

A Study to Assess the Awareness of General Public about Organ Donation in Rural Area of Nashik City

Neha Kasotiya

Clinical Instructor/Tutor, Ganpatrao Adke College of Nursing, Nashik, Maharashtra, India

Abstract: *This community based study was conducted in wadivarhe, the rural area of Nashik district (Maharashtra). Aim is to evaluate the level of knowledge regarding organ donation among rural people. Research undertaken evaluative approach and descriptive design, Convenience sampling method was adopted A questionnaire testing knowledge about various aspects of organ donation was distributed. Nearly 40.6% and 21.9% believed that healthy person and a cardiac dead person can be a donors respectively. Fifty percent believed that a brain dead person can be a donor, and 3.1% clearly stated as to be having no idea regarding the health. Status of a donor. Almost 37.5% were ready to believed a heart beating person declared as "brain dead" as dead nearly 15.6% were ready to accept a brain dead person as legally dead. Highest awareness was also observed regarding liver, kidney, heart, skin and body donations, i.e., 78.1%, 65.6%, 37.5%, 31.3% and 25.0% respectively, Awareness regarding organ donation of other tissues and organ was poor. Nearly 46.9% stated the rural people of Nashik city at they felt need for an educational session on organ donation. Awareness regarding concept of organ donation among in rural India is high. Awareness regarding details of organ donation need further awareness drives. There is a lack of understanding regarding various aspect of brain death and its important in organ donation.*

Keywords: knowledge, awareness, rural people, organ donation

1. Introduction

Organ donation takes healthy organs and tissues from one person for transplantation into another. Experts say that the organs from one donor can save or help as many as 50 Organs you can donate include

Internal organs: Kidneys, heart, liver, pancreas, intestines, lungs

Skin

Bone and bone marrow

Cornea

Most organ and tissue donations occur after the donor has died. But some organs and tissues can be donated while the donor is alive.

People of all ages and background can be organ donors. If you are under age 18, your parent or guardian must give you permission to become a donor. If you are 18 or older you can show you want to be a donor by signing a donor card. You should also let your family know your wishes.

In 2018, about 62% of **organ** recipients were male; 38% female. More than 85,000 corneal **transplants** were performed in 2018. More than 1 million tissue **transplants** are performed each year.

Brain death occurs when a person has an irreversible, catastrophic brain injury, which causes total cessation of all brain stem functions. Brain death is not a coma or persistent vegetative state. In India, brain death is determined in the hospital by four doctors, one of them is a neurologist or neuro-surgeon. The tests are done twice with a gap of six hours to confirm death. This team is not associated with a transplantation team.

Brain death is usually caused by:

- Trauma to the brain (i.e. severe head injury caused by a motor vehicle crash, fall or blow to the head)
- Cerebro-vascular injury (i.e. stroke or aneurysm)
- Anoxia before a lack of blood flow/oxygen to the brain (may be due to drowning or a heart attack)

Brain tumor

Brain dead patient looks to be asleep, is warm to touch and appears to breath, even though it is through the ventilator. And so the family finds it difficult to understand the concept of brain stem death when this tragic situation is explained to them. Once the family has accepted that their loved one is dead, they are presented with the option of organ and tissue donation, in order to help other patients.

2. Literature

- 1) **Kobus G, Poplawska B et al (2015)** A study was conducted for Opinions and knowledge about organ donation and transplantation of residents of selected villages in Podlaskie Voivodeship. Background: In recent years, transplantation, a specific area of medicine, has achieved more and more support and acceptance among different nations around the world. However, there are still many ethical, moral, and legal barriers related to this form of treatment of end-stage organ failures. The aim of this study was to investigate the knowledge and opinions of rural residents about organ transplantation. Material and methods: The research method is a diagnostic survey of 395 rural residents of selected villages of the region of Podlasie, located in north-east Poland. The research tool used to carry out the study was the authors' questionnaire. Results: Organs procurement and transplantation from deceased donors are accepted by 72.6% of respondents. About 60% of the respondents would agree to organ donation for transplantation from the members of their family after death and 65.3% of the residents would be donors after

their death. Half of the respondents (55.9%) believe that the final decision as to the donation of organs from a deceased person should be taken by the family. A positive attitude towards organ transplantation was expressed by 67.6% of respondents. Conclusions: Inhabitants of rural areas mostly agree with procurement of organs from the deceased and also from living donors. However, the enthusiasm and goodwill associated with the transplantation of organs after death diminished when the problem affects members of the family. Positive attitude about transplantation is related to age and level of the education.

