



Effect Of An Awareness Program On Knowledge And Attitude Regarding Organ Donation Among College Students Of Selected Colleges Of Bankura, West Bengal

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Abstract: A Quasi experimental study was undertaken on effect of an awareness program on knowledge and attitude regarding organ donation among College students of selected Colleges of Bankura, West Bengal with the objectives to assess the knowledge and attitude of the College students regarding organ donation before and after awareness program, to evaluate the effectiveness of awareness program, to ascertain the relationship between the knowledge score and attitude and to find out the association between knowledge and attitude with selected demographic variables. By stratified random sampling technique 88 students selected from two Colleges of Bankura and to collect data semi structured demographic proforma, structured knowledge questionnaire and structured 5-point attitude rating scale was used. Study findings revealed that the awareness program was effective in increasing knowledge and bringing positive changes in attitude among College students as evident from the paired 't' value between pre and post-test knowledge score ('t'=14.31, p=0.05) and attitude score ('t'=16.76, p=0.05) in Experimental group. The study results also revealed that the awareness program was effective in creating difference in knowledge and attitude among the College students in Experimental and Control group as evident from the independent 't' value between post-test knowledge score ('t'=14.77, p=0.05) and post-test attitude score ('t'=18.97, p=0.05). There was no significant correlation (r=0.04) between post-test knowledge and attitude score. There was significant association of pre-test knowledge score with stream of education of College students. The study has implication for nursing practice, education, administration and research.

Index Terms - Organ donation, Awareness program, College students, Knowledge, Attitude, Quasi-experimental study, Health education, Nursing research.

I. INTRODUCTION

Organ donation is a noble service contribute to humanity. It is transplantation of healthy organs from a donor to a patient receiver. Healthy human organs and tissues that are fully functioning are collected and transplanted into donor's bodies to save their lives. Generally, most popularly organs are donated after donor's death but some organs can be donated even when the donors are alive.

Donation of organs are in very much need all over the world. Take part in this social service in the form of organ donation, is a great form of charity. Through organ donation, one can be remembered even after death. We all should pledge to donate our organs and also motivate others and promote the importance of organ donation.

II. BACKGROUND OF THE STUDY

Organ donation is a distinctive social activity that has a direct impact on the delivery of healthcare to a wide range of patients. Organ Transplantation is the choice of treatment to improve quality of life and increase the life span. Also, transplantation cut the cost of various long-term treatments for any end stage organ diseases to maintain health. Advances in immunology and surgical techniques are transforming organ transplant is an important therapeutical option.

Organ donation is a virtuous act, that provides an opportunity to save lives even after death. An organ is a part of the body that performs a specific function like Heart, Lungs, Kidney, Liver, Pancreas & Intestine, etc. Many patients suffer from end stage disease of various organs; organ donation is the only hope for them. The organs that are donated by a living or a deceased donor are transplanted into those patients for therapeutic purposes.

III. NEED OF THE STUDY

Organ shortage is a matter of concern at the moment for public health worldwide. According to the International Transplantation registry in Organ donation and Transplantation 2022 the top five countries with the highest organ donation rates are USA 41.88 per million population(pmp), Spain 40.2 pmp, Croatia 29.5 pmp, Iceland 29.35 pmp, Portugal 27.85 pmp. India lags far behind with 0.4 pmp (deceased donor) and 7.60 pmp (living donation). In India, informed consent is needed from donor or donor's family for organ donation, it is very hard to meet the demands of organ as contrast to countries like Spain, where presumed consent system is present, opt-out donation system which makes easier to get adequate organs for donation.

No less than 5 lakhs people in Indian are dying annually suffering from failure of their major functioning organs anytime. More than 8 lives can be saved by a person if he or she donate their well-functioning organs. The Organ Donation Day campaign, which is celebrated every year at August 3rd in India and on August 13th Worldwide, provide great opportunity in everyone's life to come ahead and pledge to donate their precious organs.

