

7-1-2018

## Assessment of knowledge and attitude regarding organ donation

Blessy Anderson Ms

University of Buraimi, PO Box 890, Postal code 512, Al Buraimi, Sultanate of Oman,  
blessyanderson@gmail.com

Follow this and additional works at: <https://impressions.manipal.edu/mjnhs>



Part of the [Nursing Commons](#)

---

### Recommended Citation

Anderson, Blessy Ms (2018) "Assessment of knowledge and attitude regarding organ donation," *Manipal Journal of Nursing and Health Sciences*: Vol. 4: Iss. 2, .

Available at: <https://impressions.manipal.edu/mjnhs/vol4/iss2/3>

This Original Research is brought to you for free and open access by the MAHE Journals at Impressions@MAHE. It has been accepted for inclusion in Manipal Journal of Nursing and Health Sciences by an authorized editor of Impressions@MAHE. For more information, please contact [impressions@manipal.edu](mailto:impressions@manipal.edu).

---

## Assessment of knowledge and attitude regarding organ donation

### Cover Page Footnote

I thank God Almighty for granting me perseverance and the necessary support, with constant encouragement from my family to accomplish the study. I express my deep sense of gratitude to the Ethics committee of the College of Nursing for granting me approval to conduct the study. My sincere thanks to all the Principals of the colleges and the study participants without whom the study would not have been possible.

# Assessment of knowledge and attitude regarding organ donation

Blessy Anderson

Email: [blessyanderson@gmail.com](mailto:blessyanderson@gmail.com)

## Abstract

**Introduction:** Fast advancing medical technology has made organ donation and transplantation possible. With an alarming increase in non-communicable diseases, organ transplantation is undoubtedly a boon to humanity, which is possible only with organ donation. There is always an ever-increasing demand for organs globally. Adolescents who possess adequate knowledge and attitude on organ donation are more likely to discuss with their families about the willingness to donate their organs. The study was undertaken to assess the knowledge and attitude regarding organ donation among college students. **Objectives:** The objectives of the study were to assess the knowledge on organ donation, to assess the attitude regarding organ donation, to correlate the knowledge and attitude on organ donation, and to associate the knowledge and attitude regarding organ donation with selected demographic variables. **Materials and methods:** The study was a descriptive one, conducted among 250 college students. Data collection was performed after establishing the validity and reliability of research tool and obtaining necessary approvals and consent. **Conclusion:** In the study, it was found that 14.4% of the study participants had adequate knowledge on organ donation, 75.6% had moderate knowledge and 10% had inadequate knowledge. With regard to the attitude of the participants, 17.2% of them had favourable attitude, 72.4% moderately favourable attitude, and 10.4 % unfavourable attitude towards organ donation. Knowledge on organ donation was moderate. The attitude towards organ donation is moderately favourable. Knowledge and attitude regarding organ donation is not adequate enough to promote the same.

**Key words:** Attitude, college students, knowledge, organ donation

## Introduction

Organ transplantation is undoubtedly a boon to humanity, which is possible only with organ donation. It is estimated that by 2030, road traffic accidents will occupy fifth position in the list of cause of death (WHO, 2004). Adequate motivation among the potential organ donors will definitely fulfill the huge gap between the requirement of organs for transplant and the number of donors available. Dr Avnesh Seth, Director of Fortis Organ Retrieval and Transplant FORT, reports that the process of declaration of brain death and organ retrieval in India will have a new impetus, with the introduction of The Transplantation of Human Organs and Tissues Rules 2014 (Health world, 2015). United Networking for Organ Sharing (UNOS) reports that on an average 20 people die each day waiting for a transplant, out of

these 20, eight lives can be saved through one organ donor (UNOS, 2017). Organ India reports that 1.5 lakh brain deaths occur annually due to road traffic accident. Living person need not donate organs, though 5-10% of brain deaths are harvested properly for organ donation. India's organ donation rate is one of the lowest in the world.

Times of India (2017) reports that only 10 states and 2 union territories in India are active in organ donation and transplantation; the reason being myths and misconceptions related to cadaveric donations and lack of awareness regarding the topic. Death due to organ failure has increased to 2.5 lakhs per year. A systematic review performed by Kohli, Aathi and Sethi (2013) reports that youngsters are the main victims of road traffic accidents. The Center for Disease Control and Prevention (2017) reports that hospitalization due to traumatic brain injury from motor vehicle crashes included people between 15-44 years.

