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Organ Donation: An Assessment of Views and Misconceptions at MSSU

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### **Abstract**

With over 100,000 individuals currently on the waiting list for a life-saving organ transplant, and 18 of those individuals dying each day, the promotion of organ donation and its benefits for both recipients and donor families is more important than ever before (United Network for Organ Sharing, 2011). The purpose of this study was to explore the misconceptions and views of organ donation present in the sample population and to assess the effectiveness of an educational presentation in producing views more favorable to consent for organ donation. It is hypothesized that the provision of education will result in an increase in positive attitudes and willingness to consent to organ donation. A 15 item survey adapted from a 2005 survey designed by the Gallup organization was administered pre and post intervention (Division of Transplantation Health Resources and Services Administration, 2005). Paired *t*-tests on each survey item showed statistically significant changes in favor of donation in 8 out of 15 items, with all 41 participants reporting “very likely” or “somewhat likely” in the donation of their organs after their death in post-education results.

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#### **Introduction and Significance**

As medical technology continues to make advances in the discovery and improvement of lifesaving treatments, the treatment of organ donation is one that has met societal and cultural limitations preventing it from fulfilling its lifesaving potential (United Network for Organ Sharing, 2011). In fact, science has consistently provided advances in the surgical procedures, immunosuppressive drugs, and medical technology making organ transplant procedures exceedingly more successful (Ingram, Buckner, & Rayburn, 2002). With these advances, the demand for organ transplants has grown throughout the past decade, while the supply of available organs has remained relatively constant. (Ingram, et. al., 2002) Two factors contribute to this deficit: the limited number of deaths that occur resulting in eligible donors and, more significantly, the modifiable factor of the refusal from family members of eligible donors to donate (Manuel, Solberg, & MacDonald, 2010). As reported by Sque, Payne, and Macleod Clark (2006), the refusal rates nationally in the United States stand at about fifty percent.

The solution to increase the number of lives saved through donation needs to be aimed at decreasing the refusal rate of families approached about donating their loved one's organs. A better understanding of why families say no and what motivates families to provide consent needs to be obtained (Sque, et. al., 2006). The purpose of this study was to explore the misconceptions and views of organ donation present in the sample population and to assess the effectiveness of an educational presentation in producing views more favorable to consent for organ donation. It is hypothesized that the provision of education will result in an increase in positive attitudes and willingness to consent to organ donation.

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### **Methods**

The study used an exploratory quantitative design, with a pre-test/post-test interventional approach. A survey, originally designed in 2005 by the Gallup organization for the United States Department of Health and Human Resources was adapted with permission and used as a Likert scale in the study to measure the change in attitudes that occurred following the provision of public education (Division of Transplantation Health Resources and Services Administration, 2005). After receiving IRB approval, the sample was obtained by convenience, and 3 core curriculum honors courses were visited to conduct the surveys and provide education. In total 41 participants were surveyed. Pre and post survey results were matched for each participant, maintaining anonymity and a paired t-test was performed to determine statistical significance of changes in responses.

The educational information was provided in the form of a power point presentation and discussion designed by the author. In the design of the presentation information on the misconceptions represented in the survey, as identified in the literature, were addressed.

### **Results**

Following the collection of data, survey results were entered into an SPSS spreadsheet for analysis. Initial descriptive data showed that there was an overall trend toward increasing the number of participants that would consent to donation, and a decrease in the presence of misconceptions. Descriptive statistics were also used to describe the sample population. The 41 individuals mainly consisted of college aged (18-22), white/Caucasian males and females. Therefore, results cannot be generalized outside of this population.

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Paired t-tests conducted on each of the 15 survey items revealed statistically significant changes in eight of the fifteen survey items; four of the eight items were significant at the  $p=.05$  level, and four were significant at the  $p<.001$  level.

