



EXAMINATION OF COLLEGE STUDENTS' ATTITUDES, BELIEFS, OR INTENTIONS TO BECOMING AN ORGAN DONOR

By: Alexis Taquino, BSN Student (altaquino@cox.net), Senior Level Nursing Student, 2017, Bachelor of Science in Nursing, Undergraduate Research Study, (Mentors): Dr. Deedra Harrington, DNP, MSN, APRN, ACNP-BC; BSN Coordinator, Assistant Professor of Nursing, & Dr. Christy Lenahan, DNP, MSN, APRN, FNP-BC, CNE; Assistant Professor of Nursing, College of Nursing and Allied Health Professions, University of Louisiana @ Lafayette, Lafayette, Louisiana, 70503, USA

ABSTRACT

Background: Despite increased awareness and visible organ donation campaigns, it is estimated in the United States that every ten minutes someone is added to the national transplant list and, on average, twenty-two people die while waiting for an organ transplant.

Design: This study, conducted in the United States, utilized an anonymous, online organ donor survey to gather preliminary qualitative and quantitative data about college students' attitudes, beliefs, or intentions towards becoming an organ donor.

Aim: To examine college students' attitudes, beliefs, or intentions towards becoming an organ donor.

Method: The study population included a convenience sample of undergraduate and graduate students enrolled during the Spring 2016 semester at a university in a southern state of the United States. Students completed an anonymous *SurveyMonkey* 22 item survey that included items on demographics, attitudes, beliefs, and intentions to become an organ donor.

Results: Eighty-seven percent of 968 students surveyed stated they were willing to be an organ donor; however, only 83% of the students surveyed had placed the organ donor symbol on their driver's license. A large majority of students (92%) stated one factor positively affecting willingness to donate was knowing it could save someone's life. In contrast, 30% of students stated they did not trust the medical system when they were asked about particular beliefs that made them less likely to donate.

Conclusion: Based on the survey results, there remains some misunderstanding about organ and tissue donation. Educational awareness remains a vital component of increasing public awareness.

Keywords: *organ donation, organ donor, lifesaving donation, gift of life*

Recent data from the United Network for Organ Sharing (2017) indicate more than 129,000 persons are listed on the national organ transplant list with almost one-half in need of kidneys. It is also estimated that 22 patients awaiting a lifesaving organ transplant die each day. Organs are matched by blood and tissue typing, organ size, medical urgency, waiting time, and geographic location; with this said, there continues to be a consistent shortage of organ and tissue donations (Rykhoff et al., 2010).

While previous studies have focused on insufficient organ and tissue donations there is limited data to explain why this insufficiency exists (Rykhoff et al., 2010). College students are an important population to the organ donor registry. In 2017 there were approximately 19.9 million US college students between the ages of 18 and 34 (National Center for Education Statistics, 2018). This age group was the second largest group of organ donors in 2017, donating approximately 3,613 organs (Statista, 2018). Identifying and addressing this population's attitudes, beliefs, and intentions towards organ donation is vital to ensuring an ample donor registry. In recent years, identification of various myths and misconceptions related to organ donation have been identified and include individual distrust of the medical system and beliefs that recovery after the declaration of brain death is possible (United States Department of Health and Human Services, 2013). The purpose of this paper is to present the findings of a survey that addressed the attitudes, beliefs, or intentions of becoming an organ donor in students enrolled in a university.

Method

The study was conducted in 2016, at the second largest university in a southern state of the United States (US). This study was conducted as part of a university awarded Undergraduate Research Grant and was conducted independently of any academic requirements. A survey was sent to all students enrolled at the university during the spring 2016 semester (N = 15,971). Students were asked multiple questions regarding their views of organ donation.

After approval from the Institutional Review Board of the university was obtained, the primary investigator utilized *Survey Monkey* to place an organ donation survey in an electronic format. The survey was adapted from the *2012 National Survey of Organ Donation Attitudes and Behaviors* (United States Department of Health and Human Services, 2013) excluding copyrighted materials and tailored to the university student; thus, validity and reliability of the adapted survey have not been established.

The survey was set up in a manner that potential participants were required to click on a 'button' or type in a response indicating that one had read the consent information and agreed to participate in the study. Once the consent 'button' was selected, the potential participant(s) were redirected to the survey questionnaire. The survey questions could not be viewed by a participant until one clicked on or typed in a response to indicate voluntary participation and consent.

Upon completion of the survey, the participants were invited to enter an iPad drawing where they were directed to an anonymous alternate survey, separate and apart from the organ donation survey. The students' individual contact information was gathered and entered into the drawing for the iPad, but was not linked to the original survey.

