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## Effectiveness of structured teaching programme on knowledge regarding organ donation

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### Abstract

**Introduction:** Organ donation is a life-giving process and a decision to donate organs can not only change someone's life, but also have an impact on people associated with the individual waiting for an organ. Organ donation has proved to be a miracle for the society. Organs such as kidneys, heart, eyes, liver, small intestine, bone tissues, skin tissues, and veins are donated for the purpose of transplantation. The donor gives a new life to the recipient by the way of this noble act. Organ donation is encouraged worldwide.

**Methods:** The aim of this experimental study was to Assess Effectiveness of structured teaching programme on knowledge regarding organ donation among teachers. The study was Quasi-experimental one group pre-test post-test research in nature. Quantitative research approach was adopted for study. Sample size was 60, 11<sup>th</sup> and 12<sup>th</sup> junior science teachers. Non- probability convenient sampling technique was used for the collection of data. A prior formal permission was obtained from the concerned college authority for conducting the study. Informed consent of all the participants was obtained prior to the study. A 30 minute prior to the intervention the pre-test was conducted. The structured teaching programme regarding Organ donation were provided to the sample. After seven days of intervention, post-test was conducted.

**Result:** Study results depicted that on comparing pre-test and post-test scores, it showed effectiveness of structured teaching programme by 23.4%. The difference in mean scores were 6.58 and the calculated z value was 15.09. The data indicated that teachers on receiving structured teaching programme on Organ donation had higher mean knowledge scores in post- test than in pre-test. Chi-square test shows that there was only significant association between the years of experience of teachers and knowledge score regarding organ donation.

**Conclusion:** It can be concluded that the structured teaching programme on Organ donation has proved to be effective in delivering knowledge.

**Keywords:** structured teaching programme, knowledge, organ, donation, teachers

### Introduction

Organ donation is a life-giving process and a decision to donate organs can not only change someone's life, but also have an impact on people associated with the individual waiting for an organ <sup>[1]</sup>.

Organ shortage for transplantation is a crucial problem worldwide. Although organ donation is a very personal issue, the organ donation process involves medical, legal, ethical, organizational, and social factors. In India, "The Transplantation of Human Organs Act" was legalized in 1994. Yet, organ donation rate in India is very poor (0.34 per million) compared to developed countries <sup>[2]</sup>.

To streamline organ donation and transplantation activities the legislation called Transplantation of Human Organ Act (THO) was passed in India in 1994. Many states in India adopted this act, particularly Tamil Nadu and Andhra Pradesh (undivided) lead the list. Andhra Pradesh and Telangana state government developed cadaver transplantation scheme, Jeevandan to streamline various issues of declaration of brain death, infrastructure development, training of transplant coordinators and public awareness <sup>[3]</sup>.

Undoubtedly, having true information and positive attitude about organ donation process are one of the most important factors decision- making period of organ donation. It is important to measure the knowledge of social groups that might have a strong influence on the public opinion, such as medicine staff, teachers, journalists and religious authorities <sup>[4]</sup>.

The teachers are the most columns of a sound and progressive society. They bear the weight and obligation of the educating and separated from guardians, are the most sources of

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information and values for children. Therefore, worldwide important science education research centers emphasize the need to develop student's skills through provision of correct knowledge about topic of interest <sup>[5]</sup>.

### Need for study

As per the current statistical data of organ transplant, India has performed the second largest number of transplants in the world in 2019, it lags far behind the western nations like Spain, United States and United Kingdom in national donation with a donation rate of only 0.65 per million population (2019) due to its huge population <sup>[6]</sup>.

According to the World Health Organization, only around 0.01 percent of people in India donate their organs after death. Organ transplantation has been an accepted mean of treating patients with severe organ failure in India for nearly five decades. However, the organ donation rate of people who have died in India is very low (0.26 per million population), and this low rate partly contributes to the deaths of 500,000 people every year due to lack of available organs. Kerala, one of the southern states in India with 35 million inhabitants, claims to have a deceased organ donation rate of 1.03 per million population whereas Tamil Nadu has the highest deceased organ donation rate in the country i.e., (1.9 per million population). WHO identified the poor donation rate is due to lack of public awareness about organ donation <sup>[7]</sup>.

