

Awareness of Organ Donation in General Population - A Cross - Sectional Study

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Abstract: Introduction: Organ donation is defined as an act of giving one or more organs, without compensation, for transplantation to another person. The rate of organ donation in India is low and research on organ donation among the general population is limited. The current study was carried out with the objective of assessing the awareness about organ donation in the general population of central India. Methods: A cross - sectional study among the beneficiaries attending the COVID - 19 vaccination centre of a tertiary care centre in Central India was done from 21st January - 5th February 2022. This was done till the pre - determined sample size of 402 was achieved. All the participants were interviewed using a structured questionnaire. Results: Of the 402 subjects, 50.7% were males. The majority (63.2%) of the subjects had heard about the term 'Organ Donation' but didn't have knowledge about it. 45.5% of the subjects were of the opinion that there is a risk in organ donation. Most of the study participants (67.7%) had never donated any organ/tissue/cell/blood. Conclusion: The study highlights a high level of awareness but a low level of positive attitude towards organ donation among the general population. Better knowledge and awareness will help in promoting organ donation.

Keywords: Organ donation, Awareness, Knowledge, General population

1. Introduction

Organ transplantation is one of the greatest medical marvels of the twentieth century, which has prolonged and improved the lives of hundreds of thousands of patients, worldwide. Countless acts of generosity by organ donors and their families have made transplantation a life - saving treatment and a shining symbol of human solidarity. (1) Organ donation is defined as an act of giving one or more organs, without compensation, for transplantation to another person. 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 the need of a transplant. (2)

Organ transplantation is a successful medical intervention available for end - stage organ failure. For the last couple of decades, it has assumed public health significance due to the shortage of high - quality human organs. (3) The issue of organ donation is multifactorial and complex one, involving legal, ethical, medical, organizational, and social factors. Organ shortage is a global problem, but India lags far behind the western world. Organ donation following brain stem death is uncommon in India. There is a huge shortage of organs in India, and the majority of organ failure patients die while on the waiting list for a lack of timely availability of organs. (4) India needs at least 260, 000 organs every year, i. e., 180, 000 kidneys, 30, 000 livers, and 50, 000 hearts whereas only 6000 kidneys, 1200 livers, and 15 hearts are transplanted annually (National Organ Transplant Program). Unfortunately, India with a 1.2 billion population is lagging in organ donation with a national deceased donation rate of <1 per million population. (3) The organ donation rate from a deceased donor in India in 2012 was 0.16 per million populations which improved to 0.34 per million populations in 2013–2014. There is a huge gap in the demand and availability of organ donation in India. (5)

Legislation for human organ donation in India came in 1994 in the form of "The transplantation of Human Organs Act, 1994". Yet even 30 years since the country passed the act, only kidney donations by live donors are in vogue and cadaver donations are still very few. (4) From 1995 to 2000, there were only 35 hospitals that had attempted organ transplants from deceased donors, and, of these, only a handful of hospitals in states like Tamil Nadu and Maharashtra have regularly engaged in the use of such donations. In 2005, a national organ registry was established as a result of the efforts of the Indian Society of Organ Transplantation. Zonal Transplant Coordination Centre, Mumbai, Maharashtra reported 505 donors leading to transplants of the kidney (n = 822), liver (n = 344), heart (n = 77), lung (n = 18), and pancreas (n = 2) from 1997 to May 2019. (6)

Currently, organ donors are broadly classified into two types: donor after brain death and donor after cardiac death with the removal of organs/tissue possible during both living and deceased state. (3) One of the greatest roadblocks to organ donation is the refusal of family consent. Myths and misconceptions along with a general lack of awareness add to the low percentage of cadaveric donations. Knowledge, attitude and behaviour are the key factors that influence rates of organ donation. Culture and religion have also been documented to affect the decision - making process of organ donation. Hence, it is crucial to assess the knowledge and attitudes of the general population towards organ donation. In India, published evidence on organ donation is mainly from studies among healthcare workers, patients and college students. (7)

Research on organ donation among the general population is limited. Only a few researches were available about organ donation among the general and rural populations. The

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current cross - sectional study was conducted to assess the knowledge, attitudes and practices of organ donation among the general population in Central India.

2. Materials and Methods

The present cross - sectional study was undertaken in a COVID - 19 vaccination centre of a tertiary care centre of central India from 21st January to 5th February 2022. The sample size calculated was 402. All people (>18 years) attending the COVID - 19 vaccination centre were contacted (460 people). Those willing to participate in the study were included. After explaining the purpose of the study and obtaining consent from the study subjects, an interview was conducted using a predesigned, pretested structured questionnaire. Throughout the study anonymity of all participants was maintained and privacy, as well as the confidentiality of the data, was assured.

The questionnaire comprised of four sections: demographics, knowledge, attitude and practice. The demographics included the background characteristics of the study participants including their age, gender, area of residence and education status. There were 13, 5 and 3 questions regarding knowledge, attitude and practice respectively related to organ donation. After the interview, data was entered into a Microsoft excel sheet and analysed using Microsoft Excel 2019.

3. Results

In our study, 58 out of the 460 participants were excluded because they either failed to respond or were unable to finish the interview questions. Finally, 402 participants were interviewed and included in the study.

