

Measuring the Knowledge and Attitudes towards Organ Donation among the Students at Al-Imam University

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Abstract: Organ transplantation is considered now a days as one of the most evolving and important medical fields and it is referred to many times as the last saving life option of treatment. An organ transplant may save a person's life, or it may significantly improve their health and quality of life. Because of the highly increased demand of organ transplantations and the real deficiency in organs and lack of donors we have chosen this important topic for our research "Measuring the Knowledge and Attitudes towards Organ Donation among the students at Al-Imam university" aiming to identify the proportion of potential organ donors among Al-Imam university students and to explore the motives and obstacles associated with organ donation in this group and finally to report our results hoping to contribute in improving and increasing the number of organ donation in KSA. The data collection tool was self administered questioner which was focused to assess the (KAP) knowledge, attitudes and practice toward organ donation in a sample of 141 students at Al-Imam university. We found that (92,3%) of the study sample already have heard about Organ donation and only (11,3%) know about donation cards. Only (44%) of respondents know the (Islamic hokm) of donation. (73%) believe that the number of donated organs is still below the increased demand. The questioner shows that (31,2%) would think of organ donation and mostly for religious and humanitarian causes but when asked if willing and ready now to donate, the percentage drops to (11,4%). Only 1 respondent has a donation card and NOBODY (0%) has already donated. In conclusion, We found that the main obstacles preventing the study group from donation include the lack of accurate and correct information, misconception of the Islamic perspective of donation and believing of organ donation as a risky and harmful procedure. On the other hand, the most observed motives of donation were religious and humanitarian. These findings would help all the interested parties in improving organ donation in Saudi Arabia to meet the ambitions.

Keywords: Organ Donation, Measuring the Knowledge and Attitudes, Islamic hokm.

1. INTRODUCTION

Background:

Organ transplantation is considered now a days as one of the most evolving and important medical fields and it is referred to many times as the last saving life option of treatment. An organ transplant may save a person's life, or it may significantly improve their health and quality of life. When organs such as the heart, kidney or liver fail, and no drugs are available, a transplant can be the only remaining option.

Organ transplants were first attempted a hundred years ago, but early efforts failed because of rejection - the body sees the new tissue as 'foreign' and the immune system destroys it. The modern era of transplantation is very successful as compared to few years ago because of improved tissue matching and the development of immunosuppressant- drugs that turn off the immune response. The transplanted organ is not rejected, though patients remain vulnerable to infections and must take medication throughout their lives.

During the 1960s, patients rarely survived for long. Gradually, though, immunosuppressants and surgical techniques improved and organ transplantation is now relatively a straightforward and safe procedure and has a very good outcome. People who receive a new organ can expect to survive and enjoy good quality of life. Some organs - such as kidneys and

lungs - can be provided by living donors. Most people can survive with one kidney or without part of their liver (which can also regenerate).

Most people who are waiting for a donated organ need to have a kidney, heart, lung or liver transplant. One donor can help several people. This is because a single donor is able to donate a number of organs, including: kidneys ,liver, heart, lungs, small bowel, pancreas.

Tissues that could be donated include: the cornea, bone, skin ,heart valves, tendons and cartilage.

When an organ becomes available for donation, it is checked to make sure that it is healthy. The blood and tissue type of both donor and recipient are also checked to ensure that they are compatible. The better the match, the greater the chance of a successful outcome.

People from the same ethnic group are more likely to be a close match. Those with rare tissue types may only be able to accept an organ from someone of the same ethnic origin. This is why it is so important that people from all ethnic backgrounds register to donate their organs.

There are three different ways of donating an organ. These are known as:

- **Donation after brain stem death (most common):**

Most organ donations are from brain stem dead donors. This is where the donor has been diagnosed with brain stem death following a severe brain injury, and the circulation continues to be supported by artificial ventilation until the donated organs have been removed.

Heartbeating donations have a high success rate because the organs are supported by oxygenated blood until they are removed from the body of the donor.

- **Donation after cardiac death :**

Organs and tissue can also be donated from non-heartbeating donors. Almost all donors of this type are people who have died in intensive care from severe brain injuries, but who are not quite brain stem dead. In such cases, the donation must occur within a few minutes of the heart stopping because, otherwise, the organs will be damaged by the lack of oxygenated blood and it will not be possible for them to be transplanted.

- **Live organ donation :**

A live organ donation usually involves one family member donating an organ to another family member. The relative is usually blood-related, most commonly a parent, although it could be a partner. Kidney donations are often made from living donors as a healthy person can lead a normal life with only one working kidney.

