

## A Study to Assess the Knowledge Regarding ECT among B.Sc Nursing Students in Narayana Nursing Institution at Nellore

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### Abstract:

**Introduction:** Today's nursing students are tomorrow's nurses who will be closely working and taking care of the patients. The nature of nursing profession requires nurses to spend more hours with the patients than all other health care professionals and considering the valuable and essential nursing interventions provided to the patients undergoing ECT prior, during and after the treatment session; therefore, nurses' knowledge and attitudes towards ECT will impact their patients' knowledge and attitudes towards ECT. Since third year BSC nursing students have adequate knowledge or not regarding ECT. So the investigator felt the need to conduct this study to assess the knowledge regarding ECT among 3<sup>rd</sup> Year B.sc nursing students in Narayana nursing institution at Nellore district.

**Objectives:** To assess the level of knowledge regarding ECT among 3<sup>rd</sup> year B.Sc Nursing students, to find out the association between the level of knowledge with their socio demographic variables.

**Methodology:** After obtaining formal permission from principle and ethical committee the study was conducted in Narayana nursing intuition at Nellore. Sample were selected by using convince sampling technique. The study is included with 60 samples and 30 questions it took for 30 minutes to complete the tool. The students were written for all questions. The data collection procedure was done for a period of 1 week and was analyzed by using descriptive and inferential statistics.

**Results:** The knowledge regarding ECT among B.Sc Nursing students 18 (30%) has adequate knowledge, 29 (48.33%) people belong to moderately adequate knowledge and 13 (21.66%) students belong to inadequate knowledge.

**Discussion:** Monday N. Igwe et al. (2014) conducted Electroconvulsive Therapy in the Eyes of Undergraduate Nursing Students and observed the total mean score on the QuAKE was low among the student nurses. Therefore, there is a need to improve undergraduate nursing education on ECT. Byrne et al. (2006) had been earlier reported that exposure to the procedure of ECT failed to improve nursing students' attitudes to the therapy.

**Summary:** The descriptive study to assess the knowledge regarding ECT among 3<sup>rd</sup> year B.Sc Nursing students in Narayana Nursing Institution, Nellore. A sample of the study is 60. The data collection was started by using non-probability convenience sampling technique. The data collection period is 1 week only. The structured questionnaire is administered the session will completed within 30 minutes. The data was analyzed by using the descriptive and inferential statistics (frequency, percentage, mean, standard deviation and chi-square)

**Conclusion:** The following conclusion is drawn from the study. Findings revealed that majority of the B.Sc nursing students had moderately adequate knowledge, which indicates there is a need for continuing nursing education program on ECT.

**Keywords:** Electroconvulsive Therapy (ECT), Knowledge, Narayana College of Nursing.

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### I. Introduction

Electroconvulsive therapy is a type of somatic treatment first introduced by Bini and Cerletti in April 1938 from 1980 onwards ECT is being considered as a unique psychiatric treatment. ECT is defined as the artificial induction of grandma seizure through the application of electrical current to the brain. The stimulus is applied through elect odes that are placed either bilaterally in the front- temporal region or unit laterally on the non-dominant side<sup>(1)</sup>.

The exact mechanism of action is not known. One hypothesis states that ECT possibly affects the catecholamine pathways between diencephalon (from where seizure generalization occurs) and limbic system (which may be responsible for mood disorder) also involving the hypothalamus.

Aashish Parihar(2013)<sup>(2)</sup> conducted a Descriptive study to assess the knowledge of ECT among nursing students. The target population for the study was nursing personnel working in Govt. Psychiatric Centre, Jaipur, Rajasthan. For the final study a total of fifty (50) nursing personnel of Govt. Psychiatric Centre, Jaipur, Rajasthan were selected as sample. By probability sampling technique namely purposive sampling was used to make the study more practicable and feasible. A self administered questionnaire was prepared to assess the

knowledge of nursing personnel on ECT. The self administered structured questionnaire comprised of 40 items about ECT. Score  $\geq 65$  considered as Adequate and score  $<65$  considered as inadequate.