A descriptive study conducted by Gulsah G and Sibel K (2020) to assess the knowledge of pre-service primary science teachers enrolled in Turkey on organ donation. The study findings showed that there were significant limitations in the knowledge of pre-service science teachers about this subject. Based on the results of this study, it recommends that to provide pre-service science teachers with the correct information about organ donation and transplantation <sup>[8]</sup>.

A descriptive analytical study conducted by Valiee S & Mohammadi S (2019) to assess knowledge and attitude of teachers regarding organ donation. The study findings revealed that the majority of teachers had moderate knowledge and attitude regarding organ donation. The study findings recommended that there is a need to raise teachers' knowledge and attitude towards organ donation <sup>[9]</sup>.

### Statement of the problem

A study to assess the effectiveness of structured teaching programme on knowledge regarding organ donation among teachers from selected colleges of city.

### Objectives

1. To assess the pre-existing level of knowledge regarding organ donation among teachers from selected colleges of city.
2. To assess the post-test level of knowledge regarding organ donation among teachers from selected colleges of city.
3. To determine the effectiveness of structured teaching program on the level of Knowledge regarding organ donation among teachers from selected colleges of city.
4. To find association between the pre-test levels of knowledge regarding organ donation among teachers from selected college of city with their selected demographic variables

### Materials and Methods

The present Quasi-experimental One group pre-test and post-test study was conducted in 11th and 12th Junior Science Colleges of city. The research approach adopted for the present study was quantitative research approach. Total sample size of the study was consisting of 60 teachers working in selected 11th and 12th Junior science colleges of city. Non-probability convenient sampling technique was used to select the samples based on sample selection criteria. A structured questionnaire was prepared to assess the knowledge regarding Organ donation. The objectives and of the study were explained in details to the subjects in the language understand best and written informed consent is taken from the participants. Even after prior appointments, if subjects were found busy in their emergency work, care was taken not to interrupt them in their work and again suitable time was taken. After conducting the pilot study, it was found that the study was feasible and practical to conduct the main study.

### Result and Discussion

**Section I:** Description of Socio-demographic data of teachers.

The demographic data showed that The highest percentage that was (31.66%) in the age group of 25 – 30 yrs.(60%) were female teachers, (71.66%) were Hindu teachers, (45%) of them had 1 – 5 years of experience, (65%) were post-graduation teachers, (78.33%) teachers had not celebrated Organ donation day, (68.33%) teachers strongly support organ donation, (85%) teachers were willing to donate organ, (91.66%) from teachers' relation had not donated organ.

**Section II:** Analysis of data related to effectiveness of structured teaching programme on knowledge regarding Organ donation among teachers.

- it is evident that 57 (95%) of samples knew the answer for the process when person allows an organ of their own to be removed and transplanted to another person in the pre-test which was increased to 60 (100%) of samples in the post test after giving structured teaching programme on organ donation.
- 49 (70%) of samples knew about organs that can be donate which was increased to 59 (98.33%) after the intervention.
- 31 (51.66%) had knowledge about types of organ donors increased to 55 (91.66%) in post-test.
- 29 (48.33%) of samples had knowledge about the age to donate organ, which was increased to 51 (85%) after giving structured teaching programme.
- 46 (76.66%) samples had knowledge regarding irreversible loss of all Brain function is known as, which was increased to 56 (93.33%) in post- test.
- Very few 17 (28.33%) samples knew about Donating an organ to someone not well known to the donor, which increased to 33 (55%).
- The above table shows that 17 (28.33%) respondents knew the answer alternate sources of organs, that increased to 39 (65%) in the post-test.
- 35 (58.33%) of samples knew about the single person can save the lives of how many persons, which increased to 57 (95%) after the intervention.

