

## Evaluation of Learning Experience of Pediatric Oncology Nursing among Students at Embaba Technical Institute of Health

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### Abstract

Learning experience is an important aspect of nursing education as it is the transformation of theoretical knowledge into practice and the cornerstone of nursing as a health profession. **Aim of the study:** to evaluate the learning experience of pediatric oncology nursing among students at Embaba Technical Institute of Health. **Subjects and Methods:** All nursing student who are enrolled in oncology department (N= 170), a descriptive design was carried out at Embaba technical institute of health, National Cancer. Tools of the study involved I- Evaluation scale to assess the clinical learning environment, supervision and nurse teacher II-A structured questionnaire to assess the studied sample characteristics and the learning experience of pediatric oncology nursing among students at Embaba Technical Institute of Health. III -Attitude Likert Type-Rating Scale, IV - Summative evaluation sheet **Results:** It was clear that the mean age of the studied sample was 17.35 years. Almost three quarters and more of the nursing students evaluated their pediatric oncology nursing learning experience in theoretical and practical part as good and satisfactory experience, there was a statistical significant difference between pediatric oncology nursing learning experience and setting of clinical training of the studied students. Most of the studied students were having a positive attitude towards their pediatric oncology nursing learning experience. **Conclusion:** The study concluded that the learning experience of pediatric oncology nursing at Embaba Technical Institute of Health was satisfactory. **Recommendations:**The nursing learning experience at Embaba Technical Institute of Health should be planned to meet the actual educational needs of the nursing students and staff development.

**Key words:** Learning experience. Evaluation, Student, Oncology Nursing

### Introduction

Learning experience has been the mainstay of a health professional's education. However, the students need foundational experience specific to their practice role, in some form of a skill lab. In addition to opportunities to combine or broaden use of both technical and communication skills (Bradshaw & Lowenstein, 2014).

Evaluation is a multidimensional process of gathering data to inform judgment as to the value of some thing or someone. Specific to students, the evaluation is most often related to either an assignment of grades based on a student's performance or the identification of gaps in students' understanding, allowing for improvement (Smith et al., 2015).

New evidence in the research literature is reported every day. The rapid growth in health care and technology

## Evaluation of Learning Experience of Pediatric Oncology Nursing among Students at Embaba Technical Institute of Health

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requires nurses to have up-to-date knowledge and skills to provide the most effective care of patients. The challenge is to obtain the best and most current information needed in practice through effective nursing education programs (*Perry et al., 2016*).

Effective pediatric oncology care incorporates guidelines for nursing assessment, diagnosis, outcomes identification, planning, and implementation. Principles for communication and coordination of care, along with guidelines for patient and family teaching and health promotion, are essential. Nurses are expected to evaluate the child and family's progress toward optimal health outcomes (*Stefan & Galindo., 2011*).

Decisions about which individuals should be admitted to a nursing education program are important because of the nursing profession's commitment to the good of society and to the health and welfare of current and future patients (*American Nursing Association, 2010*).

Pediatric oncology nursing involves caring for children with cancer across a continuum, from diagnosis to cure or a peaceful death. Nurses coordinate multiple aspects of care and advocate for effective patient and family education, communication and quality care. Nurses may also act to increase early diagnosis of cancer through public awareness by promoting local cancer treatment options and partnering with parent groups and other nonprofit organizations in their countries to spread the message that childhood cancer is treatable and often curable (*Kulkarni et al., 2011*).

Clinical evaluation to be effective, the teacher should provide

continuous feedback to students about their performance and how they can improve it. Feedback is the communication of information to students, based on the teacher's assessment, that enables students to reflect on their performance, identify continued learning needs, and decide how to meet them (*Hewson, 2015*).

The main strategy for evaluating clinical performance is observing students in clinical practice, simulation and learning laboratories, and other settings (*Oermann et al., 2009*). The teacher may arrive at incorrect judgments about the observation, such as inferring that a student is inattentive during conference when, in fact, the student is thinking about the comments made by others in the group. It is important to discuss observations with students, obtain their perceptions of their behavior, and be willing to modify one's own inferences when new data are presented. In discussing observations and impressions with students, the teacher can learn about their perceptions of performance; this, in turn, may provide additional information that influences the teacher's judgment about competencies (*Oermann, 2008*).

