

Awareness about organ donation especially kidney donation in Nurpur Shahan, a rural community area in Islamabad, Pakistan

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Abstract

Objective: To assess the level of awareness and ethical issues related to organ donation especially kidney donation and the willingness to donate a kidney among the rural population of Pakistan.

Method: A cross sectional study was conducted in a sample of 324 subjects residing in Nurpur Shahan by means of a pre tested questionnaire. Data collection was carried out via a face to face interview and the data was analyzed using SPSS 10.0 and associations were tested using the Chi-square test.

Results: Knowledge about organ donation was significantly associated with age ($p=0.00$) and education ($p=0.024$). Allowance of organ donation in religion was an important factor in determining the attitude of individuals towards organ donation and their willingness to donate. Media emerged as a major source of information for the population of Nurpur Shahan; kidney was the organ most known for its donation. Most (69%) respondents did not consider organ vending to be ethically correct but a sizeable proportion (25%) thought it may be considered in times of dire need.

Conclusion: Awareness of organ donation in our sample was high and more than half of the people were willing to become donors.

Keywords: Kidney donation, Organ donation, Transplantation, Pakistan (JPMA 61:828; 2011).

Introduction

Organ donation is defined as the removal of tissues from the human body, from a living or dead person, for the purpose of transplantation as a treatment.¹

Organ transplants save thousands of lives every year hence, it seems unreasonable to question the ethics regarding organ transplantation. Pakistan is consistently mentioned in

various controversies linked with organ transplantation and is referred to as the black market for organs.²⁻⁴

In Pakistan, many people cannot access transplant treatment for the same sociological, economic, and educational reasons that they cannot access other medical treatment.⁵ Those who do have access to transplant treatment get the organ from live related donors. However, there is an

alarming reversal in which foreigners are receiving local organs through medical tourism.⁶

According to World Health Organization (WHO), with the rise in cases of kidney disease and renal failure, there are at least 200,000 people on waiting lists for kidneys. Different approaches are taken to meet this demand like live donation and cadaveric donation.⁷ In Pakistan; a lot of social and cultural factors are involved along with imprudent religious beliefs which prevent people from donating their organs.⁸ Another reason is the emotional association families have with the dead bodies of their loved ones as well as the sanctity of the dead body.

There is a need to create awareness on the issue of organ donation as legislations that need to be implemented are affected by the level of awareness in the community.^{9,10}

According to a study by the U.S. Agency for Healthcare Research and Quality (AHRQ), people often do not have all the information they need to make decisions about donating a family member's organs nor do they have a clear understanding of the donation process.¹¹ The results of this study have shown that those families who are aware of the patient's wishes, those that receive regular information about organ donation and those that come in frequent contact with health care providers and organ donation professionals are more likely to donate an organ. Thus public attitudes are affected by different factors such as level of education, religion, traditional values and gender.

The aim of this study was to determine the level of awareness about organ donation particularly kidney donation among people in Nurpur Shahan and to determine the factors which influence an individual's decision to donate an organ.

Subjects and Methods

This cross sectional study was carried out in Nurpur Shahan, a rural area 15 km from Islamabad the capital of Pakistan, with a population of 25000. This site was used because Shifa College of Medicine (SCM) and its faculty have been working in this area for the last 4 years. There is a primary health care facility in the area which has been established by the Rotary International and this facility is manned by faculty from SCM. There has been a good rapport established with the community members and every year students from our college are welcomed to carry out their research projects.

The study period extended from January to July 2009. The required sample size was 313 individuals as calculated by using EPI info version 6. The expected level of awareness about organ donation was expected around 33%. Worst acceptable result was 5%.

Due to the co operative attitude of the locals we were able to interview 324 individuals (within our time allotted for

data collection) above the age of 18 years, selected at random from the above mentioned community. This was done as systematic random sampling. We approached every 4th household in a given street and interviewed all consenting adults within that household. The community comprises primarily of individuals from lower socio economic group.

The questionnaire comprised of 21 multiple choice. Box checking format questions designed for effectively carrying out the survey. It was intended to estimate the perceptions of the general population towards this issue. Keeping in mind the language barriers, the group decided to interview the participants in different local languages (English, Urdu, Punjabi and Pushto). The questionnaire comprised of 21 items; about socio demographics, awareness about organ donation and willingness to donate these organs and some were related to the circumstances in which the participants would donate their organs.

Shifa College of Medicine IRB/Ethics Committee approval was obtained prior to the start of the study. Informed written consent was obtained from the study participants. All data was kept confidential.