The Saudi Center for Organ Transplantation (SCOT):

The Saudi Center for Organ Transplantation (SCOT), previously known as the National Kidney Foundation, was established in 1984 with an objective to supervise activities of organ donation and transplantation in Saudi Arabia. SCOT adopted strategies that included research conduction, distribution of donation cards, public awareness and health professionals' education. Despite efforts to educate and encourage the public about donation and transplantation, the number of organ donors has not paralleled the growing waiting list, and inadequate organ donation in Saudi Arabia remains a major limiting factor for transplantation.

Providing the general public by relevant information and correcting some of the misconceptions are likely to increase the number of individuals willing to donate organs. Several strategies have been adopted in order to maximize the number of donors in many countries, including increasing the number of organs transplanted from living donors, legislation and increase the public awareness and increase the number of those having the organ donor card. Studies on factors associated with knowledge and attitudes towards organ donation have shown contradicting results and have indicated that it is not clear which factors are most significantly related to decision-making for donation.

Because of the highly increased demand of organ transplantations and the real deficiency in organs and lack of donors we have chosen this important topic for our research" **Measuring the Knowledge and Attitudes towards Organ Donation among the students at Al- Imam university**" aiming to identify the proportion of potential organ donors among Al-

Imam university students and to explore the motives and obstacles associated with organ donation in this group and finally to report our results hoping to contribute in improving and increasing the number of organ donation in KSA.

2. LITERATURE REVIEW

Public attitudes toward organ donation in a Turkish community:

The 1030 subjects were chosen using a random, stratified method. Some 50.5% of those interviewed were willing to donate their organs while 33.7% refused and 15.8% were uncertain. A total of 53.6% said they would consent to donate a deceased relative's organs. Attitudes toward organ donation were clearly related to level of education, age, sex, and socioeconomic

Attitudes toward organ donation in China:

Conclusions We conclude that at present the Chinese public has a basic understanding about organ transplantation and donation. The majority respondents were in favor of deceased organ donation and were willing to donate their own organs after death.

Knowledge and attitudes toward organ donation by Saad Abdullah Alghanim:

In conclusion, the negative attitudes of respondents towards organ donation reported by this study are justified by the inadequate information acquired by the public about this significant issue. Accordingly, the general public should not be held alone responsible for the unwillingness to donate organs; other parties such as local mass media, health care providers, and educational institutions are responsible too for this result

((The Saudi Center for Organ Transplantation)):

The number of organ donors has not paralleled the growing waiting list, and inadequate organ donation in Saudi Arabia remains a major limiting factor for transplantation.

An Overview on Attitudes towards Organ Donation in Hong Kong:

From the bedside experience of transplant coordinators, traditional beliefs regarding the preservation of an intact body have gradually been changing. Relatives not knowing the wish of their loved ones and a lack of consensus amongst family members have emerged as important reasons for refusing to donate organs. Hong Kong needs to consider innovative ways to encourage and allow individuals to express their wish as to whether or not they would like to be organ donors, for example, by storing such data on the new Hong Kong identity cards

A literature review to compare the attitudes, knowledge and commitment of university health care students with non health care students:

The studies here show that an educational program would be necessary to spread awareness among medical students so that they develop positive perception and attitudes towards organ donation and in turn help and encourage more organ donors and also non medical students and individuals who may be less aware of the need and significance of organ donation and transplant.

3. OBJECTIVES

The main objective is (Research question) : To identify the proportion of potential organ donors among Al-Imam university students and to explore the motives and obstacles associated with organ donation in this group.

The specific objectives:

- 1- To determine the knowledge and attitudes of the study population towards ORGAN DONATION.
- 2- To determine the proportion of potential organ donors among the study population.
- 3- To determine the main obstacles preventing the study population from being potential donors.
- 4- To determine the motives making the study population potential donors
- 5- To determine the sources of information about organ donation and transplantation among the study sample.
- 6- To report the results to the interested and concerned institutions and organizations to benefit from the results hoping to improve the public awareness, encourage the people and then increase the number of ORGAN DONATION in KSA

4. MATERIAL AND METHODS

- **Study Design:**

- o Descriptive Cross-sectional studies

- **Sampling:**

1- Sample unit:

Colleges at Al-Imam Mohamed Ibn Saud Islamic University

2-Sample Frame:

Sharia

Computer sciences

Economics and administrative sciences

Engineering

Arabic language

Languages and translation

Medicine

College of Science

Islamic theology

Dawa and media

Social sciences

3-The Sample size:

