



A STUDY TO ASSESS KNOWLEDGE, ATTITUDE AND AWARENESS ON ORGAN DONATION AMONG ADULT POPULATION IN INDIA

Medical Science

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ABSTRACT

An organ transplant is a surgical operation in which a failing or damaged organ in the human body is removed and replaced with a functioning one. The donated organ may be from a deceased donor, a living donor, or an animal. Living organ donation involves the donation of one of a paired organ or a portion of an organ and the donor organ system is still able to function after the donation. The removal of organ from a deceased person must follow legal and ethical requirements and as per the regulation, definition of death and consent for donation the organ should be removed. There is great need to assess the knowledge attitude & Awareness regarding organ donation among adult population in India.

Aims & Objectives: To report the levels of knowledge, attitudes and practices regarding organ donation among general public in an urban setting in India.

Materials & Methods: A community based cross-sectional study was conducted among 600 randomly selected adult population in a tertiary care private-setup multi-specialty hospital based in an Urban location in Western India. Data regarding knowledge, attitude, and practice were collected through pretested semi-structured questionnaire.

Results: Mean (S.D.) age of the study participants was 38 (15) years and 50.7% were female. However, 49.75%, 58% & 47.8% had adequate knowledge, Attitude & Awareness regarding organ donation.

Conclusion: Less than one-half of the study population had adequate knowledge, Attitude & Awareness regarding organ donation.

KEYWORDS

Knowledge, Attitude, Awareness, Organ Donation.

BACKGROUND:

The various positive initiatives including the National organ and tissue transplant organisation, the transplantation of human organ action and the transplantation of human organs and tissues. The stringent criteria which are supposed to followed for retrieval, preservation and transportation of donor organs are also discussed. Overall the topic of organ donation appears to be of interest to neurologists because they are involved in care of "brain dead" patients and this forms a big population of those who become organ donors.¹

Organ transplantation is the desired treatment modality for end stage organ disease and organ failure.² It is the only effective and definitive treatment option for liver and heart failure and in terms of quality of life and economical treatment cost, most accepted treatment for kidney failures though other replacement therapies are also available for kidney failure patients. The most frequently carried out transplants are kidney transplants in the world. Other than kidney alone, cornea and multiple organ transplants are also being performed including pancreas, liver and heart. With the advent of modern techniques transplantation science has expanded to newer horizons and this therapeutic approach has increased indications and effectiveness.³

The donor safety has been also considered by "The Transplantation Society" with adoption of a consensus statement on the care of the live kidney donor, prepared by experts and WHO representatives addressing the community responsibility towards living organ donors and the long term follow up. The availability of organ donors from whom the organs are procured is lower than the need for the organs. The wide gap between availability and need is a hindrance in success of transplant programs and the important arm of a successful transplant program is awareness, attitudes and positive willingness to donate organs amongst general public and health care workers. Chronic shortage of organ availability exists in India. The deceased donation rate is pegged at 0.34 per million population as per recent data.⁴

The reason of shortage of organs in a country of about 1.2 billion people is mainly the limited organ donations and lack of willingness to donate amongst the public as evident from a study showing that less than 50% were willing to consider organ donation.⁵ It has been understood that the patients on palliative care could serve as a good source of organs and tissues but for the presence of adequate systems and prerequisites needed for organ donation globally.⁶

There is a paucity of studies assessing the awareness, attitude, and Knowledge with respect to organ donation in India. Hence, this study

has been undertaken to assess the knowledge, attitude, and awareness regarding organ donation among adult population in India.

AIM:

To Assess the Attitude ,Knowledge & Level of Awareness & Willingness about Organ Donation.

OBJECTIVES:

- 1) To report the levels of knowledge, attitudes and practices regarding organ donation among general public in an urban setting in India.
- 2) To determine the factors which influence the knowledge, attitudes and practices regarding organ donation among the general public.

MATERIALS AND METHODS:

A community based cross-sectional study was conducted among the adult population in a tertiary care private-setup multi-specialty hospital based in an Urban location in Western India.

Six hundred sample were randomly selected through Simple Random Sample technique. Individuals who were not able to understand and answer questionnaire were excluded from the study. Questionnaire was administered by data collectors after obtaining informed written consent. The purpose and motive of the study were explained to the participants. They were sensitised regarding the objectives of the study, confidentiality of information, participant's right and informed consent, and were also trained to administer the questionnaire to the participants.

Semi-structured questionnaire was used after pilot testing for about 100 individuals such medical personnel. Questionnaire contained sociodemographic details of individuals such as age, gender, occupation, education, marital status, religion, type of family, and socioeconomic class. Details regarding their awareness about organ donation, source of information regarding organ donation, their attitude and willingness to donate organ in future, awareness regarding procedure and place of registration, as well as current registration status for organ donation was also captured.

Knowledge regarding organ donation was assessed based on three domains. It included whether they have heard about organ donation or not, knowledge regarding eligibility status for organ donation, and knowledge regarding the place of registration for organ donation. Participants who were able to answer correctly for all the three domains were considered to have adequate knowledge regarding organ donation.

Attitude toward organ donation was assessed based on two domains. It included their willingness to donate organ in future and persons to whom they are willing to donate organs. Participants who answered as willing to donate organ in future as well as willing to donate to unknown members were considered to have good attitude toward organ donation. Practice of organ donation was assessed based on their current registration status for organ donation.

Statistical Analysis:

Data were entered using Microsoft Excel 13.0 and analysed using SPSS version 12.0. Continuous variables such as age of the participants and age at which the participant were summarised as mean (standard deviation [SD]) or median (interquartile range) based on their normality in distribution. Categorical variables such as gender, occupation, religion, socioeconomic class, awareness regarding organ donation, source of information and knowledge, and attitude of organ donation were summarised as frequency (percentages). Chi-square

test/Fisher exact test was used to find the association between sociodemographic characteristics and knowledge and attitude regarding organ donation which were summarised. $P < 0.05$ was considered statistically significant.

RESULTS:

This cross sectional study on organ donation which was done among adult population of urban population in India. There were 109 questions; 27 questions were Attitude and Willingness, 47 questions were Knowledge And 35 questions were Awareness. All of them were expert validation done by 100 samples using Chronbach alfa Methods. The Chronbach's alpha score of 0.78 for Attitude and Willingness, 0.757 for Awareness And 0.798 for Knowledge is suggestive of a high level of internal consistency.

In our study, 600 samples (304 Female & 296 Male) between the age of the participants ranged between 21 and 65.

Table No. 1: Showing Association for Socio Demographic Profile with Likert Scale on Knowledge on Organ Donation among Adult Population.

Socio Demographic Variables		Knowledge Score Code					Chi Square	P Value
		0.0 - 0.2	0.2 - 0.4	0.4 - 0.6	0.6 - 0.8	0.8 - 1.0		
Sex	Female	1	30	74	103	96	6.215	0.184 (NS)
	Male	2	27	94	101	72		
Age	< 20	0	0	7	5	8	12.155	0.433 (NS)
	20 - 40	1	42	103	131	107		
	40 - 60	2	12	46	62	46		
	> 60	0	3	12	6	7		
Marital Status	Divorced	0	0	0	0	2	18.989	0.269 (NS)
	Married	2	39	121	138	121		
	Seperated	0	0	0	0	1		
	Unmarried	1	17	39	65	40		
	Widow	0	1	8	1	4		

Table No. 2 Showing Association for Socio Demographic Profile with Likert Scale on Attitude on Organ Donation among Adult Population.

Socio Demographic Variables		Attitude Score Code					Chi Square	P Value
		0.0 - 0.2	0.2 - 0.4	0.4 - 0.6	0.6 - 0.8	0.8 - 1.0		
Sex	Female	5	37	71	95	96	2.619	0.623 (NS)
	Male	6	46	70	95	79		
Age	< 20	0	0	6	8	6	20.077	0.066 (NS)
	20 - 40	8	43	101	119	113		
	40 - 60	2	35	26	56	49		
	> 60	1	5	8	7	7		
Marital Status	Divorced	0	0	0	2	0	18.330	0.305 (NS)
	Married	9	62	93	132	125		
	Seperated	0	0	0	0	1		
	Unmarried	2	16	44	52	48		
	Widow	0	5	4	4	1		

Table No. 3: Showing Association for Socio Demographic Profile with Likert Scale on Awareness on Organ Donation among Adult Population.