Table 1: Characteristics of the study population

Variables	Frequency	Percentage (%)
Age Group (in years) (n=402)		
18 - 25	196	48.8
26 - 35	84	20.9
36 - 45	35	8.7
46 - 55	40	10
56 - 65	27	6.7
>65	20	5
Gender (n=402)		
Male	204	50.7
Female	198	49.3
Area of Residence (n=402)		
Urban	250	62.2
Rural	152	37.8
Education (n=402)		
Literate	10	2.5
Primary School Certificate	7	1.7
Middle School Certificate	60	14.9
High School Certificate	97	24.1
Intermediate / Post high school diploma	79	19.7
Graduate or Post Graduate	126	31.3
Professional	23	5.7

Among the study participants, the majority (48.8%) were in the age group of 18–25 years. An almost equal number of male and female participants were in the study. The majority

were residing in an urban area (62.2%) and 31.3% had completed education till graduation or post - graduation [Table 1].

Table 2: Participants' knowledge about organ donation

Variables	Frequency	Percentage (%)
Heard of the term organ donation and knowledge about it (n=402)		
Yes, I have heard but I don't know about it.	254	63.2
Yes, I have heard and I know about it.	136	33.8
No	12	3
Reasons for organ donation (n=402)		
To save someone's life	312	80
As a 'responsibility'	44	11.3
Out of compassion/sympathy	31	7.9
For money	3	0.8
Time of organ donation (n=402)		
After death	59	14.7
Before death	6	1.5
Both	250	62.2
Neutral	87	21.6
Law for organ donation in India (n=402)		
Don't know	220	54.7
Yes	169	42
No	13	3.2

Table 2 shows that totally, 63.2% of the study participants had heard about the term 'Organ Donation' but don't have knowledge about it. 80% of participants stated that the reason for organ donation was to save someone's life. The majority (62.2%) of the study participants agreed that the right time to donate organs was both after death and before death. 54.7% of study participants don't know if there is any law for organ donation in India.

Table 3: Participants' attitude towards organ donation

Variables	Frequency	Percentage (%)
Risk of organ donation (n=402)		
Yes	183	45.5
Don't know	145	36.1
No	74	18.4
Preferences for donating organ (n=338)		
Anyone	221	65.4
Family members	107	31.6
Friend	5	1.5
Stranger	3	0.9
Colleague	2	0.6
Perception of misuse of the donated organ (n=338)		
Sometimes	204	60.4
Often	82	24.3
Never	37	10.9
All the time	15	4.4

Table 3 shows that 45.5% of the study participants were of the opinion that there is a risk in organ donation. Most of the study participants (65.4%) were of the notion that they had no problem donating their organs to anyone. The majority (60.4%) felt that their organ might be misused.

Table 4: Participants' practice regarding organ donation

Variables	Frequency	Percentage (%)
Donated an organ/tissue/cell/blood (n=402)		
No	272	67.7
Yes	130	32.3
Organ/tissue/cell/blood donated (n=130)		
Blood	113	86.9
Skin	11	8.4
Kidney	4	3.1
Bone marrow	1	0.8
Liver	1	0.8

Table 4 shows that the majority of the study participants (67.7%) had never donated any organ/tissue/cell/blood. Among those who had donated, the majority (86.9%) had donated blood.

4. Discussion

The present cross - sectional study was carried out among 402 participants in a COVID - 19 vaccination centre of a tertiary care centre of central India from 21st January to 5th February 2022. In our study, 50.7% were males. This was found to be similar to a study done by Vijayalakshmi et al. (7) where 53.4% were men. Also in a study by Devi Ket al. (10) males were 51% and females 49%. In the present study, the majority (62.2%) were residing in urban areas. A study by Vijayalakshmi et al. (7) found that the majority (56%) were from an urban background.

In the present study, 63.2% of the study participants had heard about the term 'Organ Donation' but don't have knowledge about it. This was similar to the study done by M. R. Balwani et al. (4) found that about 86% of participants were aware of the term organ donation but knowledge about its various aspects was low. A similar study by Sachdeva et al. (3) found that the majority (74.9%) of the respondents had heard the term organ donation. In our study, 80% of participants stated that the reason for organ donation was to save someone's life. In a similar study done by Balajee et al. (11) the majority of the participants (88%) felt that the purpose of organ donation was to save a life. In our study, 54.7% of study participants were unaware of any law for organ donation in India. A study by M. R. Balwani et al. (4) found that about 74.41% of participants were unaware about any legislation regarding organ donation.

Most of the study participants (65.4%) in our study, were of the notion that they had no problem donating their organs to anyone. The study by Mishra et al. (5) found that the majority (70.5%) of participants apprised that they would donate an organ to anyone in need. A similar study by Bharambe VK et al. (9) found that the majority (72.1%) of the respondents were willing to donate to anybody. The study done by Devi Ket al. (10) showed that 78.7% of participants opined that organ donation can be done to anyone irrespective of blood relation. In the present study, the majority (60.4%) of participants felt that their organs might be misused. The study done by M. R. Balwani et al. (4) found that about 59% of aware people believed there is a potential danger of donated organs being misused, abused or misappropriated.

In the present study, out of 402 participants, only 28.1% had donated blood. In a study done by Devi Ket al. (10) only 19% of the respondents had donated blood.

5. Conclusion

The study highlights a high level of awareness but a low level of positive attitude towards organ donation among the general population. Better knowledge and awareness will help in promoting organ donation. As there is a huge gap between the requirement and availability of organs for transplantation in India, it becomes necessary to actively educate people about organ donation, its procedure, legislature and how one can register. This would require the active involvement of healthcare, media, religious and political leaders and such an informed awareness would go a long way in improving the expectancy of patients in need.

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