

Knowledge and attitude regarding organ donation among relatives of patients admitted in ICU

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DOI: <https://doi.org/10.17511/ijphr.2019.i3.01>

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Context: In India rate of organ donation is low. It is attribute to lack of awareness and myths and misconceptions regarding organ donation. Knowledge and attitude of family members and relatives have a critical role in increasing percentage of organ donation. **Aims:** To assess the knowledge and attitude regarding organ donation among relatives of patients admitted in ICU (Intensive care unit). 1) To find out factors affecting the relatives' decision regarding organ donation. **Settings and Design:** It was cross sectional study carried out among 180 relatives of patients admitted in ICU. **Methods and Material:** Data was collected through face to face interview based on a structured, pre-tested (piloted) questionnaire. **Statistical analysis used:** Data analysis was done using SPSS software version 20. **Results:** It was found that 81.1% participants had good knowledge and 72.8% had appropriate attitude towards organ donation. Majority, 114 (63.3%) were willing to donate organs in future. 106(58.9%) pledged to donate their organs after death. About 82% had good knowledge regarding organ donation which was reflected in the attitude and found to be statistically significant. There was significant association between education of participants with their knowledge. **Conclusions:** The reasons for unwillingness should be looked into more carefully and awareness campaigns should be planned to increase acceptability of organ donation.

Keywords: Organ donation, Knowledge, Attitude, Relatives

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How to Cite this Article

Patil SV, Ostwal NB, Patil VC, Gothankar JS. Knowledge and attitude regarding organ donation among relatives of patients admitted in ICU. Public Health Rev Int J Public Health Res. 2019;6(3):98-104.
Available From
<https://publichealth.medresearch.in/index.php/ijphr/article/view/106>

To Browse



Manuscript Received
2019-05-20

Review Round 1
2019-05-30

Review Round 2
2019-06-05

Review Round 3

Accepted
2019-06-11

Conflict of Interest
No

Funding
Nil

Ethical Approval
Yes

Plagiarism X-checker
7%

Note



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Introduction

Organ transplantation has become an accepted medical treatment for end-stage organ failure. In India, there is a great need for human organs as there is critical shortage of the same for transplantation. The total number of brain deaths due to accidents is nearly 1.5 lakhs annually.

Other causes of brain death such as sub-arachnoids' haemorrhage and brain tumours would potentially add more numbers. There is a need of 2 lakh kidneys, 50,000 hearts and 50,000 livers for transplantation every year [1]. In India rate of organ donation in India is less (0.34 per 100 000 population) compared to developed countries [2].

There is shortage for organ donation despite of education and motivation of general public about organ donation [3]. Although organ transplantation has brought new horizons of hope to save patients life, it is associated with a variety of cultural, ethical, and religion-related barriers [4].

It is mainly due to lack of awareness and myths and misconceptions regarding organ donation [5]. Knowledge and attitude of family members have a critical role in increasing percentage of organ donation.

Previous studies of the factors influencing decisions to become an organ donor have also highlighted the importance of knowledge, values, attitudes and social norms towards donation[6]. The study findings will indicate current status of knowledge and deficits if any, concerns or misconceptions among relatives in regards to organ donation.

ICU might provide a more ideal environment for organ donation related tasks and it will be first point of contact for donor families in the initial process of organ donation. Early identification of the potential organ donation may facilitate timely referral, which can be crucial in rapidly deteriorating patients.

Identifying the factors affecting relatives' decision, and making this information available to intensive care clinicians and transplant professionals, might have a greater and more immediate effect than any legislation.

Healthcare professionals play a key role in identifying potential donor and if they do not identify then the process of organ donation will not progress unless family member knows about patient's wish of organ donation.

Therefore, present study was conducted to evaluate knowledge and attitude regarding organ donation among relatives of ICU patients and to find out factors affecting the relatives' decision regarding organ donation

Materials and Methods

It was a cross-sectional study conducted among relatives of patients admitted in ICU. A sample size of 180 was calculated assuming a prevalence of 50% for knowledge and attitudes of organ donation, and a sample error of 15%.

Age above 18 years and those relatives of stable patients who were willing to take part in study were included.