The Sample size was supposed to be 200 students from Imam Mohamed Ibn Saud Islamic University .But the response rate was about 70% , and the response students was 141 students distributed among six colleges at Imam Muhammed ibn Saud Islamic University : college of Shariah , college of Islamic theology , college of science , college of engineering , college of computer science and college of economy the data collection tool was self-administrated questionnaire contains question about Knowledge , attitude , practice and source of information regarding organ donation . The data was collected from these colleges by the research group members with the help of some students in these colleges

- **Data analysis :**

We analyzed the data by using SPSS statistic program version 20. And after doing the data entry we have calculated the mean, standard deviation, minimum and maximum for all the data.

5. THE RESULTS

Among the study sample of 141 male students in six colleges at Al-Imam Mohammad Ibn Saude University, the ages of the students were distributed between 20 and 35 years and the mean age was 22.07 and standard deviation was 1.98 and most of the ages(90%) were between 20 and 24 years old.(94.3%) of the study sample were Saudis while there are only 8 non-Saudi students. The self-administrative questioner was distributed among a sample group in each one of these six colleges. The colleges are Sharia, Islamic theology and college of economy. The remaining 3 colleges are computer science, engineering and the college of science. (table 1,2,18)

The questioner started by some questions that assess the **knowledge** and level of awareness the people do have about organ donation and we found that (92,3%) of the study sample say that they already have heard about Organ donation and when asked specifically, about donation after brain death the number declined to (67.4%). However, only (17.7%) of them know where to go if they want to donate and also only (11.3%) know about donation card. When we asked the respondents a direct question if they know the Islamic perspective (Hokm) of Organ donation, only (44%) answered by yes and most of them (86.6%) said that it is either permitted or preferred. A majority of the study group (62.6%) think that

organ donation is risky and might harm the donor. To know how much the community is aware of the huge lack of supply of organs and how long are the waiting lists we asked if they think that the number of donated organs have paralleled the dramatically increasing demand and we found that (73%) of the study group said that NO, the need is more than the supply.

(table3-10)

After that, the questions were shifted toward assessing the students' **attitudes** toward organ donation and we have got the following results: we asked this question, Do you think of organ donation in your life if you know that it is allowed religiously and you are assured that there will be no risk or complication of this process and you will be contributing in saving others life?(31.2%)of the study sample said they are thinking of this and the number increased to(46.4%) when they were asked the same question but in the situation of brain death (GOD forbids).

(table11,12)

We asked if you would think of organ donation what would be the motivation for that ,(51.5%) said that it is religious and(43.8%) said that it's humanitarian. Then we questioned if you would refuse the idea of organ donation what would be the cause? the answers were distributed as the following :

First group(43.4%) said because they think that those who are diagnosed as brain stem death they might return again to life. The second group(23%) said that they think that the Islamic rules don't permit this. The third group (21.3%)said that they don't have enough information about organ donation.(tables 12-14)

In the final part of the questioner we were trying to assess the **practice** of this group in the field of organ donation. We asked a direct question if the student is ready to donate now one of his organs to somebody suffering and if he is assured that there is no risk at all and it is religiously permissible? the result was as the following:

YES only(11.4%), TO SOME EXTENT(32.9%),I DON'T KNOW(40,7%).Regarding DONATION CARD we found that only one student has the card and nobody(0%) said that he already has donated which wasn't surprising. (table15)

Finally. we asked about the **source of information** about organ donation and we found that:

TV(31,2%), Friend (29.1%),Internet(17.7%),Educational campaign(12.1%) . Also we asked about the evaluation of the level of media regarding public education for Organ donation and (47%) said that it is weak.(table 16,17)

6. DISCUSSION

We found (92,3%) of the study sample say that they already have heard about Organ donation but when asked specifically about donation after brain death the number declined to (67.4%). However, only (17.7%) of them know where to go if they want to donate and also only (11.3%) know about donation card. Depending on these results we can judge the level of students' awareness is below ambition.

The results of this study showed that students in all the colleges reported lack of family support .A Previous research had reported direct correlation between willingness to donate and family support⁽¹⁾ and indicated that appropriate public exposure to knowledge about organ donation would result in more family discussions and more frequent declaration of one's wishes to donate, decreasing uncertainty at critical times (brain death of a loved one) and would likely to increase organ donation. (table 19)

The results have also shown that only 44% of students claimed that they know the Islamic perspective of donation and 62.6% thinking that it is risky and causing harm to the donor. Regarding the main obstacles that prevent many respondents from donation we found that there was a clear Confusion about organ donation in general. For example 37.6% of those who would not donate said that the patient who suffers from a brain death can wake up again while 18.4% said they don't have enough information about organ donation. We were very surprised to find that 10 students 7% they do not have any information about organ donation at all.

