

Assessment of Knowledge on Organ Donation Among Degree College Students at Selected College, Tirupati

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ABSTRACT

Organ transplantation is a medical procedure in which an organ is removed from one body and placed in the body of a recipient to replace a damaged or missing organ. Organ /tissues that are transplanted within the same person's body are called Auto grafts. Transplants that are recently performed between two subjects of the same species are called Allograft. Allografts can either be from a living or cadaveric source. Organs are systems of cells and tissues that perform a specific task eg:- Respiration, Circulation, gets rid of the body waste. **Aim** : To assess the level of knowledge on organ donation among degree college students, and To associate the level of knowledge on organ donation with their selected demographic variables.

Methodology : A descriptive design was adopted.40 students were selected by using simple random sampling technique at SV Govt polytechnic college, Tirupati. The level of knowledge was assessed by using the structured questionnaire.

Results : The results were out of 40 students 16% (16) had moderate knowledge 21% (21) had inadequate knowledge and only 3% (3) had adequate knowledge.

Conclusion : based on the obtained findings the researcher prepared a book let which will help them to improve their knowledge

Keywords : Organ transplantation, Respiration, Physiotherapy

I. INTRODUCTION

Life is a dynamic process. It starts from birth and ends into death. In between different stages of life with different diseases and problems. The medical advancement and technology had begun to save lives and the most miraculous achievement of modern medicine is organ transplantation which has the power to save lives of the clients¹.

In India Currently having a decreased donation rate of 0.05 to 0.08 per million populations. The National Organ and Tissue Transplant Programme have planned strategies to improve organ donation by creating awareness and capacity building. There is great need to organ donation among general population Worldwide, organ transplantation saves thousands of lives. According to WHO Kidney transplants are carried out in 91 countries around 66000 kidney donations, 21000 Liver donations and 6000 Heart donations were transplanted globally in

2005.² Organ donation is the removal of tissue of the human body from a person who has recently died or from a living donor for the purpose of transplanting. Replacing the organs may be the only treatment of choice for a patient who is chronically ill such as ESRD (End stage Renal Disease) tumors of heart, lung and liver etc³. Live donors' transplants are available alternative for patients in need of new organs who however depended entirely on generosity of donors and their families who are willing to make their life saving gift to recipient who are usually between 18-60 years. Organs and tissues are removed in procedures similar to surgery people of all ages may be organ tissue donors. Organ transplantation helps patient to lead an active and normal life. He may live for another 5 to 8 years after transplantation³. Government of Andhra Pradesh initiated the deceased donor program under the banner of "JEEVANDAAN" since January 2013 and has been facilitating and taking care of organ distribution⁵.

II. NEED FOR THE STUDY

On an average about 106 people are added to an organ waiting but every day and 18 people die such day waiting for an organ³. In many cases list answers is to replace the damaged organ with healthy one. So that waiting list of organs for donation is increasing day by day. Transplantation is the only area in all of health care that cannot exist without the participation of the public³. To encourage the students for giving life through donating organs for the needy to save lives. It is the individual's interest to donate organs and advised as "Anyone can everyone should"⁴. The numbers of people requiring life, saving transplants continues to rise faster than the number of available donors. In India approximately 300 new transplant candidates are added to waiting list each month adding to the critical shortage of organs⁴

III. AIM OF THE STUDY

- To assess the level of knowledge on organ donation among degree college students.
- To associate the level of knowledge on organ donation with their selected demographic variables.

H₀₁ :- There is no relationship with the knowledge and demographic variables towards organ donation among degree college students at selected college Tirupati.

IV. LITERATURE REVIEW

Raktim Pratim Tamuli¹, Smritimala Sarmah, et al., (2019)⁶ conducted a descriptive study on Organ donation attitude and awareness among undergraduates and postgraduates of North-East India” This study was conducted in one of the premiere educational institutes at Guwahati. A predesigned Performa (questionnaire) was used to collect data from 360 individual, of which 180 participants were undergraduate students and 180 participants were faculties having postgraduate degree. The results show that 79.17% (285) of participants were aware about organ donation, and out of all participants, families of only three have donated organ in the past 5 years. A total number of 12 (3.33%) participants have signed up for organ donation. A significant portion of the study population (12.5%) opined that there might be some religious beliefs which are preventing certain strata of local population from donating or accepting organs. More than half (186) (51.67%) of the study group opined that there is lack of awareness among people which may be one of the reasons for low rates of organ donation. Organ donation programs are at a very primordial stage in India and are almost negligible in its North-Eastern region. It is high time for the policy makers and other stake holders of a global giant like India to understand the magnitude of the benefits from these programs. Making tangible policies that are reflected nationally,

emphasizing attention to both the organ donors and recipients, is the need of the hour.