Today's nursing students are tomorrow's nurses who will be closely working and taking care of the patients. The nature of nursing profession requires nurses to spend more hours with the patients than all other health care professionals and considering the valuable and essential nursing interventions provided to the patients undergoing ECT prior, during and after the treatment session; therefore, nurses' knowledge and attitudes towards ECT will impact their patients' knowledge and attitudes towards ECT. Literature review reveals several studies exploring nurses' knowledge and attitudes towards ECT. It has been suggested that there is a positive relationship between years of clinical experience and knowledge of mental health professionals regarding ECT and their attitudes towards ECT, while poor contact with ECT during students training was connected to poor knowledge and more negative attitudes<sup>(3)</sup>.

Since third year BSC nursing students have adequate knowledge or not regarding ECT. So the investigator felt the need to conduct this study to assess the knowledge regarding ECT among 3<sup>rd</sup> Year B.sc nursing students in Narayana nursing institution at Nellore district.

### **Objectives**

- To assess the level of knowledge regarding ECT among 3<sup>rd</sup> year B.Sc Nursing students.
- To find out the association between the level of knowledge with their socio demographic variables.

### **Assumptions:**

- The student nurse may have some knowledge on ECT.

### **Delimitations:**

This study is limited to,

- 3<sup>rd</sup> year B.Sc nursing students who are studying in Narayana Nursing Institutions.
- Nursing Students who know Telugu and English.
- For 60 sample only.
- The data collection period of one week only.

### **Projected Outcome:**

The study would help to assess the knowledge regarding ECT among 3<sup>rd</sup> year B.Sc nursing students.

## **II. Methodology**

Methodology is a significant part of the study which enables the research to protect a blue print of the research undertaking.

### **Setting of the study:**

The study was conducted in Narayana nursing institutional Nellore. It is attached with medical college hospital located in urban area. The college offers B.SC nursing (200) seats PB.Sc nursing (30seats) and the MSC nursing (30seats) college have all facilities like sufficient teaching and non teaching staffs class rooms. Seminar hall library with spacious sitting arrangement, reading room, laboratories, include fundamental lab, community lab, nutrition lab, maternity lab, child health lab, mental health lab, anatomy, biochemistry microbiology lab. And computer lab a aids room, auditorium common room for relaxation. Record room, store room, canteen, and monthly health services. Other facilities like sports, Nss, transportation and hostel.

### **Target Population:**

In this study the population is the 3<sup>rd</sup> year B.Sc nursing students who are studying in Narayana Nursing Institution at Nellore.

### **Accessible population:**

In this study the population was 60 3<sup>rd</sup> year B.Sc nursing students in Narayana nursing institution

### **Sample:**

The samples for the present study include all 3<sup>rd</sup> year B.Sc nursing students who are studying in Narayana Nursing institution at Nellore.

### **Sampling technique:**

The sampling technique for this study was non probability convenience sampling technique was used to assess the level of knowledge regarding ECT among 3<sup>rd</sup> year B.Sc nursing students in Narayana Nursing institution at Nellore.

**Sample size:**

The sample sizes consist of 60 third year B.Sc nursing students who are studying in Narayana Nursing Institutions.

**Criteria for sample selection**

**-Inclusion criteria:**

- The participants are included for the present study was following:
- Student nurse who are studying 3<sup>rd</sup> year B.Sc nursing in Narayana Nursing institution.
- The study nurse who can read & write Telugu and English.

**- Exclusion criteria:**

- The participants are excluded from the study as following;
- The student who are not willing to participate in the study.

**Description of tool:**

The development and description of tool was divided into 2 parts.

**Part A:** The demographic data include the age, religion, marital status, experience in ECT ward, if yes means how many months, type of family, source of information.

**Part B:** This consists of 30 questions to assess the knowledge regarding ECT among student nurse. Total score was 60 each question carries 1 mark correct answer and zero for wrong answer total score were calculated by adding & percentage improvement were calculated by using the formula.

**Score interpretation**

Category	Score	percentage
Inadequate	0-8	<50%
Adequate	9-16	50-70%
Good	>17	>70%

**Pilot study:**

After obtaining formal permission from principle and ethical committee the pilot study was conducted from 21-4-14 to 28-4-14 in Narayana nursing intuition at Nellore. Sample were selected by using convince sampling technique. The study is included with 60 samples. And it took for 30 minutes to complete the tool. The students were written for all questions. The data was analyzed by using descriptive and inferential statistics. Based on the pilot study results concluded that tool is reliable for conducting the main study.

