



A STUDY TO ASSESS THE AWARENESS AND ATTITUDE OF THE PUBLIC ON ORGAN DONATION AT AL-NAMAS, SAUDI ARABIA


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ABSTRACT

Organ donation and transplantation are a well-established modality of therapy for end stage organ failure in Saudi Arabia. Self-sufficiency of organ donation and transplantation will be the aim of all countries worldwide. To assess the public awareness and attitude of the adult people on organ donation in Al-namas, Saudi Arabia. A descriptive survey design was carried out with conveniently selected adult population and answered a questionnaire related to the above aim. From 120 subjects who participated were with the age ranging from 21 to 60 years, and the majority were at a secondary and university level of education. More than 63% of them were aware of organ donation and the rest of 37% of them was not aware about organ donation. Attitude from a religious point of view, 45% considered it legal to donate organs versus 55%. Respondents identified several reasons, which influence their decisions to donate organs. There was 47% of them were willing to donate organs to family, 35% to friends and relatives after brain death. Finally, there is significance between awareness level and demographic variables such as age, education and occupation and marital status. The level of awareness and attitude about organ donation was found to be satisfactory. Religion has a kind bar for organ donation. Moreover, the majority were willing to donate to the family and friends with empathy and compassion. Health professionals, mass media and educational institutions should provide intensive educational programs to encourage the public to donate organs.

Keywords :- Descriptive study, Awareness, Attitude, Public, Organ donation.

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INTRODUCTION

Your Attitude, not your Aptitude, will determine your Altitude. Organ donors are always in short supply. There are far more people in need of a transplant than there are people willing to donate an organ. Every day 22 people die while waiting for a transplant. A single organ donor can save 8 lives and change the lives of more than 50 people. Organ transplantation has made big transform over the past 10 years as a result of sophisticated surgical techniques, new immunosuppressive drugs, and superior organ preservation solutions [1-5].

According to the World Health Organization, 500 million people worldwide suffering from chronic kidney failure. That number is still rising due to an increase in the

incidence of diseases linked to kidney failure, such as high blood pressure and diabetes. Diabetes accounts for 37 percent of all kidney failure cases, and high blood pressure accounts for 23 percent. Worldwide, one in ten people suffer from some sort of chronic kidney disease. With the Kingdom 110 people per million annually suffer from kidney failure, 250 per million people in the United States and 300 per million people in Asia. Efforts are being made to reduce the Kingdom's rate, including the implementation of a number of awareness programs in coordination with MOH and other sectors providing health care services in the country [4-6].

On October 2007, Saudi Arabia passed a law in

which living organ donors could receive up to 50,000 riyals as a monetary reward from the government. The donors can also receive other benefits, such as lifetime medical care. The Prince Fahd Bin Salman Charity Society also works to provide reimbursements to donors for non-medical expenses, such as travel and accommodations. Donors also offer permanent discounts to fly on Saudi Arabian Airlines [1-2, 15].

Saudi Arabia has a history of conducting more organ transplantations from living donors than deceased donors. Between 1979 to 2012, 5,356 kidney transplants from living relatives were performed compared to only 2,467 kidney transplantations from deceased donors. In 2012, 622 kidney transplantations were performed, 504 of which were from living donors. Since 2009, there has been a rapid increase in living kidney donation [17-20].

Organ donation and transplantation have been the subject of widespread international interest in the past 10 years at both governmental and professional levels. This interest has been driven by two main factors. First, the universal shortage of organs for transplantation and the wide international variation in donation and transplantation activity. Secondly, the need to ensure that all developments have a firm basis in legal and ethical practice with equity, quality, and safety at their core [11-13, 16].

Comprehensive review of organ transplantation needs to consider both deceased and living donation. Indeed, while deceased donation fails to meet the need for transplantable organs in all countries, it is almost non-existent in many countries, and it is led to ever-increasing use of living donors as a source of kidneys and more recently also livers. World Health Assembly resolved in May 2010 to endorse revised Guiding Principles on Human Cell, Tissue and Organ Transplantation [7, 10, 17].

