

Attitudes of University Students in Jordan University of Science and Technology toward Organ Donation and their Willingness to Donate (2011)

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Abstract

Objective: This study was conducted to assess the knowledge and attitudes regarding organ donation among Jordan University of Science and Technology students and assess their willingness to donate.

Methods: A total of 389 students of both sexes in Jordan University of Science and Technology were included in this cross-sectional study. A questionnaire was used to collect information about the degree of knowledge concerning organ donation and their likelihood to donate, factors and obstacles that may influence their decisions, and whether they prefer a certain category of recipients. The content validity was ascertained from a feedback from of three experts. Chi-square test was used to test the significance of the association between willingness to donate an organ and the socio-demographic factors.

Results: Only 8.3% of students reported that are highly informed about organ donation. Two thirds (68.5%) reported that they are not willing to donate an organ during their life and 33.9% reported that they are not willing to donate an organ after death. None of the studied socio-demographic factors were significantly associated with the willingness to donate an organ during life or after death. The most common reason for not being willing to donate an organ during their life was fear of deterioration of health (34.7%). Of those who were willing to donate organs after death, 68.2% reported they were more likely to donate kidney. Of those who were willing to donate during their life, 77% reported that they more likely to donate kidney followed by cornea (30.0%) and bone marrow (27.0%).

Conclusions: Two thirds and one third of students were not willing to donate an organ during their life and after death, retrospectively. The most common reasons for not being willing to donate an organ during their life was fear of deterioration of health and the want of the body to remain complete. Religious belief was a common reason for not being willing to donate an organ after death.

Keywords: Organ donation, Kidney transplant, University students, Jordan, Attitudes.

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Introduction

Organ failure is a growing health

problem worldwide. Organ transplantation being the definitive treatment for this problem

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can save lives of many people who have organ failure. However, transplantations are limited by shortage of donated organs [1] and many people who are in need for organ donation die each year without receiving organs. Social issues, religious beliefs, concern about disfigurement of the body, suspicion about the inappropriate use of the organs were reported as reasons for refusal to donate[1-5]. Furthermore, insufficient knowledge and poor attitudes to the organ donation are considered the major reasons for unwillingness to donate [5-7].

No doubt that organ transplantation showed progressive improvement in Jordan in the last 40 years and included most organs and tissues of the body, such as kidneys, corneas, heart, lungs, liver, intestines, pancreas, bones, arteries, skin, limbs and others. In 2010, based on statistics issued by the Jordan Society for Organ Donation, 215 kidney transplantation and 150 to 180 corneal transplantation took place in Jordan. However, 500 Jordanian citizens every year are in need of kidney transplantation to obtain a healthy normal life, and another 1800 are in need of corneal transplantation to get their eye sight back. The available statistics in Jordan shows a wide discrepancy between the demand and supply of donor organs and a low rate of donation. These available data support the need to identify strategies to eliminate barriers and increase organ donation. The opinions and attitudes of the public as well as health professionals are shown to be determinants of the availability of such organs [2,3, 6-8]. Goz et al (2006) suggested that students, especially those in medicine and nursing schools, should be provided with information on organ donation[8]. This could in fact improve the scenario of shortage of donor organs for

transplantation as a healthier attitude towards organ transplant could help both the students and the patients to develop positive perception and attitudes towards organ donation and in turn help and encourage more organ donors.

Previous studies showed that medical students have gaps in their knowledge on organ donation and transplantation process. Thus it is imperative for students to be sufficiently educated in the donation. This study was conducted to assess the knowledge and attitudes regarding organ donation among Jordanian university students and assess their willingness to donate. This age group category was chosen because of their future influence on decision taking and because this age group would be of great value to organ donation if they have the sufficient and adequate degree of knowledge.

Methods

Across-sectional design was conducted among students in Jordan University of Science and Technology in 2011. One station was placed in the campus of the Jordan University of Science and Technology where the majority of students pass through. Two trained interviewers sitting in this station invited the students who passed by them to stop and participate in the study. A systematic sampling technique was used to select the sample. In each day, the first student who passed by the interviewer was interviewed to fill the questionnaire. After finishing the interview, the next student was stopped and interviewed. A total of 8-10 students were interviewed each day by face to face interview. This process continued in each day of the study period until we recruited 389 students of both sexes. The minimum sample size needed to estimate that 50% of participants are willing to donate with a margin of error of 5% and at a

level of confidence of 95% was calculated as 383 subjects.

The questionnaire contained questions about the background information of the participants and questions to assess their degree of knowledge concerning organ donation and their likelihood to donate by asking "how likely are you to donate your organs", factors and obstacles that may influence their decisions, and whether they prefer a certain category of recipients. The content validity was checked by asking three experts to review the questionnaire and modify it. The final version of the questionnaire was approved by the three experts.