## Blessy Anderson

Lecturer, University of Buraimi, PO Box 890, Postal code 512, Al Buraimi, Sultanate of Oman

**How to cite this article:** Anderson, B. (2018). Assessment of knowledge and attitude regarding organ donation. *Manipal Journal of Nursing and Health Sciences*, 4(2), 6-10.

Baughn, Rodrigue and Cornell (2006) in their study conducted among 445 adolescents who visited a Motor Vehicles office for attending driving classes or to obtain vehicle permit/license concluded that females were found to have a more favourable donation intention. 58.7% of the adolescents did not have the intention to donate their organs and 23.1% of them were undecided. Data collection was done by a semi-structured interview and questionnaire.

Ahuja (2017) reports that around five lakh people die every year in India due to unavailability of organs. The reasons for organ shortage are categorized as lack of family consent, superstitions and misconceptions, lack of education and awareness, lack of brain death declaration, lack of organ transplant and retrieval centers. Manojan, Raja, and Nelson (2014) in their study conducted among 100 participants above 18 years of age, found that although 97% of the participants in their study had heard about organ donation, only 53% had a good knowledge on the same. Concerning the attitude on organ donation, it was found that only 26% of the study participants had a good attitude, whereas 48% of them had poor attitude towards organ donation. The percentage of participants who felt that live organ donation affects health contributed to 50%. It was also reported that the willingness for eye donation was high among the participants, followed by kidney and liver donations. The data collection was done using a semi-structured questionnaire and face-to-face interview.

Another study (Poreddi, Katyayani, & Gandhi, 2016) conducted among undergraduate nursing students selected by non-probability convenience sampling revealed that 94% of nursing students were unaware of the legalities involved in organ donation, 66.7% had adequate level of knowledge, and 72.3% held positive attitudes.

**Objectives:** The objectives of the study were to assess the knowledge on organ donation, to assess the attitude regarding organ donation, to correlate the knowledge and attitude on organ donation and to associate the knowledge and attitude regarding organ donation with selected demographic variables.

### Material and methods

The study was a descriptive one, which was conducted among 250 college students from selected colleges of Kanyakumari district. The participants included

both male and female students from undergraduate and postgraduate courses and from arts and science disciplines. Stratified disproportionate random sampling technique was used to select 50 students from each of the five colleges involved in the study. The validity of the tool was established by obtaining inputs from three nursing experts, a general physician, chief nephrologist, and an organ transplant coordinator. Reliability of the tool was tested by test-retest method and was confirmed by stability and internal consistency. Reliability coefficient of the knowledge questionnaire is 0.8419 and attitude scale is 0.8056. The pilot study was conducted among 25 students. The tool was prepared in English and translated to the local language, Tamil by language expert.

The data collection was performed using the tool developed by the researcher, after establishing the validity and reliability of the tool. The tool consisted of three sections. Section 1 included demographic variables such as age, gender, religion, education, field of education, and exposure to organ donation programs.

Section 2 consisted of 20 items for knowledge assessment under a few subsections related to legal aspects, scientific knowledge, and organizational knowledge on organ donation. Multiple choice questions were used for assessment of knowledge on organ donation. A score of 1 was given for correct answer and 0 for wrong answer. The interpretation of scores was done as follows:

- >75% - Adequate knowledge
- 50-75% - Moderate knowledge
- <50% - Inadequate knowledge

Section 3 consisted of 20 statements to assess the attitude regarding organ donation under two classifications namely, cognitive factor, and affective factor. Attitude towards organ donation was assessed using a 5-point Likert scale; where the score of 5 indicates “Strongly agree” and a score 1 indicates “Strongly disagree”. The interpretation of scoring was as follows:

- 75- 100 - Favourable attitude
- 50-74 - Moderately favourable attitude
- 1-49 - Unfavourable attitude

Ethical clearance was obtained from the research committee of the College of Nursing. Necessary approvals were obtained from the principals of

selected colleges involved in the study. The purpose of the study was explained, and consents were obtained from the participants of the study.

The descriptive statistics used to analyze the sociodemographic variables of the study were frequency, percentage, mean and standard deviation of knowledge, and attitude. Inferential statistics was used to study the correlation between knowledge and attitude. The association between the knowledge and attitude on organ donation with selected demographic variables was tested using chi square and inferences were made at 5% level of significance ( $P=0.05$ ). The level of knowledge and attitude of study participants in different colleges were analyzed and interpreted by Analysis of variance (ANOVA).

**Results**

The sociodemographic characteristics of the study participants are presented in the Table 1.