We noticed that the majority of these students whom have no idea about organ donation are belonging to the college of Islamic theology and college of science which usually accept graduated students with lower GPA , if you compare this finding with the fact that **no students** from the college of engineering wrote that they have no knowledge about organ donation which indicate a link between the level of education and the knowledge about organ donation.(graph 1) Surprisingly there was no obvious difference in the knowledge about Islamic perspective regarding organ donation

between the students who study Islamic and Shariah laws and others which supports the observation that Islamic perspective in organ donation remains an opaque area for our sample even for those who have studied Islamic Feqah.(graph 2)

Questioning Non-Saudi students' about whether they know whom they should contact and ask help from regarding organ donation showed that 25% knows whom they suppose to ask, while only 17% of Saudi students know whom they should consult. From all these observations, we state that *there is a clear deficit of awareness of organ donation in all perspectives.* .(graph 3)

When we ask those who are thinking of donation about the motives encouraging them ,we found that (51.5%) are religiously motivated while (43.8%) said that it's a humanitarian motivation.For the first group (religious motives) we found that this has a special effect on the decision of donation ,this observation is supported by the finding that the majority of this group are thinking of (and not necessarily willing now) to donate and only 5% of this group have refused.(graph 4)

In the study sample there is a huge gap between whom they are willing in the future to donate and those who are ready to donate at this moment , which clearly shows the difference between the attitude and practice in regard to organ donation.

Our study shows that the principle respondents' source of information about organ donation was the television (TV). The contribution of other media sources in providing respondents with knowledge about organ donation was minimal. However even though only 17 students have gained there information from awareness campaign, it has showed a deeper effect which is supported by the fact that students who gained information from awareness campaign have agreed either to donate organ after or before death or agreed on both except one student .This finding strongly supports the awareness campaign as an excellent way to encourage students to donate. (graph 5)

7. CONCLUSION

In conclusion, organ transplantation is considered now a days as one of the most important medical fields and it is referred to many times as the last saving life option of treatment. We found that the main obstacles preventing the study group from donation include the lack of accurate and correct information, misconception of the Islamic perspective of donation and believing of organ donation as a risky and harmful procedure. On the other hand, the most observed motives of donation were religious and humanitarian. These findings would help all the interested parties in improving organ donation in Saudi Arabia to meet the ambitions.

8. RECOMMENDATIONS

- 1-We recommend more randomized researches on the same area with increased sample size to be able to do generalization.
- 2-We recommend the interested institutions and organizations to consume these findings in improving organ donation in Saudi Arabia.
- 3-We highly recommend investing more time and money in public education and awareness which is clearly playing an important role in the current situation.

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APPENDIX - A

Age

1 Table

		Frequency	Percent	Valid Percent	Cumulative Percent
	20	21	14.9	15.2	15.2
	21	44	31.2	31.9	47.1
	22	34	24.1	24.6	71.7
	23	14	9.9	10.1	81.9
	24	11	7.8	8.0	89.9
Valid	25	9	6.4	6.5	96.4
	26	1	.7	.7	97.1
	27	2	1.4	1.4	98.6
	28	1	.7	.7	99.3
	35	1	.7	.7	100.0
	Total	138	97.9	100.0	
Missing	System	3	2.1		
	Total	141	100.0		

Colleges

Table 2

	Frequency	Percent	Valid Percent	Cumulative Percent
Shariah	25	17.7	17.7	17.7
Islamic theology	26	18.4	18.4	36.2
Computer science	25	17.7	17.7	53.9
Economic	25	17.7	17.7	71.6
Engineering	20	14.2	14.2	85.8
Science	20	14.2	14.2	100.0
Total	141	100.0	100.0	

Have you ever heard of the process of donation or organ transplant?

Table 3

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	131	92.9	92.9	92.9
No	10	7.1	7.1	100.0
Total	141	100.0	100.0	

Have you heard donate organs after brain death?

Table 4

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	95	67.4	69.3	69.3
No	42	29.8	30.7	100.0
Total	137	97.2	100.0	
Missing System	4	2.8		
Total	141	100.0		

Do you know who can help you in case you are willing to donate one of your organs?