**Data Collection procedure:**

The data collection procedure was done for a period of 1 week and after formal permission was obtained from principal and ethical committee. Data collection was started 60 samples was selected by non probability convince sampling technique. The student who full filled the inclusion criteria was included for study after obtaining consent from them. And the confidentiality of the shared information was assured. The data was collected by using structured questionnaire. To assess the knowledge regarding ECT among 3<sup>rd</sup> year B.sc nursing students it took for 30 minutes to complete the questionnaire. The data were organized and presented in the tables and figures.

**Plan for Data Analysis**

The data will analyzed in forms of objectives of the study the plan for data analysis as follows.

S. No	Data analysis	Method	Remarks
1	Descriptive statistics	Frequency and percentage distribution means standard deviation	To assess the level of knowledge regarding ECT among 3 <sup>rd</sup> year B.Sc nursing students
2	Inferential statistics	Chi-square test	To find out the association between the level of knowledge with their social demographic variables

**III. Data Analysis And Interpretation**

The data collected from 60 student nurses were entered in master coding sheet and analyzed by using descriptive and inferential statistics which are necessary to prove a substantive of results and in relation to the objectives.

The data were organized and presented under

**SECTION I:** The frequency and percentage distribution of demographic variables of B.Sc nursing students.

**SECTION II:**

1. Frequency and percentage distribution of knowledge regarding ECT among 3<sup>rd</sup> year B.Sc. (n) students in Narayana nursing institutions at Nellore.
2. Mean and standard deviation of level of knowledge.

**SECTION III:** Association between the levels of knowledge regarding ECT with their socio demographic variables.

**SECTION I:**

Table I: The frequency and Percentage distribution of B.Sc Nursing students based on age. (N=60)

Age in years	Frequency (f)	Percentage (%)
19 – 20	40	66.66
21 – 22	20	33.33
Total	60	100

Table I shows that with regard of age, of student nurses, 40 (66.66%) were between 19-20 years and 20 (33.33%) are between 21-22 years of age.

Percentage distribution of B.Sc Nursing students based on age

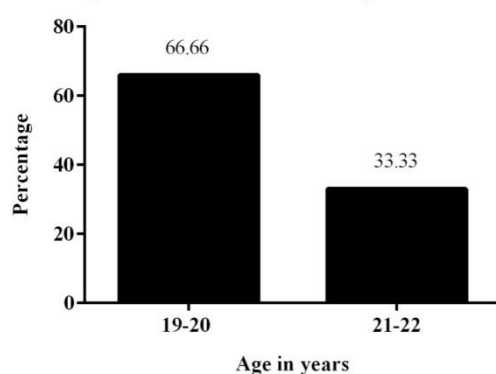


Table II: Frequency and percentage distribution of B.Sc Nursing students based on religion. (N=60)

Religion	Frequency (f)	Percentage (%)
Hindu	20	33.33
Muslim	3	5
Christian	37	61.66
Total	60	100

Table II shows that with regard to Religion, 20 (33.3%) student nurses are Hindus and 3 (5%) are Muslims and 37 (61.7%) are Christians.

Percentage distribution of B.Sc Nursing students based on religion

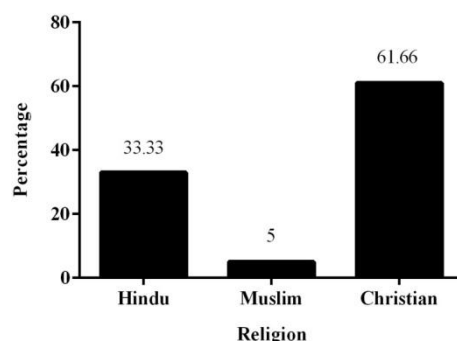


Table III: Frequency and percentage distribution of B.Sc nursing students based on marital status. (N=60)

Marital status	Frequency (f)	Percentage (%)
Married	6	10
Unmarried	54	90
Total	60	100

Table III shows that with regard to marital status of student nurses, 6(10%) were married and 54 (90%) were unmarried.

Percentage distribution of B.Sc Nursing students based on marital status

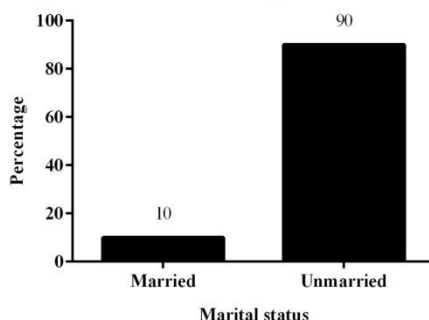


Table IV: Frequency and percentage distribution of B.Sc Nursing students based on experience in ECT ward. (N=60)

Experience in ECT ward	Frequency (f)	Percentage (%)
Yes	21	35
No	39	65
Total	60	100

Table IV shows that with regard to experience of student nurses in ECT ward, 21 (35%) had experience in ECT ward and 39 (65%) did not have experience.