Nursing education consists of theoretical and practical teaching that is provided into students to enable them to perform as nursing care professionals. The education is provided to students by experienced clinical instructors, medical professionals and other non-medical teachers who are qualified and experienced for educational tasks. Most countries provide nursing education courses that are related to general or specialized area as pediatric oncology nursing (*Doenges et al., 2014*).

### **Significance of the study:**

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Learning experience is an important aspect of nursing education as it is the transformation of theoretical knowledge into practice and the cornerstone of nursing as a health profession. Effective clinical experience is gained through a supportive clinical environment, which includes the atmosphere of the clinical placement unit, and the relationships shared with clinical staff supervisors and mentors (**Killam and Heerschap, 2013**). So it is important to evaluate the actual learning experience on nursing students regarding to pediatric oncology nursing to enhance the educational program, to develop effective teaching methods, to create effective learning environment and to prepare specialized and qualified skilled nursing students to practice and work in oncology related clinical areas.

### **Aim of the study**

The study aimed to evaluate the learning experience of pediatric oncology nursing among students at Embaba technical institute of health.

### **Research questions:**

1- What is the learning experience of pediatric oncology nursing among students at Embaba technical institute of health?

2- What are the acquired knowledge, skills and attitudes, gained by nursing students regarding pediatric oncology nursing?

### **Subjects and methods:**

#### **I-Technical design:**

#### **Research Design:**

A descriptive design was used in this study.

### **Settings:**

This study was conducted at Embaba Technical Institute of Health, the pediatric oncology departments at the National Cancer Institute (NCI) and Nasser Institute hospital.

### **Sampling:**

All nursing students of oncology department who are enrolled in the first and second academic year in the previous mentioned settings, also internship students (n = 170).

### **Data Collection Tools:**

**The data was collected through the following tools:**

**I- Evaluation scale adapted from “The Clinical Learning Environment, Supervision and Nurse Teacher (CLES+T)” by (Saarikoski, 2008)** to assess the clinical learning environment, the supervisory relationship and the role of teachers.

The evaluation scale consists of 34 items through which the learning environment and the role of Nursing Teacher (NT) are measured on five sub-dimensions with altogether total of 34 items, which are worded as statements. Regarding to the learning environment in clinical setting on the ward (nine items), leadership style of the ward manager (four items), nursing care that is given by students in the ward (four items), content of supervisory relationship (eight items), and role of the NT (nine items). For each statement/item, responders were instructed to select the best response that describes their own opinion on a 5-point rating scale, with higher values representing higher agreement regarding statements.

## Evaluation of Learning Experience of Pediatric Oncology Nursing among Students at Embaba Technical Institute of Health

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- **Scoring system:**

The response was scored as follow: strongly disagree (1), disagree to some extent (2), neither agree nor disagree (3), agree to some extent (4), and strongly agree (5).

**The total score:**

Score < 50% was referred to poor level, score from 51- 75 was referred to average level and core from  $75 \leq 100$  was referred to good level.

**II- A Structured Questionnaire Sheet** was developed by the researcher; to evaluate knowledge, skills of the students and the Nursing Learning Experience at Embaba Technical Institute of Health in terms of teaching hours of theory and practice, settings of training and it will include data about:

**1First part:** Characteristics of Studied sample as: age, gender, education, housing condition, residence, training setting, reason of enrollment at Embaba Technical Institute of Health

**2- Second part:** The nursing students' learning experience of pediatric oncology nursing at Embaba Technical Institute of Health in Egypt in terms of theoretical and practical teaching methods, scientific content, evaluation process, teaching hours of theory and practice, suitability of learning environment in terms of classrooms and lecture halls, availability of audio-visual media, availability of nursing training lab and library.

**Scoring system of this part:**

Regarding the evaluation of learning experience of pediatric oncology nursing each item was scored as 1 degree

if was answered with yes and zero if was answered with no.

**The total score:**

Score < 50% was referred to poor level, score from 50 - 75% was referred to average level and score from 76- 100 was referred to good level..