The deceased donor organ donation process can be viewed as a continuum from initial identification of the potential organ donor through to organ transplantation. To maximize the supply and quality of the deceased donor organ pool, every step in this continuum needs to be optimized. Prompt identification of all potential organ donors is critical, and this may be in the emergency department or in the intensive care unit (ICU). Currently, about 90% of actual deceased organ donors in the USA are donors who are declared brain dead and 10% are donors declared dead after permanent cessation of cardiopulmonary function. One commonly used approach is to consider any ventilator-dependent patient with a Glasgow Coma Scale score of 5 or less who is expected to die in the hospital as a potential organ donor [18].

A survey was conducted to assess the public perception on organ donation and transplantation in Dhahran Military Hospital, Saudi Arabia, from December 2011 to January 2012. From 497 subjects who answered the questionnaire, more than 90% were aware about organ transplantation and donation. Those who disagreed with the concept of donation believed that one kidney is not enough

to survive (50%), and that the remaining kidney may be affected (25.8%), whereas 15.2% expressed fear of the operation. Kidney transplantation was the preferred treatment for 73.2% of respondents and 12.75% were in favor of dialysis. Regarding financial incentive, 14.5% asked for a reward from the government, 3.4% believed that the reward should come from the donor, and the majority (82.1%) stated that organ donation should be for the sake of God. Finally, there was 61.2% of respondent's shows willingness to donate organs to relatives after brain death. The researcher concluded as the level of awareness about donation and transplantation in our population was found to be satisfactory [19, 20].

SIGNIFICANCE OF THE STUDY

Ibrahim Al-Saegh, internal medicine consultant at a dialysis center said. Organ donation has to be expanded under the supervision and control of a specialist body that organizes and coordinates donations and operations in a way that guarantees commercialization does not get involved." He also emphasized the importance of religious scholars' role in disseminating awareness of organ donations of brain-dead patients.

I found a very interesting and enlightening article in Arab News which shed some light on this topic. Donating organs to the sick or injured people is not considered to be an obligation by many in the Arab world and Saudi Arabia. The article goes on to say that prominent Saudi businessman, Abdul Aziz Alturki, is seeking to raise awareness in Saudi society on the crucial need for donation of organs.

Dr. Shaheen said there are differences of opinion regarding organ donation from a person who is clinically dead. "Many of our scholars say one has to be sure that the man or woman is 100 percent dead before his or her organs are taken out for transplantation," he said. So whose job should it be to initiate and mount an educational campaign on the importance of organ donation in Saudi Arabia? It seems to me this would be a very worth campaign for an organization or institution to undertake as part of a Civic Social Responsibility (CSR) program.

According to Shaheen, 527 kidney transplant operations were performed from 2003 to 2007, which increased to 673 (total from 2003 to 2012) in 2012. Liver transplants numbered 175 between 2003 and 2007, and increased to 271 in 2012. Heart transplants that numbered only 42 between 2003 and 2007 increased to 94 during the last five years. Only eight pancreas transplants were performed. He said 37 percent more brain-death cases were reported to the center in the last five years. He said the Kingdom follows the World Health Organization criteria stipulating that donating organs and tissues have to be performed within moral restrictions and medical standards that is based on providing better health care for patients and preserving the rights of donors. The achievements of the organ transplantation program in Saudi Arabia during the

year 2011 reflected the progressive success in the number of organ donations and transplantations. The organ failure census during 2011 showed more than 12,500 patients are on dialysis in 178 hospitals in the Kingdom of Saudi Arabia (KSA), and about 22.3% are on the active waiting list for transplantation, with another 20% being evaluated for inclusion in it. The KSA has an active, deceased transplant program under the supervision of the Saudi Centre for Organ Transplantation (SCOT). Clear policies have been laid down to facilitate diagnosis of death by brain function criteria, and the management of potential deceased donors. At the end of the year 2011, a total of 8820 possible deceased cases has been reported to SCOT, of which 710 were reported from 97 intensive care units around the Kingdom during that year. In the last five years, an average of 615 cases per year was reported. More energetic measures are still required to increase the number of reports of possible deceased cases, as well as obtaining consents. Only this will help bridge the gap between supply and demand of organs for more than 3000 patients in the active waiting list for organ transplantation. Inside the Kingdom by the end of 2011, renal transplantation has been performed for a total of 4830 living donors and 2349 deceased donors, of which 489 were transplanted in 16 active renal transplant centers. Also, liver translations were performed for a total of 439 living donors and 620 deceased donors, in which 130 of them were transplanted in 4 active liver transplant centers. Whole heart transplantations have been performed for a total of 205 deceased donors; 540 were used as sources for heart valves, and 18 whole hearts were transplanted in one active heart transplant center, during that year. In addition, during that year, 19 lung transplant operations and two harvested pancreases were successful.