Results

Our study population consisted of 324 participants, the socio demographic data of whom have been shown in Table-1. More than half of the study population was females (58%). The majority of the participants fell into the age group of 26-45 years. The level of education was secondary school in approximately 31 % of the participants.

Overall, 85.8 % had heard about organ donation, out of which the majority (55.2%) said that media was crucial in

Table-1: Sociodemographic details of our study population.

Variables	Total=324 no. (%)
Gender	
Male	136 (42)
Female	188 (58)
Age (years)	
18-25	100 (30.9)
26-35	116 (35.8)
36-45	55 (17)
46-55	48 (14.8)
55 above	5 (2.5)
Education	
Primary school	93 (28.7)
Secondary school	100 (30.9)
Graduate	35 (10.8)
Postgraduate	5 (1.5)
None	91 (28.1)
Marital status	
Married	229 (70.7)
Unmarried	87 (26.9)
Divorced	4 (1.2)
Widowed	4 (1.2)

Table-2: Awareness about organ donation.

Awareness about organ donation among our study sample	No. (%)
Heard about organ donation	
Kidney	279 (86.1)
Cornea	158 (48.8)
Liver	98 (30.2)
Organ donated most in Pakistan is	
Intestines	8 (2.5)
Pancreas	7 (2.2)
Kidneys	282 (87)
Lungs	14 (4.3)
Cornea	13 (4.0)
Basis of organ donation depends upon	
Appearance	4 (1.2)
Blood type	162 (50.0)
Sex	25 (7.7)
Ethnicity	17 (5.2)
Don't know	116 (35.8)
Which diseases limit donation?	
Tetanus	5 (1.5)
Tuberculosis	69 (18.5)
AIDS	136 (42.0)
Typhoid	1 (0.3)
Hepatitis	8 (2.5)
Any disease	67 (20.7)
Don't know	47 (14.5)
When to donate an organ	
When alive	197 (60.8)
When dead	127 (39.2)
Is it ethical to donate an organ to obtain money?	
Yes	82 (25.3)
No	225 (69.4)
Don't know	17(5.2)

creating awareness amongst them. Other sources like friends, relatives (29.3%), religious organizations etc played a minor role. There was a certain set of people (10.5%) who were completely unaware of this topic. Further, aspects regarding awareness of organ donation in our study sample are shown in Table-2.

Higher education level emerged as an important independent predictor of knowledge status of respondents; those belonging to the higher education strata of population had a higher knowledge score of organ donation ($p=0.00$). All (100%) participants with a postgraduate degree, 97% of those with secondary education, 89.2% of those with primary education, and 88.6% of those who were graduates knew about organ donation; 68.1% of those who were not formally educated had heard about it.

Age group and its association with the knowledge of respondents about organ donation was statistically significant ($p=0.00$). People belonging to age group 36-45 years (90.0% of respondents) had adequate information about organ donation, followed closely by people of age groups 26-35 and 18-25 years (89.7% and 85 % respectively). Only 40% of respondents above 55 years showed a positive response.

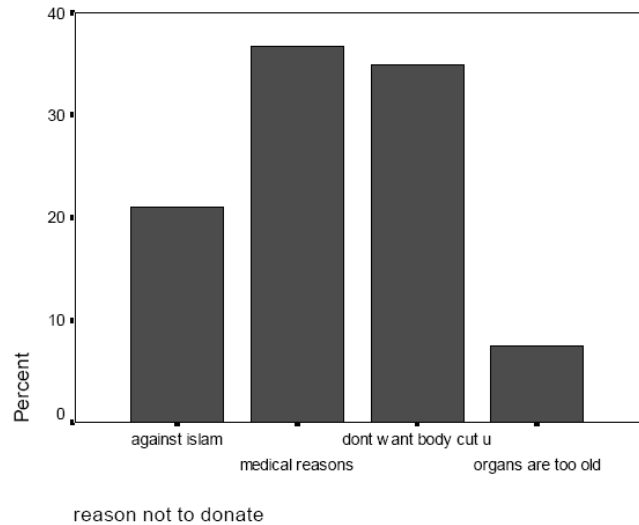


Figure: Reasons for not donating an organ.

Variation about the knowledge of organ donation was not that marked between the male and female population ($p=0.064$), with 90.4% of males and 82.4% of females having prior knowledge about it.

Out of the 324 participants, 25.9% said that they would not like to donate their organs under any circumstances, 52.4% said that they would donate under any circumstances and 21.6% said that they would donate only under special circumstances.