Srinivas Rao Gantal, Kiran Pamarthi1, Lakshmi Prasad K. K.2 (2018)⁷ conducted a cross-sectional study on Knowledge and attitude regarding organ donation and transplantation among undergraduate medical students in North coastal Andhra Pradesh, among first year undergraduate medical students during November 2017. Convenient sampling method was used to obtain the sample size. Out of 150 students in first year, 136 students fulfilling the inclusion and exclusion criteria were studied. Out of 136 students who participated in the study, 58 (42.6%) were boys and 78 (57.4%) were girls. All the 136 (100%) students had heard about organ donation, but only 24 (17.6%) of them were aware of organ donation associations. Very few students (5, 3.6%) know about any law related to organ donation in India. Mass media like TV, Internet and Newspapers have played a major role in imparting awareness regarding organ donation among students besides relatives and friends. Majority of the students i.e. 104 (76.4%) were ready to donate their organs if need comes and two third of them accepted that they would allow organ donation from a member of their family after Brainstem death. There is a positive attitude of medical students towards organ donation but there is lack of sufficient knowledge on the topic. Improving their knowledge by including organ donation topic in medical curriculum can help to reduce this gap.

Vijaya Kumar M.B(2016)⁸ conducted a descriptive study on Assess the Knowledge of Under Graduate Students Regarding Organ Donation in Selected Colleges at Abu Road with view to Develop a Pamphlet". A structured questionnaire was prepared and used to assess the knowledge regarding organ donation. The study was carried out in Shri USB group of educations, Abu road, through simple random sampling technique using lottery method, 100 under graduate students were selected from three departments of the institution like Nursing, Physiotherapy and engineering. Structured

knowledge Questionnaire was administered to collect the needed data. Data was analyzed by using descriptive and inferential statistics. With regard to the knowledge assessment, 43(43%) had moderate level of knowledge, 57(57%) had low level of knowledge and none of them had high level of knowledge, the mean score was 7.12. and also result shows that there is significant association between the knowledge of graduate students regarding organ donation with their selected demographic variables.

Alsultan M (2012)⁹ Conducted a study, to assess the knowledge and attitude towards organ donation among residents of California. 378 residents completed 44 item questionnaires. The study findings suggest that enhanced recruitment may be achieved by focusing on education and by targeting both parents and their children. Physicians are encouraged to discuss organ donation with patients.

Edward J.Saub (2012)¹⁰ Conducted a study, on organ donation, awareness, attitudes and beliefs among post graduate medical students. A total of 123 post-graduates of a medical college hospital in south India participated in the study. Specially designed questionnaire was used in assessment. 89% wished to donate their organs, 77% did not believe in body disfigurement and 87% did not believe in rebirth without the donated organs, 80% were willing to receive organs from family and cadaver, 40% were willing to donate a child's organs, 95% did not believe that organ donation is against religion, 87% disagreed with the notion that doctors would not impart adequate care if they were pledged organ donors and 79% agreed that doctors would not declare death prematurely, if they had pledged their organs during life. There was a statistically significant correlation between attitudes, beliefs and demographics.

P.H. Mishra, Aarti Vij, R.K. Sarma (2011)¹¹ Conducted a study, to assess the influence of knowledge and religiousness on attitude towards organ donation among under graduate studies. The results indicated the impact of four variables education regarding organ donation, knowledge of organ donation after

death awareness on received a donated organ and religious belief.

Horten RL, PJ (2011)¹² Conducted a study, to assess the knowledge and attitude towards organ donation among medical emphasis on providing information regarding transplantation in medical schools to improve the knowledge of future health care professionals about transplantation and organ donation issues.

V. METHODOLOGY

RESEARCH APPROACH: Non- experimental research approach was adopted to achieve the objectives of the study, which is felt to be most appropriate in the field of education for its Practicability in real life situation. It has the Advantage of practicability, feasibility and to certain for generalization.

RESEARCH DESIGN: Descriptive research design.

SETTING: -The study was conducted at S.V Govt Polytechnic College, Tirupati. The setting chosen on the basics of feasibility in terms of availability of required sample. Formal permission was obtained from the Principal of College, Tirupati, for the study.

POPULATION: - The population includes the degree students of selected college.

SAMPLE: - The study sample includes the degree students who were falling under inclusion criteria

SAMPLE SIZE: - The sample consists of 40 degree students of selected college. Who fall under inclusion criteria.

SAMPLING TECHNIQUE: -“Simple Random technique” was adopted based on inclusion criteria.