- 2) **Marck CH, Neate SL et al (2016)** A study was conducted in Potential donor families' experiences of organ and tissue donation-related communication, processes and outcome. We aimed to describe the experiences of families of potential organ and tissue donors eligible for donation after circulatory death or brain death. Forty-nine family members of potential donors from four Melbourne hospitals were interviewed to assess their experiences of communication, processes and the outcomes of donation. Interviews were recorded, transcribed verbatim and analyzed thematically. Families expressed a range of perspectives on themes of communication, hospital processes and care, the processes of consent and donation and reflected on decisions and outcomes. They expressed satisfaction overall with communication when receiving bad news, discussing death and donation. Honest and frank communication and being kept up-to-date and prepared for potential outcomes were important aspects for families, especially those of post circulatory death donors. Participants reported high levels of trust in healthcare professionals and satisfaction with the level of care received. Many donor families indicated the process was lengthy and stressful, but not significantly enough to adversely affect their satisfaction with the outcome. Both the decision itself and knowing others' lives had been saved provided them with consolation. No consenting families, and only some non-consenting families, regretted their decisions. Many expressed they would benefit from a follow-up opportunity to ask questions and clarify possible misunderstandings. Overall, while experiences varied, Australian families valued frank communication, trusted health professionals, were satisfied with the care their family member received and with donation processes, despite some apparent difficulties. Family satisfaction, infrequently assessed, is an important outcome and these findings may assist education for Australian organ donation professionals.
- 3) **Britt RK, Britt BC et al (2017)** A study was conducted for Theoretical implications addressing rural college students' organ donation behaviors. The current study used the theory of planned behavior to examine rural college students' attitudes, normative beliefs, and perceived behavioral control regarding intent to register as organ donors. This effort is done in light of a need to increase intervention efforts among college students, particularly those in rural areas where these undertakings may need to be tailored in grassroots approaches. The study made use of perceived behavioral control as a moderator and found partial support for the model.

- 4) **Bharambe VK(1), Arole VU, et al (2018)** A study was conducted in rural in a rural town called Lanja, in the Konkan region of Maharashtra in India. A questionnaire covering demographic data, knowledge, and attitude of the Participants was distributed to 400 students, middle-aged and senior citizens; 91.5% of the respondents were aware about organ donation. Television (55.2%) and newspaper (45.8%) were the most popular sources of information. About 56.2% and 32.8% believed that a healthy person and a cardiac dead person can be donors, respectively. Nearly 29.4% believed that a brain-dead person can be a donor and 22.4% clearly stated as to be having no idea regarding the health status of a donor. Highest awareness was observed regarding eye donation (92%). High awareness was also observed regarding heart, kidney, and liver donations, that is, 71.1%, 61.2%, and 54.2%, respectively. Awareness regarding donation of other tissues and organs was poor. Only 46.8% believed that the family of the deceased person can give consent for organ donation if the donor had not signed the donor card. Awareness regarding both body and organ donation in rural India is high. However, there is lack of understanding regarding the concept of brain-death. Awareness regarding body and other organ and tissue donations besides eye, kidney, etc., needs further awareness drives.

3. Problem Statement

A study to assess the awareness of general public about organ donation in rural area of Nashik city.

4. Objectives

- 1) To evaluate the level of knowledge regarding organ donation among rural people.
- 2) To assess the level of knowledge regarding organ donation among the rural people

5. Method / Approach

In this study Descriptive design was adopted, based on the problem statement and objectives of the study, evaluative research approach was used. The primary objective was to evaluate the level of knowledge regarding organ donation among rural people. Here the investigator identifies and evaluate the the level of knowledge regarding organ donation among rural people. The population and sample were rural people of wadivarhe village who were fulfilling the inclusion and exclusion criteria & sample consisted of 120 rural people. The convenience sampling technique was used. Tools used for data collection include tables namely demographic variables proforma & Structured Knowledge questionnaire on organ donation.

6. Result

For the data analysis and interpretation, various methods has been used by researcher that are descriptive and inferential statistics were widely used. The investigator collected the data for analysis and interpretation using Structured Knowledge Questionnaire. In order to examine the proposed

association, the data was tabulated, analyzed and interpreted using descriptive and inferential statistics.