The question as to who can be a donor was answered by 82.4 % of the participants, the rest were unaware. Out of the 82.4 % of the participants, 27.2% thought that age is not a barrier for donation. Amongst the rest, 42.6 % believed that only adults can donate.

A statistically significant correlation ($p=0.024$) was found between age group and willingness to donate. Participants between the ages 26-35 (58.6%) and 46-55 years (62.5%) formed the bulk of people who definitely wanted to donate whereas in younger age group i.e. 18-25 years, half of them were willing. An equally significant correlation ($p=0.037$) was seen between educational status of the people and their readiness to donate. Those who belonged to higher educational strata of population such as those with at least secondary education (60 %) and those who were graduates (62%) were more ready to contribute an organ.

Generally, people had heard mostly about kidney, cornea and liver donation in descending order with 86.1, 48.8 and 30.2 percent respectively; showing that people thought that kidney was the most frequently donated organ but they were least knowledgeable about liver donation. In addition, participants with prior knowledge about organ donation were more inclined to make a donation; as shown by these values

p=0.03, p=0.26, p=0.03 for people who had heard about kidney, cornea and liver donation respectively and their willingness to donate. The donation of intestines, pancreas and lungs was known by a few.

While interviewing the participants, some questions regarding the ethics of organ donation were inquired. The first ethical issue was related to monetary gain by selling organs. Not surprisingly, 69.4 % of the study population considered it ethically incorrect to obtain money by selling their organs. On the other hand, 25.3% of the people thought that in times of need it may be considered as a mean of earning money.

Organ donation and its allowance in Islam was another ethical issue; 58.6% of the individuals had the confidence of it being allowed whereas 22.5 % of the rest thought that it was against the teachings of Islam; another 18.8 % did not know. Out of those who considered it religiously correct, 64.7 % definitely wanted to donate.

On the whole, 52.5 % had no hesitation in donating an organ but the question as to who they prefer to give their organ to had variable responses, majority (50.9 %) saying that they donate only to their relatives, followed by 46.0 % of the people who said that they would donate to anyone in need. For those who said that they would not like to donate, they were given a set of options as to why they would not donate (Figure).

Discussion

Even though more than half of our population (85.8%) had heard about organ donation, we found that only 52.5% participants were willing to donate their organs under any circumstances. This motivation is slightly lower than that reported by Saleem et al.¹² One reason could be that our sample was derived from a rural population whereas the study by Saleem et al was from an urban setting. Also, education level of study participants was considerably different in our sample.

In a study reported by Minnifield,¹³ 40% of the younger age group was well aware of organ donation. This co relates well with our study in which the majority of participants who were aware about organ donation, fell between the ages of 26-45 (52.8%) years.

In our study, awareness about donation of different organs varied from 86.1%, 48.8% and 30.2% about kidney, cornea and liver donation respectively. In a similar study done by Yeun et al,¹⁴ the level of awareness was greatest about kidney and eye donation and varied between different races. Yeun's sample was also aware of liver transplants but since this form of treatment is not prevalent in Pakistan our study participants were not well acquainted with the concept.

Since more than half of our study population was female (58%), we were not surprised that the major source

of their awareness was the electronic media. Regardless of the socio economic strata that our study population belonged to, the electronic media appears to play a crucial role in creating awareness about various issues regarding organ donation. From the 85.8% participants who had heard about organ donation, 55.2% had heard about organ donation through the electronic media. This is similar to that reported by Saleem et al.¹²

Even though Pakistan is a third world country and the study was carried out in a rural area, which forms the bulk of the country's poor, 69.4% participants were against the idea of selling organs for monetary gains. In a study carried out by Mazaris¹⁵ among medical and nursing staff, 34.3% believed that there should be no financial reward for the donor. Again, the dissimilarity would be because of the difference in study samples regarding cultural background and education levels.

It was seen that the main reasons that prevented people from donating organs was lack of information about organ donation which included medical reasons, consequences of living a diseased life, physical disfiguration or against religion. Whereas, in a study carried out in Turkey by Tokalalak et al,¹⁶ 3.7% participants refused to donate because of lack of information about organ donation. Participants concerned about physical disfigurement were 6.3% and 1.1% refused organ donation on religious basis. These results do not match our own probably because the focus was on high school students rather than adults living in a rural setting.

We were a bit surprised to find out that almost more than half of our sample thought organ donation was allowed in Islam. If this issue is addressed through religious and spiritual leaders then perhaps the remaining people would become willing organ donors.

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