MATERIAL AND METHODS

Research Design

A descriptive cross-sectional survey design was carried out, at the general adult population on awareness and attitudes towards organ donation at Al-namas in the Kingdom of Saudi Arabia.

Sampling

In this study the non-probability convenient sampling was used. The adult population aged between 21 to 60 years (n=120) were selected for the study. Consent obtained from the from the individual sample before data collection.

Research instruments

A pre validated self-administered questionnaire was used to assess the awareness and attitude of people on organ donation. The instruments used in this study were the 16 multiple choice questionnaire to assess the awareness and selected 10 questions to assess the attitude.

Data collection

The developed tool was organized into three sections. They are as follows,

Section I: Demographic variables of the people.

Section II: The knowledge questionnaire consisted of 16 multiple choice questions with one right answer.

Section - III: The attitude was assessed by selected questions of 10 items. The total score was further categorized as positive and negative attitude as per the score obtained by the subjects.

Data analysis

Data were collected and obtained from 120 adult people in the Al-namas. The collected data were summarized and tabulated by applying descriptive and Inferential statistics. A p-value of <0.05 was considered statistically significant.

RESULTS

This chapter deals with results of data collected from a sample of 120 people regarding the organ donation by a semi-structured questionnaire.

Table 1 shows the distribution of demographic variables among the adult population. Considering age, 47% of people in between 21-30 years and 20% of them were in-between 31 – 40 years and 23% in-between 41-50 years and 10% of them were in between 51 – 60 years. On sex, 39% of them were males, 61% of them were females. On the base of education, 23% of them were primary, 18% secondary, 19% Higher secondary and 40% of them were Graduates. In view of occupation 39% of them were students, 27% employed and 34% were unemployed. Regarding marital status, 45% of them were single, another 49% of them were married and 6% were in another classification. Considering family monthly income, 19% of them were < 5000, 23% of them were in between 5001 - 10000, 29% of them were in between 10001 – 20000 and 29% of them were above 20001. Regarding the place of residence, 45% of them were living in rural area and another 55% of them were living in urban areas. On source of information 20% of them from TV, 18% of them from Internet, 18% of them from newspapers another 21% of them from friends and 23% of them from Health professional.

Table 2 shows that the mean knowledge score on organ donation among the adult population is 9.716 with the standard deviation of 2.55. A total of 16 awareness questions was used. In that those who scored 9 and above were considered to have an adequate awareness rest of them between 1- 8 score were having inadequate knowledge. In this study only 63% of the people have adequate awareness and another 37% have inadequate knowledge.

Table 3 shows there was no significance between awareness level and demographic variables such as sex, monthly income, place of residence and source of information. At age calculated Chi-square value is

23.315 and it significant at the level of $P < 0.05$. Regarding education, occupation and marital status calculated Chi-square values are 25.84, 7.068, 7.053 and it significant at the level of $P < 0.05$.

Table 4 shows that only 45% of people have positive attitude on organ donation on the basis of religion, 47% people wanted to donate only to family members, 18% were acknowledged for unknown people and 35% is for friends and known people. An important factor for donation got an equal attitude around 20% on all of these such as Relationship to a recipient, Age of the recipient, Health status of recipients and the Religion of the recipient. In other hand only 35% of the public have agreed for promoting organ donation. Remaining individuals have not accepted for promoting organ donation due to religious issues and respect of organ donated and other motives. 39%

of the sample said the aim of donating the organ is to save the life, 15% is for sympathy, 14% of money, 23% is in the perception of social responsibility and 8% of them have other explanations. Very fewer 34% of the people told that the organ donation does not change the body appearance rest of the 66% of the people were in fear of changing the appearance. 43% of the public have positive thinking about health related risk after donating, 57% have a panic about risk due to donating organs. 54% of the people were concerned about donating organs could be misused, abused or misappropriated 46% of the sample have an optimistic attitude on this segment. 90% of the people do not know anyone who has donated an organ, spare 10% of the sample had friends, Colleague and family members who has donated an organ.