Table 5

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	25	17.7	17.7	17.7
No	116	82.3	82.3	100.0
Total	141	100.0	100.0	

Do you know anything about (organ donation card)?

Table 6

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	16	11.3	11.3	11.3
No	125	88.7	88.7	100.0
Total	141	100.0	100.0	

Do you know the ruling on the organ donation?

Table 7

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	62	44.0	44.3	44.3
No	78	55.3	55.7	100.0
Total	140	99.3	100.0	
Missing System	1	.7		
Total	141	100.0		

If yes , what is the rule

Table 8

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid جائز	35	24.8	58.3	58.3
Valid مستحب	17	12.1	28.3	86.7
Valid مكروه	1	.7	1.7	88.3
Valid محرم	7	5.0	11.7	100.0
Total	60	42.6	100.0	
Missing System	81	57.4		
Total	141	100.0		

Do you think that organ donation based upon health risks for the donor?

Table 9

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	87	61.7	62.6	62.6
Valid No	52	36.9	37.4	100.0
Total	139	98.6	100.0	
Missing System	2	1.4		
Total	141	100.0		

is there enough organs for those who are needed?

Table 10

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	28	19.9	21.4	21.4
Valid No	103	73.0	78.6	100.0
Total	131	92.9	100.0	
Missing System	10	7.1		
Total	141	100.0		

Thinking of donating an organ of your members , if you know that this is permissible in Islam , and the doctors assured you that there is no harm to your health and you will help end the suffering of the patient?

Table 11

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Agree	44	31.2	31.4	31.4
Valid I don't know	86	61.0	61.4	92.9
Valid Disagree	10	7.1	7.1	100.0
Total	140	99.3	100.0	
Missing System	1	.7		
Total	141	100.0		

Consider making a donation (after death) organ of your members (college , for example) to a person in need , if you know that this is permissible in Islam and that you will help end the suffering of the patient?

Table 12

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Agree	65	46.1	46.4	46.4
Valid I don't know	57	40.4	40.7	87.1
Valid Disagree	18	12.8	12.9	100.0
Total	140	99.3	100.0	
Missing System	1	.7		
Total	141	100.0		

If you support the idea of organ donation, is it possible that the multiplicity of reasons for that?

Table 13

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Religious	67	47.5	51.5	51.5
	Mankind	57	40.4	43.8	95.4
	Financial	4	2.8	3.1	98.5
	Other	2	1.4	1.5	100.0
	Total	130	92.2	100.0	
Missing	System	11	7.8		
	Total	141	100.0		

If you refuse the idea of organ donation from brain dead , what is the reason?

Table 14

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid Missing	Religious Believes that the donation insults the human dignity You do not have information on organ donation	28	19.9	23.0	23.0
		15	10.6	12.3	35.2
		26	18.4	21.3	56.6
		53	37.6	43.4	100.0
	Total	122	86.5	100.0	
	System	19	13.5		
	Total	141	100.0		

Do you want to (now) to donate an organ of your members , if there is not any medical and religious mind and that you will help end the suffering of the patient?

Table 15

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	16	11.3	11.4	11.4
	To some extent	46	32.6	32.9	44.3
	I don't know	57	40.4	40.7	85.0
	No	21	14.9	15.0	100.0
	Total	140	99.3	100.0	
Missing	System	1	.7		
	Total	141	100.0		

Where did you get your information about organ donation?

Table 16

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	TV	44	31.2	31.4	31.4
	Friend	41	29.1	29.3	60.7
	Internet	25	17.7	17.9	78.6
	Awareness campaign	17	12.1	12.1	90.7
	Other	13	9.2	9.3	100.0
	Total	140	99.3	100.0	
Missing	System	1	.7		
	Total	141	100.0		

How do you evaluate oriented awareness of the importance of organ donation level of information?

Table 17

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	4	2.8	2.9	2.9
	Very good	24	17.0	17.1	20.0
	Excepted	46	32.6	32.9	52.9
	Poor	66	46.8	47.1	100.0
Total		140	99.3	100.0	
Missing	System	1	.7		
Total		141	100.0		

Table 18

	N	Minimum	Maximum	Mean	Std. Deviation
Age	138	20	35	22.07	1.980
Year at college	89	1	4	2.72	.657

Ocean where you live (family - friends - neighbors ... etc) encourages you to organ donation ?

Table 19

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I agree	10	7.1	7.2	7.2
	I do not know	79	56.0	56.8	64.0
	I disagree	50	35.5	36.0	100.0
Total		139	98.6	100.0	
Missing	System	2	1.4		
Total		141	100.0		