



Assessment Of the Effectiveness Of Structured Teaching Programme On Knowledge And Attitude Regarding Organ Donation Among Students Of B. Sc. Nursing At A Selected College, Punjab, India

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Abstract

Background: The rate of deceased donations in India is currently between 0.05 and 0.08 per million population. The National Organ and Tissue Transplant Programme has developed plans for raising awareness and developing capacity in order to enhance organ donation. There is a need that knowledge and attitudes regarding organ donation among the population be initiated to promoting awareness and increasing donation rates.¹

Aim of the study: The study aimed to assess the effectiveness of a Structured Teaching Program (STP) on enhancing organ donation knowledge and attitudes among first-year B.Sc. Nursing students at a selected college, Punjab, India

Material and Methods: This quantitative study was conducted among B.Sc. Nursing (First Year) students selected by non-probability convenience sampling technique from a selected college, Punjab, India. The study employed a single group pre-test and post-test pre-experimental research design. Tools used were self-structured knowledge questionnaire and a five point Likert scale for attitude.

Results: In the pretest, 54% of the sample had good knowledge, and 42% had average knowledge. After the structured teaching program, 98% gained excellent knowledge, with 2% maintaining good knowledge. Initially, 74% had a positive attitude, and 26% had a neutral attitude. Post-program, 26% shifted from neutral to positive attitude. The pretest overall mean score was 10.60 (SD 2.129), increasing in the post-test to 17.620 (SD 1.2103). Pretest attitude mean was 59.56 (SD 6.058), rising to 62.06 (SD 4.137) post-test, with a significant 't' value of 3.667 at $P < 0.05$. The results indicate a substantial improvement in awareness and positivity post-education on organ donation.

Keywords: knowledge, attitude, organ donation, structured teaching programme, B.Sc. Nursing Students

INTRODUCTION

The provision of healthcare to a diverse patient population is directly impacted by the unusual social activity of organ donation. Donating one or more organs (or portions thereof) to another person for transplantation is known as organ donation, according to the Encyclopedia Britannica (2013)². Donors may be classified as living, brain-dead, or deceased in order to donate organs. A living donor can donate one kidney, a portion of the liver, the pancreas, the intestine, or even a lobe of the lung. They may also donate their single kidney³ Transplanting solid organs is no longer possible after cardiac death since blood circulation has stopped. Thus, since blood is still flowing through solid organs at the moment of organ extraction, brain-dead donors can donate their hearts, lungs, livers, pancreas, and kidneys. However, within the first 24 hours following cardiac death, tissues such as corneas, bone, skin, and heart valves can be donated. According to experts, up to 50 individuals can be saved or helped by the organs of a single donor.⁴

The reports of the WHO depict that whereas 70–80% of people in Western nations pledge their organs after death, just approximately 0.01 percent of Indians do the same. The situation globally is much better than in India. India is facing an acute shortage of organ donors due to prevalence of myths and superstitions, and the country should bring in changes to organ donation laws to alleviate the situation, a health expert said.⁵

A transplant program cannot be successful unless certain conditions are met, such as public knowledge, a favorable attitude toward organ donation, and family agreement for organ donation in the event of brain death. Because of a lack of knowledge and comprehension about organ donation, religious beliefs, and superstitions, the general population, and terminally ill patients in particular, are fearful and mistrustful of one another.⁶ We need to educate the public so that they have a better understanding of the procedure in order to promote awareness and a positive attitude regarding organ donation.

Even in medical and nursing curricula, organ donation education is not regularly included in our educational system.⁷ A course of study must be impartial and sufficiently educational to promote independent thought, which will result in thoughtful judgments about donation and be able to be justified to family members. The number of families willing to give consent for donation has been steadily increasing as a direct result of this education, which enables them to actively participate in organ donation and transplantation. It must be acknowledged that, although each person's choice to donate or not should be given first priority, family members frequently have the last say. In fact, the most frequent cause of non-donation of organs is the inability to get potential donors' approval from their family members.⁸ Families' incomplete knowledge of the deceased's earlier desires is the reason behind this. It's common practice not to inform family members that you want to give.