### *Statistically significant changes.*

Question two of the survey was “How likely are you to have your organs donated after your death? Would you say *very likely*, *somewhat likely*, *not very likely*, or *not at all likely*?” This question resulted in statistically significant differences with a  $t$  value of  $-2.449(p=.019)$ . More importantly, in the pre-survey results, a total of 36 of the 41 participants reported being “very likely” or “somewhat likely” to donate their organs; following the education, all of the remaining 5 participants, also reported those positive responses, resulting in a post-intervention total of 41 of 41 participants being likely to donate their organs.

Questions six, eleven, and fifteen, as follows, also showed statistically significant changes after education was provided: It is important for a person's body to have all of its parts when buried.; Doctors will do everything they can to save a person's life before organ donation is even considered; Every year, thousands of people die due to a lack of organs for transplantation. Pre-survey results revealed that a number of participants were unaware of the need for organs, and had negative feelings toward donation's affect on the quality of care a patient receives and the respect a person's body is treated with. These areas showed the ability to be influenced by a simple educational discussion.

Four other survey items achieved statistically significant differences at the  $p<.001$  level. Item seven on the survey was, “You are worried that a loved one's body would be disfigured if his or her organs were donated.” Item 9 was, “If you indicate you intend to be a donor, doctors

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will be less likely to try and save your life.” Item 10 was, “People who choose to donate a family member's organs will end up paying extra medical bills.” Finally, item 14 was, “Organ and tissue donation helps families cope with their grief.” Participants were to rate their agreement or disagreement with these statements on a 4-point Likert scale: 1 being strongly agree, 4 being strongly disagree. With an even stronger level of significance achieved than the previously discussed items, results indicate that these areas are subject to influence and change with education

### *Non-statistically significant items.*

While eight of the fifteen survey items resulted in statistical significance, the remaining seven did not. Some of these items, such as item 8, which assessed religion’s impact on feelings towards organ donation, were not expected to change, as religion is a deeply rooted trait, and one that is respected and honored in medical decisions. Other items, such as item 1 (In general, do you *strongly support*, *support*, *oppose*, or *strongly oppose* the donation of organs for transplants?) did not show statistically significant changes because pre-survey results were already unanimously in favor of organ donation.

Question number 5, however, did not result in a statistically significant change, although descriptive analysis shows an overall trend toward more positive attitudes toward donation. Question 5 was, “If you didn’t know your family member’s wishes, how likely would you be to donate his or her organs and tissues upon his or her death, if it were up to you? Would you say *very likely*, *somewhat likely*, *not very likely*, or *not at all likely*?” In pre-survey results, a total of 33 of the 41 participants answered “very likely” or “somewhat likely”; in post-survey results, there was a total of 36 participants to answer in that way. That means that 3 of the 8 participants

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who pre-education were not willing to donate a loved one's organs, had changed their minds in post-survey responses. Therefore, although not enough of a change to result in statistical significance, the value of education for those 3 individuals cannot be discounted.

### **Limitations**

The sample population of 41 participants was relatively small and very homogenous; meaning the results of the study cannot be widely generalized outside of the 18-22 age range or to ethnicities and cultures outside of that of the sample. In addition, the educational session was provided to three separate classes on three separate occasions, meaning that the presentations were not standardized. Some presentations and discussions could have been more beneficial than others, producing different results in each group, as opposed to the difference being true to the sample population. A convenience sample of students in core honors classes also produces a limitation in the study, reducing its generalizability. A final limitation to keep in mind is the bias resulting from a Hawthorne effect, in which the participants could decipher the purpose of the researcher and answered surveys in a way they felt they were "supposed to" instead of in a way that reflected their true beliefs.

### **Future Recommendations**

To account for many of these limitations, future research could allow more time for data collection and utilize a larger and more diverse number of participants. Education could be provided in a different format, such as that of a video presentation, allowing for more standardization of what all participants are exposed to. Furthermore, research could aim to determine the effectiveness of various educational interventions, comparing results to determine which method proves to have the greatest impact.