The data were analyzed using the Statistical Package for Social Sciences (SPSS, version 19). Frequencies and percentages were used to describe the data. Chi-square test was used to test the significance of the association between willingness to donate an organ and the socio-demographic factors. A p-value of <0.05 was considered statistically significant.

Results

A total of 389 students (254 males and 129 females) were enrolled in this study. Table 1 shows their socio-demographic characteristics. Two thirds (64.7%) of students were obtaining their degrees in a health related major. The majority of students had parents with bachelor or higher education.

The vast majority of students (94.1%) reported that they heard about organ donation. Of those, 76.0% reported that they heard about that from television/radio, 40.7% from internet, 39.1% from friends, 29.2% from newspaper, and 28.1% from educational materials. Only 8.3% of students reported that are highly informed about organ donation and

49.6% were moderately informed.

Four students (1.0%) reported that they had donated an organ in the past to one of their family members. About one fifth (19.4%) of students reported that they know at least one patient who is in need for organ donation and 31.5% reported that they know at least one who had donated an organ.

Two thirds (68.5%) reported that they are not willing to donate an organ during their life and 33.9% reported that they are not willing to donate an organ after death. None of the studied socio-demographic factors were significantly associated with the willingness to donate an organ during life or after death. The reasons for not being willing to donate an organ for those who reported that they are not willing to donate an organ after death or during their life are shown in Table 2. The most common reason for not being willing to donate an organ during their life was fear of deterioration of health (34.7%) and the want of the body to remain complete (35.8%). The most common reasons for not being willing to donate an organ after death were the want of the body to remain complete (38.9%) and religious belief (22.1%).

Of those who were willing to donate organs after death, 68.2% reported they were more likely to donate kidney followed by cornea (36.5%). Of those who were willing to donate during their life, 77% reported that they more likely to donate kidney followed by cornea (30.0%) and bone marrow (27.0%).

The majority (89.6%) of students reported that they would undergo transplantation if they are critically ill and in need for that. About 85.8% reported that they would donate an organ if the person who is in need is a relative

or friend. When students were asked about to whom they would prefer to donate, 59.6% reported any one of the relatives, 8.7% reported a friend, and 31.6% reported any one. About 35.7% reported they prefer to donate to non smokers, 6.2% prefer to donate to smokers, and the remaining (58.1%) reported

no preference to donate to people based on their smoking status. On the other side, 40.2% of students reported that they prefer to donate to young, 4.6% to middle aged people, and 2.8% to elderly. About 52.3% reported that had no preference to donate to people based on their age.

Table 1. The socio-demographic and relevant characteristics of Jordanian university students

Variable	n	%
Age		
17-19	113	29.0
20-22	238	61.2
>=22	38	9.8
Sex		
Male	254	66.3
Female	129	33.7
Major		
health related	238	64.7
non-health related	130	35.3
Year of education		
first year	49	12.7
second year	144	37.2
third year	87	22.5
>=fourth year	107	27.6
Residency		
Urban	221	58.6
Rural	156	41.4
Fathers' education		
Bachelor or higher	325	84.9
less than bachelor	58	15.1
Mothers' education		
Bachelor or higher	283	74.1
less than bachelor	99	25.9
Total monthly family income, JD (1 JD = 0.71 \$)		
≤1000	163	45.9
>1000	192	54.1

Discussion

This study suggests that the university

students in Jordan lack the sufficient knowledge regarding organ donation. Even

though the knowledge is inadequate, the willingness of the students to donate organ is relatively satisfactory. Less than one tenth of the students considered themselves highly informed regarding donation and one half of the students were moderately informed. In a study among medical students in Germany [9],

the researchers showed that 2.7% found their knowledge very sufficient, 42.1% sufficient, 48.4% not sufficient, and 6.8% with no knowledge at all. These findings indicate that more information and education need to be delivered to students.