OBJECTIVES

1. To assess the pre-test and post-test level of knowledge and attitude regarding organ donation among B. Sc. Nursing (First Year) students.
2. To assess the effectiveness of STP regarding organ donation on knowledge and attitude among B. Sc. Nursing (First Year) students.
3. To find out the association between post test level of knowledge and attitude regarding organ donation

and selected demographic variables among B. Sc. Nursing (First Year) students.

4. To assess the correlation between knowledge and attitude regarding organ donation among B. Sc. Nursing (First Year) students.

HYPOTHESIS

H0: There will not be any significant difference between the pre-test and post-test level of knowledge and attitude regarding organ donation among B. Sc. Nursing (First Year) students.

H1: There will be a significant difference between pre-test and post-test level of knowledge and attitude regarding organ donation among B. Sc. Nursing (First Year) students.

ASSUMPTIONS

- B. Sc. Nursing (First Year) students may have inadequate knowledge regarding organ donation.
- Knowledge regarding organ donation can help the B. Sc. Nursing (First Year) students to understand the rumors, myths, misconceptions and facts regarding organ donation.

DELIMITATIONS

This research is restricted to nursing students alone.

REVIEW OF LITERATURE

The literature has been reviewed under the areas given below:

- A review of the literature on attitudes and knowledge about organ donation
- Examining the research on the efficiency of a systematic education program on organ donation knowledge and attitudes

RESEARCH METHODOLOGY

RESEARCH APPROACH AND RESEARCH DESIGN

For this study, a pre-experimental research design with a single group pre- and post-test using a quantitative research approach was chosen.

POPULATION

Students pursuing a B.Sc. Nursing (First Year) at the State Institute of Nursing and Paramedical Sciences, Badal, were the study's target demographic and accessible population.

SAMPLE and SAMPLE SIZE

First-year B. Sc. Nursing students who satisfied the inclusion requirements made up the study's sample, which had a size of 50.

SAMPLING TECHNIQUE

Non-probability convenience sampling technique was used for this investigation.

DESCRIPTION OF TOOL

The tool used in the study consists of three parts:

Part 1: Socio-demographic variables

This section focused on demographic factors such as age, religion, marital status, area of residence, family type, and family income.

Part 2: Knowledge questionnaire regarding organ donation

This part assessed knowledge about organ donation through twenty multiple-choice questions. Each correct response was awarded one mark, while incorrect or unanswered responses received zero. Scores were interpreted as follows:

- 0-10 (0-50%): Average
- 11-15 (55-75%): Good
- 16-20 (80-100%): Excellent

Part 3: Attitude rating scale

Students' attitudes toward organ donation were evaluated using a Likert scale with twenty statements. Each statement had five choices: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree. Positive responses received scores of 5, 4, 3, 2, 1, while negative responses received the opposite. Scores were interpreted as follows:

- 61-100 (61-100%): Positive Attitude
- 20-60 (20-60%): Negative Attitude

VALIDITY OF THE TOOL

The tool underwent validation by diverse experts, including doctors and nursing professionals in the relevant fields. They assessed its relevance, accuracy, and appropriateness. Their feedback guided modifications and rearrangements for enhancement.

RELIABILITY OF THE TOOL

The reliability of the instrument was estimated by test-retest method by using Karl Pearson coefficient correlation. The reliability value of the instrument was 0.70 for knowledge and 0.76 for attitude and it was found to be statistically reliable for the main study.

PILOT STUDY

Pilot study involved ten first-year GNM day scholars selected by convenience sampling technique. Ethical clearance was obtained. Using a knowledge questionnaire and attitude scale, the study assessed organ donation knowledge and attitudes. Results revealed a significant correlation between structured instruction and improved knowledge and attitudes. The survey indicated heightened awareness and positive sentiments towards organ donation. Descriptive and inferential statistics were applied for data analysis, confirming the study's feasibility.

ETHICAL CONSIDERATION

For the present study, Ethical values were taking into consideration. The study was accepted by the research ethical committee of the college. Prior permission was obtained from the concerned authorities of the State Institute of Nursing and Paramedical Sciences, Badal, Shri Muktsar Sahib district. The samples were apprised of the study's purpose before their informed written consent was obtained. Confidentiality was promised and ensured. The participants were given freedom to quit from study in between if they are not willing to participate. No routine duties were altered or withheld. No physical or psychological pain was caused.