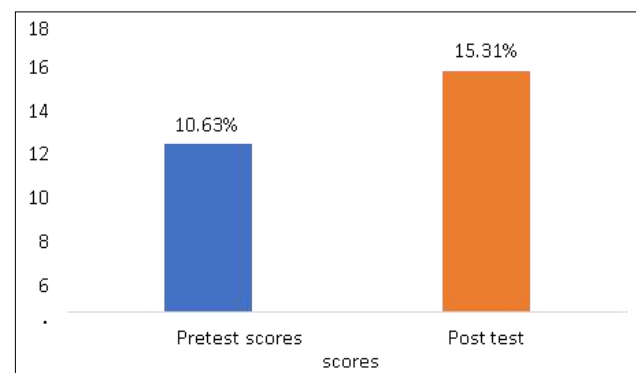
- In pre-test, 50 (83.33%) had knowledge about why the organ donation is done, that increased to 56 (93.33%) in post-test.
- 33 (55%) of samples answered standard used for defining death in case of donors, which increased to 45 (75%) after giving structured teaching programme.
- In pre-test, 32 (53.33%) of samples answered how many organs a single person can donate, which later increased to 46 (76.66%) after giving structured teaching programme.
- Organ donation day celebration on, was answered correctly by 13 (21.66%) in pre-test and increased by 47 (78.33%) samples in post-test.
- 51 (55%) samples had knowledge regarding who cannot donate organ in the pre-test which was increased to 59 (98.33%) in post-test.
- 22 (36.66%) samples knew about the types of organ rejection after transplantation which increased to 33 (55%).
- The study shows that 38 (63.33%) respondents knew about screening tests done for organ donation, that increased to 47 (78.33%) in the post-test.
- From the above table, 18 (30%) of samples knew about when the "Transplantation of Human Organ" act was legalized, in the pre-test which was increased to 38 (63.33%) of samples in the post test after giving structured teaching programme.
- 26 (43.33%) of samples knew what is xenograft which was increased to 26 (43.33%) after the intervention.
- 21 (43.33%) had knowledge about when Dr. Joseph E. Murray has performed first successful organ transplantation, that duly increased to 30 (50%) in post-test.
- 30 (50%) of samples had knowledge about the part of eye that can be restore through donation, which was increased to 39 (65%) after giving structure teaching programme.

- 27 (83.33%) of samples had knowledge about the regulatory and advisory bodies for monitoring transplantation activities, which was increased to 43 (71.66%) after giving structure teaching programme.

**Table 1:** Comparison of mean, SD and mean% of pre-test and post- test knowledge scores of teachers regarding Organ Donation.

Knowledge Scores	Mean	SD	Mean%	Difference In Mean%
Pre-test scores	10.63	3.93	53.15	23.4%
Post test scores	15.31	2.45	76.55	

Comparison of pre-test and post-test scores shows the effectiveness of structured teaching programme by (23.4%). As the post-test mean% (76.55%) shows that the teachers had higher knowledge than the pre-test mean score (53.15%) indicates the effectiveness of structured teaching programme.



**Fig 1:** Bar diagram showing comparison of pre-test and post-test mean score.

**Section III:** Knowledge of teachers working in 11th and 12th Junior science college regarding organ donation in pre-test.

**Table 2:** Pre-test and post- test knowledge level of respondents, n=60

Knowledge Level	Pretest		Posttest	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
POOR (1 – 5)	0	0%	0	0%
AVERAGE (6 – 10)	28	46.66%	1	1.66%
GOOD (11 – 15)	30	50%	29	48.33%
EXCELLENT (16 -20)	2	3.33%	30	50%

Table depicts that majority 0% of the respondents had poor knowledge and 46.66% average knowledge, 50% had good knowledge & 3.33% had Excellent knowledge regarding Organ donation in the pre-test.

After administration of structured teaching programme 0% of respondents had poor knowledge, 1.66% had average knowledge, 48.33 had good knowledge & 50% had excellent knowledge regarding Organ Donation.

**Table 2:** Z' value of pre and post-test knowledge of teachers regarding Organ donation. n = 60

Knowledge Scores	Mean	SD	SE	'Z' Value	Level of significance
Pre-test scores	10.63	3.93	0.31	15.09	Significant
Post test scores	15.31	2.04			

The above data indicates teachers working in 11th and 12th Junior science college who received structured teaching programme on Organ Donation had higher mean knowledge scores in post-test than pre-test. It can be concluded that the structured teaching programme on Organ Donation has proved to be effective in delivering knowledge.

**Section IV: Association between the pre-test knowledge score and demographic variables of Teachers.**

Chi square test was done to find out significant association between the pre-test knowledge with selected demographic variables. It reveals that no significant association was found between the knowledge scores and demographic variables i.e., Age, Gender, Religion, Qualification, Organ

Donation Day celebration, Views on organ donation, willingness to donate organ and Organ donation from relation.

There was only significant association between the years of experience of teachers and knowledge score regarding organ donation.