**3-Third part:** it was related to the students' experience with nursing skills of pediatric oncology nursing practice that included training at, pediatric surgery unit, pediatric medicine unit, outpatient clinics, intensive care unit, emergency room and causality, day case of chemotherapy unit, pain management unit and blood investigation lab. These skills involved also knowledge (as indication and contraindication of the procedure...etc) and attitude (as keeping privacy and providing emotional support for the pediatric patient before and after each procedure)

**Scoring system for this part:**

Regarding to evaluation of learning experience of pediatric oncology nursing each item was scored as 1 degree if it was answered with yes and zero if was answered with no.

**The total score:**

Score from  $60 \leq 100$  was referred to satisfactory level, while score < 60% was referred to unsatisfactory level.

**III -Attitude Likert Type Rating Scale:**

This tool was developed by the researcher to assess the attitude of the students toward their learning experience in pediatric oncology nursing.

Score each item is scored 2 if was answered with agree, 1 if Sometimes agree, and zero if not agree.

#### **IV -Summative evaluation sheet**

This tool was used to evaluate the nursing students' achievement scores in their learning experience of nursing and non-nursing courses according the policies of the Egyptian Ministry of Health and the Egyptian Ministry of Higher Education. Where students' evaluation was categorized into either, passed or failed.

##### **Operational Design**

##### **Preparatory phase:**

A review of the past and current, local and international related literature using books, Journals, magazines, scientific periodicals and online references was done to develop the study tools and to get acquainted with the various aspects of the research questions.

##### **Validity and Reliability**

Testing validity of the designed tools by inspecting the items to determine whether the tools measure what supposed to measure. The tool was revised by a jury of 3 experts from different academic categories (professors and assistant professors) of the pediatric nursing department's staff at the Faculty of Nursing, Ain Shams University. The jury reviewed the tools for clarity, relevance, comprehensiveness and simplicity. Minor modification was done in form of omission or rephrasing of statements.

**Testing reliability** of the designed tools was done statistically by Cronbach alpha test. It was used to examine whether the structured

questionnaire and the attitude likert-type scale had internal consistency. A good internal consistency was found here, alpha tests reached (0.92).

##### **Pilot study:**

The pilot study was carried out involving 10% of the expected total study sample (n=17 students). About 3 weeks period was required to fulfil the tools of data collection. The results of the data obtained from the pilot study were used to test the clarity and feasibility of the study tools. The entire sample, involved in the pilot study was included to the study sample as there were minor modifications to the study tools by omission of data part of tool II.

##### **Field work:**

The actual field work was carried out over 11 months period from the first week of October 2015 up to the end of August 2016. The researcher was available in the study settings, 4 days/week (from Saturday to Tuesday) from 9 am to 2 pm based on the students' schedule of clinical training and teaching lectures.

After explaining the study aim for the study sample, the study tools were distributed and filled by each study subject within 30-45 minutes.

Regarding to the students' summative evaluation sheet, the researcher obtained the achievements scores in nursing and non-nursing courses of the studied students from the administration of Embaba Technical Institute of Health in Egypt by the end of the academic year 2015-2016.

## **Evaluation of Learning Experience of Pediatric Oncology Nursing among Students at Embaba Technical Institute of Health**

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### **III. Administrative Design**

An official approval to carry out the study was obtained from the administrator of each study setting. The purpose, the methods of the data collection and the expected outcomes of the study were explained.

### **Ethical Considerations:**

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Approval from the Ethical Research Committee at the Faculty of Nursing- Ain Shams University was obtained before initiation of the research.

The approval to use The Clinical Learning Environment, Supervision and Nurse Teacher (CLES+T) evaluation scale was obtained from the author Saarikoski, 2008 (Appendix, II).

Also, a written approval from the study subjects was obtained and they

were informed about the purpose and expected outcomes, they were assured that data would be used only for the purpose of the study, their participation was voluntary and they had the right to withdraw from the study at any time.

### **IV. Statistical Design**

The data collected were revised, coded, tabulated and statistically analysed by using number and percentage distribution were fulfilled using the Statistical Package for Social Sciences (SPSS) version 25. Chi-square test, mean and standard deviation were used to estimate the statistical significant difference between variables of the study.

Non-significant (NS)  $P > 0.05$

Significant (S)  $P < 0.05$

Highly significant (HS)  
 $P < 0.0$ .

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**Results**

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**Part I: Characteristics of the Studied Sample**

Table (1): Number and percentage distribution of the studied students according to their characteristics (N=170).