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### **Conclusion**

One person on the donor registry dies every 91 minutes waiting to receive an organ transplant, meanwhile only 4 to 5 out of every 10 families approached for consent agree to donation and the provision of life for these waiting individuals (Ingram, et. al., 2002; Jacoby, Breitkopf, & Pease, 2005). Organ donation and transplantation has met its barrier in the lack of organ donations, rather than the lack of medical technology available. This is an issue of significance that requires further research into effective methods for increasing the rate of consent. Results of this study show that a five minute informational session and discussion about the misconceptions and benefits of organ donation can be effective in reducing negative misconceptions, and increasing positive attitudes towards organ donation. Further research is needed to assess the effectiveness of this method across a wider range of individuals, and to assess the significance of other educational methods. Despite limitations, the value of the education provided to the 41 individuals in this study cannot be overlooked. These results should encourage individuals in support of donation to discuss these misconceptions with others and “spread the word” about organ donation, just as many other national health campaigns aim to do in the population.

### **Acknowledgments**

Lauren Haggard, PhDc, RN, for her guidance throughout this project.

Grace Ayton, MSN, RN, for her assistance in obtaining IRB approval and offering her guidance.

Dr. Robert McDermid, for his assistance with SPSS and statistical analysis

Various honors professors for the participation of their courses in data collection.

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**Appendix**Survey of Organ and Tissue Donation Views and Attitudes

The following is a survey being used to assess the views and attitudes towards organ and tissue donation in a sample population of MSSU students. The survey questions were taken from the 2005 National Survey of Organ and Tissue Donation Attitudes and Behaviors conducted by The Gallup Organization. Please answer each question honestly and thoughtfully. Surveys will remain anonymous. The biographical information will be used for statistical analysis of survey results only. Thank you for your participation.

**Biographical Information**

- Gender: M    F
- Age: \_\_\_\_\_
- Major Field of Study: \_\_\_\_\_
- Ethnicity:
  - Black/African-American
  - Hispanic/Latino
  - Asian
  - White/Caucasian
  - Other race

**Survey Questions**

- Please circle the answer choice written in *italics* that most closely relates to your feelings regarding the question asked.
1. In general, do you *strongly support*, *support*, *oppose*, or *strongly oppose* the donation of organs for transplants?
  2. How likely are you to have your organs donated after your death? Would you say *very likely*, *somewhat likely*, *not very likely*, or *not at all likely*?
  3. Have you granted permission for organ and tissue donation (On your driver's license/On a signed donor card/By joining an organ donor registry)? *YES* or *NO*
  4. Would you be willing to grant permission for organ and tissue donation on your driver's license, on a donor card, or by joining an organ donor registry? *YES* or *NO*
  5. If you didn't know your family member's wishes, how likely would you be to donate his or her organs and tissues upon his or her death, if it were up to you? Would you say

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*very likely, somewhat likely, not very likely, or not at all likely?*

- For the following items please place an X in the column that most closely relates to your feelings regarding each statement.

<i>Statement</i>	<i>Strongly Agree</i>	<i>Somewhat Agree</i>	<i>Somewhat Disagree</i>	<i>Strongly Disagree</i>
It is important for a person's body to have all of its parts when buried.				
You are worried that a loved one's body would be disfigured if his or her organs were donated.				
Organ and tissue donation is against your religion.				
If you indicate you intend to be a donor, doctors will be less likely to try and save your life.				
People who choose to donate a family member's organs will end up paying extra medical bills.				
Doctors will do everything they can to save a person's life before organ donation is even considered.				
It is impossible to have a regular funeral service after organ and tissue donation.				
Organ donation allows something positive to come out of a person's death.				
Organ and tissue donation helps families cope with their grief.				
Every year, thousands of people die due to a lack of organs for transplantation.				

**Reference:**

Division of Transplantation Health Resources and Services Administration, (2005). *National survey of organ and tissue donation attitudes and behaviors*. Washington, DC: The Gallup Organization. Retrieved from <ftp://ftp.hrsa.gov/organdonor/survey2005.pdf>