### Discussion

The present Quasi-experimental One group pre-test and post-test study was conducted in 11th and 12th Junior Science Colleges of city. The research approach adopted for the present study was quantitative research approach Total sample size of the study was consisting of 60 teachers working in selected 11th and 12th Junior science colleges of city. Non-probability convenient sampling technique was used to select the samples based on sample selection criteria. A structured questionnaire was prepared to assess the knowledge regarding Organ donation. The objectives and of the study were explained in details to the subjects in the language understand best and written informed consent is taken from the participants.

A same study was conducted by Umesh Yamanappa Ramadurg, Akash Gupta. Impact of an Educational Intervention on Increasing the Knowledge and Changing the Attitude and Beliefs towards Organ Donation among Medical Students An educational interventional study with pre structured questions being administered to study subjects. Results: In the present study, a total of 70 students consented to participate and all the 70 attended the pre-test and post-test after the classroom teaching. Among the 70 participants, 35(50%) were males and 35(50%) were females. A majority of the subjects were Hindus 64(91.4%) and only 3(4.30%) were Muslims. Sixty seven (95.7%) of the students had heard of the term, 'organ donation'. Most common reason given by the participants for organ donation was that it was done to save someone's life [61 (87.11%)]. Among the 70 study subjects, only 19(27.10%) knew about the organs that could be donated, whose number increased to 56(80%) after providing the educational intervention. The difference which was observed in their knowledge before and after providing the educational intervention was found to be statistically significant ( $t= 39.315$ ,  $p< 0.0000$ ). The awareness of the legislation regarding organ donation was poor. Thirty one (44.3%) subjects were unaware about the existence of laws which were related to organ donation and its process. Conclusion: The study emphasizes the need of an intervention which incorporates the knowledge, motivational messages, facts and figures, to bring necessary changes in the perceptions and intentions of the students regarding organ donations <sup>[10]</sup>.

### Conclusion

The present study was conducted to assess the effectiveness of structured teaching programme on knowledge regarding organ donation among teachers from selected colleges of city. It was concluded that there were changes in mean of knowledge scores after implementation of structured teaching programme on organ donation among teachers. The structured teaching programme on Organ Donation was found to be effective in improving knowledge of teachers. There was significant association between the years of experience of teachers and knowledge score regarding organ donation.

### References

1. Surveswaran G. Knowledge attitude and practice regarding organ donation among adult population of urban puduchery: south India journal of education and health promotion (Internet) 2016;7:117. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc6149118>.
2. Poredi V. Attitudes, knowledge, and willingness to donate organs among Indian nursing students: saudi journal of kidney Disease and transplantaion (Internet) 2016;27(6):1129-1138. Available from: <http://www.sjkkdt.org>.
3. Deceased Organ Donation in India. Accessed October 10, 2021. <https://www.mohanfoundation.org/organ-donation-transplant-resources/organ-donation-in-india.asp>
4. Kahraman, Sibel. Evaluation of Pre-service Science Teachers' Argumentation Skills, Knowledge Levels and Attitudes Regarding Organ Transplantation and Donation: European Journal of Educational Research 2019;(8):545-558. Available from: <https://www.researchgate.net/publication/332424413>.
5. Savithri KB. STP on varicose veins among teachers: International Journal of Health Sciences and Research 2020;10(6):2249-9571. Available from: <https://www.researchgate.net/publication/342145144>
6. Solanki S. Effectiveness of video assisted teaching on knowledge and attitude regarding organ donation among degree college student at meerut: U.P International Journal of Current Research (Internet) 2018;10(4):68520-68526. Available from: <http://www.journalcra.com>.
7. Mekkodathil A, Asim M, Sathian B, Rajesh E, Kumar RN, Simkhada P, *et al*. Current scenario of organ donation and transplantation in Kerala, India. Nepal journal of epidemiology 2019;9(2):759-760. <https://doi.org/10.3126/nje.v9i2.24679>
8. Gulsah G, Sibel K. The Investigation of Preservice Teachers' Epistemological Beliefs, Knowledge Levels and Attitudes regarding Organ Transplantation and Donation: Journal of Education in Science, Environment and Health 2020;6(1):53-64. Available from: <https://www.jeseh.net>
9. Valiee S, Mohammadi S *et al*. Knowledge and Attitude of Teachers in Sanandaj City towards Organ Donation: 2019;12:14-28. Available from: Website: <http://ijme.tums.ac.ir>
10. Ramadurg UY, Gupta A. Impact of an Educational Intervention on Increasing the Knowledge and Changing the Attitude and Beliefs towards Organ Donation among Medical Students 2014'8(5):JC05-JC07.