Table 1. Distribution of Demographic variables. N= 120

Demographic variables	Frequency	Percentage (%)
1. Age (in years)		
a. 21-30	56	46.7
B. 31-40	24	20.0
C. 41-50	28	23.3
D. 51-60	12	10.0
2. Sex?		
A. Male	46	38.3
B. Female	74	61.7
3. Educational status		
A. Primary	27	22.5
B. Secondary	22	18.3
C. Higher secondary	23	19.2
D. Graduation	48	40.0
4. Occupation		
A. Student	47	39.2
B. Employed	32	26.7
C. Unemployed	41	34.2
5. What is your marital status?		
A. Single	54	45.0
B. Married	59	49.2
C. Others	7	05.8
6. Cumulative monthly household income:-		
A. ≤Rs. 5, 000	23	19.2
B. Rs. 5, 001 – 10,000	27	22.5
C. Rs. 10,000- 20,000	35	29.2
D. >Rs. 20,001	35	29.2
7. Place of residence		
A. Rural	54	45.0
B. Urban	66	55.0
8. What is the source of information?		
A. TV / Radio	24	20.0
B. Internet /online resources	21	17.5
C. Newspaper or magazines	22	18.3
D. Friend or colleague	25	20.8
E. Health professional	28	23.3

Table 2. Mean Knowledge N = 120

Knowledge level	Frequency	%	Mean & SD
Adequate Knowledge	76	63.3	9.716 & 2.55
Inadequate Knowledge	44	36.7	

Table 3. Association of awareness Score on Organ Donation by their Socio-demographic Variable N = 120

Demographic variables	Adequate awareness Score (N = 76)		Inadequate awareness Score (N = 44)		Chi-square P- Value
	Frequency	%	Frequency	%	
1. Age (in years)					
a. 21-30	44	57.9	12	27.3	23.315 P=0.000 P < 0.05 (Significant)
b. 31-40	18	23.7	6	13.6	
c. 41-50	12	15.8	16	36.4	
d. 51-60	2	2.6	10	22.7	
2. Sex?					
A. Male	31	40.8	15	34.1	0.529 P=0.467 NS
B. Female	45	59.2	29	65.9	
3. Educational status					
A. Primary	07	9.2	20	45.5	25.84 P=0.000 P < 0.05 (Significant)
B. Secondary	12	15.8	10	22.7	
C. Higher secondary	18	23.7	5	11.4	
D. Graduation	39	51.3	9	20.5	
4. Occupation					
A. Student	29	38.2	18	40.9	7.068 P=0.029 P < 0.05 (Significant)
B. Employed	26	34.2	6	13.6	
C. Unemployed	21	27.6	20	45.5	
5. Marital status?					
A. Single	41	53.9	13	29.5	7.053 P=0.029 P < 0.05 (Significant)
B. Married	32	42.1	27	61.4	
C. Others	3	3.9	4	9.1	
6. Cumulative income					
A. ≤SR. 5, 000	10	13.2	13	29.5	5.307 P=0.15 NS
B. SR 5, 001 – 10,000	17	22.4	10	22.7	
C. SR.10,000- 20,000	24	31.6	11	25.0	
D. >SR. 20,001	25	32.9	10	22.7	
7. Place of residence					
A. Rural	32	42.1	22	50.0	0.701 P=0.402 NS
B. Urban	44	57.9	22	50.0	
8. Source of information?					
A. TV / Radio	13	17.1	11	25.0	6.955 P=0.138 NS
B. Internet /online	18	23.7	3	6.8	
C. Newspaper or magazines	12	15.8	10	22.7	
D. Friend or colleague	14	18.4	11	25.0	
E. Health professional	19	25.0	9	20.5	