Table 1: Distribution of Study Participants Based on their Sociodemographic Profile

Demographic variables	Frequency	Percentage
N= 250		
<b>Age</b>		
15-19 years	97	38.8
20-24 years	153	61.2
<b>Gender</b>		
Male	63	25.2
Female	187	74.8
<b>Religion</b>		
Christian	95	38.0
Hindu	139	55.6
Muslim	16	6.4
<b>Education</b>		
Undergraduate	125	50
Postgraduate	125	50
<b>Subject group</b>		
Arts	140	56.0
Science	110	44.0
<b>Exposure to organ donation program</b>		
Yes	205	82.0
No	45	18.0

Data in Table 1 showed that 61.2% of the study participants belonged to the age group 20-24 years. Three fourth of the participants (74.8%) were female. With regard to the religion, 55.6% were

Hindus. The number of participants in the science group was 110(44%), which was surpassed by the arts group which contributed to 140(56%) of the participants.

Knowledge of study participants on organ donation

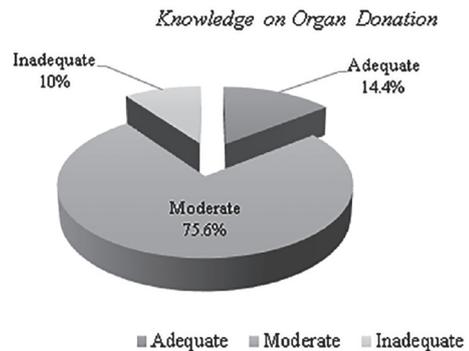


Figure 1: Pie diagram showing distribution of knowledge on organ donation

The data in Figure 1 shows that the percentage of study participants having adequate knowledge on organ donation contributed to 14.4%. The proportion of moderate knowledge was 75.6%. The inadequate knowledge proportion worked out to 10%.

With respect to the level of knowledge, there was no significant difference between the colleges ( $F= 0.460$ ,  $df= 4$  and  $245$ ,  $p>.05$ ). The estimated mean level of knowledge in the population is 11.9 to 12.5 at 95% of the confidence interval.

Attitude of study participants towards organ donation

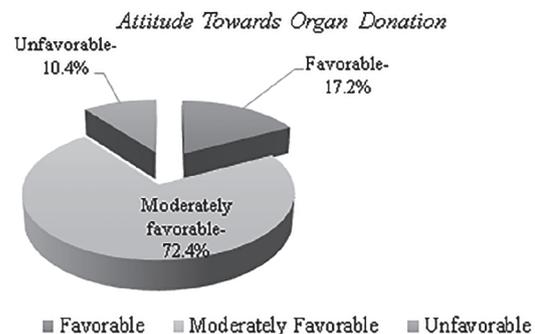


Figure 2: Pie diagram showing distribution of attitude towards organ donation

Data in Figure 2 reveals that the favourable attitude towards organ donation contributed to 17.2%. The moderately favourable attitude worked out to 72.4% and the proportion of negative or unfavourable attitude was 10.4%.

Table 2:  
Association of Knowledge and Attitude with Demographic Variables

Variable	Association with knowledge			Association with attitude		
	df	Chi Square ( $\chi^2$ )	p- Value	df	Chi Square ( $\chi^2$ )	p- Value
Age	2	1.377	.502	2	0.752	.686
Sex	2	4.706	.095	2	1.477	.477
Religion	4	3.699	.448	4	8.235	.083
Education	2	0.199	.905	2	0.259	.878
Course group	2	1.388	.499	2	1.898	.387
Exposure to organ donation program	2	2.674	.262	2	1.892	.388

The college wise students' attitude differed significantly ( $F=4.079$ ,  $df=4$  and  $245$ ,  $p<.01$ ).

The relationship between the knowledge and attitude was studied by Pearson correlation coefficient  $r=.1778$  which was not statistically significant. Hence, there is no relationship between knowledge and attitude.

It is evident from Table 2 that no variable had an association with either the knowledge or the attitude towards the organ donation. All calculated chi square values are less than the respective table value at respective degrees of freedom and  $p > .05$ .

### Discussion

The study shows that majority of the participants have moderate knowledge on organ donation. In the present study, only 14.4% of the study participants were found to have adequate knowledge, whereas a study conducted in Kerala by Manojan, Raja, and Nelson (2014) revealed that the percentage of participants possessing good knowledge on organ donation contributed to 53%. In the same study, 26% of the study participants had favourable attitude towards organ donation, which is supportive of the present study in which only 17.2 % of the study participants had a favourable attitude towards organ donation.