DATA COLLECTION PROCEDURE

Data from 50 first-year B. Sc. nursing students was gathered at the State Institute of Nursing and Paramedical Sciences, Badal, Shri Muktsar Sahib District. The samples were assured anonymity and confidentiality of information provided by them. Before the Structured Teaching, pretest was conducted and teaching was given in two small groups. Then the Post test was conducted after 15 days with the same participants by using the same questionnaire. The tool was verified for completion. Data confidentiality was ensured for the clients. The participants were made comfortable.

DATA ANALYSIS AND INTERPRETATION

TABLE 1. Frequency and Percentage distribution of B. SC. Nursing (First Year) students according to demographic characteristics

S.NO	DEMOGRAPHIC Characteristics	B.SC NURSING 1ST YEAR STUDENTs N= 50	
		Frequency	Percentage
1.	Age (in Years)		
	a) Less than 17	1	2%
	b) 17-19	42	84%
	c) 20-22	6	12%
	d) More than 22	1	2%
2.	Religion		
	a) Hindu	13	26%
	b) Sikh	36	72%
	c) Christian	1	2%
3.	Family's type		
	a) Nuclear	37	74%
	b) Joint	13	26%
4.	Family Income (in Rupees/month)		
	a) 5000-10000	22	44%
	b) 10000-15000	13	26%
	c) >15000	15	30%
5.	Marital Status		
	a) Unmarried	50	100%
6.	Residing in		

	a) Rural	35	70%
	b) Urban	15	30%
7.	Have you heard about organ donation?		
	a) Yes	49	98%
	b) No	1	2%
8.	Source of information		
	a) Mass Media/ Internet	24	48%
	b) Health Professional	8	16%
	c) Friends/ Family/ Relatives	14	28%
	d) Teachers	2	4%
	e) Others	2	4%

Majority of first-year B.Sc. Nursing students (84%) were aged 17-19. 74% were Sikh, 44% had family incomes between 5000 and 10,000 Rs./month. 70% lived in urban areas. 98% were aware of organ donation; 48% learned about it from media or internet.

TABLE 2: Frequency and percentage Distribution of B. Sc. Nursing (First Year) Students according to Pretest and Post Test Level of Knowledge.

N=50

Level of knowledge	score	Pretest		Post test	
		N	%	N	%
Average	0-50%	21	42	-	-
Good	55-75%	29	54	1	2
Excellent	80-100%	-	-	49	98

Pretest results showed 54% with good knowledge, 42% with average knowledge, and none with excellent knowledge. In the post-test, 98% gained excellent knowledge, 2% had good knowledge, and none were in the average knowledge category.

Figure1 Frequency and percentage Distribution of B. Sc. Nursing (First Year) Students according to Pretest and Post Test Level of Knowledge regarding organ donation.