The analysis of data is organized and presented under the following heading:

Table 1: Age-wise distribution of participants

Age Group (Years)	Frequency	Percentage (%)
21 – 25	20	16.67%
26 – 30	24	20.00%
31 – 35	23	19.17%
Above 35	53	44.17%
Total	120	100.00%

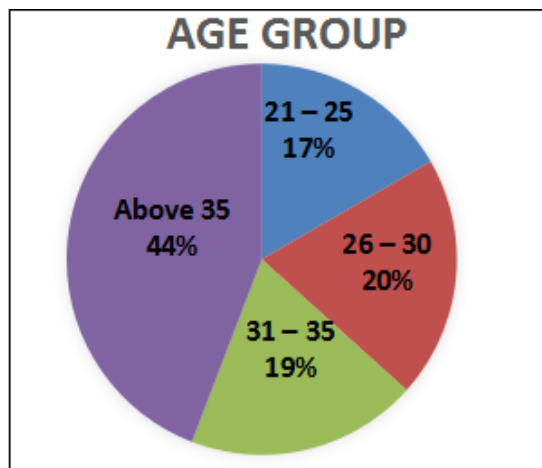


Figure 1

Table 2: Pie diagram showing percentage distribution of age group

Meaning of Organ Donation	Frequency	Percentage (%)
Donation of Heart	16	13.33%
Donation of Eyes	30	25.00%
Donation of Kidney	17	14.17%
Donation of all body Organs	57	47.50%
Total	120	100.00%

In this study we observed that out of 120 participants overall 47.50% (57) people have awareness regarding organ donation as they know the definition of the organ donation.

Whereas remaining 52.50% people did not know the meaning of organ donation.

Correct Answer: Donation of all body Organs (47.50%)

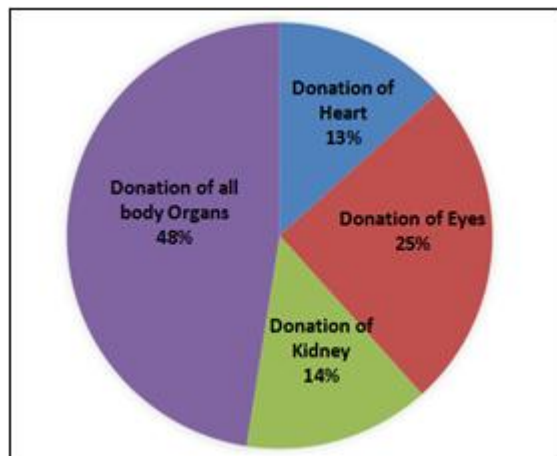


Figure 2

Pie diagram showing percentage distribution of meaning of organ donation

Table 3

Meaning of Brain Dead	Frequency	Percentage (%)
Cessation of respiratory only	20	16.67%
Loss of Brain function only	48	40.00%
Loss of Brain function and Cessation of respiratory	38	31.67%
Unconsciousness	14	11.67%
Total	120	100.00%

In this study we observed that out of 120 participants overall 31.67% (38) people have awareness regarding meaning of brain dead as they know the meaning of brain dead. Whereas remaining 68.34% people did not know the meaning of meaning of brain dead.

Correct Answer: Loss of Brain function and Cessation of respiratory (31.67%)

