

Awareness regarding organ transplantation among visitors of the ICU patients in three tertiary care centres in Kathmandu, a cross-sectional study

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Keywords: attitude; brain death; knowledge; organ transplant



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Abstract

Background and aims: Organ transplant is often the only viable treatment option for various end stage organ failures. Inadequacy of organ procurement from living as well as cadaveric donors is common, more so in developing countries. The aim of this study was to find out the knowledge and attitude regarding organ transplantation.

Methods: A questionnaire-based survey was carried out among 150 respondents, who were the visitors of patients admitted to ICU of three tertiary care centres in Kathmandu. **Results:** Majority of the respondents were male 105 (70%) and 132 (88%) were aware about organ transplant. Likewise, 111 respondents (84.1%) hold the belief that organ transplant save lives. Ninety-four of the responses (34.8%) believe that media was the source of knowledge and 121 (91.7 %) of the respondents stated that organ transplant should be promoted. Majority of them, 80 of the total respondents (60.6%) believed that organ can be donated by both living and deceased donors and 111 (84.1%) of them believed that organ transplant save lives. While 88 of the respondents (66.7%) have heard about brain death, 60 of them (45.4%) believe that there is an organ transplant act in Nepal. Out of all respondents who are aware about transplantation, 91 of them (68.9%) have opinion that they are willing to donate the organ of their beloved ones should there be a situation of brain death.

Conclusions: The study concludes that respondents have adequate knowledge regarding organ transplantation. Respondents have overall positive attitude towards organ donation and transplantation.

Introduction

The first successful kidney transplant was performed in Nepal in 2008 at Tribhuvan University Teaching Hospital. Similarly, kidney transplant from deceased donor was done in May 10, 2017 after amendments in previous Organ Transplantation Act of Nepal favouring initiation of cadaveric organ donation and transplantation.¹

The first ever successful liver transplant in Nepal was conducted on 7th December, 2016 at Human Organ Transplant Centre.² Tribhuvan University Teaching Hospital performed its first successful liver transplant on 1st June, 2019.³ Both were living related donor liver transplant. Despite the advances in transplantation, the organ shortage continues to raise a worldwide

endeavour to increase the rate of donation. In Asia, the cadaveric organ donation rate is below 5 per million population per year as compared to the western world where it is 10-34 per million population per year.⁴ Although the first cadaveric liver transplant was performed in Asia by Chen et. al. in Taiwan in 1984, cadaver organ donation rates remain low in this region.⁵ Many factors play a role in willingness to donate an organ. Apart from the financial issues, the major determinants of organ availability are social and cultural differences between Asian population and Western population. Similarly, myths and religious misconceptions also play significant role.^{6,7} Another major factor that plays the role in organ availability is the knowledge and attitude towards organ donation. Also, the lack of knowledge regarding legal and procedural details of organ donation may play a role in

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contributing to the limited availability of donor organs. For any transplant program to be successful, awareness and positive attitude regarding organ donation is essential.⁷⁻⁹

Inadequacy of organ procurement from cadaver is a major problem worldwide, more so in developing countries. In order to increase the rate of deceased donor organ transplant, it is very important to determine the patients who are terminally ill or have the possibility of brain death and prepare the patient's family for the process of organ donation.^{8,9} Providing family members with the option of organ donation is often an element of end of life care.¹⁰

The aim of our study was to survey the knowledge and attitude of visitors/family members of patients who are critically ill, regarding the organ donation, brain death and the factors associated with their level of perception regarding organ donation and transplantation. We explored various aspects of the target group and tried to elucidate the various factors that play the role in understanding of organ donation, both living and cadaveric. We also explored the understanding of the concept of brain death.

Materials and methods

Study design and Setting:

A cross sectional survey was done using self-administered questionnaire at three tertiary care hospitals, Tribhuvan University Teaching Hospital, Kathmandu Medical College and National Medicare Hospital and Research Center from 2017 March to 2017 August (six months) with a level 3 Intensive care unit (ICU). The family members/visitors of the critically ill patients were administered the questionnaire after obtaining the consent. The total number of the participants was 150, both male and female. We used probability sampling method for the study.

Instrumentation:

The questionnaire was in Nepali language and subdivided into four segments. Segment A dealt with demographic data, segment B dealt with understanding of organ donation, segment C dealt with personal opinion and experiences and segment D allowed respondents to make comments if any.