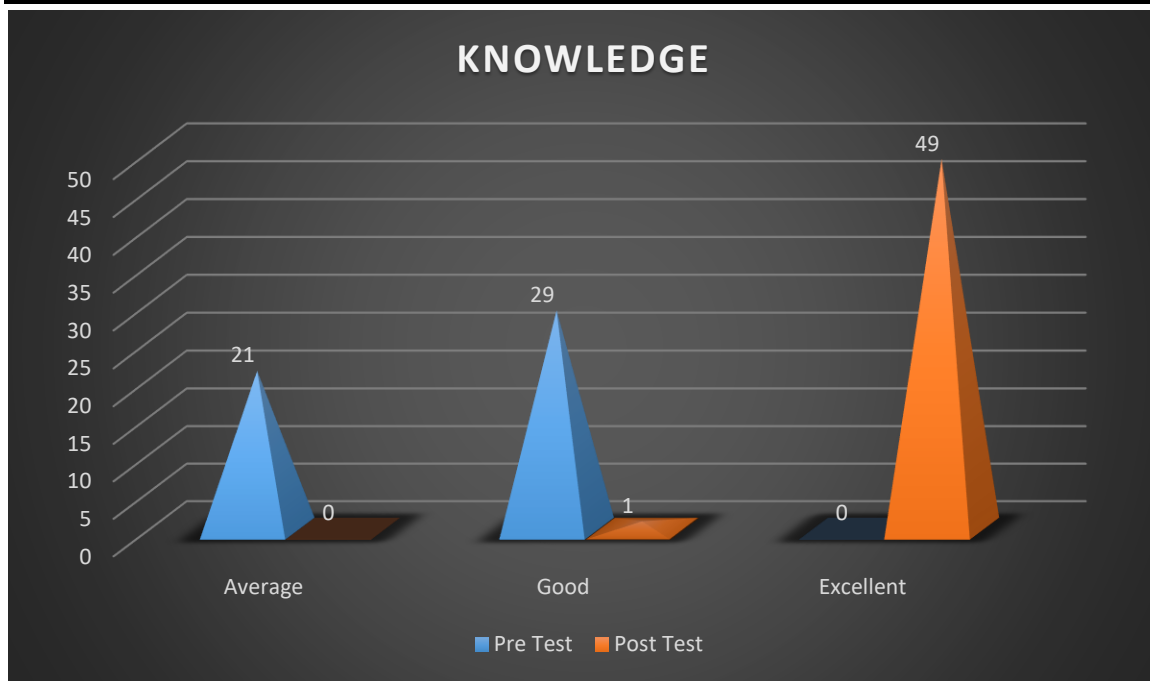


TABLE 3: Mean Knowledge score of B. Sc. Nursing (First Year) Students Regarding Organ Donation in Pre Test and Post Test

N=50

B. Sc. (N) 1 st year students	Mean Knowledge score	SD	“t” Value
Pre Test	10.60	2.129	22.572
Post Test	17.620	1.2103	Df=49 P= .000*

Level of significance 0.05

*=significant

Pre-test mean score: 10.60 (SD: 2.129). Post-test mean score: 17.620 (SD: 1.2103). "t" value: 22.572. Results indicate a significant improvement in understanding after an organ donation education program. Methodical instruction enhanced knowledge among first-year B.Sc. Nursing students.

TABLE 4: Frequency and percentage Distribution of B. Sc. Nursing (First Year) Students according to Pretest and Post Test Level of attitude.

N=50

Attitude	score	Pretest		Post test	
		N	%	N	%
Positive	61-100	13	26	50	100
Neutral	20-60	37	74	0	-

Maximum Score=100

Minimum Score= 20

In pretest majority of sample i.e 74% had negative attitude while only 26% had positive attitude towards organ donation. After teaching program, all the participants were having positive attitude indicating that increased knowledge positively influenced attitudes toward organ donation.

Figure 2 Frequency and percentage Distribution of B. Sc. Nursing (First Year) Students according to Pretest and Post Test Level of attitude regarding organ donation.