### Conclusion

The findings of the study reveal that the knowledge regarding organ donation is not adequate to promote the same. The attitude towards organ donation is moderately favourable. It was found that neither knowledge nor attitude on organ donation had association with the demographic variables studied. Although it was not an objective under study, it was found that the attitude of participants from those colleges in rural area were more favourable than from

the town or urban areas. Educating the public through mass media communication, inclusion of a chapter on organ donation and transplantation in secondary school curriculum, conducting awareness programs on facts about organ donation will increase the knowledge and promote positive or favourable attitude towards organ donation.

### Acknowledgements

I thank God Almighty for granting me perseverance and the necessary support, with constant encouragement from my family to accomplish the study. I express my deep sense of gratitude to the Ethics committee of the College of Nursing for granting me approval to conduct the study. My sincere thanks to all the Principals of the colleges and the study participants without whom the study would not have been possible.

Sources of support: None

Conflict of interest: None declared

Source of support in form of grants: None

### References

- Ahuja, A. (2017, November 26) Lack of Organ Donation in India: Here is why Half a million people die Annually in India due to unavailability of organs. Retrieved January 12, 2018 from. Retrieved January 12, 2018 from <http://sites.ndtv.com/moretogive/lack-organ-donation-india-half-million-people-die-annually-india-due-unavailability-organs-2107/>
- Baughan, D., Rodrigue, A., & Coenell, (2006). Intention to Register as Organ Donors: A Survey of Adolescents. Retrieved June 16, 2017 from <http://journals.sagepub.com/doi/abs/10.1177/152692480601600313>
- Cantwell & Clifford. (2000). English nursing and medical students' attitudes towards organ donation. *Journal of Advanced Nursing*, 32(4), 961-968.

- Kohli, G., Aathi, M.K., & Sethi, M. (2013). Road Accidents among Adolescents. *Journal of Asia Pacific Studies*, 3, pp. 245-259. Retrieved February 4, 2017, from <http://www.japss.org/upload/3.%20Kohli.pdf>
- Managle, T., & Thomasma, J. (2005). Health care ethics: critical issues for the 21<sup>st</sup> century. (1<sup>st</sup> ed.). London: Jones and Barlett Publishers. 342-350.
- Manojan, K.K., Raja, R., Nelson, V. (2014). Knowledge and Attitude towards Organ Donation in Rural Kerala, *Academic Medical journal of India*. Retrieved February 14, 2018 from <http://medicaljournal.in/volume2-issue1-feb-2014-48-original-research-knowledge-and-attitude-towards-organ-donation-in-rural-kerala/>
- Mehdi, S. (2006). Essentials of blood banking. (1<sup>st</sup> ed.). New Delhi: Jaypee brothers. 60-70.
- New Law to Boost Organ Donation in India: Health world From the Economic Times (2015). Retrieved December 13, 2017, from <https://health.economictimes.indiatimes.com/news/industry/new-law-to-boost-organ-donation-in-india-dr-avnish-seth-directorfort/45974593>
- Organ donation up 4-fold in India, but still a long way to go. (2017). *Times of India*. Retrieved August 22, 2017, from <https://timesofindia.indiatimes.com/india/organ-donation-up-4-fold-in-india-but-still-a-long-way-to-go/articleshow/59855757.cms>
- Organ India. (2014) MOHAN Foundation, A study of the deceased organ donation environment in Delhi/NCR. Retrieved January 22, 2016, from <http://organindia.org/wp-content/uploads/2014/11/ORGAN-Research-Report.pdf>
- Poreddi, V., Katyayani, BV., & Gandhi, X. (2016). Attitudes, knowledge, and willingness to donate organs among Indian nursing students. *Saudi Journal of kidney diseases and transplantation*, 27, pp.1129-1138. Retrieved January 14, 2018 from <http://www.sjkdt.org/article.asp?Issn=13192442;year=2016;volume=27;issue=6;spage=1129;epage=1138;aurlast=Poreddi>
- Traumatic Brain Injury & Concussion (2017). Retrieved January 15, 2018, from [https://www.cdc.gov/traumaticbraininjury/get\\_the\\_facts.html](https://www.cdc.gov/traumaticbraininjury/get_the_facts.html).
- United Network for Organ Sharing (2018) Retrieved February 15, 2018, from <https://unos.org/data/>
- World Health Organization. (2014). *Global Burden of Disease report 2004 update*. Retrieved March 23, 2016 from [http://www.who.int/healthinfo/global\\_burden\\_disease/GBD\\_report\\_2004update\\_full.pdf](http://www.who.int/healthinfo/global_burden_disease/GBD_report_2004update_full.pdf)