Results

Out of the 150 respondents, 105 (70%) were males and the rest were females. The mean age of the male respondents was 38.7713.17 years and that of female respondents was 41.2614.96 years. Majority of respondents (34) relied on agriculture (22.66%) as an occupation followed by education/students 32 (21.33%). The geographical distribution showed that the 74 of respondents to be clustered around central developmental region (49.34%) with 10 (6.66%) of the respondents being illiterate, while others having varying levels of educational qualification, with 38 of them having had educational qualification of higher secondary school level (25.33%). Out of all the respondents, 113 (75.33%) were married. Most of them followed Hindu religion 132 (88%) with similar number 132 (88%) of all respondents being aware of or having heard about organ transplantation. Out of all respondents, 132 (88%) have heard about organ transplantation, while 88 (12%) have not heard about it. (Table 1)

Table 1. Knowledge regarding organ donation

Heard about organ donation	Frequency (n)	Percentage (%)
Yes	132	88.0
No	18	12.0

Out of all respondents who had idea about organ transplantation, the most common source of the knowledge was from social media

like radio and television (34.81% of all responses). Most of them 88 (66.66%) believed that organ transplantation involves both living and dead donors and 111 (84.09%) of them believed that organ donation is done because it is their duty to do so. Out of all responses obtained regarding which organ/body parts are donated as a part of organ transplantation, 70 of the total response was in favor of kidney (53.03%) followed by 65 of the responses who believe that it is eye/cornea (49.24%). While 88 (66.66%) of the respondents have heard about the brain death, 45.45% believed that there is an organ transplant law/act in Nepal.

Most of the respondent did not know any individual who had donated organs (64.39%) and majority of them (95.46%) had not donated any organ at any point in life. However, 83.33% of them said that they will receive organ in future should such need arise and 90.15% of them were happy to donate organ in future. (Table 2)

Table 2. Attitude of respondents regarding organ donation

Variables	Frequency (n)	Percentage (%)
Have you ever donated organ?		
Yes	6	4.54
No	126	95.45
Do you wish to donate organ in future?		
Yes	119	90.15
No	13	9.85
Allow donation of organ of your beloved if such situation arise		
Yes	91	68.93
No	9	6.81
Undecided	32	24.24
Receive organ transplant in future if needed		
Yes	110	83.33
No	22	16.67

With regards to the religious belief, 66.66% of them believe that their religion permits organ transplantation. Out of all respondents who are aware about transplantation, 68.93% have opinion that they are willing to donate the organ of their believed ones should there be a situation of brain death. Out of them 91.66% believe that organ transplant should be encouraged and out of 2.27% who believe that organ transplant shouldn't be encouraged believe so because of the fear of misuse or organ trafficking.

Discussion

This cross-sectional study assessed knowledge and attitude of visitors of critically ill patients regarding organ transplantation. The visitors are often involved in decision making on behalf of critically ill and sedated patients. Families assist in end-of-life decisions and decisions regarding life-sustaining medications therapies.¹¹

The present study signifies that the majority (88%) of the respondents have heard about organ donation. A similar study done in India among 266 respondents depicts that all had heard about organ transplantation and brain death.¹² The results of this study is consistent with the previous study.

The present study signifies that the 45.4% (60) of respondents believe that there are organ donation/transplantation laws in Nepal. A similar study done in Delhi among office goers, students and general public stated that the majority of respondents had heard about organ transplant is legal in their country. The results of both the studies are comparable.¹³

In the present study 66.66% of respondents had heard about

brain death. A similar cross-sectional study among 113 respondents of Saudi Arabia showed that only 59.52% have heard about brain death. This result is in contrast with the present study. It might be due to different setting of single institute, and medical students as participants of the study.¹⁴

Likewise 68.93% of the respondents have a view that they allow donation of organ of their beloved family members should the situation of brain death arise, comparable to a study done in Saudi Arabia where 60.2% of the respondents were willing to donate organ of a family member.¹⁴

In majority of participants (34.8%) source of information regarding organ transplantation was from media (television, radio) similar to a study conducted on level of knowledge and attitude regarding organ donation, a community-based study from Pakistan which depicts that media was a popular source of information. The results of the both studies are similar.⁷

The present study illustrates that the highest proportion of respondents revealed that both living and deceased donors can donate organs. A similar study conducted on knowledge, attitude and practice regarding organ donation among 257 adult population in India shows that almost half of the study participants were aware that both living donor and deceased can donate organ.¹⁵

The present study reveals that 66.66% of respondents believe that their religion permits organ donation and transplantation which is in contrast with a community based cross-sectional study conducted in India among 257 participants which displays that the majority of the population were unaware of their religion allowing organ donation.⁷

Almost all of the respondents in the study believe that organ donation should be promoted. A small proportion (3.03%) believe that organ transplant should not be promoted, the reasons being fear of disfigurement, familial pressure, fear of trafficking and fear of misuse.

This study was conducted only in three Tertiary level hospitals of Kathmandu, so it may not be possible to generalize the findings to all. This study will serve as a baseline information for other researchers to conduct further research in this area.

Conclusion

The study concludes that respondents have adequate knowledge regarding organ transplantation. Respondents have overall positive attitude towards organ donation and transplantation.

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