Those who refused to give consent and were unable to communicate were excluded. Institutional Ethical Committee approval was obtained.

After taking informed consent from participants, the aim of study was stated and questionnaire was explained and the respondents were assured that their confidentiality would be maintained.

Data was collected through face to face interview based on a structured, pre-tested (piloted) questionnaire. The tool was designed based on literature review [7-14].

The questionnaire consisted of structured questions with two sections:

Section A: This section included demographic information such as age, gender, education, occupation, monthly family income etc.

Section B: Structured Questionnaire about basic Knowledge, and Attitude toward Organ Donation among study participants.

Knowledge of the respondents was assessed through questions regarding familiarity of the term "organ donation", awareness of donation from living people as well as cadavers, name of organs which can be donated, awareness about laws, national registers, consent for organ donation and the sources of information for their knowledge.

Attitudes of the respondents was determined through questions consisting their opinions regarding organ donation such as the willingness to donate organs in the future and factors affecting the relatives' decision regarding organ donation.

Each participant was interviewed individually in local

Language; total time consumed by each participant was approximately 10-15 minutes. Data was collected over a period of 3 months April to June 2017.

Outcome: In the present study, the knowledge and attitude of patients' relatives regarding organ donation was evaluated.

11 questions are related to knowledge and a score between 0 to 11 were given based on the level of knowledge. Each true answer was given score 1.

Those with score of 6 and above were considered as having good knowledge and below 6 as poor knowledge. Similarly, attitude level had a score between 0-7.

Those with score of 4 and above were considered as appropriate and below 4 as inappropriate.

Statistical analysis: Statistical analysis was done using SPSS software version 20.

After presenting descriptive analysis of data, Chi-square and Fisher tests were performed to assess the relation between demographic variables and the level of knowledge and attitude.

Results

This study was conducted among relatives of ICU patients. There were total 180 participants. The socio-demographic details of the participants are shown in Table: 1. Out of 180 participants, maximum (44.4%) belonged to age group of 18-30 years of age. Out of the 180 participants, 13 (7.2%) had a history for organ donation in the family.

It was observed that major source of information was newspaper (31%), followed by television (29%), doctors (17%), friends (12%), internet (8%), magazines (2%) and others (1%) which included books, advertisements, college, school, profession, trust and relatives.

Table-1: Socio-demographic Factors.

Sr. No.	Variables	Frequency (%)
1. Age Group	18-30	80 (44.4%)
	30-40	50 (27.8%)
	40-50	30(16.7%)
	50-60	14(7.8%)
	>60	6(3.3%)
2. Gender	Male	119(66.1%)
	Female	61(33.9%)
3. Address	Urban	130(72.2%)

	Rural	50(27.8%)
4. Education	Graduate/PG	79(43.9%)
	Intermediate/Post High School	47(26.1%)
	High School	40 (22.2%)
	Middle School	8(4.4%)
	Primary School	1(0.6%)
	Illiterate	5(2.8%)
5.Income	< 10000	52(28.9%)
	10001 – 20000	63(35.0%)
	20001 – 30000	32(17.8%)
	> 30000	33(18.3)
6.Marital Status	Married	113(62.8%)
	Unmarried	64(35.6%)
	Widow	2(1.1%)
	Widower	1(0.6%)
Total Participants		180

Relationship between knowledge and socio-demographic factors are depicted in table 2.

Overall 81.1% participants had good knowledge about organ donation.

Knowledge regarding organ donation was significantly higher among those who were graduates and above.

Table-2: Relation between knowledge and socio-demographic factors.

Sr. No.	Variable	Good	Poor	Total	P-value
		Knowledge	Knowledge		
1. Age Group (in years)	18-30	67(83.75%)	13(16.25%)	80	0.432
	30-40	42(84.00%)	8(16.00%)	50	
	40-50	23(76.67%)	7(23.33%)	30	
	50-60	9(64.29%)	5(35.71%)	14	
	>60	5(83.33%)	1(16.67%)	6	
2 .Gender	Male	99(83.19%)	20(16.81%)	119	0.322
	Female	47(77.05%)	14(22.95%)	61	
3.Education	Graduate/PG	70(88.61%)	9(11.39%)	79	0.011
	Intermediate /Post	39(82.98%)	8(17.02%)	47	
	High School	29(72.50%)	11(27.50%)	40	
	Middle School	6(75.00%)	2(25.00%)	8	
	Primary School	0(0.00%)	1(100.00%)	1	
	Illiterate	2(40.00%)	3(60.00%)	5	
	Total	146(81.1%)	34(18.9%)	180	

Relationship between attitude and socio-demographic factors are presented in table 3.

