice in Sweden, and found that lack of opportunity for the nursing students to practice in the clinical area as a problem; suggesting that lack of opportunity for the nursing students to practice affects the conversion of the theoretical knowledge to practice.

CONCLUSION

The current study and the research questions concluded that less than half of the studied students had good level of knowledge about quality of clinical training and there was factors that affect on the quality of pediatric nursing clinical training as perceived by the students such as clinical instructor (teaching skills, personal characteristics and their role as facilitator), learning environment. Additionally the majority of the students had a competent level of performance related to their clinical training in pediatric nursing.

RECOMMENDATIONS

- Increase the awareness of nursing students about the concept of quality in clinical training.
- Pediatric nursing skill labs should be well equipped, quiet, the number of clinical

instructors should be suitable to the number of students, with small groups placement.

- Emphasize on the importance good interpersonal relationships between clinical instructors and students to improve clinical experience.
- Periodic assessment and continuous evaluation of the pediatric nursing students towards their learning experience in pediatric nursing.

REFERENCES

- Cheek, J.; Gillham, D. and Mills, P. (2012):** "Application of Computer Technology ". Nurse Education Today; 18(2): 153-157.
- Craig, J.; Lancaster, G.; Williamson, P., and Symth, R. (2010):** Temperature Measure in Children and Young people: Systematic Review; 30(2): 70-74.
- Dierce, L. (2010):** Protocols for Practice: Applying Research at the Beside. Traditional and Non- Traditional Modes of Mechanical Ventilation-Critical Care Nurse; 20(1): 81-84.
- Duffy, D. and Halloran, M. (2011):** "Meeting the Challenge of Multiple Academic Roles Through A Nursing Center Practice Model". Journal of Advanced Nursing; 22: 1116-1173.
- Gura, K. (2009):** Growth Measurements for Pediatric: One Hospital's Recommendation. 28, 221-223, 227-228, 231-236, 239-242.
- Hassan F.; El Shimy H.; and Mohaseb S. (2012):** "Effectiveness in Clinical Teaching Perceived by Nursing Faculty and Students. XV International Annual Ain Shams Medical Congress". Cairo International Conference Center (CICC); 28(3): 40-46.
- Henderson, A. (2014):** Leadership in Clinical Education: Embedding Learning in Everyday Practice. Nurse Education Today 31, 4-5. Available at <http://www.jamk.fi/kirjasto>, Nelli Portal, Terveystietti.

- Hilton, P. (2010):** "Clinical Skills Laboratories: Teaching Practical Nursing". Nurse-stand; 10 (37): 44-47.
- Hoffman, N. (2011):** Role of Pediatric Nurse in the Care of Infants, Neonates, Children and Adolescents, Pediatrics; 44 (6): 126-133.
- Ironsides, P. (2012):** "Thinking in Nursing Education. Part 1. A Student's Experience Learning to Think". Nurs- Health - Care-Perspect; 20(5): 238-242
- Johnson, L. and Smith, C. (2011):** A Hybrid Course for the RN-to-Baccalaureate Curriculum: Patient-Centered Care and Quality. Nurse Educator; 36(4): 155-160.
- Jones, K. (2010):** Nursing Undergraduate Programs Student Hand Book 1st Ed Page (4).
- Jones, C.; Mayer, C. and Mandelkehr, L. (2011):** Innovations at the Intersection of Academia and Practice: Facilitating Graduate Nursing Students' Learning about Quality Improvement and Patient Safety. Quality Management in Healthcare; 18(3): 158-164.
- La Rocco, S. (2011):** Undergraduate Nursing Education in the United States, Journal of Medical Colleges of Pla.; Available at www.Sciencedirect.Com. Pp. 45-47.
- Leino, H. (2012):** Professionalization of Nursing: Current Issues and Trends, 3rd ed., Lippincott, Philadelphia, Pp 4- 13.
- Li, M. (2013):** " Perception of Effective Clinical Teaching Behaviors in A Hospital-Based Nurse Training Programme". Journal of Advanced Nursing; 26(6): 1252-1261.
- Lofmark, A.; Snide, B. and Wikblad, K. (2011):** Competence of Newly Graduated Nurses: A Comparison of the Perceptions of Qualified Nurses and Students. Journal of Advanced Nursing; 53(6): 721-728.
- Mohamed, S. (2013):** "Factors Affecting Clinical Learning of First Year Students at H.I.N". M. Sc. Thesis, Submitted to faculty of nursing, Ain Shams University, pp.84, 86.
- Mouawad, A. (2016):** Opinions of Students Versus Teachers Towards Clinical Teaching Methods of Pediatric Nursing Course in Technical Health Institutes, Master thesis, Submitted to faculty of nursing, Ain shams University, 82-84.
- Papastavrou, E.; Lambrinou, E.; Tsangari, H., Saarikoski, M. and Leino-Kilpi, H. (2010):** Student Nurses Experience of Learning in the Clinical Environment. Nurse Education in Practice; 10(3): 176-182.
- Papp, I.; Karkkanen, M.; Von Bonsdorff, M. (2010):** Clinical Environment as A Learning Environment: Student Nurses' Perceptions Concerning Clinical Learning Experiences. Nurse Education Today; 23: 262-268.
- Poole, S.M.; Nowobilski, V.A. and Free, F. (2000):** Intravenous Push Medications in the Home; (2): 209-2015
- Skaalvik, M.; Normann, H. and Henriksen, N. (2011):** Clinical Learning Environment and Supervision: Experiences of Norwegian Nursing Students—A Questionnaire Survey. Journal of Clinical Nursing; 20(15-16): 2294-2304.
- Tanner, C. (2011):** "On Clinical Teaching." Journal of Nursing Education; 33: 387.