IV. OBJECTIVES:

1. To assess the knowledge of the College students regarding organ donation before and after awareness program of selected colleges of Bankura, West Bengal.
2. To assess the attitude of college students towards organ donation before and after awareness program.
3. To evaluate the effectiveness of awareness program on knowledge regarding organ donation.
4. To evaluate the effectiveness of awareness program on attitude regarding organ donation.
5. To ascertain the relationship between the post-test knowledge score and attitude regarding organ donation among the college students in experimental and control group.
6. To find out the association between pre-test knowledge score and attitude with selected demographic variables.

I. V. RESEARCH METHODOLOGY

Research methodology indicates the general pattern for organizing the procedure of gathering valid and reliable data from an investigation. It includes the strategies of to be used to collect and analyze the data to accomplish the research objectives and to test the research hypotheses. This chapter dealt with a brief description of methodology adopted for the present study. The content of the chapter includes research approach, research design, variables, setting, sample size and sampling technique, development and description of tool and awareness program, data collection procedure and plan of data analysis for the present study. The details are as follows;

3.1 Population and Sample

In the present study, the population consisted of all the college students of Bankura, West Bengal.

3.2 Sample:

In the present study sample consisted of the Arts and Science stream College students of selected Colleges at Bankura, West Bengal who met the inclusion criteria.

3.3 Sample Size: 88 college students were selected as sample (44 each in Experimental and Control group).

3.4 Study setting: Selected colleges of Bankura, West Bengal.

3.5 Sampling technique: To select the sample Disproportionate Stratified Random Sampling technique was adopted for the present study.

3.6 Data collection tools and techniques

For demographic variables semi-structured demographic proforma, for knowledge of college students regarding organ donation structured knowledge questionnaire and for attitude of college students regarding organ donation structured 5-point attitude rating scale was used.

3.7 Data collection period: After obtaining the formal ethical and administrative permission the investigator started the data collection procedure from 02/01/2024 to 27/01/2024.

3.8 Theoretical framework

The Conceptual framework presents logically constructed concepts to provide a general explanation of the relationship between the concepts of 'the research study'. The present study is based on Karl Ludwig Von Bertalanffy's General System Theory (1968). This model has three main components-Input. Process and Output

Input

Input involves the resources used and the manner in which they are organized. Investigator focuses on the information regarding Organ Donation. In this study 'input' refers to preparation of the content, lesson plan, audio-video visual aids, development and validation of tools, preparation of awareness program on Organ Donation for College students, with their characteristics such as age in years, gender, stream, educational status of father, educational status of mother, occupational status of father, occupational status of mother, socio economical class according to modified B.G.Prasad scale 2022, previous knowledge regarding organ donation, source of knowledge, attended any Workshop/One-day seminar/Sensitization program regarding organ donation, any history of family member of organ donation, if yes then relation with the family member.

Process

Process is the way in which the professionals and others use the resources and the manner in which information is given. The assessment of knowledge and attitude of the College students regarding organ donation by using structured knowledge questionnaire and structured 5-point attitude rating scale before administration of awareness program, administering awareness program on Organ Donation and assessment of knowledge and attitude of College students regarding organ donation after awareness program.

Output

It is the end result in terms of change in the knowledge and attitude of College students regarding Organ Donation after the awareness program. In the present study, here it is considered to be change in knowledge and changes in attitude in a positive way regarding organ donation.

Feedback

Feedback is the process through which output is returned to system which is not under study.

3.4 Statistical tools

3.4.1 Descriptive Statistics

Analysis of the demographic data were done by frequency percentage. Mean, Median, Mode and Standard Deviation were computed to assess the knowledge score and attitude of college students regarding organ donation.

3.4.2 Inferential Statistics

- Paired 't' test was computed to compare pre-test and post-test knowledge score and attitude score of college students.
- Unpaired 't' test was computed to compare the knowledge and attitude score of experimental and control group.
- Correlation coefficient was computed to assess the correlation between the post test scores of knowledge and attitude regarding organ donation among the college students in both experimental and control group.
- Chi square test was computed to find the association between the pre-test knowledge score and attitude score with selected demographic variables.