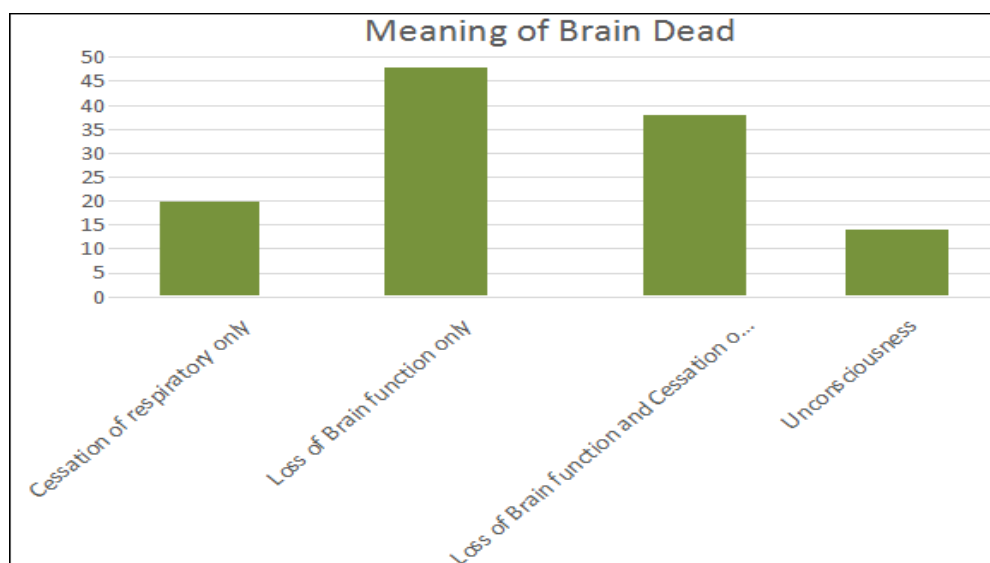


Figure 3

Column diagram showing percentage distribution of meaning of brain dead

Table 4: Age-wise distribution of Mean Score of Awareness of the Participants

Age Group (Years)	Mean Score of Awareness	S.D.	t Statistic	P Value
21 – 25	4.65	1.60	1.329	0.268 Non-Significant
26 – 30	4.83	2.14		
31 – 35	5.69	1.79		
Above 35	5.02	1.85		

In this study we observed that out of 120 participants 21 – 25 age group mean score of awareness is 4.65, 26 – 30 age group mean score of awareness is 4.83, 31 – 35 age group mean score of awareness is 5.69, Above 35 age group mean score of awareness is 5.02.

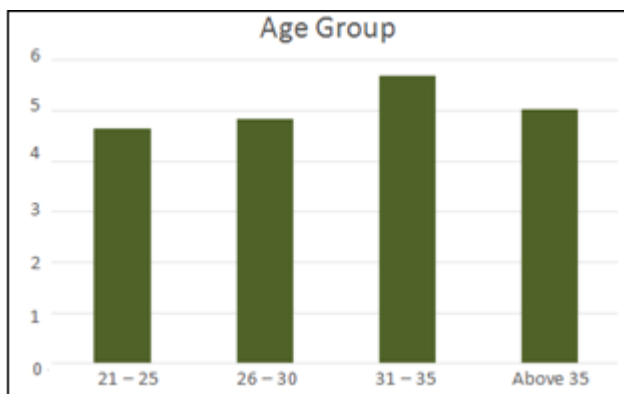


Figure 4

Column diagram showing percentage distribution of Age-wise distribution of Mean Score of Awareness of the Participants

7. Discussion

The knowledge regarding organ donation is important for every rural area people. We aimed to assess the attitude and awareness regarding organ donation in a selected general public population in rural area, Nashik.

8. Objectives

- To evaluate the level of knowledge regarding organ donation among rural people.
- To assess the level of knowledge regarding organ donation among the rural people.

We observed that out of 120 participants overall 47.50% (57) people have awareness regarding organ donation as they know the definition of the organ donation. Whereas remaining 52.50% people did not know the meaning of organ donation.

We observed that out of 120 participants overall 32.51% (39) people have awareness regarding which organ can be donated as they know about the which organ can be donated. Whereas remaining 67.49% people did not know the meaning of which organ can be donated.

We observed that out of 120 participants overall 31.67% (38) people have awareness regarding meaning of brain dead as they know the meaning of brain dead. Whereas remaining 68.34% people did not know the meaning of meaning of brain dead.

We observed that out of 120 participants overall 28.33% (57) people have awareness regarding maximum time the human heart can be kept artificially functioning as they know about the Maximum Time the human heart can be kept artificially functioning. Whereas remaining 71.66% people did not know the meaning of maximum Time the human heart can be kept artificially functioning.

We observed that out of 120 participants overall 34.17% (57) people have awareness regarding any possibility to brain dead patients to survive as they know the any possibility to brain dead patients to survive. Whereas remaining 65.83% people did not know regarding any possibility to brain dead patients to survive.

We observed that out of 120 participants overall 11.67% (14) people have awareness regarding Organ transplantation Act came inforce from year as they know about the Organ transplantation Act came inforce from year . Whereas remaining 88.33% people did not know the meaning of Organ transplantation Act came inforce from year.

We observed that out of 120 participants overall 40.00% (48) people have awareness regarding brain dead Patients body handed over to the relatives as they know about the brain Dead Patients body handed over to the relatives. Whereas remaining 60.00% people did not know the meaning of brain dead Patients body handed over to the relatives.

We observed that out of 120 participants overall 48.33% (58) people have awareness regarding distribution of donated organ done according to Economical Status of Patients as they know about the Distribution of donated organ done according to Economical Status of Patients. Whereas remaining 51.67% people did not know the meaning of distribution of donated organ done according to Economical Status of Patients.