Overall 72.8% had appropriate attitude about organ donation.

Table-3: Relation Between attitude and socio-demographic factors.

Sr. No.	Variable	Appropriate	Inappropriate	Total	P-Value
		Attitude	Attitude		
1. Gender	Male	93(78.15%)	26(21.85%)	119	0.033
	Female	38(62.30%)	23(37.70%)	61	
2.Address	Urban	89(68.46%)	41(31.54%)	130	0.040
	Rural	42(84.00%)	8(16.00%)	50	
3.Religion	Budh	1(20.00%)	4(80.00%)	5	0.009
	Hindu	122(75.78%)	39(24.22%)	161	
	Muslim	7(53.85%)	6(46.15%)	13	
	Sindi	1(100.00%)	0(0.00%)	1	
4.Education	Graduate/PG	62(78.48%)	17(21.52%)	79	0.075
	Intermediate/Post	35(74.47%)	12(25.53%)	47	
	High School				
	High School	28(70.00%)	12(30.00%)	40	
	Middle School	3(37.50%)	5(62.50%)	8	
	Primary School	0(0.00%)	1(100.00%)	1	
	Illiterate	3(60.00%)	2(40.00%)	5	
Total		131(72.8%)	49(27.2%)	180	

Distribution according to knowledge regarding organ donation is shown in table 4. Of the 180 participants, 53(29, 4%) knew that both living and dead can donate organs.

Most of the participants, 172 (95.6%) were not aware about the laws of organ donation.

Table-4: Distribution according to the knowledge regarding organ donation

Sr.No.	Factors	Correct Knowledge	Incorrect Knowledge
1	Reasons for organ donation	179(99.4%)	1(0.6%)
2	Both living and dead can donate organs	53(29.4%)	127(70.6%)
3	Knowledge about laws of organ donation	8(4.4%)	172(95.6%)
4	Organ donation is a treatment option	102(56.7%)	78(43.3%)
5	Knowledge about national register of organ Donation	13(7.2)	167(92.8%)
6	Can pledge to donate his/her organs after death	106(58.9%)	74(41.1%)
7	Presence of threat with organ donation	100(55.6%)	80(44.4%)
8	Consent for organ donation when donor is alive	138(76.7%)	42(23.3%)
9	Consent for organ donation when donor is dead	165(91.6%)	15(8.4%)

Distribution according to the attitude regarding organ donation is shown in table: 5.

Majority 114 (63.3%) were willing to donate organs in future. Very few participants, discussed their wish to be an organ donor with member of their family.

Table-5: Distribution according to the attitude regarding organ donation.

Sr. No.	Factors	Correct Attitude	Incorrect Attitude
1	Willingness to donate organs in future	114(63.3%)	66(36.7%)
2	Discussed his/her wish to be an organ donor with a member of family	13(7.2%)	167(92.8%)
3	Agreed with organ donation of relatives	166(92.2%)	14(7.8%)
4	Member of family told about his/her wish to donate organs after death	28(15.6%)	152(84.4%)

About 118(80.82%) had good knowledge regarding organ donation which was reflected in the attitude and found to be statistically significant (p<0.001).

The reasons for refusing organ donation were religious beliefs 39(21.7%), fear from abuse 34(18.9%), family refusal 9(5%), fear of procedure 4(2.0%).

About 15 (8.30%) participants never thought about organ donation and 1(0.5%) had other reason. Major reason for consenting organ donation given by the participants was that they wished to help others 149(82.77%).

The other minor reasons were, feel good 12(6.66%), to respect the deceased choice 9(5%), in the memory of deceased 6(3.33%), not to waste useful organs 7(3.88%).