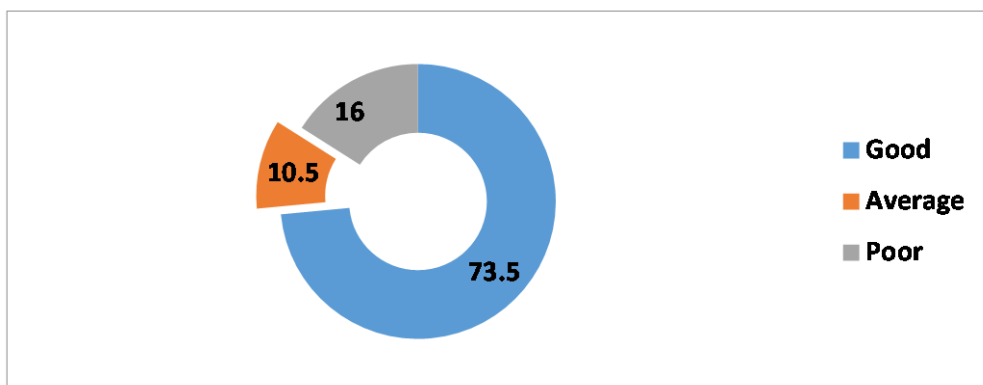
| Items                      | NO        | %           |
|----------------------------|-----------|-------------|
| <b>Age in years</b>        |           |             |
| 15 - 17                    | 50        | 29.4        |
| 18 - 20                    | 75        | <b>44.1</b> |
| 21 – 23                    | 45        | 26.5        |
| $\bar{X} \pm SD$           | 17.35±1.8 |             |
| <b>Gender</b>              |           |             |
| Male                       | 46        | 27          |
| Female                     | 124       | <b>73</b>   |
| <b>Academic study year</b> |           |             |
| The first                  | 69        | 40.6        |
| The second                 | 71        | <b>41.8</b> |
| Internship                 | 30        | 17.6        |
| <b>Residence</b>           |           |             |
| Rural                      | 55        | 32.4        |
| Urban                      | 115       | <b>67.6</b> |
| <b>Housing condition</b>   |           |             |
| Living in students' host   | 58        | 34.1        |
| Living with family         | 112       | <b>65.9</b> |

As regards nursing students' characteristics, the above table reveals that, 44% of them were in the age group of 17-20 years, Mean  $\pm$ SD (72.4  $\pm$  11.4), in addition to 73% were females and 62.5% were enrolled in internship year.

## Evaluation of Learning Experience of Pediatric Oncology Nursing among Students at Embaba Technical Institute of Health

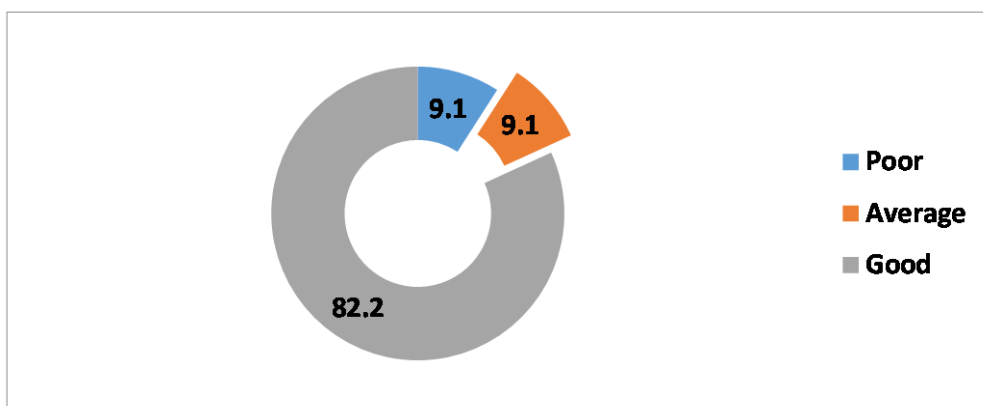
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**Figure (1):**Percentage distribution of the studied students according to their total evaluation for nursing learning experience at Embaba Technical Institute of Health. (n=170).



**Figure (1):** shows the total nursing students' evaluation for their pediatric oncology nursing learning experience, it was found that 73.5% of them reported good experience, while the rest of them 16% and 10.5% reported poor and average experience respectively.