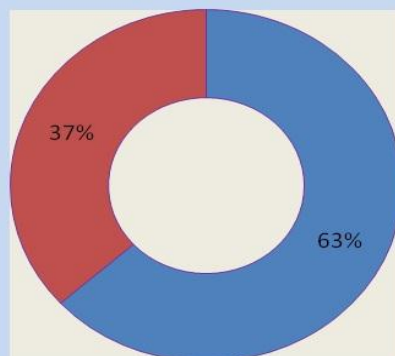
Table 4. Distribution of Attitude score on Organ Donation N=80

Sl.no	Attitudinal variables	Frequency	%
1	Acceptance of organ donation in religion		
	-Yes	54	45
	-No	32	26.7
	-Don't Know	34	28.3
2	Would you like to donate to		
	-Family	56	46.7
	- Stranger/Anyone	22	18.3
	- Friend/Colleague	42	35.0

3	Most important factor for donation		
	- Religion of recipient	14	11.7
	- Relationship to recipient	31	25.8
	- Age of recipient	23	19.2
	- Health status of recipient	27	22.5
	-Assurance of respectful treatment of donated organs	25	20.8
4	Promotion of organ Donation		
	-Needed	43	35.8
	-No need	23	19.2
	-Don't Know	54	45.0
5	Reasons Why Organ Donation Shouldn't Be Promoted		
	-Fear that organs could be wasted/mistreated	27	22.5
	-Religious beliefs	29	24.2
	-Other reasons	64	53.3
6	Reasons for Organ Donation.		
	To save the life	47	39.2
	Compassion/sympathy	18	15.0
	For money	17	14.2
	Social responsibility	28	23.3
	Others	10	8.3
7	organ and tissue donation change the appearance of my body?		
	yes	39	32.5
	no	41	34.2
	Not known	40	33.3
8	Does organ donation involve any risks		
	yes	29	24.2
	no	52	43.3
	Not known	39	32.5
9	Donated organs could be misused, abused or misappropriated		
	Never	56	46.7
	Some time	45	37.5
	Often	19	15.8
10	Do you know of anyone who has donated an organ		
	Family member	3	2.5
	Friends	6	5.0
	Colleague	3	2.5
	No one	108	90.0

Figure1: Mean Knowledge Score

■ Adequate knowledge ■ Inadequate knowledge



DISCUSSION

This chapter discusses the major findings of the study and reviews them in relation to findings from the results of another study. Our analysis of the collected data revealed an interesting set of findings.

This study showed a mean knowledge score on organ donation among the adult population is 9.716 with the standard deviation of 2.55. Only 63% of the people have an adequate awareness and another 37% have an inadequate knowledge. There is significance between awareness and demographic variables such as age, education, occupation and marital status.

Attitude study showed that only 45% of people have positive attitude on organ donation on the basis of religion. In other hand only 35% of the public have agreed for promoting organ donation. 39% of the sample said the aim of donating the organ is to save the life. Very fewer 34% of the people told that the organ donation does not change the body appearance rest of the 66% of the people were in fear of changing the appearance. 43% of the public have positive thinking about health related risk after donating. 54% of the people were concerned about donating organs could be misused. 90% of the people do not recognize anyone who has donated an organ.

However, this study suggests that an intensive public awareness campaign should be launched periodically in different settings of Kingdom Saudi Arabia to improve the awareness and to create a positive attitude among the public on organ donation. Thus, organ donation ought be

made by the person before death. The awareness program may help to raise a number of an organ donors in the future.

SUMMARY

Motivation to donate in turn is associated with the awareness of organ donation. Religious beliefs are a major factor deterring many people from expressing a motivation to donate. Television, internet, newspapers and doctors can be used as efficient sources of information. The communication gap between patients and doctors should be bridged for the more favorable attitude towards organ donation in the population.

STATEMENT OF HUMAN AND ANIMAL RIGHTS

All procedures performed in human participants were in accordance with the ethical standards of the institutional research committee and with the 1964. He link declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals' performed by any of the authors.

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CONFLICT OF INTEREST

There are no conflicts of interest.

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