Discussion

In India, the demand for organs for transplantation far exceeds the supply. The success of organ donor program depends on the knowledge and attitude of relatives. Therefore, present study was conducted to evaluate knowledge and attitude regarding organ donation among relatives of ICU patients.

In present study, overall 81.1% participants had good knowledge about organ donation which is higher than other studies conducted by Poreddi Vijayalakshmi et al. i. e 52.8% [15] and KK Manojan et al. i.e. 53% [16]. In line with previous research, Poreddi Vijayalakshmi et al. [15] and Annadurai K, [12] we also found that television and newspapers (60%) were the major sources of information on organ donation.

Other sources of information in our study were doctors, friends and internet. Good knowledge regarding organ donation was significantly (p-value

=0.011) associated among those who were graduates or above which was consistent with study findings by Taimur Saleem et al [9]. We found that highest level of knowledge about organs donated was kidneys, eyes and heart.

The study conducted by Ghaida Jabri et al.[3] also revealed the same. In this study about, 138(76.7%) reported that donor consent is required for living donation and 165(91.6%) reported that family consent is required for organ donation after death.

The Iran studies found that majority of study participants (93.1%) reported the mandatory of donor consent for living donation and 69% reported the necessity of family consent for donation after death [17]. The study findings revealed that 114(63.3%) were willing to donate organs in future. The recent Saudi studies found that 74.1% of the participants were willing to donate their organs [3].

In this study, appropriate attitude was seen in participants who were male ($p=0.033$), who were residing in urban area ($p=0.040$) and those who belonged to Hindu religion (0.009). The difference in attitude in rural and urban background may be due to education and proper sources of communication. And females were less educated and most of them were housewives.

In present study, overall 72.8% participants had appropriate attitude about organ donation which is higher than other studies conducted by AmirthaSanth et al[14]and Poreddi Vijayalakshmi et al[15].

In our study we found that major reasons for refusal for organ donation were religious beliefs 39(21.7%), fear from abuse 34(18.9%), family refusal 9(5%), fear of procedure 4(2.0%). About 15 (8.30%) participants never thought about organ donation.

Whereas in the study conducted by Ghaida Jabri et al (2016) lack of awareness (21.7%), family refusal (20.6%) and fear of unknown (19.7%) were the most important barriers of organ donation [3]. This study revealed that 118 (80.82%) had appropriate knowledge towards organ donation which reflected in their attitude.

We found out that 99(83.19%) males had good knowledge, whereas only 38 females (62.30%) had good knowledge. One of the Iran studies found that 62.0% of participants had appropriate attitude to organ donation and 34.2% of them were well informed about [17].

In the present study only about (1.7%) of the participants had donor card which was similar to the study conducted by Annadurai K. [12]. Though study participants have good knowledge and attitude towards organ donation it is not reflected in their practice as very few of them have donor card.

Conclusion

The study showed that considerable amount of people had good knowledge and appropriate attitude about organ donation. It was also found that good knowledge among the participants regarding organ donation was reflected in their attitude.

There is need to address issues regarding organ donation through mass media campaigns which is the major source of information about organ donation. The reasons for refusal should be assessed for the success of organ donation.

Recommendation: As ICU patients are potential organ donors, information about significance of organ donation should be made available to them as they are part of decision-making team.

Author Contribution

First author (SVP): Concepts, Design, Definition of intellectual content, Literature search, Data analysis, Statistical analysis, Manuscript preparation, Manuscript editing. **Second author (NBO):** Design, Literature search, Data acquisition, Statistical analysis, Manuscript preparation, Manuscript editing. **Corresponding author (VCP):** Concepts, Design, Data acquisition, Data analysis, Manuscript preparation, Manuscript editing. All authors discussed the results and contributed to the final manuscript.

Acknowledgement

We would like to express our gratitude to Principal of our Medical College for permitting us to carry out this research project. We would also like to thank Dr J. S. Gothankar, Prof and Head, Dept. of Community Medicine and Dr Shiv kumar Iyer, Prof and Head, Dept. of Critical Care Medicine, for their support and guidance.

Key Messages: As ICU patients are potential organ donors, information about significance of organ donation should be made available to them as they are part of decision-making team.

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