

## Assessment of knowledge and attitude regarding organ donation: a community based Study

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**Background:** Organ transplants can save lives. People needing tissue transplants can also be of any age. In some cases, tissues can save lives. **Aim of the study:** is to assess and determine the correlation between the knowledge and Attitude regarding organ donation among individuals in the community. **Material and Methods:** A Cross Sectional, Community based descriptive study was conducted on population of Mullana District Ambala. A sample size of 200 was selected by using the simple random technique. A structured questionnaire for knowledge and attitude scale was used to collect data from general population. **Results:** Out of 200 participants 39% were between 15-25 age group, 64% of them were males, 52% family were joint family, a high percentage 64% were of Sikh religion and majority 40% were educated till primary. The family income of 76% was below the poverty line and major 43% source of awareness was T.V/Radio. The mean score of knowledge was 5.21 and SD 3.25 and the mean score for attitude was 23.12 and SD 4.12 with positive correlation between the knowledge and Attitude regarding organ donation i.e.  $r=0.082$ . **Conclusion:** Efficient knowledge may ultimately translate into the awareness of organ donation. Efficient measures should be taken to educate the population with relevant information.

**Keywords:** Organ Donation, Living Donation, Deceased Donation

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## Introduction

People requiring organ transplants are usually very ill or dying because of their own organ is failing. They range from young babies and children through to older people. Some need transplants because they are born with a physical problem or a disease that causes organ failure. Others may have contracted a disease or acquired an injury. Organ transplants can save lives. People needing tissue transplants can also be of any age. In some cases, tissues can save lives [1]. Organ transplantation is the moving of an organ from one body to another or from a donor site to another location on the patient's own body, for the purpose of replacing the recipient's damaged or absent organ [2]. Organs of the body that can be transplanted include: Kidney, Heart, Liver, Lung, Pancreas, Intestines. Tissues that can be donated include: Cornea (coating of the eyeball), Middle ear, Skin, Heart valves, Bone, Veins, Cartilage, Tendons, Ligaments, Stem cells, blood, and blood platelets can also be donated [3]. There are two ways of Organ donation the first is, living related donors only immediate blood relations (brother, sister, parents & children) can donate as per the Transplantation of Human Organ Act 1994 [4]. Living donor can donate only few organs, one kidney (as one kidney is capable of maintaining the body functions), a portion of the pancreas (as half of the pancreas is adequate for sustaining pancreatic functions) and part of the liver (as the few segments that are donated will regenerate after a period of time) can be donated and second is cadaver Organ donor can donate all organs after brain death [4].

**Organ donation** is the donation of biological tissue or an organ of the human body from a living or dead person to a living recipient in need of a transplantation [5].

**Knowledge** refers to the amount of information and understanding about the organ donation in general population as measured by structured questionnaire schedule.

**Attitude** refers to the opinion or feeling that general population have about organ donation and the way they behave towards organ donation .

**Correlation** refers to examining the strength and relationships between two variables that is knowledge regarding organ donation and attitude regarding organ donation. Correlations may be either positive or negative [6].

Aim to assess and determine the co- relation between the knowledge and Attitude regarding organ donation among individuals in the community.

## Material and Methods

Cross Sectional, Community based descriptive study was conducted in Field practice area of MMIMSR, Mullana District Ambala. Ethical clearance was taken from ethical committee of the Institute. All male and females who fulfilled selection criteria in households of village Budiyo of field practice area of Department of Community Medicine, MMIMSR, Mullana, Ambala were included in the Study.

The study duration was 6 months in which 100 households of Village Budiyo were selected by simple random sampling. Persons aged above 15 years those who can read and write or understand in any language were included in the study. Written consent to participate in the study was obtained from each subject. After covering whole village total sample of 200 individuals was achieved.

The Research tool consists of structured questionnaire regarding demographic Variables, Knowledge of organ donation and attitude scale statements.

01. Demographic data consisting of student profile such as Age in years, gender, religion, marital status, type of family, educational discipline, family Income, domicile or place of living, and source of awareness of organ donation .
02. The structured questionnaire consists of 10 questions to test the Knowledge. A score of one was given for each correct response and a score 0 was given for each incorrect response. The total knowledge score was 10.
  01. **Classification of knowledge score based on arbitrary division**
    - Below 50 %- Inadequate knowledge
    - 50-80 % -Moderate adequate knowledge
    - Above 80% -Adequate knowledge
03. Attitude scale consists of 8 items related to organ donation attitude questions were assessed by 5 point Likert's scales ranged from strongly agree to strongly disagree. In the attitude scale equal positive and negative statements selected. For negative statement reverse score was used.

**01. Classification of attitude scores based on arbitrary division**

- Below 50 % -Negative attitude
- 50-80 %- Uncertain attitude
- Above 80%- Positive attitude

A pilot testing of Performa was conducted on 10 individuals to assess the feasibility of the study by using predesigned Performa. Based on the observation, certain minor modifications were done and the Performa was used for data collection from individuals in the community. The study samples were selected based on selection criteria. The data was collected from all the study subjects and was compiled and analyzed by using appropriate statistical methods. Correlation of knowledge and attitude scores was calculated using Pearson’s correlation method.

**Results**

The results of present study shows total 200 subjects were participated in the study out of them 128 male and 72 were female. From study population 78 were in 15-25 year of age group, 52 were in 26-35 year ,33 were in 36-45 year, 17 were in 46-55 year, 13 were in 56-65 year and 7 were in >65 year of age.(Table 1). In all the subjects 56 belonged to Hindu, 2 to Christian,13 to Muslim and 129 from Sikh religions.104 subjects were staying in joint family and 96 were staying in nuclear family.

Out of 200 subjects 15 were educated till Bachelor degree,38 have completed Intermediate, 57 were metric pass and 80 were educated till Primary. Source of awareness regarding organ donation, 86 persons from TV and Radio,44 from news paper and magazines, 29 from family and friends,21 from movies, 5 from internet and 2 from other sources (Table 1). The study shows the overall knowledge and attitude levels of individuals regarding organ donation.

The majority 61% individuals have inadequate knowledge, 23% have Moderate knowledge and 16% have adequate knowledge regarding organ donation. 84% individuals have negative attitude, 10% uncertain attitude and 06% positive attitude towards organ donation (Table 2).The mean score for knowledge was 5.21 with SD ±3.25and the mean score for attitude was 23.96 with SD±4.12 which shows positive correlation between knowledge and attitude having correlation coefficient of r=0.082 regarding organ donation among individuals in the community (Table 3).

**Table-1: Frequency and percentage distribution of demographic variables**

SN	Variables		No. of Participants	(%)
1	Age (years)	15-25	78	39
		26-35	52	26
		35-45	33	16.5
		45-55	17	8.5
		55-65	13	6.5
		>65	7	3.5
2	Gender Distribution	Male	128	64
		Female	72	36
3	Religion Distribution	Hindu	56	28
		Christian	2	1
		Muslim	13	6.5
		Sikh	129	64.5
4	Marital status	Single	67	33.5
		Married	133	66.5
5	Type of family	Joint family	104	52
		Nuclear family	96	48
6	Educational discipline	Bachelor degree	15	7.5
		Intermediate	38	19
		Metric	57	28.5
		Primary	80	40
7	Family Income	Above poverty line	53	26.5
		Below poverty line	147	74.5
8	Source of awareness	T.V/Radio	86	43
		News papers /Magazines	44	22
		Friends/ Family members	29	14.5
		Physician/ Doctor	15	7.5
		A Movie	21	10.5
		Internet	05	2.5
		Other sources	02	1

**Table-2: Distribution of overall Knowledge and attitude scores of individuals in percentage**

S. No	Parameter		Percentage
1	Knowledge scores	Inadequate	61
		Moderate	23
		Adequate	16
2	Attitude scores	Negative	84
		Uncertain	10
		Positive	06

**Table-3: Co- relation between knowledge & attitude regarding organ donation among individuals in community**

Aspect	Maximum Scores	Range score	mean	SD	Correlation
Knowledge	10	8	5.21	3.25	0.082
Attitude	40	32	23.96	4.12	

## Discussion

Our study suggests that the majority of population do not have positive attitudes toward organ donation more information and education are needed on this particular issue. About 6% of them would donate their organs without any hesitation, and a further 10% had some doubts and needed persuasion and 84% had negative attitude for organ donation. A similar study conducted by Bilgel *H et al* [7,8] showed that 50.5% to 57.0% of the respondents would donate their own organs and 53.6% to 52.6% would donate their relatives' organs. A study in Saudi Arabia conducted by Al-Faqih *SR et al* [9] found that the Islamic view supporting concepts of transplantation provided the strongest positive influence for organ donation. This view is also supported by our study; Positive correlation ( $r=0.082$ ) was seen between willingness to donate and knowledge of the allowance of organ donation.

A study conducted by Ali *et al* [10] 81.6% agreed that it was ethically correct to donate an organ. In general opinion, most commonly donated organs and tissues were kidney, cornea, blood and platelet. Ideal candidates for donating organ were parents (81%). Regarding list of options for preference to receive an organ, most of the individuals agreed on young age group patients and persons with family. Willingness to donate was significantly associated with knowledge of allowance of organ donation ( $P=0.000$ ). The present study also shows the Positive Correlation between knowledge and attitude regarding organ donation. Unfortunately, only 13.3% of the population was aware of the existence of the 'Transplantation of Human Tissues and Organ act[4], the knowledge of which could have far reaching impact on their decision to donate [11,12]. The study conducted in china by Chung *et al* [13] response rate was 94% (655/694).

A majority (85%) had a 'positive' attitude, but only a small proportion (23%) had signed the organ donation card this contradiction is due to the prevalence of local myths and misconceptions regarding organ donation in that area. Inconvenience and lack of knowledge about organ donor registration, and concerns about premature termination of medical treatment are responsible for such discrepancies.

Socio-cultural factors such as the traditional Chinese belief in preservation of an intact body after death, unease discussing death-related issues, and family objections to organ donation were significantly associated with a 'negative' attitude. Knowledge and action increased with medical education yet only a small proportion of medical students felt competent and confident in counselling patients on organ donation.

The Study Conducted by Kose *et al* [14] reveals 71.7% of individuals had positive views about transplantation of their own organs to a suitable recipient, with half of them giving being useful to others as a reason. Among individuals who had negative views about organ donation, the most important reason given was that it would mean a loss of bodily integrity. 44.1% of participants had positive views about transplantation of their relatives' organs to another person after death. 51.7% of participants had positive views about transplantation of the organs of a homeless person to another person after death.

## Limitations

Main limitation of the study was that it includes only literate people.

## Conclusion

The conclusion of the study is efficient methods for targeting general population are required. Better knowledge may ultimately translate into the act of donation. Efficient measures should be taken to educate the general population with relevant information with the involvement of media, health personnel, nongovernmental organizations like GYOF ( Gift your organ foundation) and MOHAN foundation and religious scholars.

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