VI. RESULTS AND DISCUSSION

Major findings of the study:

Major Study findings are summarised below:

1. Findings related to Demographic characteristics of the study samples:

- Most (93.18%) of students were from the age group 18-20 years in Experimental group and most (97.73%) students were from age group 18-20 years in Control group.
- Majority of students in Experimental group (54.55%) and in Control group (59.10%) students were female.
- 50% students from Arts stream and 50% students were from Science stream in Experimental and Control group.
- Maximum in Experimental group (40.90%) and majority (63.64%) in Control group fathers of College students had Secondary level of education.
- Majority mothers of College students in Experimental group (50%) and in Control group (65.91%) had secondary level of education.
- Maximum (45.46%) in Experimental group and maximum (47.72%) of fathers of college students in Control group were daily labour.
- Most (81.82%) of mothers of college students in Experimental group and all (100%) in Control group were homemaker.
- Majority (63.64%) College students in Experimental group and (68.19%) in Control group belongs to middle socio-economic class.
- Most (93.18%) College students in Experimental group and (90.91%) in Control group had no previous knowledge regarding organ donation.
- Among 3 College students (100%) in Experimental group and 4 students (100%) in Control group received knowledge from internet.
- In both Experimental and Control group no one had attended any Workshop/One-day seminar/Sensitization program regarding organ donation and no one had any family history of Organ Donation.

2. Findings related to knowledge level of College students:

table 1 distribution of college students according to pre-test and post-test knowledge score in experimental and control group

		Experimental group				Control group				n =88(nE)
Knowledge score	Range of score	Pre-test		Post-test		Pre-test		Post-test		
		f	%	f	%	f	%	f	%	
Excellent knowledge	>Q3 (>75%) = >19	0	0	18	40.91	0	0	0	0	
Good knowledge	>Q2-Q3 = (51%-75%) =13-19	2	4.54	24	54.55	2	4.54	3	6.82	
Average knowledge	Q1-Q2 = (25%-50%) =6-12	36	81.82	2	4.54	37	84.09	36	81.82	
Poor knowledge	<Q1(<25%) =<6	6	13.64	0	0	5	11.37	5	11.36	

=44, n_C=44)

Maximum possible score is 25

Minimum score is 0

Data depicted table 1 indicated that in Experimental group most (81.82%) of the students scored average and maximum (13.64%) had poor knowledge score in pre-test where as in post-test majority (54.55%) of students had good knowledge score and majority (40.91%) had excellent knowledge score.

Data also revealed that in Control group most (84.09%) students had average knowledge score and maximum (11.37 %) students had poor knowledge score in pre-test whereas in post-test most (81.82%) had average knowledge score and maximum (11.36%) students had poor knowledge score.

So, computed data revealed that excellent and good knowledge score was increased whereas average and poor knowledge score was decreased after administration of awareness program.

3. Findings related to attitude of College students

table 2 distribution of college students according to pre-test and post-test attitude score in experimental and control group.

n =88(n_E =44, n_C=44)

Attitude score	Range of score	Experimental group				Control group			
		Pre-test		Post-test		Pre-test		Post-test	
		f	%	f	%	f	%	f	%
Positive attitude	(>75%) = >90	1	2.27	36	81.81	0	0	0	0
Neutral attitude	= (50%-75%) =60-90	17	38.64	8	18.19	28	63.64	30	68.18
Negative attitude	= (<50%) =<60	26	59.09	0	0	16	36.36	14	31.82
Maximum possible score 120									
Minimum possible score 24									

Data depicted table 2 indicated that in Experimental group majority (59.09%) of the students had negative attitude and maximum (38.64%) students had neutral attitude in pre-test where as in post-test most (81.81%) of students had positive attitude, maximum (18.19%) students had neutral attitude and no one had negative attitude towards Organ Donation.

Data also revealed that in Control group majority (63.64%) students had neutral attitude and maximum (36.36%) students had negative attitude regarding Organ Donation in pre-test whereas in post-test majority (68.18%) had neutral attitude and maximum (31.82%) students had negative attitude.

So, computed data revealed that attitude towards Organ Donation changed from neutral to positive attitude after administration of awareness program.