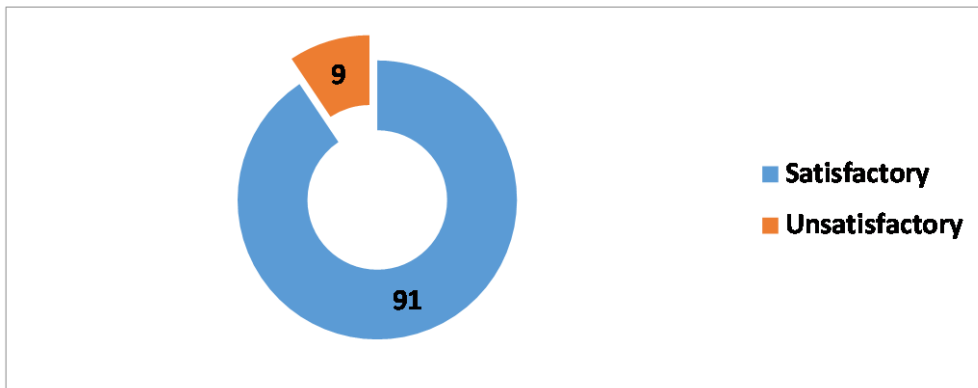
**Figure (2):**Percentage distribution of total pediatric oncology nursing learning experience evaluation by the studied students in clinical settings (n=170).



Concerning students' evaluation to total pediatric oncology nursing learning experience at clinical settings, figure (2) shows that most (82.2%) of the studied students reported a good level, while 9.1% of them reported average and poor level respectively

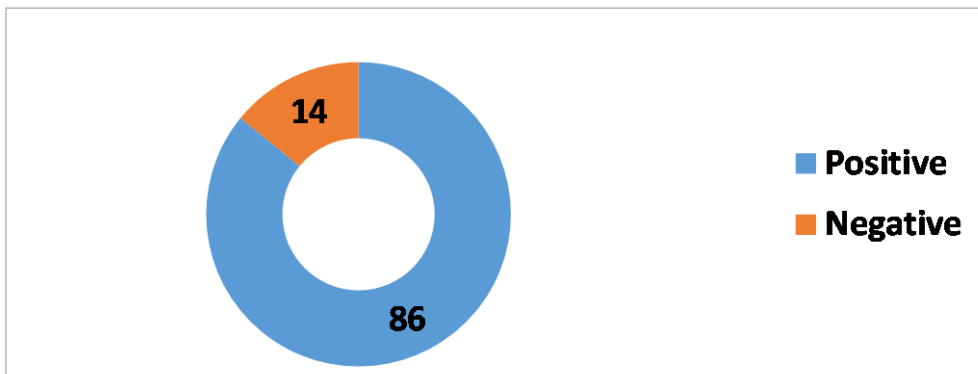


**Figure (3):**Total satisfaction of the studied students with the type of acquired skills and its related knowledge and attitude at pediatric oncology nursing clinical training areas (n=170)



As regards total satisfaction of the studied students with the type of acquired skills and its related knowledge and attitude at pediatric oncology nursing clinical training areas, it is clear from figure (3) that 91% of the studied students were satisfied.

**Figure (4):**Percentage distribution of the studied students' total attitude regarding to their learning experience of pediatric oncology nursing (n=170).



Concerning the total attitude of nursing students regarding their nursing learning experience of pediatric oncology nursing, figure (4) shows that, 86% of the studied students had a positive attitude compared with 14% of them who had a negative attitude.

## Evaluation of Learning Experience of Pediatric Oncology Nursing among Students at Embaba Technical Institute of Health

**Table (2):**The relation between the Nursing Skills of the studied students and their Attitude regarding to learning experience of pediatric oncology nursing (n=170).

| Students' Attitude | Nursing Students' Skills |      |                |     | X <sup>2</sup> | P           |
|--------------------|--------------------------|------|----------------|-----|----------------|-------------|
|                    | Satisfactory             |      | Unsatisfactory |     |                |             |
|                    | NO                       | %    | NO             | %   |                |             |
| Positive           | 140                      | 82.4 | 6              | 3.5 | 28.6           | .0001<br>** |
| Negative           | 15                       | 8.8  | 9              | 5.3 |                |             |

Regarding to the relation between the nursing students' skills of the studied students and their Attitude regarding to learning experience of pediatric oncology nursing , table (2) illustrates that, there was highly statistically significant difference between the skills of the studied students with their attitude, regarding to their learning experience of pediatric oncology nursing, X<sup>2</sup> =28.6 and P<0.01.