Percentage distribution of B.Sc Nursing students based on experience in ECT ward

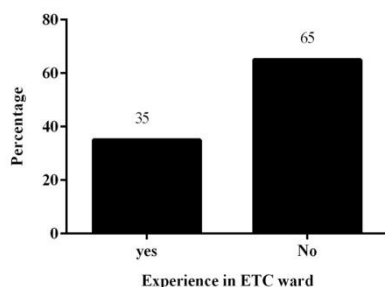


Table V: Frequency and percentage distribution based on months of experience of B.Sc nursing students. (N=60)

Months of experience	Frequency (f)	Percentage (%)
1 Month	36	60
2 Month	10	16.66
2 - 5 Month	10	16.66
> 5 Month	4	6.66
Total	60	100

Table V shows that with regard to months of experience I n ECT ward , 36 (60%) student nurses had 1 month experience 10 (16.66%) had 2 months, 10 (16.66%) had 2-5 months and 4 (6.66%) had >5 months of experience.

Percentage distribution of B.Sc Nursing students based on months of experience

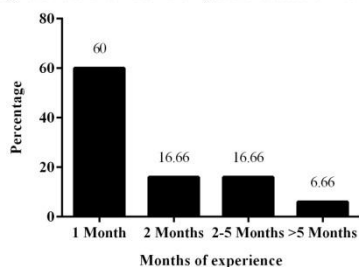


Table VI: Frequency and percentage distribution of B.Sc nursing students based on type of family.

Type of family	Frequency (f)	Percentage (%)
Nuclear family	56	93.33
Joint family	4	6.66
Total	60	100

Table VI shows that with regard to type of family of student nurses, 56 (93.33%) belongs to nuclear family, 4(6.66%) belong to joint family.

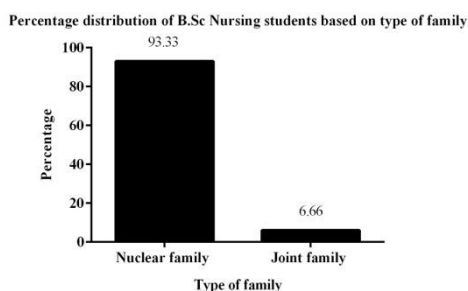
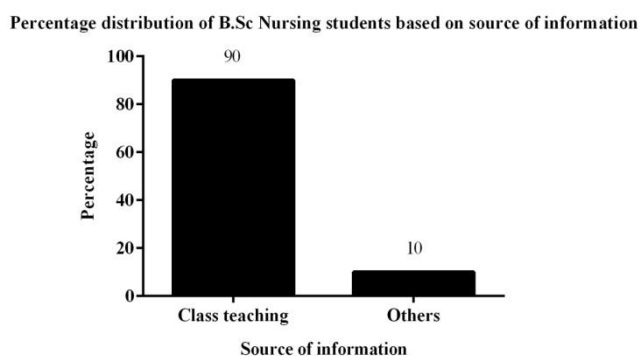


Table VII: Frequency and percentage distribution of B.Sc nursing students based on source of information.

Source of information	Frequency (f)	Percentage (%)
Class teaching	54	90
Others	6	10
Total	60	100

Table VII shows that with regard to source of information, 54 (90%) had got information from class teaching and 6 (10%) got information from other sources.



## SECTION II

Table VIII: Frequency and percentage distribution of B.Sc nursing students based on level of knowledge in ECT. (N=60)

Knowledge	Frequency (f)	Percentage (%)
Adequate	14	23.33
Moderately adequate	35	58.33
Inadequate	11	18.33
Total	60	100

Table VIII shows that, among 60 student nurses, 14 (23.33%) had adequate knowledge, 35 (58.33%) had moderately adequate knowledge and 11(18.33%) had Inadequate knowledge regarding ECT.