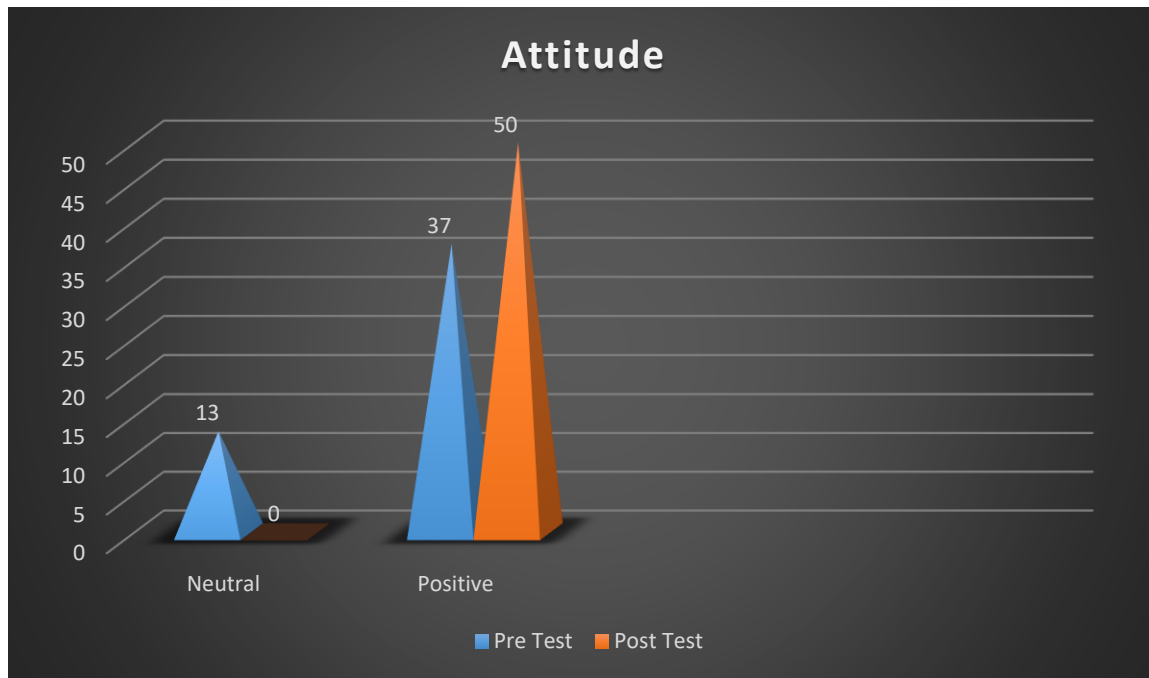


TABLE 5: Mean attitude score of B. Sc. Nursing (First Year) Students regarding organ donation in pretest and post test.

N=50			
B. Sc. Nursing 1 st year students	Mean Attitude Score	SD	"t" Value
Pre Test	59.56	6.058	3.667
Post Test	62.06	4.137	Df=49 P= .001*

Level of significance 0.05

*= significant

In the pre-test, the average attitude score was 59.56, standard deviation 6.058; in the post-test, the average score was 62.06, standard deviation 4.137; the resulting "t" value was 3.667, statistically significant at the 0.05 level of significance. Thus, it was concluded that a systematic educational approach was successful in influencing first-year B. Sc. Nursing students' attitudes toward organ donation.

TABLE 6: Correlation between Knowledge And Attitude of B. Sc. Nursing (First Year) students Regarding Organ Donation.

N=50

Post Test	Mean Score	SD	'r' value
Knowledge	17.620	1.2103	0.78
Attitude	62.06	4.137	

The post test mean knowledge score was 17.620 with SD 1.2103 and mean attitude score was 62.06 with SD 4.137 and the obtained 'r' value was 0.001 which was calculated by Karl Pearson correlation coefficient. It was found to be positively correlated. Hence, there was moderately positive correlation between knowledge and attitude of participants.

DISCUSSION

The study aimed to evaluate knowledge and attitudes on organ donation among B.Sc. Nursing (First Year) students. Pre-test results showed 54% had good knowledge, increasing to 98% post-structured teaching. Positive attitudes rose from 74% pre-test to unanimous positivity post-instruction. Similar findings were supported by Jalala Azmandian's⁹ study on improved organ donation knowledge and attitudes post-education.

Structured teaching effectiveness was confirmed with significant pre-test to post-test score increases ($p < 0.05$), consistent with Zavalkoff, S., Shemie, S.D., Grimshaw, J.M. et al.¹⁰ study in Canada showing increased awareness and willingness to donate post-education.

The study found a strong correlation between post-test knowledge and willingness to donate organs. Demographic variables didn't significantly influence knowledge. Walid A. Al-Qerem, Jonathan Ling's¹¹ studies supported the connection between post-test knowledge and the willingness to donate.

A positive correlation between post-test knowledge and attitude was established using Karl Pearson correlation coefficient ($r = 0.78$). Gupta A, Jain S, Jain T, Gupta K¹² study on eye donation among adolescents further supported a positive correlation between knowledge and attitude.

RECOMMENDATIONS:

In light of the results, the researchers put forth the following suggestions:

- Regular educational workshops concerning organ donation must be conducted to ensure public awareness of the practice.
- To generalize the results, a large-scale study with various demographic features can be conducted.
- A study on public awareness and participation in organ donation may be conducted.
- A comparative study can be conducted to assess the knowledge, practice and attitude regarding organ donation among health professional and non health professional students.

CONCLUSION:

Globally, organ donation is a critical public health issue, with only 200 potential donors per 100,000 deaths annually.¹³ This low number underscores the urgency of increasing awareness around organ donation. The significant impact of organ donation lies in saving lives that might otherwise be lost. A single donation can positively affect multiple lives, enhancing both survival and quality of life. Additionally, donating across diverse religious backgrounds fosters love, compassion, and empathy in communities. Regular educational programs are crucial for promoting organ donation, and there's a suggestion to incorporate organ donation lessons into school curricula as an innovative approach to address the shortage of organs.

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