We observed that out of 120 participants overall 48.33% (58) people have awareness regarding distribution of donated organ done according to Economical Status of Patients as they know about the Distribution of donated organ done according to Economical Status of Patients. Whereas remaining 51.67% people did not know the meaning of distribution of donated organ done according to Economical Status of Patients.

We observed that out of 120 participants overall 40.00% (48) people have awareness regarding Any consequences seen on the body of the organ donor as they know about the Any consequences seen on the body of the organ donor. Whereas remaining 60.00% people did not know the meaning of any consequences seen on the body of the organ donor.

We observed that out of 120 participants overall 59.17% (71) people have awareness regarding Organ Donation is permitted by your Religion as they know the Organ Donation is permitted by your Religion. Whereas remaining

40.83% people did not know the meaning of organ donation is permitted by your Religion.

We observed that out of 120 participants overall 40.00% (48) people have awareness regarding minimum age limit of donating Organ as they know the minimum age limit of donating organ. Whereas remaining 60.00% people did not know the meaning of minimum age limit of donating organ.

We observed that out of 120 participants overall 34.17% (41) people have awareness regarding first kidney transplant was successfully done in which as they know the first kidney transplant was successfully done. Whereas remaining 65.83% people did not know the meaning of first kidney transplant was successfully done.

We observed that out of 120 participants overall 24.17% (29) people have awareness regarding In which medical conditions an individual cannot do organ donation as they know about the In which medical conditions an individual cannot do organ donation. Whereas remaining 75.83% people did not know the meaning of In which medical conditions an individual cannot do organ donation.

We observed that out of 120 participants 21 – 25 age group mean score of awareness is 4.65, 26 – 30 age group mean score of awareness is 4.83, 31 – 35 age group mean score of awareness is 5.69, Above 35 age group mean score of awareness is 5.02.

We observed that out of 120 participants male mean score of awareness is 5.31 and female score is 4.87.

We observed that out of 120 participants Educational Qualification-wise distribution of Mean Score of Awareness of the Participants primary 5.10, higher secondary 5.00, degree 5.4 and illiterate 4.61.

9. Conclusion

In this study population, there is high level of awareness about eye and kidney donation, but the awareness about other organ donation is poor. The awareness about eligible donors and the timing of organ donation is also high. Almost all the subjects were willing for eye donation, while two-thirds were unwilling to donate solid organs due to perceived risks and family pressure. This needs to be addressed through awareness campaigns in the community and also popularized during their contact with the health system.

According to the study, when the peoples had not enough information regarding family member's donation wishes the rate of willingness to donate organs is lower. Socio-demographic characteristics influence the rate of public willingness to donate organs and campaigns educational should be directed to improve rates of donation the organs.

References

[1] Organ donation: medline plus 2016 (september 16) available from: medlineplus.gov

- [2] Organ donation statistics/organ donation available from: www.organ donor .gov>statistics
- [3] Organ donation facts/news,research and analysis available from: www.mohan foundation.org/organ/donation
- [4] Kobus , Popławska B et al, "Opinions and knowledge about organ donation and transplantation of residents of selected villages in Podlaskie Voivodeship". *Ann Transplant.* 2015 May 8;20:256-62. Available from: doi: 10.12659/AOT.892659. PMID: 25951889 [Indexed for MEDLINE]
- [5] Marck CH, Neate SL et al. "Potential donor families' experiences of organ and tissue donation-related Communication, processes and outcome". *Anaesth Intensive Care.* 2016 Jan;44(1):99-106.PMID: 26673595 [Indexed for MEDLINE]
- [6] Britt RK, Britt BC et al. "Theoretical implications addressing rural college students' organ donation Behaviours". *J Health Psychol.* 2017 Apr;22(5):650-660. Epub2015 Nov Available from: DOI: 10.1177/1359105315611953 PMID: 26585861 [Indexed for MEDLINE]
- [7] Bharambe VK(1), Arole VU,et al "Knowledge and attitude toward organ donation among people in Lanja: A rural town in India". *Saudi J Kidney Dis Transpl.* 2018 Jan-Feb;29(1):160-166. Available from: DOI: 10.4103/1319-2442.225209 PMID: 29456223

Author Profile

Ms. Neha Kasotiya Ganpatrao Adke College of Nursing, Nashik, Maharashtra, India