Several methods of data analysis were utilized within *Survey Monkey* software. Initially, overall question summaries were reviewed. After all question summaries were reviewed, a filter was applied in order to allow for data comparison on selected questions. Open-ended survey questions were analyzed by using a text analysis feature, which assisted with categorization of open-ended responses to gain insight into attitudes, beliefs, and intentions. Additionally, quantitative data gathered from completed surveys was analyzed using descriptive statistics.

Results

One thousand and two students began the initial survey. Nine hundred sixty-eight surveys were completed out of 15,971 surveys distributed (6% response rate). The 34 incomplete surveys were not included in the data analysis.

Demographics

Seventy-seven percent of survey respondents identified themselves as female and 23% of respondents identified themselves as male. Ethnicities were categorized as Caucasian, African-American, and other. Seventy-eight percent of survey respondents identified themselves as Caucasian, 12% identified themselves as African American, and 10% identified themselves as other. Established state residency was another factor examined in which 90% of survey respondents stated they were residents of state and 10% stated they were not residents of the southern state. These demographics are consistent with the university's student demographics published in 2016. (See Table 1).

Familiarity with Organ Donation

To assess familiarity with organ donation, students were asked: if they were familiar with organ donation, if they had ever donated or received an organ, or if they knew someone who had ever donated or received an organ. Ninety-eight percent of students stated they were familiar with organ donation, while two percent stated they were not. A small percentage of respondents stated they had donated or received an organ, 0.5% and 0.44% respectively, while the remainder of respondents had never donated or received an organ transplant. A larger percentage of students stated they knew someone who had donated an organ, 30%, or received an organ, 39%. Seventy percent of respondents surveyed did not know anyone who had donated an organ and 61% of students did not know anyone who had received an organ. (See Table 2).

Willingness to Donate

Questions that assessed students' willingness to donate included: if the student had ever placed the organ donor symbol on their driver's license, if the student was willing to become an organ donor, and if the student would allow a deceased family member to be an organ donor. Eighty-seven percent of students surveyed stated they were willing to be an organ donor; however, only 83% of the same students surveyed had placed the organ donor symbol on their driver's license. Additionally, 80% of students stated they would allow donation of a deceased family member's organs, 3% stated they would not allow this, and 17% were unsure. (See Table 3).

Factors that Influence Willingness to Donate

Positive

A large majority of students (92%) agreed that one factor positively affecting willingness to donate was knowing it could save someone's life. Other factors positively affecting students' willingness to donate included knowing the organs were not needed after death (82%) and knowing that family would find solace in the idea that part of the donor was still alive (60%). (See Table 4).

Narrative Results

"I feel like when you have a chance to help better or save a person's life in such an easy way (easy because it requires no actual action from the donor), it's the humane,

compassionate thing to do. Not only a compassionate thing, but almost something that should be expected of someone.

"It is selfish not to, if you could save lives."

"It is the ultimate gift; most self-less thing you can do for someone you love."

"I'm dead and don't need organs anymore."

"I wouldn't care because I'll be dead."

"My dad donated his organs and tissue when he died and it gave me peace."

"My dad was a tissue and eye donor and he enhanced over 50 lives with his donation and it has helped our family to cope with his death knowing that he has helped other people."

Negative

Factors negatively affecting students' willingness to donate were also assessed. Thirty percent of students stated they did not trust the medical system when they were asked about particular beliefs that made them less likely to donate. Distrust of the medical system was also a resounding theme in the narrative response option of this question. Another factor that negatively affected a students' willingness to donate was that 22% of students surveyed believed it may be possible for a brain dead person to recover from one's injuries. (See Table 4).

Narrative Results

"I feel SOME doctors may be less likely to save my life."

"I have heard that hospitals present a bill for the cost of the organ donation to the donating family. It's an unfair practice if a person is donating organs to save someone else's life."

"I knew someone who donated their body to science and medicine and it was sold to other countries when it was not supposed to be."

"They will not try as hard to save me if they see I am an organ donor."

"What if my family never wanted a piece of them inside a stranger?"

“I've heard the brain processes pain hours after death.”

“Transplants may go to those with more money, not more need.”

“Sometimes they might be misused. Some hospitals sell organs.”

Discussion

The data collected from this survey revealed mostly positive beliefs and the willingness to donate after death with 83% making this known by placing the organ donor symbol on their driver's license. These findings are consistent with other studies that have examined college students' attitudes and behaviors regarding organ donation (Feeley, 2007). As compared with the general US population, however, college students' support of organ donation was lower. Approximately 94.9% of the general US population supports or strongly supports organ donation (United States Department of Health and Human Services, 2013).