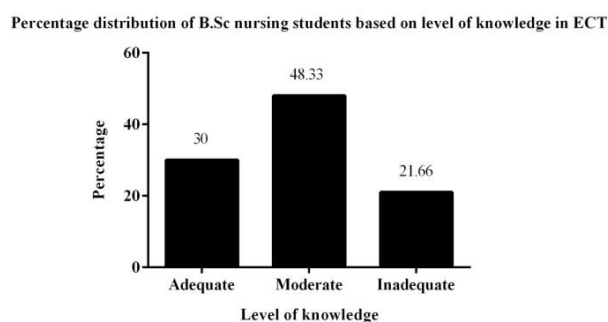


Table IX: Mean and standard deviation of B.Sc nursing students based on level of knowledge in ECT

Mean	standard deviation
20	8.15

Table IX shows that with regard to mean and standard deviation of level of knowledge of student nurses regarding ECT. It shows that the mean is 20 and standard deviation is 8.15.

### SECTION III

Table X: Association between levels of knowledge among B.Sc nursing students on ECT with their socio demographic variables

SL. NO	Demographic variables	Adequate		Moderately Adequate		Inadequate		Chi-Square
		f	%	f	%	f	%	
1	Age of student nurses							CV – 8.03 TV – 5.99 df – 2 S*
	A. 19-20 Years	30	50	9	15	1	1.66	
	B. 21-22 Years	10	16.66	5	8.33	5	8.33	
2	Religion							CV – 2.64 TV – 9.49 df – 4 NS
	A. Hindu	3	5	14	23.33	3	5	
	B. Muslim	1	1.66	2	3.33	0	0	
	C. Christian	10	16.66	19	31.66	8	13.33	
3	Marital status							CV – 2.28 TV – 5.99 df – 2 NS
	A. Married	0	0	5	8.33	1	1.66	
	B. Unmarried	14	23.33	30	50	10	16.66	
4	Experience in ECT ward							CV – 8.07 TV – 5.99 df – 2 S*
	A. Yes	10	16.66	5	8.33	6	10	
	B. No	8	13.33	24	40	7	11.66	
5	Months of experience							CV – 13.00 TV – 12.59 df – 6 S*
	A. 1 Month	25	41.66	5	8.33	6	10	
	B. 2 Months	5	8.33	2	3.33	3	5	
	C. 2-5 Months	3	5	5	8.33	2	3.33	
	D. >5 Months	1	1.66	3	5	0	0	
6	Type of family							CV – 2.22 TV – 5.99 df – 2 NS
	A. Nuclear	12	20	34	56.66	10	16.66	
	B. Joint family	2	3.33	1	1.66	1	1.66	
7	Source of information							CV – 0.87 TV – 5.99 df – 2 NS
	A. Class teaching	14	23.33	32	53.33	10	16.66	
	B. Others	1	1.66	3	5	2	3.33	

CV - Chi-Square value, TV – Table value, df – degree of freedom, S – significant, NS – Non significant, P value - \* < 0.05

### IV. Discussion

The main aim of the present descriptive study to assess the knowledge regarding ECT among 3<sup>rd</sup> year B.Sc Nursing students in Narayana Nursing Institution at Nellore.

The study was conducted by descriptive design the total number of 60 student nurses were selected through convenience sampling technique. The study was conducted for a period of 1 week from 21-4-2014 to 28-4-2014 after obtaining formal permission from the principal and ethical committee then the data collection was started. The students who fulfilled the inclusion criteria were included for study after obtaining consent from them. Confidentiality of the shared information was assured. The data was collected by using structured questionnaire to assess the level of knowledge. Finally the data was analyzed by using descriptive statistics and inferential statistics.

#### Objectives

- To assess the level of knowledge regarding ECT among 3<sup>rd</sup> year B.Sc Nursing students.
- To find out the association between the level of knowledge with their socio demographic variables.

#### Major Findings of the Study

##### Description of Demographic Characteristics

Among the 60 samples with regard to the age group 19-20 years 40 (66.33%). Then based on the religion, 37 (61.66%) belongs to Christian. Majority of the student nurses 54 (90%) were unmarried. And most of the student nurses 39 (65%) were having no experience in ECT ward. If 'yes' means majority of the student nurse 36 (60%) were experiencing in 1 month. And most of them 56 (93.3%) were belongs to nuclear family.

And many of them got source of information by class teaching. The findings are discussed based on the demographic characteristics and objectives of the study.

#### **Findings related to determine the knowledge regarding ECT among student nurses**

Table VIII reveals the knowledge regarding ECT among B.Sc Nursing students 18 (30%) has adequate knowledge, 29 (48.33%) people belongs to moderately adequate knowledge and 13 (21.66%) students belong to inadequate knowledge.