CRITERIA FOR SAMPLE SELECTION

Inclusion criteria : - students who are

- Studying degree
- Able to understand Telugu and English.
- Age group of 18-25 Years.
- Willing to participate in the study

Exclusion criteria

Who were not willing to participate in this study

- Absent during the data collection period
- Selected from pilot study

PROCEDURE FOR DATA COLLECTION

The investigator obtained permission from the principal of S.V Govt Polytechnic, Degree college of Tirupati to conduct the study. The investigator selected the sample by **Simple random sampling technique**, Who fall under inclusion criteria. The investigator selected the sample and made them to sit comfortably and introduced themselves to each participant and explained the purpose of the study. The participants who meet the inclusion criteria were assessed the knowledge by using self structured knowledge questionnaire. Data collection was done on 01\08\2019. The time taken for the completion of data collection is 2 hours.

TOOLS OF DATA COLLECTION :

Part -I : - Demographic Data.

Part -II : - The structured questionnaire related to knowledge on organ donation.

VI. RESULTS AND DISCUSSION

SECTION-I

Table-1 : Frequency and percentage distribution of demographic variables N=40

		Frequency	Percentage
Age	18 Years	30	75 %
	19 Years	7	17.5%
	20 Years	3	7.5%
	Total	40	100%
Sex	Male	30	75%
	Female	10	25%
	Total	40	100%
Educational qualification	Second Year	2	5%
	Third Year	38	95%

	Total	40	100%
Religion	Hindu	37	92.5%
	Christian	1	2.5%
	Muslim	2	5%
	Total	40	100%
Type of family	Joint family	12	30%
	Nuclear family	27	67.5%
	Extended family	1	2.5%
	Total	40	100%
Source of information about organ donation	Mass media	12	30%
	Health care professionals	20	50%
	Family members	4	10%
	Friends	4	10%
	Total	40	100%
Are you a registered organ donor	Yes	7	17.5%
	No	33	82.5%
	Total	40	100%

family, 27(67%) were Nuclear family, 1(2%) were Extended family. Source of Information about Organ donation 12(30%) through Mass media, 20(50%) through Health care professionals, 4(10%) through family members, 4(10%) through friends. 7(17%) were Registered as Organ donation, and 33(82%) were not registered as Organ donation.

SECTION-II

Table-2 : Frequency and percentage distribution of level of knowledge on organ donation among degree Students.

Level of knowledge	Frequency	Percent	Mean	SD
Inadequate knowledge	21	52.50	12.23	4.246
Moderate knowledge	16	40.00		
Adequate knowledge	3	7.50		

shows that out of 40 students. 30(75%) were 18years age group 7(17%) were 19 years 3(7%) were 20yrs, 30(75%) were males and 10(25%) were females. Educational qualification 2(5%) were second year students, 38(95%) were Third year students. Religion 37(92%) were Hindu, 1(2%) were Christian, 2(5%) were Muslims. Type of family 12(30%) were joint

Table 2 : Shows among 40 Students 21(52%) had inadequate knowledge, 16(40%) had Moderate knowledge, 3(7.5%) had Adequate knowledge. The mean of knowledge in students is 12.23 and the Standard deviation is 4.246.

SECTION-III

Table-3 : Association of demographic variables with level of knowledge on organ donation among degree students. **N=40**

Demographic variables			Inadequate	Moderate	Adequate		Chi-Square	P Value
Age	18 years	N	15	12	3	30	2.485	0.647
		%	37.50%	30.00%	7.50%	75.00%		
	19 years	N	5	2	0	7		
		%	12.50%	5.00%	0.00%	17.50%		
	20 years	N	1	2	0	3		
		%	2.50%	5.00%	0.00%	7.50%		
Total	N	21	16	3	40			
	%	52.50%	40.00%	7.50%	100.00%			
Gender	Male	N	13	14	3	30	3.663	0.045*

	Female	%	32.50%	35.00%	7.50%	75.00%		
		N	8	2	0	10		
		%	20.00%	5.00%	0.00%	25.00%		
Total		N	21	16	3	40		
		%	52.50%	40.00%	7.50%	100.00%		
Educational Qualifications	Second year	N	2	0	0	2	3.910	0.048*
		%	5.00%	0.00%	0.00%	5.00%		
	Third year	N	19	16	3	38		
		%	47.50%	40.00%	7.50%	95.00%		
Total		N	21	16	3	40		
		%	52.50%	40.00%	7.50%	100.00%		
Religion	Hindu	N	19	15	3	37	1.137	0.888
		%	47.50%	37.50%	7.50%	92.50%		
	Christian	N	1	0	0	1		
		%	2.50%	0.00%	0.00%	2.50%		
	Muslim	N	1	1	0	2		
		%	2.50%	2.50%	0.00%	5.00%		
Total		N	21	16	3	40		
		%	52.50%	40.00%	7.50%	100.00%		
Type of family	Joint family	N	6	5	1	12	0.945	0.918
		%	15.00%	12.50%	2.50%	30.00%		
	Nuclear family	N	14	11	2	27		
		%	35.00%	27.50%	5.00%	67.50%		
	Extended family	N	1	0	0	1		
		%	2.50%	0.00%	0.00%	2.50%		
Total		N	21	16	3	40		
		%	52.50%	40.00%	7.50%	100.00%		
Source of Information about organ donation	Mass Media	N	9	3	0	12	11.310	0.079
		%	22.50%	7.50%	0.00%	30.00%		
	Health care professionals	N	6	11	3	20		
		%	15.00%	27.50%	7.50%	50.00%		
	Family members	N	2	2	0	4		
		%	5.00%	5.00%	0.00%	10.00%		
	Friends	N	4	0	0	4		
		%	10.00%	0.00%	0.00%	10.00%		
Total		N	21	16	3	40		
		%	52.50%	40.00%	7.50%	100.00%		
Are you a registered organ donor	Yes	N	6	1	0	7	3.822	0.148
		%	15.00%	2.50%	0.00%	17.50%		
	No	N	15	15	3	33		
		%	37.50%	37.50%	7.50%	82.50%		
Total		N	21	16	3	40		
		%	52.50%	40.00%	7.50%	100.00%		