Based on the narrative comments listed previously health care professionals still have work to do to educate the public, including college students, about organ donation. Increased awareness and addressing misconceptions would only serve to provide a better understanding of organ donation and potentially increase the donor registry (D'Alessandro, Peltier, & Dahl, 2012).

Implications for Future Awareness

Through the literature review and search, the investigator identified several key initiatives that may help enhance community awareness of organ donation.

Social Media

Social media provides the best platform to raise public awareness. *Facebook*, an online social network, has over one billion daily active users. This country has witnessed a rapid growth with popular media sites such as *Twitter*, *Qzone*, *Skype*, *WhatsApp*, *Wechat*, *YouTube*, and *Instagram*. Social media platforms can serve as an avenue to communicate with students and enhance their understanding of organ donation (Shi, Poorisat, & Salmon, 2016).

The use of social media crosses over all ages from young adults who will *tweet* and use *snapchat* to older adults whose main source of keeping up with local, regional, and national news is *Facebook* (Lenhart, Purcell, Smith, & Zickuhr, 2010; Johns Hopkins Medicine, 2013). Social

media provides a platform to initiate a conversation with others about organ and tissue donation. In addition, donor outreach programs could assist with sustained awareness of organ donation (Salim et al., 2014). A study completed by researchers at the School of Public Health in New Jersey validated that social media served as a very powerful and valuable tool for enhancing awareness (Lim, Wright, Carrotte, & Pedrana, 2016; Shi, Poorisat, & Salmon, 2016).

Collaborative Efforts

Each state has an organ procurement organization (OPO) which employ professionals in public relations and communication. Each OPO may have relationships with worksites, faith institutions, or communities of interest which may include local medical facilities who assist in sponsoring advertising campaigns. Other initiatives that most states employ is placing the organ donor symbol on an individual's driver's license and partnering with national blood banks to encourage blood donors in becoming organ and tissue donors. Another initiative would be to have the university work with the local OPO to assist with a campus-wide campaign promoting organ donation (United States Department of Health and Human Services, n.d.).

Limitations

This study was conducted at the second largest university in a southern state of the US where only a small pool of students responded (6% response rate). Results may not be generalizable to all college age students based on their state of residency, religious beliefs, and personal convictions related to organ and tissue donation. Additionally, future studies would have to determine validity and reliability of the adapted survey. The survey was conducted to capture preliminary data in a particular region and to identify the need for increased public awareness concerning organ donation on the university campus.

Conclusion

Results indicated an overall positive attitude and willingness to donate among students at this university. Negative attitudes were mostly a result of a generalized distrust of the medical system, which is consistent with the national perspective of why an individual is unwilling to become an organ donor. Actions to increase the organ donor registry should focus on education through social media campaigns that reach college students and collaborative efforts with the local OPO. These actions would serve as an impetus to increase willingness to donate and to dispell common misconceptions regarding organ donation.

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Table 1: Demographics

Demographics	Responses (n = 968)	Percentage Totals
Gender		
Female	745	77
Male	223	23
Ethnicity		
Caucasian	755	78
African-American	116	12
Other	97	10
Established Residency		
Resident of the State	871	90
Non-State Resident	97	10

Table 2

Familiarity with Organ Donation	Responses (n = 968)	Percentage
Are you familiar with organ donation?		
Yes	948	98%
No	20	2%
Have you ever donated an organ?		
Yes	5	0.5
No	963	99.5
Have you ever received an organ?		
Yes	4	0.44
No	964	99.56
Do you know someone who has donated an organ?		
Yes	290	30
No	678	70
Do you know someone who has received an organ?		
Yes	378	39
No	590	61

Table 3

Willingness to Donate	Responses (n = 968)	Percentage Totals
Are you willing to become an organ donor?		
Yes	842	87
No	126	13
Have you ever place the organ donor symbol on your driver's license?		
Yes	803	83
No	165	17
Would you allow donation of a deceased family member's organs?		
Yes	774	80
No	29	3
Unsure	165	17

Table 4

Factors Influencing Willingness to Donate	Responses (n = 968)	Percentage Totals
Positive		
Knowing donation could save someone's life	891	92
Knowing organs were not needed after death	794	82
Knowing family would find solace in the idea that part of the donor was still alive	581	60
Negative		
Distrust of the medical system	290	30
Believing in a possibility of recovery after brain death	213	22