The present study was in accordance with the previous studies done by Byrne et al. (2006)<sup>(4)</sup> showed, Greater number of the students observed an ECT procedure at least once or more during their mental health posting. The scores of those who had observed the procedure compared to those who had never observed the procedure was not statistically significant ( $p = 0.72$ ). Thus exposure to an ECT procedure produced no significant change in score on the QuAKE. It had been earlier reported that exposure to the procedure of ECT failed to improve nursing students' attitudes to the therapy.

#### **Mean and standard deviation of level of knowledge regarding ECT**

Table IX shows that the mean and standard deviation for the level of knowledge regarding ECT for student are 20 and 8.15 respectively.

#### **Association between the knowledge regarding ect among student nurses with their selected socio demographic variables**

Table X shows that there is a significant association with age, experience in ECT ward and if yes means how many months of experience. And there is no significant association between the marital status, religion, type of family and source of information.

The present study was in accordance with the previous studies done by Monday N. Igwe et al. (2014)<sup>(5)</sup> conducted Electroconvulsive Therapy in the Eyes of Undergraduate Nursing Students and observed the total mean score of the students was  $7.53 \pm 2.65$ . Fifty eight (71.6%) students observed an ECT procedure and followed up the patients during the posting. They scored  $7.17 \pm 2.55$  while 23 (28.4%) students who had not observed the procedure scored  $6.98 \pm 1.92$  on the QuAKE ( $t = -0.36$ ,  $p = 0.72$ ). Thirty one (38.3%) students who would accept the procedure if indicated scored  $7.14 \pm 2.21$  while 50 (61.7%) of them who would not allow ECT carried out on them scored  $6.88 \pm 1.96$  ( $t = 0.56$ ,  $p = 0.58$ ). The mean score of 29 (35.8%) students who might pursue psychiatry as a career was  $8.10 \pm 1.90$  while 52 (64.2%) of them who would not specialise in psychiatry scored  $6.05 \pm 1.79$  ( $t = 5.00$ ,  $p < 0.001$ ). The total mean score on the QuAKE was low among the student nurses. Therefore, there is a need to improve undergraduate nursing education on ECT.

### **V. Summary**

The descriptive study to assess the knowledge regarding ECT among 3<sup>rd</sup> year B.Sc Nursing students in Narayana Nursing Institution, Nellore. A sample of the study is 60. The data collection was started on 21-4-2014 by using non-probability convenience sampling technique. The investigator explained about the nature and purpose of the study and then written consent was obtained from the subjects. The data collection period is 1 week only. The structured questionnaire is administered the session will completed within 30 minutes. The data was analyzed by using the descriptive and inferential statistics (frequency, percentage, mean, standard deviation and chi-square)

#### **Implica Tions of the Study Nursing Practice:**

- This study helps the student nurses to increase the level of knowledge regarding ECT.
- By following these interventions the quality of nursing practice can be enhanced and there by the profession itself.

#### **Nursing Education:**

- Student nurses have to update their knowledge regarding ECT.
- Nursing curriculum can provide opportunities the students to plan and conduct health education programs for various age groups regarding various therapies in different settings like schools, colleges, communities, hospitals and other health care agencies.
- The faculty has motivates the students regarding awareness of Electro Convulsive Therapy through seminar, conference and group discussion.

#### **Nursing Administration:**

- The administrators should plan continuing nursing education programs to nurses and should include such topics to enhance of student nurses.
- Nurse administrator should provide adequate training to nursing students regarding ECT.



**Nursing Research:**

- The study will be valuable reference and pathway for future researcher.
- The essence of research is to build up knowledge in nursing and involving profession for the period.

**VI. Recommendations For Further Research:**

On the basis of the findings of the study the following recommendations have been made,

- A similar study can be replicated on large sample size, in different settings within different population as longitudinal study.
- An experimental study can be conducted with structured learning program for study regarding ECT.
- Health education program can be conducted by using different method to teach and improve the knowledge regarding ECT.
- A descriptive study can be understood to assess the psychological; problem of applying ECT.
- A study can be conducted to assess the side effects of applying ECT.

**VII. Conclusion**

The following conclusion is drawn from the study. Findings revealed that majority of the B.Sc nursing students had moderately adequate knowledge, which indicates there is a need for continuing nursing education program on ECT.

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