Table 2. The university students self-reported reasons for not being willing to donate an organ after death or during their life

Reason	Unwilling to donate an organ after death		Unwilling to donate an organ during life	
	n	(%)	n	(%)
Parents don't accept the idea of organ donation	24	(18.3)	36	(10.6)
Organs can be wasted	9	(6.9)	17	(6.4)
Want the body to remain complete	51	(38.9)	95	(35.8)
Religious belief	29	(22.1)	30	(11.3)
Rich/famous people may be favored for donation over poor people	2	(1.5)	5	(1.9)
Doctors profit from it	5	(3.8)	10	(3.8)
Fear of deterioration of health	0	(0.0)	92	(34.7)

The main sources for such information as reported by students were television or radio, making the media the primary source of information for organ donation. In the Germany study [9], the primary source of students' knowledge was the media (72.1%), and only 22.7% of students reported that they know about organ donation from their medical education. The lack of information might be the cause of the lack of positive attitudes towards donation as 68.5% reported that they are not willing to donate an organ during their life and 33.9% do not have the willingness to donate an organ after death. The acceptance for cadaver donation is twice as that for live donation in Jordanian students. This finding is different from that reported in the Germany study [9] where 22.7% of the students were not willing to donate their organs and live donation is more accepted than cadaver

donation. In a similar study among university students in Turkey [10], 49.5% expressed a willingness to donate their organs after death.

The variation between the willingness to donate before and after death in Jordan may be due to cultural and religious beliefs that are widespread in our society. Although not statistically significant, there was a variation in the willingness to donate between males and female where males being more unwilling in comparison to females, whether it is during life (37.3% males versus 28.1% females) or after death (68.2% males versus 65.8% females). This might be explained by the fact that females are more passionate and affectionate. On the other hand, male students were 1.9 times more likely to report not to donate their organs compared to female students in Germany. In our study in Jordan,

we found that 30.8% of health related majors' students were not willing to donate after death in comparison to 40.6% of non health related majors' students. This finding might be explained by the differences in the degree of knowledge around this subject that health related students poses over non health related specialties students.

In conclusion, two thirds and one third of students were not willing to donate an organ during their life and after death,

retrospectively. The most common reasons for not being willing to donate an organ during their life was fear of deterioration of health and the want of the body to remain complete. Religious belief was a common reason for not being willing to donate an organ after death. We think that healthcare professionals are able to play a major role in raising the education and awareness and even changing the opinions towards organ donation, while considering the wishes of the patient and the family.

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اتجاهات طلبه الجامعة الأردنية للعلوم والتكنولوجيا نحو التبرع بالأعضاء

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الملخص

الهدف: أجريت هذه الدراسة لتقييم مدى المعرفة والآراء بشأن التبرع بالأعضاء بين طلبة الجامعات الأردنية وتقييم مدى استعدادهم للتبرع. أجريت هذه الدراسة للكشف عن مدى معرفة طلبة الجامعة الأردنية للعلوم والتكنولوجيا بالتبرع بالأعضاء واستعدادهم للتبرع.

الطريقة: شملت الدراسة المقطعية 389 طالبا من طلاب الجامعة الأردنية للعلوم والتكنولوجيا من كلا الجنسين. استخدم أسلوب الاستبانة كطريقه لجمع البيانات حول درجة معرفة الطلبة بالتبرع بالأعضاء واستعدادهم لذلك، والعوامل والعقبات التي قد تؤثر على قرار التبرع، ومدى تفضيلهم لفئة معينة من متلقي التبرع. للحكم على صدق محتوى أداة جمع البيانات تم الرجوع إلى ثلاثة من المختصين. استخدم الأسلوب الإحصائي مربع كاي (Chi-square) لفحص مدى وجود علاقة ذات دلالة إحصائية بين القابلية للتبرع والعوامل الاجتماعية والديموغرافية.

النتائج: أظهرت الدراسة ما يأتي:

أشار 8.3% فقط من الطلاب أنهم على مستوى عال من المعرفة حول التبرع بالأعضاء. ذكر ثلثي الطلبة (68.5%) أنهم ليسوا على استعداد للتبرع بالأعضاء خلال حياتهم، بينما أفاد (33.9%) أنهم ليسوا على استعداد للتبرع بعد الوفاة. لا يوجد ارتباط ذو دلالة إحصائية بين العوامل الاجتماعية والديموغرافية والرغبة في التبرع أثناء الحياة أو حتى بعد الوفاة. السبب الرئيس لرفض التبرع أثناء الحياة كان الخوف من تدهور صحة المتبرع (34.7%). أشار 68.2% من الذين لديهم استعدادهم للتبرع أثناء حياتهم أنهم أكثر ميلا للتبرع بالكلية، بينما أشار 77% من الذين لديهم استعداد للتبرع بعد الوفاة أنهم أكثر ميلا للقيام بذلك.

الاستنتاجات: بالرغم من افتقار العينة التي شملتها الدراسة إلى القدر الكافي من المعرفة بالتبرع بالأعضاء، إلا أن حجم الموافقة والإقبال على التبرع بالأعضاء مرضٍ جداً.

الكلمات الدالة: التبرع بالأعضاء، زرع الكلية، طلاب الجامعات، الأردن، الاتجاهات.