**Table (3):**The relation between the studied students' level of learning experience at Embaba Technical Institute of Health and their clinical learning experience at clinical training setting (n=170).

| Clinical learning experience at clinical training settings | Learning experience at Embaba Technical Institute of Health |      |         |      |      |     | X <sup>2</sup> | P           |
|--|---|------|---------|------|------|-----|----------------|-------------|
|  | Good  |      | Average |      | Poor |     |                |             |
|  | NO  | %    | NO      | %    | NO   | %   |                |             |
| Good   | 111   | 65.3 | 19      | 11.2 | 10   | 5.9 | 27             | .0001<br>** |
| Average  | 9   | 5.3  | 2       | 1.2  | 4    | 2.4 |                |             |
| Poor   | 5   | 2.9  | 9       | 5.3  | 1    | 0.6 |                |             |

Concerning the relation between the total level of learning experience of the studied students at Embaba Technical Institute of Health and students' total level of clinical learning experience at clinical setting, table (3) illustrates that, there was highly statistically significant differences between both of them where good learning experience was associated with attitude in good clinical training setting, X<sup>2</sup> =27 p=.0001.

### Discussion

The goal of evaluation of learning experience is to support nursing education and practice development. Evaluating knowledge and performance, compared to specific standards enables nursing students and the teachers to identify developmental needs. However, the performance-related behaviors are directly associated with job tasks and need to be accomplished to achieve a

training objectives (Sullivan, 2012).

As regard to previous academic failure and its causes, the study findings revealed that 15% of the studied students had previous academic failure due to increase number of courses and English language course. This finding is similar to result of Koch et al., (2008) in their study "English Language Acculturation Predicts Academic Performance in Nursing Students who speak English as a second Language", who reported that,

students who speaks English as a second language face considerable challenges in learning courses taught in English language at universities.

As regards the teaching methods of the theoretical and practical content, the study findings, revealed that the studied students reported lectures and

group discussion respectively. This could be because all the teachers in the current study had attained a previous training related to communication skills; by which it may facilitate the demonstration of teaching skills in lecture time. In addition to, almost half of clinical instructors in the present study attained post graduate studies that enable them to be more oriented with teaching and learning process.

Findings of the current study is not in accordance with the result of study “**Supporting failing students in practice**” by *Duffy & Hardicre, (2007)* who mentioned that , the common indicators of student failure: as inconsistent clinical performance, lack of interest or motivation, limited practical, interpersonal, and communication skills and lack of theoretical knowledge. This disagreement with the study finding could be related to the difference in the study sample and setting.

Also the results of the current study are in accordance with **Bayomi, (2013)**, who reported that the studied students had a positive attitude regarding nursing learning experience. It is believed that teachers, having good personality, supporting and respecting the students can improve their attitudes towards learning experience of pediatric oncology nursing. The present study revealed that there was highly statistical significance difference between age of the studied students and their acquired nursing skills.

These findings are in contrast with **Hengameh et al., (2015)** who studied the effect of applying direct observation of procedural skills on nursing students' clinical skills, and mentioned that there was no significant correlation was observed between students' demographic variables and clinical skills' acquisition.

### **Conclusion and recommendation**

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The study concluded that the learning experience of pediatric oncology nursing at Embaba Technical Institute of Health was satisfactory. In the light of study findings,

#### **It can be recommended that:**

The nursing learning experience at Embaba Technical Institute of Health should be planned to meet the actual educational needs of the nursing students. Peer and self-evaluation should be an integral component of learning experiences of pediatric oncology nursing at Embaba Technical Institute of Health. Encouraging and updating strategies for teaching and learning at Embaba Technical Institute of Health.

Periodic assessment of the nursing students towards their nursing learning experience of pediatric oncology nursing.

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**Evaluation of Learning Experience of Pediatric Oncology Nursing among Students at Embaba Technical Institute of Health**

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