Table 3 : revealed that there is a significant relationship between knowledge with gender and educational qualification at $p < 0.05$ level. There is no significant relation between with other demographic variables.

VII. DISCUSSION

The first objective of the study was to assess the level of knowledge on organ donation. The test was conducted by using the structured questionnaire. Out of 40 students 21(52%) had inadequate knowledge, 16 (40%) had moderate knowledge, 3 (7.5%) had adequate knowledge. regarding organ donation. These study results were supported by a conducted by **Arunpiravom** at Bangalore to assess the knowledge and attitude of Adults regarding Organ donation, it reveals that 52.2% had moderate knowledge, 42.2% had inadequate knowledge, and 5.56% had adequate knowledge. Regarding attitude on Organ donation 25% had unfavourable attitude, 48% had moderately favourable attitude, and 27% had favourable attitude⁶.

The second objective of the study was to associate the level of knowledge with selected demographic variables on organ donation among degree college students at selected college Tirupathi. The study revealed that there is significant association with gender, educational qualification at $p < 0.05$ level. These findings were supported by a study conducted by **John S. McGrath, Magdi Shehata**; A study to assess the Attitudes of surgical trainees towards transplantation surgery as a career, it reveals that Among (HST), 12.5% had favourable attitude, only 6.2% had moderately favorable attitude, 81.3% had un favorable attitude. Among (BST), 14% had favourable attitude, 24% had moderately favorable attitude, 62% had un favorable attitude¹³.

VIII. CONCLUSION

The study concludes were out of 40 students 21% (21) had inadequate knowledge, 16 (16%) had moderated knowledge, 3 (3%) had adequate knowledge. In relation to the findings most of the students had

inadequate knowledge so the researcher prepared information book let and provided information on organ donation in order to improve the knowledge of the students. So the organ transplantation helps the people to lead an active and normal life. These findings of the study serves as a basis for professionals and students nurses to conduct awareness programmes which helps in motivation of the people for organ donation.

IMPLICATIONS: -The findings of the study have following implications in the areas of nursing service, nursing administration, nursing education and nursing research.

NURSING SERVICE: -

- The results of the study would help the nurse to enlighten their knowledge on importance of the health education.
- Health education is essential part of nursing service nurses can be instructed in motivating patients and family to donate organs.
- Provide family centered nursing care and involve the parents in health programs in hospital and community settings.
- Provide guide to client and family regarding donation of life and it's process.
- In critical care units, I.C.U's, THE Nurse should have good knowledge and attitude to motivate them patients and family to donate organs after their death (or) brain death.

NURSING EDUCATION: -

- In the curriculum there should be separate topic for organ donation. The nursing curriculum should emphasize on importance imparting health education to all individuals using different teaching methods.
- Nursing student should be educated by importance and process of organ donation.

NURSING ADMINISTRATION: -

- Nursing administration should take an initiative to formulate policies that would include all nursing staff to be actively involved in health education programmes in critical care units.

- Nurse administrators should plan and organize continuing nursing education in conducting programmes on section of organ donation, uses, procedure of donation etc.
- Administrator can plan awareness programmes and publish materials and should be available to the public.

NURSING RESEARCH: -

- Nursing research on newer methods of teaching focusing on interest, quality and construction effectives.
- There is a great need for nursing research on the areas of patients education family education about organ donation.
- The findings of the study serve as a basis for professionals and the student nurses to conduct further studies on organ donation.

RECOMMENDATIONS FOR FUTURE STUDY

- The study can be conducted with large group
- The study can replicated in different settings such as community, ICU's
- The study can be conducted using pre test and post test method.
- A similar study can be conducted using experimental and control group.
- A similar study can be conducted among relatives if brain death individuals.
- A similar study conducted in nursing and medical students.
- A similar study conducted on general public in rural and urban areas.
- A similar study conducted on nurses in hospitals.

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