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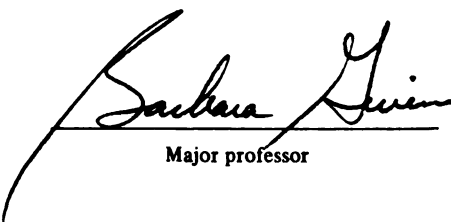
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**THE IMPACT OF AN EDUCATIONAL SESSION ABOUT ORGAN DONATION ON
THE ATTITUDE AND BELIEFS OF FIRST SEMESTER NURSING STUDENTS**

By

Andrea Perri

A THESIS

**Submitted to
Michigan State University
in partial fulfillment of the requirements
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ABSTRACT

THE IMPACT OF AN EDUCATIONAL SESSION ABOUT ORGAN DONATION ON THE ATTITUDE AND BELIEFS OF FIRST SEMESTER NURSING STUDENTS

By

Andrea Perri

Organ transplantation and donation is an issue with which every individual may be faced someday, either directly or indirectly. This study explored how an educational session about organ donation affected the beliefs and attitude of a sample of first semester nursing students. The sample consisted of 23 student nurses enrolled in a community college in the midwest and met the criteria for this study. They were asked to complete a pretest, The American Public's Attitudes Toward Organ Donation And Transplantation Questionnaire, and were then presented an educational session about organ donation. Approximately one month later the pretest was readministered as a post test. The paired t-test was utilized to compare total means of each subject to evaluate the effect of the educational session. A significant increase existed from the pretest to post test scores in both the belief and attitude variables (paired $t=5.23$, $df22$, $p<.05$, paired $t=3.72$, $df22$, $p<.05$). This significant change in the scores indicated that education did effect an individual's beliefs and attitudes towards organ donation. Implications include a need for further studies to replicate this study and increase the reliability of the findings.

This paper is dedicated to Natalie, my daughter, whom through her death expanded my knowledge base about organ donation to include all the emotional factors one faces when a choice of this nature needs to be made.

ACKNOWLEDGEMENTS

A special thank you to my family, husband Bob, and sons Joe, Brad and Jacob. It was their strong belief in me and this project that drove me to complete this endeavor. Joe, a special thank you, for all your help with the computer and the formatting of this paper. Brad, thank you for offering your views and never giving up on me. Jacob, thank you for all the hugs. And Bob, thanks for all the understanding, encouragement, support and advice on how to handle each road block that developed.

A special thank you to my thesis support group, Luanne, Jan, Sandy, Kathy and Debbie. It is true that it is easier to tackle a large problem in a group rather than as an individual. A note of appreciation to Betty Marshall for her assistance in obtaining the literature needed to research the issue of organ donation. Thank you to all.

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The Impact Of An Educational Session About Organ Donation On The Attitudes And Beliefs Of First Semester Nursing Students

Introduction

It was a cold January morning when a car stopped for a bus picking up children. Suddenly a five year old boy darted out of a car and in front of the bus. The result was a tragic death. The child was taken to the nearby hospital, where he was pronounced dead on arrival. The staff and family members were equally upset over the morning's events, resulting in their failure to achieve the one thing that could have given this traumatic event meaning: No one asked about organ donations. Why was this? Did the staff feel uncomfortable with their own feelings? If asked, the above mentioned family would have gladly donated.

The idea of transplantation of tissue or organs has been around for approximately 5000 years. The Hindu used skin grafting to reconstruct damaged areas of derma (Lancaster, 1992). Cox (1986) presented the historical fact that the first corneal transplant took place in 1905 in Austria. The graft lasted three years at which time the recipient died. In 1954 at Peter Bent Brigham Hospital in Boston, the first successful kidney transplant occurred and lasted 25 years. With advances in immunosuppressants, transplants have progressed over the years. Today multiple organs are being transplanted and extending patient's lives that would otherwise have died from chronic organ failure (Lancaster, 1992). The increased success rate of transplantations has created a supply

deficit of available organs. The supply of healthy organs cannot keep up with the demand.

Acorn (1995) stated that as of March 2, 1995 there were 38,549 individuals waiting for an organ transplantation. Another person is added to the national waiting list for an organ donation approximately every twenty minutes. It is estimated that seven of those individuals will die each day while awaiting transplantation. The total number of actual donors both cadaveric and living related donors, was 7,618 in 1994. This resulted in 18,665 successful organ transplants during the year of 1994. This disparity is attributed to multiple organs being donated from one individual.

According to the Transplantation Society of Michigan (TSM) as of June 1, 1996 there were 1457 individuals waiting for a kidney, 60 for a heart, two for a heart/lung, 111 for a lung, 179 for a liver, 76 for a pancreas, and 250 for a cornea. TSM reports that in 1995 there were 282 kidney transplants, 106 livers, 47 hearts, 29 lungs, one heart/lung and 35 pancreas, done for a total of 500 total organ transplants in Michigan. Nationally there were 43,000 cornea transplants performed during 1994, which leaves an average of approximately 5000 individuals on the waiting list for corneas at any given time.

Lenehan (1986) stresses the importance of organ donations. The following statistics are presented: 50 % of patients waiting for livers die before one is available, and 30% of those awaiting a heart die. Friedl (1995) notes that liver transplants are successful in 67.5% with a three year survival rate, hearts 74.4%, kidneys 87.2%, and pancreas transplants 81.8%. People are still dying before they are able to get a new organ.

Would education of health professionals make a difference? Where should the professional education begin? Whom should the information be presented to and when in their professional training? For health professionals, the educational session should be

presented as early as possible in training. Nursing should consider presenting the information during the first semester of their education and updating on a regular basis.

Garber, Hall, Phillips, Tolley, and Britt (1990) suggest that those working in the health care professions directly caring for the organ donors play a critical role in obtaining consent for organ donations. Health care providers are the ones that develop the earliest relationship with the family by providing care during this critical time. These individuals are in a role where early recognition of potential donors exists and many times they have the opportunity to initiate discussion about donations with the family. The health care professionals must continue to provide acute care for the potential donor and counseling for the grieving family. With such close contact during a highly stressful time, the nurse can make a dramatic impact on the success of organ procurement. Even the slightest of negativity in personal attitudes can come across and influence the nurse's approach. The importance of recognizing the way the nurses feel cannot be under estimated if the supply of organs is going to be increased.

In order to avoid the formation of barriers in the health care profession, Randall and Marwan (1991), suggest organ donation education should be presented in medical and nursing schools. These educational programs should include all aspects of organ and tissue donation, with special attention on the importance of effective, sensitive, and timely communication. Surveys have revealed that about one half of all medical and nursing schools spend no more than one to four hours on the subject of organ procurement. Some provide no instruction at all, yet these are the professionals the public turns to as resource people when a question arises about organ donation (Randall & Marwan, 1991).

Deyoung, Temmler, Adams, and Just (1991) studied 978 nurses to find out why

there is lack of involvement in organ requests. The researchers supported their initial hypothesis that a knowledge deficit existed and was the cause of the low motivation. It was reported that 45% of the nurses believed that hospitals were required to honor the donor care even in the absence of family permission. Forty three percent or 421 of the nurses who had never participated in the referral process cited inadequate knowledge as the reason. Only 36% or 353 of those that had participated in the process felt confident in their knowledge.

This study will address the following research question: **What impact would an educational session about organ donation have on the attitudes and beliefs of first semester nursing students ?** To find the answer to this question, a questionnaire would be administered prior to an educational session and then again one month later. This time frame would give individuals time to think about the information and discuss it with family and friends. The one time session offers a limited time exposure in one's education to organ procurement. The retesting is a device used to measure any changes in the subject's attitudes. The retesting determines the effectiveness of the session in expanding the subject's knowledge base, which in turn influences one's beliefs and attitudes.

Horton and Horton (1991) have identified education as having an effect on the attitudes that individuals have developed. Deyoung, et al (1991) surveyed nurses and found that a knowledge deficit does exist in the nursing profession concerning organ donation. Nurses felt that this deficit could be deleted if education was provided on the subject of organ donation. By filling the gaps that exist in nurses' knowledge, nurses will become informed participants in the donation process and may make a difference in the number of requests being made and the number of organs being obtained.

Study Relevance

Organ transplantation and donation is an issue that every individual may be faced with someday either directly or indirectly. The Advanced Practice Nurse (APN) must be able to assess the community within which she/he practices, identifies needs and develops solutions to the problems. One solution to the organ donation problem is to start the education process in the early phase of nurses' education. The APN is viewed as an expert in the field of nursing and can serve as the educator and resource for other nurses.

The APN can educate the first semester nursing students to the facts of organ donation and begin to expand their knowledge base. These nursing students will graduate and become recognized novice nurses in the field of nursing. These individual nurses will build upon their knowledge foundation by further exposure through additional experiences and continued education. The novice nurse will progress along the continuum to become an expert nurse by adding information to the knowledge that she/he obtained in the very beginning of her/his education.

This study acts as a beginning point for those individuals entering into the nursing program and provides a knowledge base about organ donation. The nursing student can draw from this knowledge bank's valuable information during her/his career. During the nurse's career a situation may arise where she/he may need to ask a family about making a donation. With this background knowledge, the nurse would be able to serve as a resource person for the family and provide them with the necessary information to make an informed decision. The study will provide the community with more informed nurses that can educate others about organ donation and hopefully increase the number of individuals making donations.

Conceptual Framework

The Theory of Reasoned Action developed by Fishbein and Ajzen (1975), explains how an individual's beliefs influence their attitudes and intentions which results in their behavioral outcomes. "The theory is based on the assumption that human beings are usually quite rational and make systematic use of the information available to them" (Ajzen & Fishbein, 1980, p.5).

Fishbein and Ajzen's (1975) model assumes that a causal chain exists. This chain links beliefs that have been formed from information that is available to the individual's attitudes, and attitudes to intentions, and intentions to their behavior. The actual outcome of the behavior may provide the individual with new information that again influences his/her beliefs, which starts the causal chain to begin again.

Fishbein and Ajzen (1975) view an attitude as a learned attribute that guides or influences behavior. Simply put, it is the person's judgment that performing the behavior is good or bad, that he/she is in favor of or not in favor of performing the behavior (Ajzen & Fishbein, 1980).

Beliefs are the building blocks that ultimately determine an individual's attitudes, intentions, and behaviors towards a specific concept. Fishbein and Ajzen (1975) state that beliefs can be formed in two ways: 1) Inferential beliefs, those formed from prior personal experience and 2) Informational beliefs, those formed from information obtained from an outside source. People tend to have more knowledge about things that are important to them and thus tend to have stronger beliefs about the important rather than about the unimportant attributes.

Fishbein and Ajzen's (1975) theory states that beliefs about an object provide the

foundation for attitude formation towards the object. Behavioral beliefs are the beliefs that performing a certain behavior will lead to certain outcomes and his/her evaluation of those outcomes. A person who believes that performing a certain behavior will result in a positive outcome is likely to have a favorable attitude towards performing the behavior. Likewise, a person who believes that performing a certain behavior will result in a negative outcome is likely to have an unfavorable attitude.

An individual's salient beliefs are those that a person holds at any given time towards an object and determine that individual's attitude at that moment. A person can attend to no more than five to nine at any given time and they may change from situation to situation. A researcher would be interested in obtaining model salient beliefs for a given population before designing an influence attempt addressing the concept which he/she is studying. The model salient beliefs provide a general picture of the beliefs that determine the attitudes for most members of the population under investigation (Ajzen & Fishbein, 1980). Some examples of model salient beliefs in relation to organ donation would be that a person is too old, people do not want the body mutilated, or that it would give some purpose to the loss of a loved one (Lenehan, 1986).

Normative beliefs are those that a specific reference group or individual thinks he/she should or should not perform the behavior. Normative beliefs are the beliefs that are underlying an individual's subjective norms. The perceived social pressure will influence the individual either to engage or not to engage in the behavior (Fishbein & Ajzen, 1975).

The ultimate goal of the theory of reasoned action, according to Ajzen and Fishbein(1980), is to understand and predict an individual's behavior. The first step

towards obtaining this goal is to identify and measure the behavior or interest. The best indicator of an individual's intention to behave in a certain way is to ask them of their intent if that situation were to occur. In relation to organ donation, some ways to evaluate an individual's intent to become involved in organ donation would be to ask them if they had signed either their driver's license or a donor card, for nurses to be willing to ask families to donate organs of their loved ones, or if the APN is asking clients their status on organ donation issues.

A person's intention is a function of two basic determinants. The first determinant is termed "attitude toward the behavior" and is personal in nature. This personal factor is the person's positive or negative evaluation of performing the behavior (Fishbein & Ajzen, 1975). In relation to organ donation, examples of a positive personal outcome would be that it would be nice to help others by giving of oneself, and if a family is asked to donate and a gift is made then they feel that individual did not die needlessly. Negative personal outcomes would be that the body would be mutilated and an open casket would no longer be possible (Lenehan, 1986) or the family was not asked because they were too upset and did not need any extra stress, so organs were lost.

The second factor identified by Ajzen and Fishbein (1980) that would affect a person's intention is termed "subjective norm". The subjective norm determinant is the person's perception of the pressure society places on him/her to perform or not to perform a certain behavior. An individual will be more willing to perform a certain behavior when it is thought of as positive and when he/she believes that important others think he/she should perform it. Horton and Horton (1990) give an example which reflects social pressure for donating organs. It is that most major religions support organ donation as an

act of charity, the gift of life.

Fishbein and Middlestadt (1987) suggest that the first step in applying The Theory of Reasoned Action is to identify the behavior of interest. The behavioral criteria identification is comprised of four elements. These elements are the action, the target at which the action is directed, the context in which the behavior occurs, and the time at which the behavior is performed. The appropriate recognition of these elements is an important step in developing an effective intervention to change the behavior of interest.

The action identified in this study is an educational session about organ donation. This educational session is targeted at first semester nursing students' beliefs about organ donation that will influence their attitudes towards donating organs and making requests for donation of others. The context in which the behavior occurs will be a classroom setting where the educational session is to be presented in a lecture format with a question and answer period. The situation of interest in regard to organ donation would be when the nurse, either in the student role or the nurse role, is faced with a time when an organ request is required and she/he is able to make that request as an informed professional. The time at which the behavior is to be performed is in the first semester of the nurse's education. The time when a nurse may need to make a request for organ donation may come at any time during her/his nursing career.

The study, concerning what impact would an educational session about organ donation have on the beliefs and attitudes of first semester nursing students, is dealing with a change agent aimed at influencing attitudes. The change agent is an organ donation educational session. Fishbein and Ajzen (1975) state that a person's attitude is determined by his/her salient beliefs, and exposure to new information can result in a

change in those beliefs. Target belief is the term given to a belief for which a change is attempted. One strategy used to influence beliefs is persuasive communication.

Fishbein and Ajzen (1975) define communication as the process by which a person, the communicator (the researcher), transmits stimuli, usually verbal, to modify the behavior of others, the audience. The information is presented in the form of a written or oral message. The message consists of a series of belief statements each linking some object to an attribute, such as another object, a concept, an event, or a goal.

A persuasive communication is made up of a set of belief statements. Each statement is related to a proximal belief held by a receiver. Some of these proximal beliefs may be dependent beliefs, others target beliefs (Fishbein & Ajzen, 1975). A proximal belief is a person's belief that directly corresponds to an informational item. An external belief is a person's belief that does not correspond to any of the information provided.

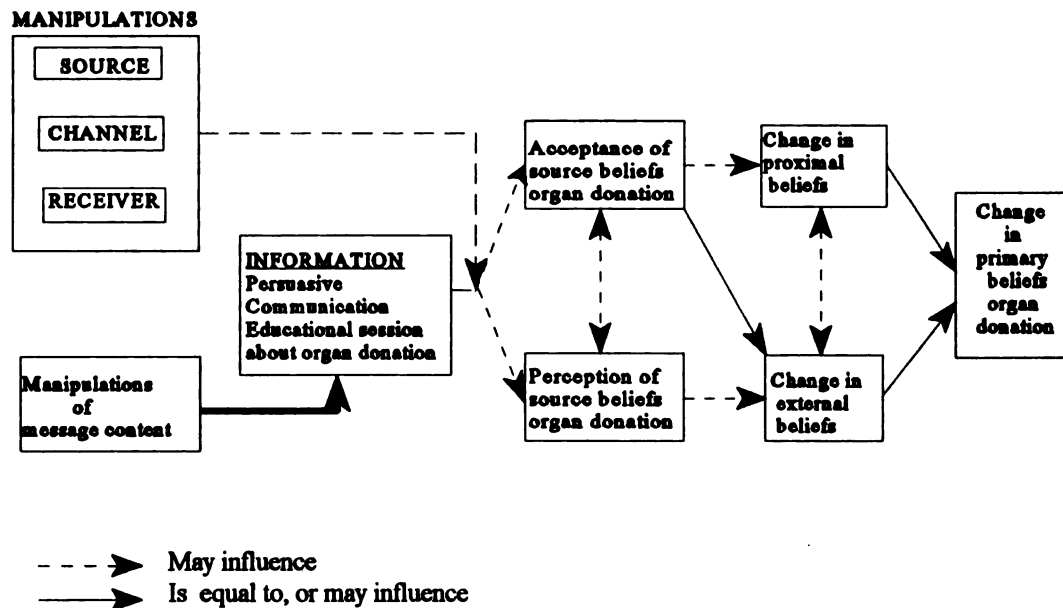


Figure 1: Persuasive Communication Process For Educational Session About Organ Donation adapted from Fishbein & Ajzen (1975).

A researcher investigating the results of a persuasive communication attempt may need to first identify which beliefs are proximal and which are external. Once these beliefs have been identified, the researcher can then develop an approach aimed at the beliefs that are of interest. A successful intervention would depend on the beliefs targeted and the approach developed. Figure 1 is a schematic presentation of the persuasive communication process adapted from Fishbein & Ajzen (1975), as related to an educational session about organ donation directed at influencing individuals' beliefs.

In the study, "What impact would an educational session about organ donation have on the beliefs and attitudes of first semester nursing students", the manipulation would be an influence attempt designed to address the model salient beliefs that have been identified by many researchers. These model salient beliefs have been identified as barriers to the organ donation process. These barriers to organ donation are outlined in the educational session portion of this study (Appendix A). Accurate information needs to be presented to clarify the many misconceptions concerning organ donation. When individuals or families are asked about organ donation they need to make an informed decision.

It is hypothesized, by this researcher, that many individuals with a negative attitude would change to a positive attitude if they were knowledgeable of all the facts concerning organ donation. The nurses making the request would be more comfortable with the request process if they were knowledgeable about all the facts of organ donation thus, increasing the numbers of requests being made.

The educational session about organ donation is the persuasive communication part of Figure 1. The source of the information being presented is the educator providing

the educational session. The channel chosen is a verbal lecture format with a question and answer period provided for clarification. The receiver of the information being provided would be the first semester nursing students.

The educational session about organ donation contains information aimed at changing the beliefs of the first semester nursing students. As outlined in the diagram, persuasive communication Figure 1, the information if accepted by the receivers may cause a change in their proximal beliefs. If a change does occur in the proximal beliefs it will ultimately cause a change in that individual's primary beliefs. The information provided may affect how the student nurse perceives organ donation and what role she/he chooses to play in requesting organs. The change in one's perception may change one's external beliefs. The change in one's external beliefs will result in a change in one's primary beliefs. The end results of a successful persuasive communication process is a change in an individual's primary beliefs, which may cause a change in one's attitude towards the object that was addressed in the communication process.

Attitudes are acquired automatically and simultaneously with the formation of beliefs about an object. Each belief is linked to some attribute, and a person's attitude towards the object is a function of that individual's evaluations of these attributes (Fishbein & Ajzen 1975). Attitudes may be changed if beliefs about an object are changed. Figure 1 demonstrates the effects that an influence attempt can have on an individual's beliefs. The Theory of Reasoned Action, figure 2, explains how an individual's beliefs can affect his/her attitudes and influences his/her intention to behave in a certain manner.

Figure 2 indicates how one's beliefs about organ donation influences that individual's

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attitudes and his/her intent to either donate or to participate in the organ donation request procedure. It is documented that an individual's desire to carry out his/her intent can be influenced by his/her attitude or may be influenced by pressure exerted by others, depending on the circumstances surrounding the situation.

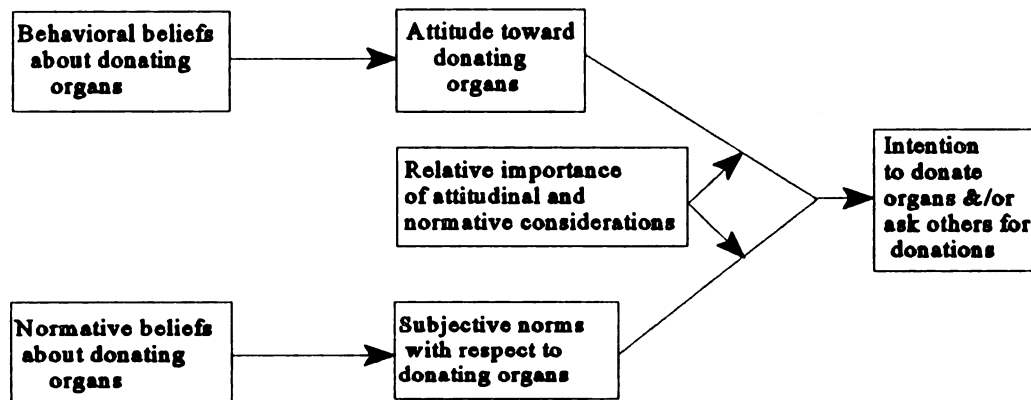


Figure 2: Theory of Reasoned Action For Organ Donation Intention adapted from Fishbein & Ajzen (1975).

Fishbein and Ajzen's (1975) theory states that when predicting intentions that the two determinants, the personal factor and the subjective norm factor are weighted and reflect the importance of each factor in explaining intention. In some instances, attitudinal components (personal factor) might be more important, while at other times the normative components might weight the decision. The two factors may at times hold equal weights and often will vary from one person to another for the same decision.

Figure 3 is a schematic presentation for the study "What impact would an educational session about organ donation have on the beliefs and attitudes of first semester

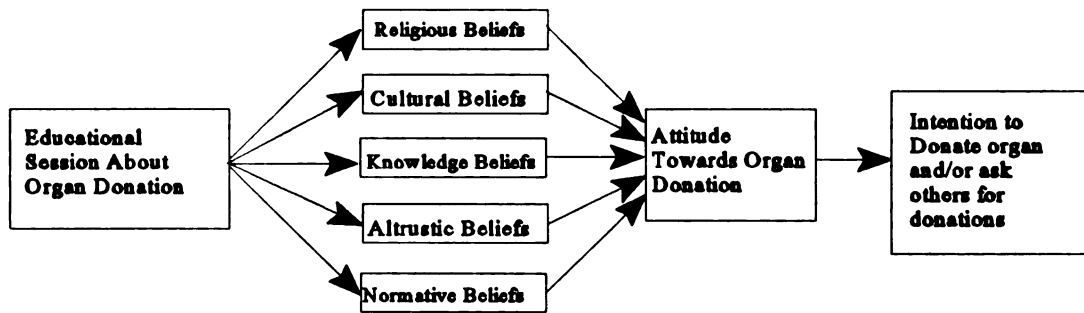


Figure 3: The Effect of Education On Beliefs, Attitudes, And Intention of Organ Donation adapted from Radecki and Jaccard (1997).

nursing students?” The effects education has on an individual’s salient beliefs about donation in Figure 3 is explained in greater detail in Figure 1, Persuasive Communication Process. The next part of Figure 3 is what Figure 2, Theory of Reasoned Action, explains, the effects beliefs have on an individual’s attitudes and intentions. Figure 1 and Figure 2 are combined to demonstrate the entire process that this study is investigating. It indicates that education is used as a change agent to influence an individual’s salient beliefs about organ donation. Figure 3 takes the broad grouping of salient beliefs and categorizes it into five smaller groups: religious, cultural, knowledge, altruistic, and normative (Radecki & Jaccard, 1997). Each belief category has a direct impact on an individual’s attitude towards organ donation and his/her intention to respond.

Religious beliefs are those that are important to organ donation that develop from one’s religious background and values (Radecki & Jaccard, 1997). Horton and Horton (1990) note that most major religions support organ donation as an act of charity, the gift of life. Radecki and Jaccard (1997) identify some religious obstacles to organ donation as

fear that donation precludes an open casket, that it may delay the funeral, and that the absence of certain organs at the end of life will have ill-effects in the afterlife. These important issues were discussed in the educational session of this study to address these fears that have been identified.

Cultural beliefs are those beliefs that come from the inherent culture in one's ethnic background. Radecki and Jaccard (1997) have identified that African Americans have many fears and have a lack of knowledge about organ donation. Asians view organ donation with a great deal of disfavor. Asians have many superstitious beliefs and have a fear of death and the afterlife (Radecki & Jaccard, 1997; Woo, 1992). Hispanics also have a disfavorable outlook about organ donation (Radecki & Jaccard, 1997). An individual's cultural background and beliefs must be considered when an educational session is being developed in an attempt to clarify any misconceptions. An individual's culture must also be addressed when a nurse is involved in making an organ request. The presentation of the facts and to whom the request is being made is very important in certain cultures and may make the difference in if a request is obtained.

Knowledge beliefs about organ donation are those that can be verified against an external standard and described in terms of accuracy (Radecki & Jaccard, 1997). Typically donation knowledge is acquired through nonmedical sources such as movies, television or newspapers (Gallup, 1993). Without accurate information many misconceptions and fears can develop. Some of the misconceptions and fears associated with organ donation are, the hasty removal of organs before an individual is actually dead, death will be declared too soon, individuals are maintained on life support for the soul purpose of organ removal, it is possible for an individual to recover from brain death, an

individual is too old or too young for donation, and it may compromise one's medical care to be an organ donor (Cox, 1986; Gallup, 1993; Horton & Horton, 1990; Lenehan, 1986). The educational session in this study was designed to provide accurate information concerning the many misconceptions identified (see Appendix A).

Radecki and Jaccard (1997) identified altruistic beliefs as those that develop from an affective response towards others. Altruistic beliefs include: organ donation allows something positive to be a result of a death, transplantation improves the lives of the recipients, and a desire to help out others with the organs (Prottas, 1983). The positive effects of organ donation were discussed in the educational session of this study.

Normative beliefs are those that a specific reference group or individual thinks he/she should or should not perform the behavior. The perceived social pressure will influence the individual either to engage or not to engage in the behavior (Fishbein & Ajzen, 1975). Horton and Horton (1990) have given an example of a normative belief as one that most major religious groups support organ donation as an act of charity, the gift of life.

The concepts in Fishbein and Ajzen's Theory of Reasoned Action will help to accomplish a change in beliefs and attitudes. As the student nurses become more knowledgeable about organ donation their salient beliefs will change. Through an increase in knowledge and changing attitudes towards organ donation the researcher (educator) has succeeded in providing the community with knowledgeable individuals. This interaction process will provide the nurses with an opportunity to educate others in an attempt to eliminate the many misconceptions the public has concerning organ donation.

Conceptual Definitions

Organ Donation

Skelley (1989) refers to the concept of removing diseased or damaged organs and replacing them with anonymously given organs, as organ donation. He continues to include in his definition the giving of tissue to replace defective areas. These two aspects of organ donation can dramatically improve the quality of life for those individuals receiving these items. For this study, the definition for organ donation is the giving of organs or tissue anonymously for the use of transplantation.

Attitudes Towards Organ Donation

According to The American Heritage Dictionary (1981), attitude is defined as a feeling in regards to a certain matter. The matter referred to is organ donation. Fishbein and Ajzen (1975) view attitude as an underlying variable that is assumed to guide or influence behavior. Horton and Horton (1990) conducted a study investigating the public's attitudes about donations and looked at some beliefs causing negative feelings. They defined an individual with a positive attitude as one who has signed a donor card. For this study, the definition of attitude is an individual's judgment that donating organs is good or bad and that he/she is in favor of or against donating organs.

Salient Beliefs About Organ Donation

Salient beliefs are defined by Fishbein and Ajzen (1980) as an individual's beliefs that a person holds at any given time towards an object and determines that individual's attitude at any given moment. This study will be concerned with model salient beliefs. The model salient beliefs provide a general picture of the beliefs that determine the attitudes for most members of the population under investigation. The model salient beliefs addressed in this study are as follow: fear of hastiness to remove organs, not dead

before procurement of organs, brain death criteria confusion, too old or too young, religious beliefs, fear of mutilation of the body, no open casket, fear to sign a donor card, dealing with one's own death, never thought about it, lack of communication with family members, lack of knowledge of process, fear of making a request and unfair distribution of organs (Appendix A). For this study, the definition of model salient beliefs are those beliefs a group holds at any time towards organ donation and determines an individual's attitude as being negative or positive.

Education

Education is defined by The American Heritage Dictionary (1981), as the method of imparting knowledge from one to another. Norman (1980) infers that individuals learn by fitting new knowledge into a framework of previous knowledge. In order to fully understand the knowledge presented one needs to be able to relate it to other things that she/he knows. Gagne' (1985) states that learning begins with some kind of stimuli which attracts an individual's attention and causes the senses to register the new information and to transfer it to the individual's working or short term memory. If the information is of interest and can be connected into one's framework of previous information, it is then shifted into the long-term memory, otherwise forgotten. Once in the long term memory of the brain the information is mulled over and reorganized. The result of this reflection is the formation of more generalized abstract ideas, theories, concepts, and mental models.

The method of imparting knowledge used in this study would be a change agent taking the form of an educational session about organ donation presented by the researcher. The program would include a seminar format followed by a question and answer session. This time would allow for clarification of any information or ethical issues

presented. For this study, the definition of an educational session is the imparting of knowledge about organ donation to a group of student nurses to influence their salient beliefs.

Horton and Horton (1990), “ conclude that knowledge is an important variable in the process that leads to the decision to become a potential organ donor” (p.796). They have constructed a ‘learning hierarchy’ decision-making model to become a potential organ donor that shows the effect that knowledge has on attitudes. Horton (1991) found that attitude positively and strongly affects both the willingness to donate and the actual carrying of a signed donor card. The model suggests that willingness to become a potential donor is influenced by personal values and specific knowledge about organ donation. Education about organ donation can influence a person’s decision to become a donor and sign a donor card. Horton and Horton (1990) identified four areas where a knowledge deficit existed. The four areas are religious beliefs, brain death criteria, an awareness of the efforts that are taken to protect the interests of the donor, and the correct way to obtain a donor card. Horton and Horton suggested that these are the areas where education should begin.

Literature Review

A review of the literature revealed few studies investigating the effect education has on the attitudes of individuals towards organ donation. Most studies dealt with the examination of individual’s attitudes about donation and hypothesizing what others can do to change the negative attitudes, comparing donation attitudes to other ethical issues, and identifying barriers. The conclusion to almost all of the articles reviewed is that education is the key factor in increasing the number of potential donors.

Education is the imparting of knowledge to a learner. The adult learner has special needs and requirements. Adult learning is a relatively new area of study and several principles need to be considered when designing and implementing an educational session for the adult students. Cerny (1995) outlined several of these principles in his paper *Principles of Adult Learners*. Adults bring with them years of life experiences and a wealth of knowledge that should be accessed during an educational session to enrich the quality of the class. Adults have their own established values, beliefs and opinions that have developed over their lifetime. Everyone's values, beliefs and opinions should be valued as important, and differences should be discussed with misconceptions clarified. Adults relate new information to previously learned information. Fishbein and Ajzen (1975) stress this principle in that they have identified that people tend to have more knowledge and interest in things that are important to them. Norman (1980) supports this principle by identifying that individuals learn best by fitting new knowledge into a framework of previous knowledge. Cerny (1995) states that adults tend to have a problem-oriented orientation to learning putting emphasis on how the information can be related to everyday life and to their work setting. Lieb (1995) states that adult learners must see a reason for what they are learning and how the information is applicable to their lives. Adults are the primary decision makers in the donation process and when designing an educational presentation the adult learning principles should be considered as major influencing factors.

Flarey (1991) presented a study on the effects of an educational program given to nurse managers at Youngstown Osteopathic Hospital. The total number of participants was 15. The program was a five hour session that covered all aspects of organ

procurement and transplantation. After the educational program a criteria evaluation survey was administered to assess the feelings of the participants. The results of the survey showed that 94% (14) either strongly agreed or agreed that they supported government legislation regarding organ procurement. Forty five percent (seven) expressed that they were uncomfortable approaching family members about organ donation. Eighty one percent (12) felt comfortable with the established brain death criteria and had no difficulty removing an individual from life support if they met the criteria.

The overall results were positive and indicated that the nurse managers that attended viewed organ donation with a positive attitude. The study did not include a pretest of those attending the program. Since no pretest was administered it is difficult to evaluate how effective the program was, since a baseline of the participants was not established prior to the program. The study's sampling was obtained in a voluntary manner and consisted of a very small number, factors that make generalization difficult. The study should be repeated on a larger number of nurses and with a pretest to verify its findings.

A study by Triick (1990) evaluated the effects an educational session had on the behavior of the general public concerning organ donation and donor cards. The sample included a 117 participants. Triick's study used a pretest and a post test as an evaluation tool. The research design included a follow-up phone survey to track participants to evaluate if they had signed a donor card or discussed donation with their family members.

The results of Triick's study indicated an increase in the knowledge of participants from a 42.1% (394) incorrect answers on the pretests to 4.5% (42) incorrect on the post

tests. The pretesting result showed that 40% (47) had not discussed organ donation with their families. Post testing indicated that 40 participants who previously stated they had not discussed donation with their family intended to discuss it with their families. The phone call survey indicated that of the 40 who intended to discuss donation that 5 had actually discussed donation with their family. Of the 67 participants who had not signed an organ donor card pretesting, 28 responded that they intended to sign a donor card post test. The phone survey indicated that 4 of the 28 that intended to sign a donor card reported that they had signed a card at that time. Triick's (1990) study does indicate a positive relationship between increased knowledge and some behavior changes towards increasing the number of potential donors.

One limitation identified on Triick's (1990) study is the evaluation tool. The evaluation instrument was a newly developed tool and had not withstood the rigid testing to establish its credibility in the research world. Another limitation of the study conducted by Triick was that the sampling was done on a voluntary basis. Voluntary sampling may cause a bias and the findings cannot be generalized to the general public (Polit & Hungler, 1991).

Flarey (1991) and Triick's (1990) studies have identified and addressed the effects education can have on an individual's attitude towards organ donation. The results indicated that an educational session about organ donation did have a positive effect on the beliefs and attitudes of individuals. Even though the studies held some limitations, they did indicate that education may be the access point to changing beliefs and attitudes.

The literature review provided only two studies that addressed a relationship between education and its effect on individuals' attitudes towards organ donation. This

study attempts to help fill the gap that exist in the literature in the area of education about organ donation and the effects it can have on those participating in the program. The literature continues to address the identification of barriers, the examination of individual's attitudes about organ donation and comparing organ donation to other ethical issues. These studies have been helpful in the identification of areas where education needs to start and provides a basis for the development of an educational session directed at target beliefs where misconceptions have developed. This study connects what the literature has identified as what should be done and has developed it into what can be done.

The need for further studies exist if education is indeed the access point. This study, "The Impact Of An Educational Session About Organ Donation On The Attitudes Of First Semester Nursing Students", will affect the knowledge base of those individuals receiving the education. A positive relationship between education and a change in beliefs and attitudes may open the door to the funding of even more studies which may result in everyone accepting organ donation as a positive experience.

Methods

Organ failure is a curable disease. An area that should be pursued for a cure would be the evaluation of the beliefs and attitudes of student nurses' towards organ donation and the effect that education may have on these beliefs and attitudes. This study addressed the subject of student nurses' beliefs and attitudes before and after an educational session by using a descriptive study design. A questionnaire was used to evaluate the change that took place in the students' beliefs and attitudes between the initial pretest period and one month later. The t-test was then performed to analyze the data in an effort to accept or reject the null hypotheses.

Research Question

What impact would an educational session about organ donation have on the beliefs and attitudes of first semester nursing students?

Design

To evaluate the effects an educational session can have on student nurses' attitudes towards organ donation, a prospective study using a descriptive, quasi-experimental design will be utilized. This design was chosen since an educational session about organ donation will be used as a one time intervention to attempt to influence the beliefs and attitudes of student nurses from negative to a more positive outlook. There is no random assignment or control group being used. The study is a one group pre and post test administration of a pencil and paper questionnaire.

Operational Definitions of Variables

EDUCATIONAL SESSION - A period of time in which facts are presented about organ donation, that will address the OPAM subobjectives and definitions, need and cost, criteria, barriers identified by researchers, laws and what's next (see outline Appendix A).

SALIENT BELIEFS - Beliefs that individuals hold at any given time towards organ donation and determines that individual's attitude as being negative or positive (see questions 3-7, 13, 14, and 23-33 on the Gallup poll questionnaire, Appendix B). A knowledgeable individual would have a score of at least nine out of the possible 18 questions.

ATTITUDE - An individual's judgment that donating organs is good or bad and that he/she is in favor of or against donating organs, their own and their loved ones (see questions 1, 2, 8-12, 15-22 on the Gallup poll questionnaire, Appendix B). An individual

with a score of eight or above out of a possible 15 would indicate a positive attitude towards organ donation.

Sample

The target population for this study was first semester nursing students. These students were accessed through the Muskegon Community College (MCC) nursing program. The enrollment in the program is 30 to 40 students twice a year. A convenience sample ranging from 20 to 40 students will be utilized depending upon the number of students who were willing to participate.

Criteria for entry into the study included:

- (1) Enrollment in the nursing program in the first semester.
- (2) 18 years of age or above.
- (3) Must give their consent (Appendix C).
- (4) Will have had no prior personal experience with organ donation, such as being an organ recipient, or being a family member of an organ recipient or organ/tissue donor.
- (5) Must be a voluntary participant.
- (6) Agree to participate in both the pre and post test period.

Verbal or written consent was obtained from MCC prior to the study being conducted. Approval by the University Committee on Research Involving Human Subjects (UCRIHS) was obtained before data collection began. A consent form (Appendix C) was signed by each participant stating their willingness to be a part of the study.

Data Collection Procedure

The research study data collection took place at MCC in a classroom setting. The

researcher was responsible for conducting the study and notifying the students one week prior to the study date. The study was held during a time period when the students were not in the classroom, but during an orientation phase of their training. A brief description of the study was given to include the purpose and importance of this research. Volunteers were recruited as participants for the study. The students were asked if they had any prior personal organ donation exposure. If so, they were asked not to participate in the study, but would be invited to stay for the educational session. This study did not have any students that identified any previous organ donation exposure. The students that met the criteria for the study were asked to sign a consent form to qualify as a participant.

Data collection was conducted in two sessions, the first in December 1996 with a follow up in January 1997 for the post test. The second session was held in January 1997 with the post testing occurring in February 1997. The two session collection process was necessary in order to obtain a larger sample size. The first session produced a sample of seven and the second a sample of sixteen for a total of 23 participants. All participants participated in the pretest, educational session, and the post test phases of the study.

A pretest was administered prior to the presentation of the educational session about organ donation. The students participating in the study were asked to put their student number on the pretest. The numbered questionnaires were used to compare the pretest with the post test responses. The pretest was The Public Attitudes Towards Organ Donation And Transplantation survey designed by the Gallup organization in 1993 and is a 35 question questionnaire. Permission was sought and granted for the usage of this tool by The Partnership for Organ Donation organization on February 2, 1995 per Caryn Youtan (Appendix D).

The student nurse was asked to answer the questions using the pencil and paper method. Time allotted for the completion of the questionnaire was fifteen minutes. All participants completed the test before the allotted time and the educational session began upon completion of the questionnaires.

The educational session was presented by the researcher in a lecture format and included a handout of informational facts (see Appendix A). The information addressed the four OPAM subobjectives. These subobjectives are: 1) Understanding of basic technological aspects of organ donation and transplantation, 2) Awareness of the positive aspects of transplantation and the need for organ donation, 3) Understanding of the criteria for organ and tissue donation, and 4) Understanding of the fairness and equity in the distribution of organs for transplants (Triick, 1990, p.22). The presentation was followed by a question and answer period. The total time for information presentation and clarification was one hour. If participants had further questions after this time period, they were given the option of continuing the discussion during a break or at a later date. The students did have several questions that the researcher did answer and clarify.

A month interval between the presentation of the educational session and the post test existed. This time frame gave individuals time to think about the information and time to discuss it with family and friends. The retesting was a device used to measure any changes in the subject's beliefs or attitudes.

One month following the initial presentation the researcher administered the post test to the students who had participated in the pretest and educational session in a classroom setting. The post test was the same questionnaire, The American Public's Attitudes Toward Organ Donation And Transplantation, that was administered as the

pretest. The students were asked to put the same identification number on this test as they had used on their pretest. A time allotment of fifteen minutes was given for the students to answer the questions. The data collection phase was then completed. A thank you note was sent to the college, instructors, and students to thank them for their cooperation and participation.

Instrumentation

The measurement tool selected to measure any change in the outcome is a questionnaire designed by the Gallup organization. The American Public's Attitudes Toward Organ Donation And Transplantation was developed in 1992 by the Gallup organization in response to a request by The Partnership for Organ Donation. The Partnership wanted to know what the general public's feelings were towards organ donation and what type of educational development may be necessary to overcome any barriers.

The Gallup organization created a 35 question survey to be administered as a national telephone survey. For this study to determine what impact an educational session about organ donation would have on the beliefs and attitudes of first semester nursing students, the survey was altered by removing two questions, numbers 34 and 35. Questions number 34 and 35 dealt with proposed solutions to the organ donation problem, not an individual's belief or attitude. The survey was adapted to the pencil and paper self-administration format rather than the telephone format as it was originally designed.

The initial step taken after the creation of a tool and before administration of it by the Gallup organization is to have it pilot tested, according to Cortugo, (personal communication, February 1995). The pilot testing is a general procedure that all new

surveys are required to undergo before they can be administered. The pilot testing is performed by making random phone calls and asking the questions in the survey. They are then adjusted as needed in accordance to the responses that were received during this testing period. The testing usually consists of 10 to 20 phone calls. The number is determined on how the questions are interpreted by the initial phone calls.

The questionnaire, *The American Public's Attitudes Toward Organ Donation And Transplantation*, has face validity. The questionnaire will provide information about the individuals' feelings and beliefs towards organ donation. The questions are designed specifically to address those individuals' opinions about organ donation. The questions are taken at face value to provide a route to obtain this type of information.

Content validity was maintained in the development of the tool, in that the tool was developed for The Partnership for Organ Donation. This organization has many experts in the organ donation field on its staff. Cotugno, (personal communication February 1995) stated that it is the Gallup organization's procedure to present all questionnaires to the organization for whom they developed the study before actually doing the survey. This is done to provide the purchasing organization a chance to give their input and to make sure they are satisfied with the tool. Cotugno, (personal communication February 1995) stated that he is certain that this particular tool was processed according to Gallup's general practices.

No specific statistical data is available on the tool, *The American Public's Attitudes Toward Organ Donation And Transplantation*. Cotugno, (personal communication February 1995) stated that the Gallup organization does not do statistical testing on their surveys, since they are opinion surveys and the responses are taken at face

value. The Gallup organization assumes that people will answer the questions truthfully and they base their studies on this fact.

Reliability testing for stability may have been established through the pilot testing procedure that is done on all surveys developed by the Gallup organization. All of the questions in this tool, The American Public's Attitudes Toward Organ Donation And Transplantation, are measuring different beliefs about organ donation and the attitudes of those individuals responding to the questions.

Internal consistency of the tool could be determined by conducting the Cronbach's alpha method. The normal range of values for the Cronbach's alpha variable is between 0.0 and ± 1.00 , the higher the value the higher the degree of homogeneity. This value is important to the extent that it provides proof that all the subparts of the instrument are all measuring the same characteristics. The Cronbach's alpha technique can also help to identify individual problem questions.

The study may meet with some situations that could create a problem with the reliability of the results obtained. One problem that could arise with the usage of a questionnaire is how truthful are the subject's responses. People may guess at the answers, just circle any answer to get it done, or just answer the questions incorrectly. Individuals may not understand the questions being asked, therefore giving a false response. These problems will hopefully be minimized by having the researcher present to clarify any confusion that may arise. A second problem that may develop with the usage of the pre/post test design is that individuals may change their responses on the post test based on their exposure to the questions on the pretest. The education may not have any effect on the changes in their responses. The changes may be attributed to the prior

exposure only. These limitations will have to be considered when the generality of the results are addressed.

The validity of the questionnaire may come under some question if certain situations arise. One such situation that may question the validity is if the test indicated that a person had a negative attitude, but yet carried a signed donor card and had expressed a positive attitude to friends and family. This project is only a beginning point that is examining the question, "Is there any correlation between education and attitude change in the field of organ donation?"

Scoring

The one group pretest and post test design uses a dichotomous scale of measurement. In using this scale a number is assigned to each answer. The higher the overall score the more positive outlook that individual has towards organ donation. A one value would be assigned to the response of 'yes', 'agree' or 'likely'. Only positive responses will be calculated and used in the statistical analysis of the data. The question responses will be divided into two categories, attitudes and beliefs. Each of these categories will be analyzed as a separate variable and no comparison will be made to see if a change in one area results in a change in the other. A positive beliefs response on the pretest would be a score of 9 out of a possible 18. The pretest scores are only to be used as a baseline for comparison to the post test responses. The post test responses should be an 18 out of the possible 18 score, since this category is testing the knowledge presented in the educational session. A positive attitude score on the pretest and post test would be 8 out of a possible 15. The post test scores should be higher then the pretest if education is indeed a change agent that affects attitudes. The remainder of the unscored question

responses would be described in a descriptive format and would address the negative and 'don't know' responses. On the pretest the negative and 'don't know' responses are to be viewed as reference points to determine a baseline of the participant's knowledge and attitudes towards organ donation. The negative and 'don't knows' should decrease from the pretest to the post test responses. The information presented in the educational session should increase an individual's knowledge and therefore decrease the number of incorrect responses on the post test. Reverse scoring will be done on the following questions: 6, 7, 9, 23, 24, 26, 27, 28, 29, 30, 32, and 33. A no response to the reverse scoring questions is a correct or positive response. A comparison of the responses to the questions on the pretest and post test will be done to evaluate the effectiveness of the educational session.

Data Analysis

Once the data collection process had been completed an analysis was done using the paired t-test procedure. The paired t-test was used to compare the pretest results with those obtained on the post test. The one-tailed t-test analysis was used to accept or reject the null hypothesis with the significant level being set at a .05 level.

The following null and alternative hypothesis were proposed:

Ho = An educational session about organ donation to first semester nursing students is not effective in changing the students' beliefs about donating.

Ha = An educational session about organ donation to first semester nursing students changes the students' beliefs about donating.

Ho = An educational session about organ donation to first semester nursing students is not effective in changing the students' attitudes towards donating.

Ha = An educational session about organ donation to first semester nursing students changes the students' attitudes towards donating.

A comparison of the total means of the pretest and post test was used to see if an overall change in beliefs and attitude had occurred in those that had participated in the study.

Human Subject Protection

The proposal was reviewed by the University Committee on Research Involving Human Subjects (UCRIHS) and permission was obtained on November 15, 1996. Several strategies were used to protect the rights of the first semester nursing students participating in this study. First, a written consent form was signed and obtained prior to the administration of the questionnaire. The students were informed of the purpose of the study, that participation was voluntary and that they had the right to refuse to participate. Identification numbers were assigned to all participants so a comparison could be made between the pre and post tests responses. Confidentiality was maintained at all times by using numbers instead of names of the participants.

Results

Study Sample

The target population used in the study, The Impact Of An Educational Session About Organ Donation On The Attitudes And Beliefs Of First Semester Nursing Students, were students enrolled in the nursing program at Muskegon Community College, winter semester 1997. The subjects were first semester nursing students and met the criteria outlined in the sample section of the study. A convenience sample of 23 students were recruited to participate in the study. The sample consisted of 21 females and two males. .

Table 1. Participants Demographics

Characteristics		(N=23)	(Frequency)
		NUMBER	PERCENT
<u>GENDER:</u>	MALE	2	8.7
	FEMALE	21	91.3
<u>AGE:</u>	18-24	12	52.3
	25-34	5	21.7
	35-44	3	13.0
	45-54	3	13.0
	55+	0	0
<u>RACE:</u>	CAUCASIAN	19	82.6
	AFRO-AMERICAN	2	8.7
	OTHER	2	8.7
<u>ETHNICITY:</u>	NONHISPANIC	22	95.7
	HISPANIC	1	4.3
<u>RELIGION:</u>	PROTESTANT	1	4.3
	CATHOLIC	2	8.7
	BAPTIST	4	17.4
	CHRISTIAN	7	30.4
	NONDENOMINATION	4	17.4
	OTHER	3	13.0
	NONE	2	8.7
<u>INCOME HOUSEHOLD</u>	<\$15,000	7	30.4
	\$15-\$24,999	5	21.7
	\$25-\$34,999	5	21.7
	\$35-\$44,999	2	8.7
	\$45-\$54,999	2	8.7
	\$55,000+	1	4.3
	Don't Know/Refuse	1	4.3
<u>EDUCATION COMPLETED:</u>	HIGH SCHOOL	0	0
	SOME COLLEGE	17	73.9
	ASSOCIATE	4	17.4
	BACHELOR	2	8.7
	MASTERS	0	0

The subjects were mostly Caucasian with some college background. More specific demographic information may be obtained by viewing Table 1.

Findings

The research question, what impact would an educational session about organ donation have on the beliefs and attitudes of first semester nursing students, was divided and evaluated as two separate variables, that of attitudes and beliefs. A paired t-test was used to analyze if a statistical significance exist between the pre testing and post testing responses of the individuals participating. Each questionnaire was hand scored and the scores of attitudes and beliefs were recorded according to the responses on the designated questions for each category. An overview of grouped responses to each question may be examined in Appendix E. The data was analyzed using the Statistical Package for the Social Sciences (SPSS/PC+) software.

The first null hypothesis, an educational session about organ donation to first semester nursing students is not effective in changing the students' beliefs about donating must be rejected and the alternate hypothesis is accepted. The paired t-test analysis showed a significant increase from the pretest to the post test mean scores (paired $t=5.23$, $df\ 22$, $p<.05$) (see Table 2). The mean scores for beliefs changed from a pretest score of 11.61 ($SD=2.97$) to a post test score of 15.30 ($SD=1.94$).

The second null hypothesis, an educational session about organ donation to first semester nursing students is not effective in changing the students' attitudes towards organ donation must be rejected and the alternate hypothesis is accepted. The paired t-test analysis showed a significant increase between the pretest and post test mean scores (paired $t = 3.72$, $df\ 22$, $p<.05$) (see Table 2). The mean scores for attitudes changed from

a pretest score of 8.61 (SD=3.92) to a post test score of 10.09 (SD=3.19).

The 'don't know' responses to the questions of each individual were total and analyzed using the paired t-test to evaluate if there was a significant decrease in the number from the pretest to the post test. The belief 'don't know' responses indicated a statistically significant decrease between the pre and post testing scores (paired $t = -4.69$, $df = 22$, $p < .05$) (see Table 2). The mean belief 'don't know' scores changed from 4.17 pretest to 1.13 post test. The attitude 'don't know' responses did not indicate a statistically significant decrease between the pretesting and the post testing scores (paired $t = -2.79$, $df = 22$, $p < .05$) (see Table 2). The mean attitude 'don't know' scores changed from 1.78 pretest to 1.26 post test.

Table 2. T-test For Paired Samples: Beliefs, Attitudes And Don't Knows (df=22)

Variables	<u>MD</u>	<u>SD of Mean</u>	<u>SE</u>	<u>t</u>
Beliefs	3.70	3.39	.71	5.23*
Attitudes	1.48	1.90	.40	3.72*
Don't Knows Beliefs	-3.04	3.11	.65	-4.69*
Don't Knows Attitude	-.52	.89	.19	-2.79*

* $p < .05$, one-tailed.

Discussion

Discussion of Findings

The data has shown that education was an effective device in changing the nursing students' beliefs and attitudes towards organ donation in a positive direction. The mean scores indicated an increase from the pretest to the post test in both the belief and attitude variables. The mean scores for beliefs changed from 11.61 pretest to 15.30 post test.

This would support the concept that the educational session did increase the number of correct responses on the post test for the belief variable. An increase in the mean scores supports the findings of the t-test which indicated a significant difference existed between the pretesting and post testing periods in a positive direction. The value of nine correct responses was set for this study as an individual that was knowledgeable about organ donation. The mean score of 11.61 pretesting was already above the nine value indicating that on average the students were knowledgeable, but the post testing scores did increase to a value of 15.30 out of a possible 18. The mean scores for the 'don't know' responses for the beliefs variable decreased from 4.17 pretesting to 1.13 post testing. On average the 'don't know' scores decreased and the correct belief scores increased thus supporting an increase in the knowledge base of the students. Since beliefs influence an individual's attitudes the scores indicated that on average the students did have the knowledge base to affect their attitude towards organ donation. The standard deviation scores changed from 2.97 pretesting to 1.94 post testing for the belief category. This would indicate a decrease in the variability of the scores in the data set for beliefs.

The attitude variable also indicated a positive result with an increase in the mean scores of 8.61 pretest to 10.09 post test. The standard deviation decreased from 3.92 pretest to 3.19 post test. These results indicate that the mean score increase supports the significant findings of the t-test that education did effect the student nurses' attitude scores in a positive direction. The value of eight was set for this study as an indicator of a positive attitude towards organ donation. The pretesting mean score was 8.61 which would suggest that on average this group of student nurses had a positive attitude even in the pretesting phase. The post testing mean score of 10.09 indicated that on average the

scores did increase. The mean scores for the 'don't know' responses for attitude did decrease from 1.78 pretesting to 1.26 post testing. Even though a decrease in the scores did result it was not statistically significant (paired $t=2.79$). The change in the attitude scores can therefore be contributed to a change from negative to positive responses rather than from 'don't know' to positives. The higher scores may represent a more favorable attitude being developed by the student nurses in this study towards organ donation in the post test period.

Questions That May Have Contributed To The Changes

Several individual questions present interesting findings in their overall scores from the pretesting to post testing periods. The belief questions that were of interest are questions 27, 28, 30, 31, 32, and 33. Questions 31 and 32 indicate that even though information was presented to correct the misconceptions the scores did not reflect a significant change.

Question 27, people who choose to donate a family member's organs end up paying extra medical bills, the scores went from an eleven value pretesting to a 23 value post test. The score of 23 indicates that everyone answered this question correctly on the post test. A nurse involved in the organ donation request procedure should be knowledgeable of this fact since this is of a great concern to families when a request is being made. Many families are unsure of how they are going to pay for the hospital bills when an individual is in a critical situation. To be able to reduce that burden of organ donation for a family may make a difference in their decision. If they believe that they will have the added expense of the organ procurement and the expenses that accompany this procedure they may have a negative response to any request. The nurse by being able to

provide the facts about organ donation procedures may make the difference in the family's decision.

Question 28, it is impossible to have a regular funeral service following organ donation, scores changed from 13 pretest to 20 on the post test. This statement is an area where a misconception has been identified that during the procurement of the organs that the body is chopped up. OPAM (1992) stresses the fact that removal of organs and tissue is a surgical procedure. The nurse should be able to reassure the family that their relative will look like any other surgical patient and an open casket would be possible. The family will have total control of the funeral arrangements.

Question 30, you are worried that a loved one's body would be disfigured if their organs were donated, scores changed from 17 pretest to 22 post test. This statement is closely related to question 28, about funeral arrangements. Questions 30 and 28 both address the issue of disfigurement that may directly influence an individual's attitude about donation. In our society the thought of a loved one or oneself being 'chopped up and parted out' is an uncomfortable thought. It must be stressed that the utmost care and dignity is given to anyone making the gift of donation. The students at the post test time seemed to be knowledgeable of the facts and as they progress along the continuum to becoming nurses, they should be able to communicate these facts to family members when a request situation develops. It is important that when making a request that the family be knowledgeable of all the information so an informed decision can be made.

Question 31, given equal need a poor person has as good a chance as a rich person of getting an organ transplant, scores changed from eight pretest to 12 post test. It is interesting to see that this statement's scores did not change by as great a margin as most

belief statements. During the educational session this topic was covered when UNOS and organ distribution procedure was discussed. UNOS is the organization responsible for organ distribution and has criteria on how a recipient is chosen. The students stated, during the educational session, that they believed that money is an over riding factor and gave several incidents where celebrities were given organs after what seemed like a very short wait. The educator stressed that all the facts of the donations were not known and that medical urgency is a factor that is always considered. The scores indicate that approximately half of the participating students did not believe that the poor are treated equally in the donation/recipient situation.

Question 32, racial discrimination prevents minority patients from receiving the organ transplants they need, scores changed from a 12 value pretest to a 19 value post test. This would indicate that this group of student nurses did not believe that race would prevent an individual from being an organ recipient. It should be noted that this group of student nurses was predominately Caucasian and that these results cannot be generalized to the general population. The interesting fact is however, that the students felt that money is a factor, but race is not, in determining a potential organ recipient.

For question 33 which said, organs for transplant can be brought and sold on the black market in the U.S., the correct scores were low both at the pretest at five and the post test at eight. These scores continue to reinforce the fact that this group of student nurses on average believe that organs can be brought if an individual has the money. The correct information was presented in the educational session, in the section on the laws and distribution of organs. The Uniform Anatomical Gift Act prohibits the selling of organs in the United States (Davies 1989).

The students indicate that a one time presentation does not always change an individual's belief statements. The results of some questions indicate that even though the information was presented, that the beliefs that one has developed over the years may be more factual to that person than the actual correct information. The media plays an important role in influencing some individual's beliefs as indicated in this study by the students' verbal responses to some sections that were presented. Even though the overall results indicated that a significant difference in beliefs did result from the educational session, not all the areas were changed at the same margins. This may be of interest if this group of students would participate in a comparison study and these low scoring beliefs were presented differently to see if a second exposure would be able to undo what the media has done.

The attitudinal portion of the questionnaire revealed some interesting data in the questions 2, 9, and 15. Since attitudes are more difficult to change than beliefs and may take a longer time to change, even small changes in the overall scores were found to be significant. On average the student nurses did present with a positive attitude on both the pretest and post test.

Question 2, how likely are you to want to have your organs donated after your death, scores changed from a 13 value pretest to a 19 post test. The post test score indicated that 19 of the 23 participating students did favor their own organ donation. These scores show that even though on average an overall positive attitude existed pretesting that after the educational session that the score increased by six students. The exact reason for the change in the scores is not known at this time, the educational session may have caused a change in the individual's beliefs and thus influenced the attitude. Or

the individual may not have ever given it any serious thought before and when confronted with the issue and the facts decided upon a positive attitude. This concept change is of clinical significant if these students do indeed become potential organ donors by either signing a donor card and telling their families or if they become a part of the organ registry.

Question 9, thinking about your death makes you uncomfortable, indicated a score change from 10 pretest to 14 post test. The facing of one's own mortality seems to cause stress in our society where fitness and youth are thought of as the norm. Talking about death makes people feel uncomfortable, because they must explore their own attitudes and feelings about death and their bodies. It is easier for people many times to avoid the subject rather than to explore and face the issue. The scores may have increased as a result of having to think about death and face some of the issues, since to become an organ donor one must die first.

Question 15, most members of your family support the idea of organ donation, increased by only one student from the pretest to post test period. This slight change may be a result of several factors, it may be contributed to the fact that the students did not discuss the issue of organ donation with their family or that this is truly the result, that the students' families do not support organ donation. From this study that exact reason for the changes between the pretest and post test scores are not known and were not evaluated, it only evaluated if a change did occur.

The individual question scores may provide a basis for the development of other educational presentations with the topics of the lower scoring questions being stressed. The overall optimal results would be that all participants would have all the belief

statements correct on the post test and that the participants would be aware of their own individual attitudes and be knowledgeable of their family's feelings towards organ donation.

Discussion of Results Related To Conceptual Framework

The original research question, what impact would an educational session about organ donation have on the beliefs and attitudes of first semester nursing students, would have to be answered that a positive effect can be seen in this study. There was a significant increase in both the belief and attitude scores of the individuals participating from the pretesting to the post testing phase. Fishbein and Ajzen's theory of Reasoned Action helps to explain the process that resulted.

Ajzen and Fishbein (1980) theory of Reasoned Action explains how an individual's beliefs influence one's attitude and eventually influence their behavior in a given situation. In this study a change agent, an educational session about organ donation, was used to change first semester nursing students' beliefs about organ donation and the attitudes they possess towards donation. The questionnaires indicated that the belief scores changed by a wider margin then did the attitude scores from the pre to the post testing. Beliefs are the building blocks that influence an individual's attitudes and some may need a longer period of time or additional exposure to affect all aspects of organ donation, which is viewed as a highly ethical issue.

Fishbein and Ajzen (1975) noted that people tend to have more knowledge and interest in things that they perceive as important and thus have stronger beliefs about these important issues. This may explain that even though the belief scores increased, which also measures an increase in an individual's knowledge, the sample subjects may not have

viewed organ donation as of great importance. Since knowledge is the building block of a belief, it is difficult to know if an actual belief change resulted or just a clarification of misconceptions.

The ultimate goal of the theory of Reasoned Action, according to Ajzen and Fishbein (1980) is to understand and predict an individual's behavior. The best indicator of an individual's intention to behave is to ask them how they would behave if that situation were to occur. The questionnaire used in this study did ask the subject if they had signed a donor card/driver's license (pretest score 14 post test score 15), have they told their family of their intent to donate or not (pretest score 12 post test 14), and would they donate a family member's organs if the situation developed (pretest score 9 and post test score 10). These questions were included in the attitude scores, since attitudes influence an individual's intentions. An individual's actual behavior in a given situation evaluation is beyond the realm of this study. The behavior that may result would either be donating or not donating, approaching a family and making an actual organ donation request or for the APN to ask clients in the primary care setting about their preference on organ donation.

The concepts of Fishbein and Ajzen's Theory of Reasoned Action did help to explain the change that occurred in the beliefs and attitudes of a group of student nurses. The students in the study should be more knowledgeable (according to the belief scores) and have a more positive attitude (according to the attitude scores) towards organ donation than before they participated. According to the scores the researcher (educator) was successful in increasing the knowledge base of the student nurses on a short term bases and therefore has provided the community with knowledgeable individuals. The

overall effect will hopefully result in an increase in the number of organs being donated.

Discussion of Results Related To The Literature

The study, *The Impact Of An Educational Session About Organ Donation On The Attitudes And Beliefs Of First Semester Nursing Students*, indicated that an educational session about organ donation did have a positive effect on the attitudes and beliefs of the student nurses that participated. The literature review did support this concept with Flarey (1991) and Triick (1990) studies. Flarey and Triick studies also indicated a positive correlation between education and a change in individual's attitudes towards organ donation. The studies did hold some limitations, but identified education as being an access point to changing individual's beliefs and attitudes toward organ donation. The results of this study indicated a statistically significant difference existed between the pretest scores and the post test scores, both for beliefs and attitudes. The data strengthens the findings of Flarey and Triick's studies by re-enforcing that education is effective in influencing an individual's attitudes towards organ donation.

This study supports the concept that education is the access point to changing an individual's beliefs and attitudes towards organ donation. The adult learning principles as identified by Cerny (1995) and Lieb (1995) may have been contributing factors to the changes that occurred in this study. The demographic data has shown that 47.7% of the participants were above the age of 25 and 26% above the age of 35. These adult learners brought with them their life experiences, values, beliefs, and opinions about organ donation. Adult learners have demonstrated an increased interest in things that are of interest to them and that they can relate to their everyday life and work setting (Cerny, 1995). Lieb (1995) states that the adult learners must see a reason for what they are

learning and how it can be applied to their lives. The study participants were all student nurses currently enrolled in a nursing program. The organ donation procedure is an issue that each one of the students may be faced with during their career, it may be on a professional or personal level. The organ donation issue therefore should have been viewed as important to each of the participants, thus increasing their interest in the subject and their willingness to learn. The application to their new careers was stressed during the educational session with case studies introduced to re-enforce the importance of being knowledgeable of this issue. These factors may be some of the reason why a statistical significant increase was seen in both the belief and attitude variables from the pretesting to the post testing phase.

The literature review revealed only two studies that investigated the effect education had on the attitudes and beliefs of individuals towards organ donation. This study adds to the body of knowledge about the effect education has on the attitudes and beliefs individuals have towards organ donation. The adult learning principles may be a contributing factor to the positive results of this study. The need for further studies still exist and needs to be fulfilled if a solution to the organ crisis is to be found.

Assumptions

All studies carry with them a certain number of assumptions, this study is no exception. Certain assumptions were made and they are as follows:

- (1) Students were truthful when asked the subject criteria to be a part of the study.
- (2) Students answered the questions truthfully.
- (3) Students read the questions thoroughly and did not just guess on the answers.
- (4) All the students were literate.

Limitations Of This Study

Most studies have limitations that are identified during the course of implementing the study. During the course of this study several limitations were identified and they are as follows:

(1) Small sample size. Only 23 subjects were included in the study out of a possible 35 making the results difficult to generalize to a larger population. Smaller samples tend to produce less accurate data.

(2) Voluntary participation. Voluntary sampling may cause a bias and the findings cannot be generalized to the general public (Polit and Hungler, 1991). Voluntary participation may have kept those with a negative attitude from participating. According to Fishbein and Ajzen (1975) individuals tend to have more interest in the things that are of importance to them than in things that are unimportant.

(3) Convenience sample. Convenience sampling may cause a sample bias, so the results can only be applied to a similar population (first semester nursing students).

(4) Lack of statistical information on the measurement tool (The American Public's Attitudes Toward Organ Donation And Transplantation Questionnaire). The Gallup Poll organization does not do statistical testing on their opinion surveys. They stated that they take the responses at face value. The tool was however, pilot tested by the Gallup Organization. The tool therefore, has limited credibility in the research world.

(5) Pretest-Post test exposure. Testing effects may take place from exposure to the questions on a pretest and influence the effects on the post test (Polit & Hungler, 1991). The sensitization that results from the first administration of the questionnaire may have caused the changes in the student's belief and attitude scores rather than the

educational session. It may be impossible to tell what effect the sensitization, or testing, problem had on the overall results of the study.

Implications For The Role Of The APN

The APN must be able to assess the community in which she/he lives and practices within and develop solutions to the problems that have been identified. One problem that has been recognized is the organ donation crisis. This study has identified that education may be a key factor in effecting individual's beliefs and attitudes towards organ donation. The results of this study indicated a statistically significant increase in the post testing scores of the participants after an educational session.

The APN has many roles which she/he may assume in finding a solution to the organ crisis. The APN may assume the roles of an assessor and educator if a program is to be developed and implemented for other nurses, students, or the general population. In the assessor role the APN will need to assess the community and designate a specific target population. Once the target population has been designated, the APN will then need to develop an educational session specific to met the needs of those individuals. Since each subgroup in a given population may have different needs and learning techniques the APN will need to be creative. The APN will need to consider the different beliefs that each group holds. These beliefs would include cultural, religious, knowledge, altruistic, and normative beliefs. These belief categories may directly or indirectly influence the participants' attitudes towards organ donation. The APN may need to assume a researcher role in order to identify the target beliefs this subgroup possess, so as the educational session will be individualized to that specific group. The educational session used in this study can be reviewed in Appendix A, the target beliefs

(misconceptions) are identified in the barriers portion of the presentation. Once the educational session has been designed and reviewed by other APNs and educators, the APN will assume the educator role and present the given information. After the presentation the APN will again become the researcher and evaluate the effectiveness of the entire process. In this study the evaluation process was done by administering the pretest as a post test to compare if any changes had occurred. This study did indicate that education did have a positive effect on the student nurses' beliefs and attitudes towards organ donation. From this final evaluation changes can be made to improve the educational session and the overall effectiveness of the presentation. The APN will need to continue to monitor the results and research the effectiveness of education as an influencing agent in changing individuals' beliefs and attitudes towards organ donation.

Funding is an area that must be looked at if an educational program is to be developed. The APN must be creative in finding the necessary funds to cover the cost of these programs and to pay for the research to indicate their effectiveness. Prottas and Batten (1991) suggest sources of funds available for education about organ donation. The Division of Transplantation in the Public Health Service under federal legislation is allowed to fund nonprofit organizations working to improve methods of organ procurement. The Organ Procurement and Transplantation has a public education section. Public education is a reimbursable expense and nothing precludes the Network from subcontracting for public education from an outside party.

Public education may be funded through the above source. The health care professional education may be funded through hospitals' educational funds. Nurses need to be educated in the matter of organ donation so they can make informed requests from

the families. The acute care facilities need to make sure these requests are being done, because of the requirements of the laws and the installation of the routine request policy their reimbursement from governmental program may be withheld.

In order to make these programs work the APN needs to be aware of some marketing techniques, according to Prottas and Batten (1991). Advertising is one way to stimulate an interest in organ donation and to make them aware of the issue. New strategies will need to be developed to get individuals to attend the educational sessions. The APN may want to consult a marketing expert to get some new approaches or to review the APN's ideas on the subject. Through the consultation with others, the APN is entering into a collaborative endeavor, thus expanding the APN's role.

Once the research project is completed it could be published in a journal. This would be a way to communicate the results to a larger audience of professionals. Through publication of an article the researcher's work is recognized as a scholarly endeavor. It may be subjected to replication to verify that the steps of scientific approach to problem solving were followed. The documentation of the effects nursing can have on organ donation helps to expand the knowledge of nursing and adds credibility to the profession.

In the primary care setting the APN should be aware of the importance of the organ donation situation. A policy should be developed and implemented to include organ donation preference in the health history assessment. The primary care APN needs to change the health history form to include this important aspect of the clients. The APNs should be made aware of the organ donation issue during the educational training period, so as after graduation the APN will consider this a routine question in the assessment process. The APN should develop a policy for each primary care setting to include asking

all clients their preference about organ donation. A procedure should then be developed to include several questions about organ donation in the health history. These questions may include:

1. Would you be willing to donate your organs in the event of your death?
2. Have you signed a donor registration card?
3. Have you made your family aware of your wishes?

This information should be updated at each health maintenance exam. The APN with her/his advanced educational level should be viewed as a resource person by the remainder of the clinic. As the resource individual, the APN needs to be responsible for educating all the clinic's employees about organ donation. This educational process will result in providing the clinic with knowledgeable individuals. If a client would have a question about donations anyone in the clinic should be able to answer it or refer that client to the APN. During the health history interview with the client the APN should be able to answer any questions the client may develop. The client should be educated on the importance of making a decision and informing their loved ones before the actual situation occurs. The setting in which the APN is practicing may have organ registration cards available for those clients that are interested in becoming a potential organ donor.

Randall and Marwan (1991) have suggested that organ donation education should be presented in medical and nursing schools in order to avoid the formation of barriers. This study, *The Impact Of An Educational Session About Organ Donation On The Attitudes And Beliefs Of First Semester Nursing Students*, lays the ground work to start organ donation education in the first semester of student nurses educational preparation. The results were significant that a change did result, but with only a one time post testing

it is difficult to know if the changes are short term or long term. Further studies would be needed to evaluate if the changes were short or long term. The follow up evaluation may be done in consecutive years of the nurses' education and even after graduation. If the changes were found to be long term this would add to Randall and Marwan suggestions and support the idea that organ donation needs to become a part of all students in the health care fields education. The implications from this study have identified many roles that the APN may assume. The APN may be an educator and present the educational session. The APN may be a researcher in the development of the section, in the evaluation of the presentation and in the publication of the study as research. The APN may be a collaborator working with others to find funding and creative ways to the present ideas. The APN will assume the role of practitioner in assessing client's needs in the primary care and community settings. Organ donation is a very broad issue with many facets and the APN with her/his wide range of roles is the individual to tackle this problem if a possible solution is to be found.

Implications For Future Studies

Education has been identified as an access point to changing individual's beliefs and attitudes towards organ donation. This study has shown a positive relationship between education and changes in the beliefs and attitudes of first semester nursing students. The educational session about organ donation proved to be an effective intervention in influencing the students' beliefs and attitudes.

The study will need to be replicated to increase the credibility of the results. Limitations have been identified and changes in the design of the study may need to be done, so as to avoid any bias that may have developed in this study. One limitation that

was identified in this study was the small sample size. One way to overcome this limitation may be to include this in a class and just consider it a section of the basic nursing education format. Therefore, voluntary participation would be accounted for and would include all the nursing students in that class, those with both negative and positive attitudes. Some limitations, like pretest-post test exposure, cannot be changed and those need to be considered when generalizing the results.

In future studies a different measurement tool will need to be used, since permission for The American Public's Attitudes Toward Organ Donation And Transplantation Questionnaire was granted only for this study. The development of a useful measurement tool will in itself represent a study. The tool should include both belief statements and attitude statements. Both are important variables to measure, since beliefs are the building blocks for attitudes which influence an individual's intentions to carry out a specific behavior. If the tool is designed for the entrance level nursing student it may also be useful in evaluating the general public's beliefs and attitudes towards organ donation, which may be an area for a future study for the APN. The study may be referred to as, what impact would an educational session about organ donation have on the beliefs and attitudes of the general public?

Nurses are not alone in the organ donation request procedure. Others that may be active participants may be the physician, the social worker, or the clergy. A study that could be developed would be one that would compare the beliefs and attitudes of physicians, social workers, and clergy to the responses of nurses. Or a comparison study may be done comparing each group's responses to each other to evaluate if each group would perceive the organ donation issue differently. It is important for everyone involved

in the organ donation request to be knowledgeable of all the facts so as they may serve as a resource to the families and others. An informed knowledgeable consent is of value to the family, since they will never have the opportunity to change their mind once the decision has been made. Prottas (1983) noted that families that donate organ/tissues experience psychological benefits as a result of donation.

It would be interesting to re-evaluate the students that participated in this study, *The Impact Of An Educational Session About Organ Donation On The Attitudes And Beliefs Of First Semester Nursing Students*, at a later date. The study may be redone in the second year of the community college nursing program and then again when the participants have become nurses. A comparison study could be done by re-administering the questionnaire to see if their belief and attitude scores changed with any degree of significance. Factors that may influence the students scores would be the time lapse effect or further education to increase their knowledge base which may change their beliefs and influence their attitudes. Another factor influencing the scores may be personal experiences that have affected either the students' personal or professional lives. The APN may be interested in this comparison study to evaluate the long term effects of education and does it cause a long lasting change in an individual's attitudes.

The need for further studies has been recognized and some ideas for how these may be accomplished have been identified. Replication is necessary to add credibility to the results. The development of a new measurement tool would be needed to be used by the health care profession and the public to evaluate the beliefs and attitudes of all those involved in the organ donation process. A comparison study would be helpful to evaluate the beliefs and attitudes of the health care professionals involved in the organ donation

request procedure. A longitudinal study is needed to evaluate the long term effects education has on the beliefs and attitudes towards organ donation of those that participated in the study. This study showed a significant statistical increase did occur from the pretesting to the post testing phase in both the beliefs and attitudes variables, which supports the fact that education is an effective change agent for students. Further studies are the method needed to add credibility to the fact that education is the key to the organ donation dilemma for health care professionals.

Summary

At this time there are more than 38,000 people waiting for an organ transplantation. Approximately every twenty minutes another person is added to the national waiting list for an organ donation. It is estimated that seven of those individuals will die each day while awaiting transplantation. The government has been trying to fill the gaps that exist between the supply of organs and the demand by passing different laws. The gap continues to widen. Nursing as a growing profession must step in and through education overcome the barriers that exist. The barriers will fall and attitudes will change if the public and health care providers become more knowledgeable and are given a chance. This study has indicated that education may indeed be an important access point to make the change possible.

APPENDICES

APPENDIX A

APPENDIX A

EDUCATIONAL SESSION OUTLINE

ORGAN DONATION

OBJECTIVES

1. Understanding of basic technological aspects of organ donation and transplantation.
2. Awareness of the positive aspects of transplantation and the need for organ donations.
3. Understanding of the criteria for organ and tissue donation.
4. Understanding of the fairness and equity in the distribution of organs and transplants.

OUTLINE

I. Definition of organ/tissue donation

A. Organ donation is referred to as the removal of diseased or damaged organs and replacing them with anonymously given organs. Organs that can be donated - kidneys, heart, lung, liver, pancreas, and intestine.

B. Tissue donation is included in the broad definition of organ donation. It is the giving of tissue to replace defective areas. Tissues that can be donated - eyes/corneas, bone, skin, heart valves, saphenous veins, ear ossicle, and tendons.

II. Need - what it is at present time of presentation

According to the TSM (1996) as of June 1, 1996 there were: 1457 individuals waiting for a kidney, 60 for a heart, two for a heart/lung, 111 for a lung, 179 for a liver, 76 for a pancreas, and 250 for a cornea.

A. Success rate - positive outcomes

Friedl (1995) notes that liver transplants are successful in 67.5% with a three year survival rate, hearts 74.4%, kidneys 87.2%, and pancreas transplants 81.8%.

B. Cost of transplants

1. Dollars

Cost of transplants for 1995 per The Wall Street Journal Jan. 17, 1995 per J.F.L.(1995).

Kidneys -- \$92,700 at Cleveland Clinic -- paid \$50,000 - \$60,000

Bone-marrow -- \$172,900 at Duke University -- paid \$65,000

Livers -- \$280,200 at Johns Hopkins -- paid \$150,000 - \$200,000

Hearts -- \$222,700 at Cleveland Clinic -- paid \$110,000

Lungs -- \$265,100 at Cleveland Clinic -- paid \$130,000

Charges include hospital bills, physician fees, organ procurement, meds and follow-up for the first year after transplantation.

2. Who Pays For What

The issue of who is going to pay for the transplants is another concern to the transplant community. Davis (1989) addresses this in her article regarding dilemmas in transplantations. Most kidney transplants are covered by Medicare under the End Stage Renal Program. Champus has begun to pay for liver transplants in children with biliary atresia. Other third-party payers are beginning to pay for extrarenal transplants. The uninsured many times fall through the cracks and end up not receiving the needed transplant or not paying.

There is no cost to the donor family. Donation is a gift. TSM (1995) states the only cost the donor family will be responsible for is the regular hospital charges up to the point where the donor becomes a donor candidate. Kidney transplantation costs for the donor are usually paid by the recipient's Medicare and/or Medicaid coverage. All the

medical costs related to the donor's evaluation and surgery are covered by the recipient's insurance. Extrarenal organs are not usually reimbursed by the Medicare program, but rather by private insurance. OPAM pays the donor hospital for all the costs incurred. The transplant centers are billed for the organs. The transplant centers then, in turn, bill the transplant recipients and their insurance companies.

The other payment issue is, who pays for the immunosuppressant drugs? Once a transplant takes place, these drugs are necessary so a rejection of the new organ does not occur. This is as important as receiving the organ in the first place.

Medical benefits are another aspect of donations that should be examined. Each center has specific guidelines the centers use when determining if a patient is worthy of receiving the available organs. The one factor they all consider important is the patient's compliance after transplantation. Noncompliance could mean rejection or loss of the organ that could have benefited another. Organs are a scarce commodity and the procurement centers cannot afford to take the risk of wasting any.

III. Criteria

A. Organ Donor

1. Newborn to 75 years of age
2. Brain death imminent or declared
3. Must be on ventilator
4. Medical Examiner case does not preclude donation.

B. Donor Maintenance

Each potential donor must be hemodynamically maintained. Ideal parameters for organ donors according to TSM 1995 include:

1. Systolic B/P > 90mmHg
2. Central Venous Pressure 5 - 10cmH₂O
3. Arterial Oxygen Saturation > 95%
4. Urine Output 1 - 3cc/kg/hr
5. Body Temperature 95 - 100 degrees

C. Criteria for tissue donor

1. Newborn to 75 years of age
2. No age for research eyes
3. Does not require ventilator support
4. Medical Examiner case does not preclude donation
5. Refrigerate body within 3 hrs of death, if possible

IV. Barriers

Horton and Horton (1990) conducted a survey to evaluate the knowledge base of the general public in hopes of discovering some of the barriers. Eighty eight percent of 470 were aware of the inadequate supply of organs, of the increasing cost effectiveness and the permission necessary for donations to be possible. Randall (1991) noted the Gallup poll taken in 1990 showed that 85% of those polled were in favor of organ donations by a loved one, and 60% would donate their own. For the estimated 15000 eligible organ donors each year, only 25% to 30% of families consent to donate. Still, there remains a gap between available organs and the need for them. Why does a gap still exist?

A. Brain Death Criteria

Lenehan (1986) addresses several reasons why a gap between the number of

available organs and those requiring transplants exists. The first reason cited is the fear of hastiness to remove organs. Many fear they would not be dead prior to the procurement. Many people do not understand the concept of 'brain death'. They see their relative as still breathing and having a heart beat. Cox (1986) defines 'brain death' as complete and irretrievable loss of brain function. It is important for the public to understand exactly how death is determined and that there is no possibility that life could be sustained without the machines. It is difficult for many to realize that brain death is in a sense identical to cardiopulmonary death. The potential donor is only a body being sustained by machines.

Cox (1986) provides the "Harvard Criteria", that has been accepted as the brain death criteria by many institutions. These standards are:

(1) Unreceptivity and unresponsiveness. There is a total unawareness of any externally applied stimuli, with no response to even the most painful of these.

(2) No movement or breathing. This is determined by taking the individual off the ventilator and observing them for three minutes to see if there is any spontaneous respiratory effort.

(3) No reflexes. Irreversible coma with absence of central nervous system activity is evidenced by the absence of elicitable reflexes.

(4) Flat electroencephalogram (EEG). This shows the absence of electrical activity in the brain, thus indicating brain death. Two factors must be taken into consideration when doing the EEG, first hypothermia cannot be present and no central nervous system depressants can be in the bloodstream. The requirement is that at least ten minutes of no activity must be documented.

It is essential that all states have their own brain death criteria established and that

each institution has a protocol to follow. With clearly defined policies, nurses should be aware of the guidelines and the confusion surrounding brain death should disappear. The fear of litigation should be dismissed through understanding the protocols.

B. Age

A second reason for not donating noted by Lenehan (1986), is age. Many feel they are either too old or too young. OPAM (1992) criteria for tissue donation is individuals between the ages of three months and 75 years. Thus making age not a barrier in most cases.

C. Religion

A third barrier to organ donation expressed is religious beliefs. Many believe that it is against their religion to donate. Horton and Horton (1990) note that most major religions support organ donations as an act of charity, the gift of life.

D. Mutilation

The fourth belief identified is the fear of mutilation of the body. Many believe the body is chopped up and sent away after the organs have been retrieved. With this type of removal of organs, how can an open casket be a part of the funeral. OPAM (1992) stresses the fact that removal of organs and tissue is a surgical procedure. The patient is treated with the utmost respect and dignity, like any other surgical patient. Surgery is often seen by some as different from organ donation, since surgery repairs the body and organ donation may be viewed as the taking away or as destroying the body. The family should be made aware of the fact that their relative will look like any other surgical patient and an open casket would be possible. The family will still have total control of the funeral arrangements.

Cox (1986), states that some health care professionals see organ donation as ghoulish. Some health care professionals feel that transplant surgery is going beyond the realm of medicine and into the science fiction arena. These health care providers feel that the cost of the transplant surgery and the pain experienced by the recipient does not warrant the actual outcome, improved quality of life.

E. Dealing With Death

The fifth fact noted by Lenehan (1986), as a barrier to organ donation is by signing a donor card one must come to terms with one's own death. The donor card brings death into reality and one must face their own mortality. The facing of one's own mortality seems to cause stress in our society where fitness and youth are thought of as the norm. Talking about death makes people feel uncomfortable, because they must explore their own attitudes about death and their bodies.

The Gallup Poll's 1993 survey indicated that more than one-third of the Americans survived admit to some discomfort concerning the thought of their own death. Sanner's (1994) study identified the factor of death anxiety as a barrier to signing a donor card. Mankind has developed several defenses to cope with the phenomenon of death. These anxiety defenses are a necessary part of mankind's existence, but may have consequences that prevent decisions concerning procedures that deal with death. So, instead of facing this anxiety, it is easier not to sign the donor card. The 1993 Gallup survey indicated that only 28 percent of 6,127 Americans have a signed donor card.

F. No Thought

The sixth fact noted by Lenehan (1986), is that nondonors cite that they have just never given it much thought. The fact of not thinking about the organ donation indicates

that the public needs to be made aware of this issue. The public needs to take time to think about organ donation, before the actual time arises and decision time is at hand.

G. Lack Of Communication With Family

A seventh barrier identified by The Partnership for Organ Donation (1992) is the lack of communication to family members concerning one's wishes in the area of donation. A 1993 Gallup Poll reveals that only 47% of the 6,127 polled had told a family member of their wishes about donation, but only 29% could remember a family member discussing their own intentions about donation. These low numbers place an added stress on family members when a death occurs and a request is made. The family may want to donate, but are fearful to in case the deceased was against the donation. Through discussion of organ donation the family will know how each member feels and this will allow families to make well-informed decisions about a donation if the situation arises.

H. Lack Of Knowledge

Horton and Horton (1990), identify an eighth barrier in their study as to why people are reluctant to sign a donor card. This is the fact that many believe the donor cards must be registered with the U.S. government in order to be valid. This belief supports the fact that the general public perceive organ donation as a complex process and too complicated for them to undertake. The study by Horton and Horton (1990) stresses that individuals are unaware of how to become an organ donor. Somewhere there is a miscommunication between accurate information delivered and the perception of those receiving it.

I. Difficult to make request

Garber et al (1990), found that care givers believe that requesting donations places

an undue strain on the bereaved families. Their study found that 43% of 1000 nonphysician providers felt that their solicitation could be offensive to the family and thus making a stressful situation even more difficult for the family.

The medical profession can develop a positive approach to organ donation that will result in a positive outcome for all, but first they must examine their own feelings about death, according to Farrell and Greiner (1993). Health care providers must accept the fact that they are unable to save all patient's lives and be able to go forward. When a donation is made it should not be viewed as the end of one life, but the possible re-beginning of another's. This concept can cause difficulties, because the recipient is unknown to those caring for the donor. Organ procurement agencies report that between 70% and 75% of families asked have donated. It has been noted that families that donate organs/tissue experience psychological benefits as a result. Prottas (1983) found that eighty six percent of 97 donor families felt that donation made something positive extend out of a death.

Hospitals are required to follow the law and the Required Request Act mandates that hospital personnel make the necessary requests for organ donations. Physicians and nurses are faced with the issue of when to make this request. Most potential donors are brought to the hospital under extreme circumstances which already place the families under undue stress. Drachman and Beasley (1994) suggests using the 'decoupling' approach. Decoupling addresses making the organ request at a different time than when the family is informed that their loved-one has been declared brain dead. Tymstra, Heyink, Pruim, and Slooff (1992) found that it is essential to allow the bereaved some time to come to terms with the bad news. Asking for donation at a time which coincides with

denial during the grieving process will usually result in a denial of an organ/tissue donation. Denial is usually stronger in these situations since the patient still looks alive. Farrell and Greiner (1993) suggests asking about organ donation during discussion of related issues, such as life support and “do not resuscitate”, before the individual has been diagnosed as brain dead.

V. Distribution of organs - United Network for Organ Sharing (UNOS)

With the increasing number of potential recipient, who decides who is to receive available organs? The federal government has awarded funding to the United Network for Organ Sharing (UNOS) to make this determination, according to Davis (1989). When an organ becomes available the local procurement agency notifies UNOS. UNOS then logs the vital information into their computer system looking for a compatible recipient. The present criteria they are using are: (1) blood type, (2) size, (3) medical urgency, (4) geographic location, and (5) waiting time. Numbers one and two are an absolute must when determining compatibility. Medical urgency is considered, but not-always a deciding factor. Survival of the extensive surgery is taken into consideration. UNOS does not want to waste organs. Geographic location is important in the fact that, organs are offered in the region where they are obtained first. If a match is not possible there, it is placed in a national and even international bank for matching.

VI. Laws - Government Involvement

A. Uniform Anatomical Gift Act - 1968

How then, do these centers go about increasing the number of available organs? Davis (1989), explains that the federal government has stepped in and passed several laws to do this. In 1968, the Uniform Anatomical Gift Act was passed in all 50 states. This act

authorizes anyone 18 years of age or older, in the presence of two witnesses, to express their wishes regarding donation by will, donor card, or written document before his/her death.

B. Michigan Uniform Anatomical Gift Act - 1970

In 1970 Michigan adopted the Michigan Uniform Anatomical Gift Act (MUAGA) in reference to Eby (1995). The act has three purposes, it 1) defines permissible donors; 2) defines permissible donees; and 3) establishes a procedure for making organ donations. The act defines a permissible donor as any competent legal adult. The act allows anatomical gifts to be made by the usage of a Uniform Donor Card. A properly prepared donor card will identify the donor and his/her eligibility to make a donation, along with identifying the specific items to be donated. The signing of the card must be witnessed and signed by two witnesses. A signed witnessed donor card or the back of a driver license is all that is required to fulfill the requirements of becoming an organ donor. Secondly this act gives the next of kin the authority to make that decision at the time of death, if no objection is known. The MUAGA identifies a third way a donor may identify himself/herself, this is through a will. The will is put into effect immediately upon the person's death, before being probated.

Friedl (1995) states that even though the government has established criteria to be followed in potential organ donation, the hospitals virtually always seek consent from the next of kin. While formal consent is only necessary if no donor card or other legal evidence is present, in practice no hospital or medical staff will proceed without consent. Two reasons have been identified for this action. The first reason for seeking consent is the fear of a lawsuit by the donor's family, whom did not agree with the donor's wishes.

The MUAGA does provide protection against liability of those seeking donations by including the clause, any person or hospital who acts in good faith in accordance with this law is not liable for damages. The second reason for seeking consent is the fear of negative publicity that could have an adverse effect on the entire organ donation community.

C. Required Request Act - 1986

In 1986, the state of Michigan passed the Required Request Act in an attempt to increase available organs. Davis (1989) interprets the Required Request Act as one that requires all Medicare funded facilities to request donations. It insists that all families be given the option of donation at the time of death of their loved one. The nurse many times is put into the role of the requester and needs to be knowledgeable, in order to answer any questions the family may present. It necessitates that hospitals keep accurate records of all requests made. This ensures that requests are being made and the public is given the choice.

It has been noted that there is a great demand for organ transplantation. It is a successful procedure that extends and improves the quality of life for many. The government has established payment for some transplants and has tried to provide guidelines to increase the number of available organs by passing several laws. The acts outline how to become a donor and require hospitals to take an active part in the procurement process. The acts, however, do not address ways to increase the number of actual donors. This is the next step the government is going to need to research, how to get potential donors and their families to donate.

VII. What's next !

A. Xenograft

Cross-species transplants. Davis (1989) expresses that after the Baby Fae incident several years ago the public feels this approach is unacceptable. This technique is used with a high success rate in tissue transplantation, but has not met the same degree with organs.

B. Presumed Consent/Routine Salvage

“Presumed consent” allows for organ donation as long as the donor’s family does not actively intervene (TSM 1995). This policy assumes that everyone would elect to donate if possible, even when their actual wishes are unknown and when family members cannot be consulted. This practice has been instituted in many countries outside the U.S. The U.S. would like to continue to keep donation solidly within the realm of personal choice.

C. Organ Donor Registry

Friedl, 1995 proposes the establishment of an organ donor registry. Individuals willing to become organ donors can send a registration card that has been filled out and witnessed by 2 people to the Transplant Society of Michigan (TSM). The hospitals can then notify TSM of a potential donor where TSM can scan their computer for the donor’s name. If the donor is on the list of registered donors the hospital can then inform the family of the donor’s wishes. This information may assist the family in their final consent decision, since many families say that they would donate if they knew the potential donor’s wishes. Driver licenses are not always accessible to hospital personnel when a donor situation arises.

D. Non-heart beating donors

Cardiac-oriented death not brain death. This procedure is currently under research in several states, but not in Michigan. Patients are not declared brain dead, but prognosis is none for recovery. Standard for determining a non-heart beating donor is asystole for 2 minutes without CPR. Goal for the non-heart beating donor is to take the organs as quickly as possible to prevent warm ischemia damage to the organs. This procedure is still under investigation and presents many unanswered ethical questions.

E. Condemned prisoners

It has been suggested over the media that prisoners on death row should be used as organ donors. Since the prisoners are to die their organs might as well be put to good use (so to say). Many say this would help to repay the prisoner's debt that they owe society. Opponents present the objection to this proposal saying that prisoners, even though on death row, continue to have certain rights in America and these cannot be violated.

F. Financial Incentives

The National Organ Transplant Act of 1984 prohibits the buying or selling of human organs (Davis, 1989). It has been proposed that more families would agree to donation if a financial incentive were offered. These incentives may be offered in the form of assistance in paying the funeral expenses, a cash reward to the donor's estate, or a cash award to a charity of the family choice. Altshuler and Evanisko (1992) surveyed health care professionals involved in organ donation and found that 71.8% of those surveyed opposed financial incentives. Altshuler and Evanisko suggested that if this high of percentage opposed financial incentives as a solution to the organ shortage that this may have a negative impact and cause an overall decrease in the number of donors. They felt

that adding this aspect would increase the level of discomfort for those making the necessary requests.

G. Mechanical devices

Mechanical devices have been found to be successful on a short term basis. They may be used to bridge the gap between organ death and finding a new organ for replacement. Davis (1989) mentions that with this technique the person using the artificial organ is exposed to many complications that could impair their chance of being a recipient any longer.

H. Anencephalic

Davis (1989) explains the option of using anencephalic donors for infants and small children with organ failure. These children are born without a cerebral vault. They do have minimal brain stem functioning, therefore do not meet the 'brain death' criteria and cannot legally be used to fill the organ gap.

HANDOUT -- ORGAN DONATION

I. Definition

A. Organ Donation -- The removal of diseased or damaged organs and replacing them with anonymously given organs. Organs that can be donated are: Kidneys, heart, lung, liver, pancreas, and intestine.

B. Tissue Donation -- The giving of tissue to replace defective areas. Tissues that can be donated are: Eyes/corneas, bone, skin, heart valves, saphenous veins, eaossicleles, and tendons.

II. Need-- June 1, 1996 -- 1457 kidneys, 60 hearts, 2 heart/lung, 111 lungs, 179 livers, 76 pancreases, and 250 corneas in Michigan

A. Success Rate

Liver transplants are successful 67.5% with a three year survival rate

Hearts are 74.4%

Kidneys are 87.2%

Pancreas 81.8%

B. Cost

1. Dollars - Costs of transplants actual vs paid

Kidneys -- \$92,700 at Cleveland Clinic -- paid \$50,000-\$60,000

Bone-marrow -- \$172,900 at Duke University -- paid \$65,000

Livers -- \$280,200 at John Hopkins -- paid \$150,000-\$200,000

Hearts -- \$222,700 at Cleveland Clinic -- paid \$110,000

Lungs -- \$265,100 at Cleveland Clinic -- paid \$130,000

Charges include hospital bills, physician fees, organ procurement, meds and follow-up for the first year after transplantation.

2. Who pays for what ?

- a. Medicare - under the End Stage Renal Program - kidneys transplants are paid for
 - b. Champus - liver transplants for biliary atresia
 - c. Third party payers are beginning to pay for extrarenal transplants
 - d. No cost to donor's family -- family is responsible for hospital charges up to the point of donor identification
 - e. OPAM pays the donor hospital for all costs incurred after donor identification
 - f. Immunosuppressants - many third party payers pay for these.
- These are vital if rejection is going to be avoided

III. Criteria

A. Organs

- 1. Newborn to 75 years
- 2. Brain death imminent or declared
- 3. Must be on ventilator
- 4. Medical Examiner clearance if necessary
- 5. Family consent

B. Tissues

- 1. Newborn to 75 years
- 2. No age limit for research

3. No ventilator support
4. Medical Examiner clearance if necessary
5. Refrigerate within 3 hrs of death
6. Family consent

IV. Barriers

A. