



Awareness regarding organ donation among the adult Population of urbanfield practice area in Tamilnadu, India

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ABSTRACT: Body donation and organ donation are noble act. Even though it is extremely important, the number of persons who choose to donate is remains very minimal. Most important reason behind less donation is lack of awareness. Need of efforts to create more awareness and change the mindset of the each and every one. In the present study the authors assess the knowledge and attitude of the people living in an urban area in Tamilnadu, India towards organ donation.

Materials/Methods: A descriptive cross-sectional questionnaire based study was conducted in urban filed practice area. Questionnaire had about 15 questions based on the knowledge of Organ donation, 10 questions towards attitude and 5 questions for practice. A total of 236 people voluntarily came forward. A questionnaire was distributed amongst all willing people in the urban field practice area. This was followed by an awareness session, wherein the researchers discussed body and organ donation and its need in India. Information sheet was handed to all and the willing respondents were given eye and body donation forms and guidance.

Results: Among 236 participants, 190 (81%) have heard about organ donation in their lifetime. Knowledge of females (49%) about organ donation was found to be better than males (36%) and the attitude of people between 20-39 years (36%) was found to be better than above 40 years (27%). Major reasons for the organ donation not popular in India is lack knowledge and fear of disfigurement.

Conclusion: Organized and well planned approach to raise awareness is very much necessary to come out this situation, motivational slogans, messages and more concentration on behavioral impact change in perceptions and intentions about organ donation among general population.

Key words: Organ Donation, urban population, Knowledge, Attitude.

I. INTRODUCTION:

Organ donation is defined as “when a person allows an organ of theirs to be removed,

legally, either by consent while the donor is alive or after death with the assent of the next of the kin”(1). Transplantation is defined as the transfer of human tissues or organs from a donor to a recipient (2) and legalized in India in 1994 (3). Even though organ donation is possible while alive, majority of the donations occur after donor’s death only(4). Deaths due to organ failure can be prevented by increasing organ donations and transplantation of organ as and when needed that is timely. Common transplantations are kidney, heart, liver, pancreas, intestine, lungs, bones, bone marrow, skin and corneas. Some organs and tissues can be donated by living donors like part of kidney, part of liver can be donated by healthy ones (5). Organ donation and subsequent transplantation gives new life to the patient, but also saves the expenses, indirectly from dialysis, hospital costs and transportation. While India ranks second in the world in organ transplantation surgeries by live organ donations, but in deceased organ donation rate is very less 0.08 per million population per year(6). Knowledge of Anatomy is an very important part of medical education of health care professionals for which medical students need human bodies for dissection(7). Donation of human body also needed for medical research. People have to be aware of these needs and donate their bodies after death. Providing the general population with relevant information and making awareness on some of misconceptions likely to increase the organ donation (8). There is a need for an atmosphere that favors increase in organ donation rates (9).

II. OBJECTIVES:

To analyze the knowledge and Attitude about organ donation and its association with the demographic profile of the population.

To determine the source of information about organ donation.

To determine the main reasons prevents the study population from being potential donors.



III. METHODS:

A community based cross sectional study was conducted from August 2019 to October 2019 among the adult population residing in the field practice area of Government Dharmapuri Medical College and Hospital.

The sample size was calculated based on previous study, assuming awareness regarding organ donation as 67 % (5) absolute precision of 6% and 5% alpha error, the minimum sample size was calculated as 236.

All adults aged 20 and above their address details obtained from the Village health nurse. 260 adults were randomly selected by keeping 10% as non-response rate using this line list simple random sampling, those who are willing are taken up for the study, individuals who were not able to understand and answer were excluded from the study.

Semi structured questionnaire was used after pilot testing from 10 individuals from the area earlier. Questionnaire contained sociodemographic details like age, sex, gender, education, occupation, marital status, 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.

Knowledge regarding organ donation was assessed based on three domains, whether they heard about organ donation or not, eligibility status for organ donation and regarding place of registration for organ donation. Those who able to

answer all three domains were considered to have adequate knowledge.

Attitude towards organ donation assessed based on two domains, one willingness to donate in future and persons to whom they are willing to donate organs. To know their practice of their organ donation was assessed by their current registration status for organ donation.

Statistically analyzed using SPSS 21. Association between knowledge and attitude with that of age and gender was assessed using chi square test. A P value <0.05 was considered statistically significant. Institutional ethical committee clearance obtained.

IV. RESULTS:

In this study a total of 236 individuals were participated but by keeping in mind of 10% wastage 260 were contacted, in that 17 individuals who contacted earlier their house was locked even after two consecutive visits, remaining 7 were not able to understand the questionnaire.

Table (1) depicts socio demographic characteristics of the study participants. Majority are belongs to 30-39 years (32%) age group, sex wise females (57%), 85(36%) were post graduates and above, 142 (60%) were employed, in unemployed 94(40%) which includes home maker, ex-serviceman and retired persons. 173 (73%) were married, 137(57%) more than half belonged to nuclear family and 66(27.9%) are belonged middle class socioeconomic scale according to modified BG Prasad classification 2020.

Table.1. Socio demographic characteristics of the study participants (n-236)

Socio demographic characteristics	Frequency (%)
Age category(years)	
20 – 29 years	38 (16%)
30 – 39 years	76 (32%)
40 – 49 years	48 (21%)
50 – 59 years	40 (17%)
>60 years	32 (14%)
Gender	
Men	102 (43%)
Women	134 (57%)
Education	
No formal education	45 (19%)
Primary (1-5)	15 (6%)
Middle (6-8)	26 (11%)
Secondary (9-10)	25 (11%)
Higher secondary (11-12)	40 (17%)
Post-secondary (graduate and above)	85 (36%)
Occupation	
Employed	142 (60%)
Unemployed*	94 (40%)



Marital status	
Married	173 (73%)
Un married	36 (15%)
Others **	27 (12%)
Type of family	
Nuclear	135 (57%)
Joint	72 (31%)
Three generation	29 (12%)
Socio economic status ***	
Lower < 1129	43(18.2%)
Lower middle 1130 – 2259	45(19.0%)
Middle 2260 – 3765	66(27.9%)
Upper middle 3766 – 7532	47(19.9%)
Upper > 7533	35(14.8%)

* includes homemaker, ex-servicemen, pensioners and retired persons
 **Widowed, separated and divorced.
 *** Socio economic status based of B.G.Prasad scale 2020

Table (2) shows based on three domains knowledge were determined.190 (81%) have heard about organ donation in their lifetime, but only 69(29%) had adequate knowledge regarding eligibility status and place of registration for organ donation.

Table. 2. Knowledge regarding organ donation among the study participants (n-236)

Knowledge regarding organ donation	Frequency (%)
1. Heard about organ donation	
Yes	190 (81%)
No	46 (19%)
2. Eligibility status for organ donation	
No idea / don't know	132 (60%)
Living donor / brain dead / after death	104 (40%)
3. Knowledge regarding place of registration	
No idea / don't know	138 (59%)
Government hospitals/medical college/private agency	98 (41%)
4. Knowledge regarding organ donation	
Adequate*	69 (29%)
Inadequate	167 (71 %)

* If all the three domains (Heard about organ donation, eligibility status for organ donation and place of registration) were correct, then they were considered to have adequate knowledge.

Table (3) shows attitude towards organ donation determined based on two domains, 151(64%) of the participant thought about organ

donation at any time in the past during their lifetime and 149 (63%) were willing to donate organ in future. 143 (61%) were willing to donate to unknown person. Out of 236, 149 (63%) of them had positive attitude. But only 10(4%) were registered for organ donation that to for eye donation.



Table.3. Attitude toward organ donation among the study participants: (n-236)

Attitude towards organ donation	Frequency (%)
1. Thought of organ donation at any time in the past	
Yes	151 (64%)
No	85 (36%)
2. Willingness to donate organ in future	
Willing	149 (63%)
Want to discuss with family	52 (22%)
Don't know to take decision	09 (4%)
Not willing	26 (11%)
3. Persons to whom you are willing to donate	
Unknown persons	143 (61%)
Own family members	72 (30%)
Relatives	16 (7%)
Medical college	5 (2%)
4. Attitude towards organ donation	
Positive*	149 (63%)
Negative	87 (37%)

* If both (willing to donate organ in future, willing to donate organs to unknown person or to a medical college) were present, then they were considered to have positive attitude.

Table.4. shows there is no significant association was found between knowledge score and gender. Comparatively females had good knowledge than Males.

Table.4. Knowledge score and gender (n-236)

GENDER	Knowledge score			Chi square Value = 2.00 df = 1 P value 0.1572 Statistically not significant
	Good	Average	Poor	
Male	37	49	16	236
Female	61	55	18	
Total	98	104	34	

Table.5. shows there was a significant association between attitude score and age. People between 20-39 years showed good attitude compared to people

above 40 years. It may due to current exposure to media, newspaper and internet.

Table.5. Attitude score and age (n-236)

Age	Good Attitude	Poor Attitude	Chi square value= 11.02 df = 1 P value = 0.000901 Statistically significant.
20 -39 years	85	29	
40 and above	64	58	
Total	149	87	

Chart .1. Shows Television is the major source of information 115(49%), next to it Medical fraternity 47(20%) as a source of information, mainly heard from Doctors and Nurses.

Chart .1. Source of Information of knowledge for organ donation (n-236)

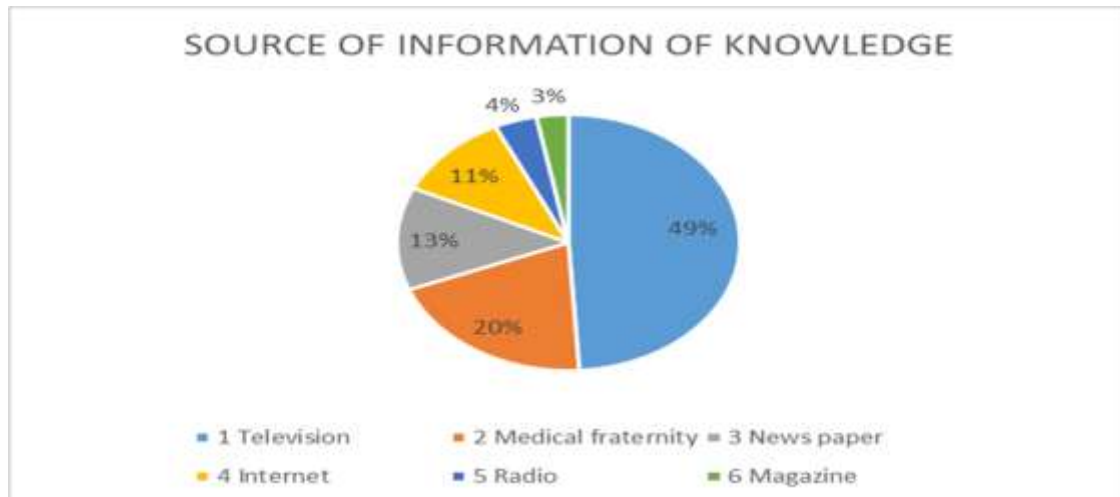
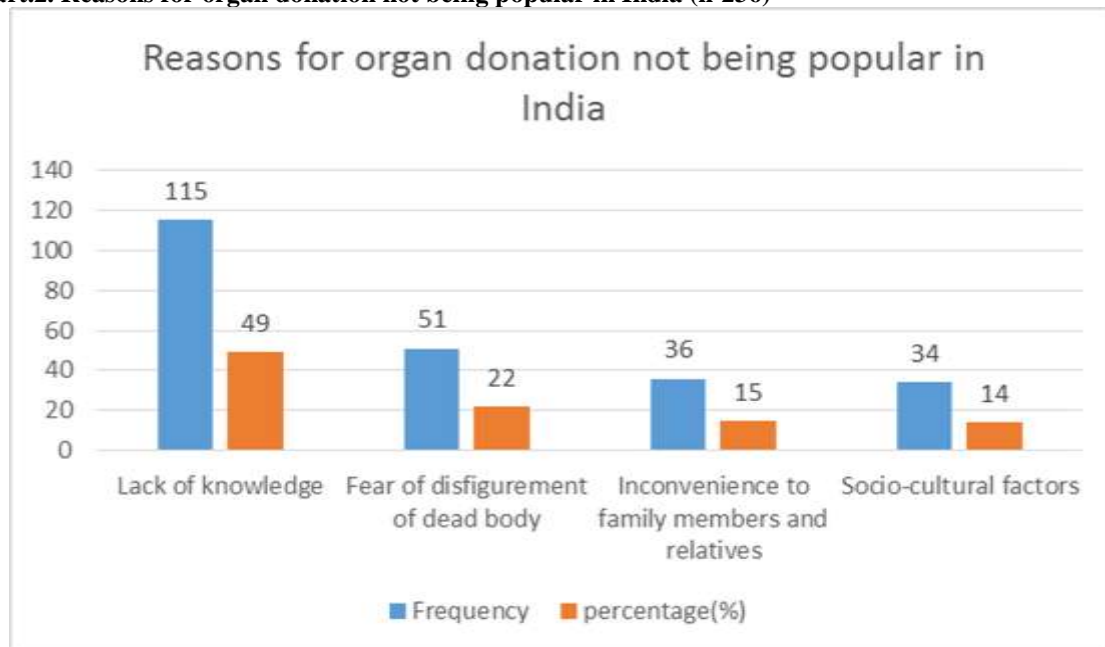


Chart .2.shows Lack of knowledge is the major reason for organ donation is not being popular in India. Lack of awareness about the concept of brain death, religious attitudes and superstition related to rebirth, fear of misuse of

organs, health risks due to organ donation, disfigurement of body after death and consensus among family members have been identified as major barriers for implementation of organ donation program in India.

Chart.2. Reasons for organ donation not being popular in India (n-236)



Despite good attitude of 149(63%), when it comes to practice, people who were ready pledge their organs after death is 24% only.

V. DISCUSSION:

Demand for organs for transplantation far exceed the supply in India. The newer, advanced technologies and surgical methods improved the survival as well as improved the quality of life for the recipient. Even though there is improvement

and advancement related to transplantation of organ has not been accompanied by availability of donor organs. In this study we aimed to know the knowledge, attitude and practice regarding organ donation in a selected urban Dharmapuri.

Our study reveals (81%) have heard about organ donation in their lifetime,when compared to study done by Sujatha et al shows similar results of (82.8%) were aware of the term organ donation(10) study done by Manish R Balwani et al shows



(86%) were aware of the term organ donation(11) study done by Gokula saravanan et al shows (89%)(12), whereas study done by Manojan KK et al shows (97%) were aware of the term organ donation(13).

Study done by Vijayakumar et al shows 43% had good knowledge and 80% had good attitude towards organ donation (14), Gokula saravanan et al study shows 28% had good knowledge and 60% had good attitude (12), whereas in our study 29% had good attitude and 64% had good attitude it shows variation in different regions and it may be due to high literacy and more awareness towards organ donation is the reason.

In our study Living donor / brain dead / after death eligibility status is known to 40% of the respondent, study done by Bharambe VK et al shows 24.4% were aware of live organ donation (15). Study done by Gokula saravanan et al shows 32.3% were aware of live organ donation which was similar to our study.

Study from Mithra p shows were ready to donate to unknown persons were 75.2%, 21.7% to family relatives (18), Naina Sam R et al study shows 43% were ready to donate to unknown persons, 32% to family relatives(19), El-shoubaki H et al study shows 34% of the participants preferred to donate their organs to relatives and friends(20), Saleem et al study shows 51% respondents were like to donate their organs to family members(21), whereas in our study 61% were ready to donate to unknown persons and 30% to family members.

In our study 52% participants are aware of eye donation, study done by Priyadarshini B et al shows 50% are aware of eye donation immediately after death.(16)

Study done by Sujatha K et al and Vijakuamr et al shows 56% of the participants were aware of organ donation through Television(10,14), Devi et al study shows 46.4% were aware of organ donation through Television(17), in our study 49% were aware of organ donation through Television. Study done by Devi et al shows 6% were aware through Doctors (17), in our study 20% were aware through medical fraternity.

In our study reason for organ donation is not being popular were 49% lack of knowledge, 22% are fear of disfigurement were report, study done by Sujatha K et al study shows 46.4% were lack of knowledge (10), 19.6 % were fear our disfigurement which was similar to our study, study done by Devi et al shows afraid of misuse were reported among 27.7% of the participants, in our study 14% were afraid of misuse of organ donation (17).

Manojan KK Study shows only 5% were involved in organ donation (13), Sujatha K study shows 7.3% were involved in organ donation (10), Gokula saravanan et al study show 2.3% were involved in organ donation, in our study similarly only 4% were involved in organ donation.

Organ donation is becoming as a topic of public health importance as results of need and actual status of organ donation. This problem is not only in India, it also among developed countries. Major reason for the problem due to lack of awareness about organ donation among general population. In this study, we found that even those who were aware about organ donation, attitude and practice was poor. This might be due to health professional acted as source for 20% only, hence apart from media, health professional's plays vital role in motivating and increase trust in the community to register for organ donation. At the end of the survey, information regarding the procedure for organ donation was provided to all the participants and general population. Participants who were willing to donate were guided accordingly.

VI. LIMITATIONS:

We have used quantitative tool to assess the awareness, larger study can be done with quantitative as well as qualitative tool can be employed in further studies to get more in depth information on organ donation.

VII. CONCLUSION:

This study found that there is above average knowledge and good attitude towards organ donation, when it comes to practice there is lot of reasons such as family, acceptance, religious beliefs, superstitions and some of the myths plays vital role in hindrances. These can be reduced by proper awareness and by creating strategies which should changes the behavioral impact of the people. It is very much essential to implement these concepts in the curriculum of all fields of education, to ensure awareness from school students. Organ donation needs to be addressed through awareness campaigns in the community and also should be popularized during their visit to the health facilities.

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