Socio Demographic Variables		Awareness Score Code					Chi Square	P Value
		0.0 - 0.2	0.2 - 0.4	0.4 - 0.6	0.6 - 0.8	0.8 - 1.0		
Sex	Female	5	37	71	95	96	2.619	0.623 (NS)
	Male	6	46	70	95	79		
Age	< 20	0	0	6	8	6	20.077	0.066 (NS)
	20 - 40	8	43	101	119	113		
	40 - 60	2	35	26	56	49		
	> 60	1	5	8	7	7		
Marital Status	Divorced	0	0	0	2	0	18.330	0.305 (NS)
	Married	9	62	93	132	125		
	Seperated	0	0	0	0	1		
	Unmarried	2	16	44	52	48		
	Widow	0	5	4	4	1		

Table No. 4: Distribution for Correct Responses regarding Knowledge, Attitude & Awareness.

Question No.	0.00	1.00	2.00	
Q.1	25	49	26	49.75% overall Knowledge.
Q.2	30	22	49	
Q.3	42	17	41	
Q.4	13	38	49	
Q.5	26	35	40	
Q.6	23	77	22	

Q.7	10	68	15	58% Overall Attitude.
Q.8	15	20	65	
Q.9	19	11	70	
Q.10	27	17	56	
Q.11	25	32	43	
Q.12	22	13	65	
Q.13	33	18	50	
Q.14	38	15	47	
Q.15	20	6	75	

Q.16	12	12	76	47.8% Overall Awareness.
Q.17	23	8	69	
Q.18	40	19	4	
Q.19	30	29	41	
Q.20	20	59	22	
Q.21	26	9	66	

DISCUSSION:

Our final questionnaire was a 21-item questionnaire. Various studies have used varied number of items for assessing the knowledge and attitudes regarding organ transplantation. For example, in the study by Panwar et al, the number of items were 30. In the study by Chakradhar et al,⁷ there were 27 items. In this, there were Knowledge (13 questions) Attitude (11 questions) and Practice habits (3 questions). However, in ours, there were knowledge (8 questions), attitudes (8 questions) and awareness (5 questions). In the study by Uzunturla⁸ also, there were 20 questions. In the study by Janahi et al⁹, there were 31 items.

In our study, age of the participants ranged between 21 and 65. In the study by Uzunturla⁸ also, the age ranged between 18 and 63. In the study by Oluyombo et al¹⁰, the mean age of the participants was 36 years, which is similar to that of our study. Age had a significant influence on the results in our study, especially on the knowledge and the awareness levels.

In the study by Sarveswaran¹¹, there was no influence of gender on the results. In the study by Nacar¹² also, there was no influence of gender on the knowledge or attitudes. In the study by Paraz et al¹³ also, it was found that the female gender is more likely to answer questions accurately related to organ transplantation, than the male respondents. In the study by Oluyombo et al¹⁰, there was no influence on gender on the knowledge or attitudes.

In the study by Oluyombo et al¹⁰, the authors felt that there was an almost 82% level of accuracy of knowledge. In the study by Luo et al¹⁴, the accuracy rate regarding knowledge about transplantation was about 71%. In the study by Flayou et al¹⁵, the knowledge level was only around 36%. In the study by Uzunturla⁸, the authors felt that almost 60% had adequate information about organ donation. In the study by Janahi et al⁹, the accuracy of knowledge was around 40%. In our study, the overall knowledge level was around 49.75%.

In the study by Flayou et al¹⁵, 65.7% expressed their consent to organ donation during their lifetime, and 82.8% expressed their agreement to donation after their death. In the study by Paraz et al¹³, 31 % were willing to donate their corneas, 22.2 % were not willing to donate their corneas, and 46.8 % were undecided about what to do. In our study, as a composite score of all the items on willingness, 58% showed a positive response. In the study by Sarveswaran et al¹¹ also, there was a 58% willingness to donate organs. In the study by El-Hangouche et al¹⁶, 48% refused to donate their organs.

CONCLUSION:

A 21-item questionnaire was developed using the multi-round consensus Delphi method. The items tested knowledge, awareness and attitudes/willingness regarding organ donation. The items were administered to 600 participants. The respondents appear to have a moderate amount of knowledge (49.75% accuracy) regarding organ donation. The respondents appear to have a reasonably favourable attitude towards organ donation (58% responses being favourable attitude) & The respondents appear leads to an overall awareness level of 47.8%. Age, Gender and Marital status has a significant impact on the knowledge, awareness and attitudes / willingness regarding organ donation.

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