4. Findings related to effectiveness of awareness program regarding organ donation on knowledge among College students in Experimental group and Control group

H₀₁: After administration of awareness program regarding organ donation among college students, there is no significant difference between mean pre-test and post-test knowledge score at 0.05 level of significance.

H₁- After administration of awareness program regarding organ donation among college students, the mean post-test knowledge score is significantly higher than the mean pre-test knowledge score at 0.05 level of significance.

Table 3 mean, standard deviation, mean difference, and paired 't' value of the pre-test and post-test knowledge score of college students within group

n=88(n _E =44, n _C =44)				
Knowledge score	Mean	SD	Mean difference	Paired 't' value
Experimental group				
Pre-test	10.02	2.29	7.79	14.31
Post test	17.81	2.72		
Control group				
Pre-test	9.25	2.29	0.06	0.13
Post test	9.31	2.67		

't' (df 43)= 1.68, p=0.05

Data presented in table 3 revealed that the mean post-test knowledge score (17.81±2.72) of College students in Experimental group was significantly higher than their mean pre-test knowledge score (10.02±2.29), with a mean difference of 7.79.

Computed paired 't' value (14.31) from the above data was found to be statistically significant from corresponding 't' table value (1.68) indicating that the mean difference (7.79) was a true difference and not by chance.

Hence, the null hypothesis (H₀₁) was rejected and research hypothesis (H₁) was accepted. So, it could be concluded that the awareness program regarding Organ Donation was effective in increasing knowledge in College students in experimental group.

Data also showed that paired 't' value computed between pre-test and post-test knowledge score in Control group (0.13) which was found statistically not significant from corresponding 't' table value (1.68) indicating that the mean difference (0.06) was by chance and not a true difference.

5. Findings related to effectiveness of awareness program regarding organ donation in creating difference in knowledge of College students in Experimental and Control group.

In order to find out the significant difference 'Independent t' was computed between pre-test knowledge score of college students in Experimental and Control group and post-test knowledge score of College students in Experimental and Control group and the following hypothesis was tested.

H₀₂: After administration of awareness program regarding organ donation among college students, there is no significant difference between mean post-test knowledge score in Experimental and Control group at 0.05 level of significance.

H₂: After administration of awareness program regarding organ donation the mean post-test knowledge score of College students in Experimental group is significantly higher than the mean post-test knowledge score of College students in Control group at 0.05 level of significance.

table 4 mean, standard deviation, mean difference, and independent 't' value of the knowledge score of college students in between groups.

n=88 (n _E =44, n _C =44)				
Knowledge score	Mean	SD	Mean difference	Independent 't' value
Pre-test				
Experimental group	10.02	2.29	0.77	1.57
Control group	9.25	2.29		
Post test				
Experimental group	17.81	2.72	8.5	14.77
Control group	9.31	2.67		

t (df 86)=1.66, p=0.05

Data presented in table 4 revealed that the mean post-test knowledge score (17.81 ± 2.72) of College students in Experimental group was higher than the mean post-test knowledge score (9.31 ± 2.67) of College students in Control group, with a mean difference of 8.5.

Independent 't' value was computed from the above data which was found to be statistically significant as evident from corresponding 't' test value (14.77) was more than the tabulated 't' value (1.66) for df (86) indicating that the mean difference (8.5) was a true difference and not by chance.

Hence, the null hypothesis (H_0) was rejected and research hypothesis (H_2) was accepted. So, it could be concluded that the awareness program regarding Organ Donation was effective in increasing knowledge in College students in experimental group.

Data also showed that independent 't' value computed between pre-test knowledge score of Experimental and Control group (1.57) which was found statistically not significant from corresponding 't' table value (1.66) indicating that the mean difference (0.77) was by chance and not a true difference.

6. Findings related to effectiveness of awareness program regarding organ donation on attitude among College students in Experimental group.

- The mean post-test attitude score (93.63 ± 6.32) of College students in Experimental group was significantly higher than their mean pre-test attitude score (58.18 ± 11.97), with a mean difference of 35.45.
- Paired 't' value (16.76) computed from the above data was found to be statistically significant from corresponding 't' table value (1.68) indicating that the mean difference (35.45) was a true difference and not by chance.

7. Findings related to effectiveness of awareness program regarding organ donation on attitude among College students in Control group.

- The mean post-test attitude score (62.75 ± 8.74) of College students in Control group was apparently higher than their mean pre-test attitude score (61.29 ± 8.29), with a mean difference of 1.46.
- Paired 't' value computed between pre-test and post-test attitude score in Control group (1.45) which was found statistically not significant from corresponding 't' table value (1.68) indicating that the mean difference (1.46) was by chance and not a true difference.

8. Findings related to effectiveness of awareness program regarding organ donation in creating difference in attitude of College students in Experimental and Control group.

- The mean post-test attitude score (93.63 ± 6.32) of College students in Experimental group was higher than the mean post-test attitude score (62.75 ± 8.74) of College students in Control group, with a mean difference of 30.88.
- Independent 't' value was computed from the above data which was found to be statistically significant as evident from corresponding 't' test value (18.97) was more than the tabulated 't' value (1.66) for df (86) indicating that the mean difference (30.88) was a true difference and not by chance.

9. Findings related to find out the relationship between knowledge and attitude regarding organ donation after introduction of awareness program on attitude among College students in Experimental group.

- Karl Pearson's coefficient correlation ('r') value between post-test knowledge score and attitude score (0.04) was found not to be statistically significant 0.05 level of significance, but there was a weak positive correlation.

10. Findings related to find out the relationship between knowledge and attitude regarding organ donation after introduction of awareness program on attitude among College students in Control group.

- Karl Pearson's coefficient correlation ('r') value between post-test knowledge score and attitude score (0.13) was found not to be statistically significant 0.05 level of significance.

11. Findings related to the association between pre-test knowledge with selected demographic variable.

- There was no significant association between pre-test knowledge score College students and age in years, gender, educational status of father, educational status of mother, occupational status of father, occupational status of mother, socio economical class according to modified B. G. Prasad scale may 2022, any previous knowledge regarding organ donation, source of knowledge, attended any workshop/one-day seminar/sensitization program regarding organ donation, history of family member of organ donation, if yes then relation with the family member. So, it could be concluded that knowledge score of college students was not depended on their age in years, gender, educational status of father, educational status of mother, occupation of father, occupation of mother, socio economical class according to modified B. G. Prasad scale may 2022, any previous knowledge regarding organ donation, source of knowledge, attended

any workshop/one-day seminar/sensitization program regarding organ donation, history of family member of organ donation, if yes then relation with the family member.

- There was significant association between pre-test knowledge score and Stream of College students So, it could be concluded that knowledge score of college students was depended on their stream.

12. Findings related to the association between pre-test attitude with selected demographic variable.

- There was no significant association between pre-test attitude score College students and age in years, gender, stream, educational status of father, educational status of mother, occupational status of father, occupational status of mother, socio economical class according to Modified B. G. Prasad scale may 2022, any previous knowledge regarding organ donation, source of knowledge, attended any workshop/one-day seminar/sensitization program regarding organ donation, history of family member of organ donation, if yes then relation with the family member. So, it could be concluded that attitude score of college students was not depended on their age in years, gender, stream educational status of father, educational status of mother, occupation of father, occupation of mother, socio economical class according to Modified B. G. Prasad scale may 2022, any previous knowledge regarding organ donation, source of knowledge, attended any workshop/one-day seminar/sensitization program regarding organ donation, history of family member of organ donation, if yes then relation with the family member.

VII. IMPLICATIONS

The findings of the study have several implications for nursing practice, nursing education, nursing administration and nursing research.

VIII. CONCLUSION

This study findings revealed that there was minimum modified gain score (0.09) in the area of Indications and contraindications for Organ transplantation, so there is a lack of awareness but the study also revealed that the awareness program was effective to increase the knowledge and brought positive changes in attitude. If periodic intervention like awareness program regarding Organ Donation can be arranged that will eventually increase the knowledge and change attitude among people.

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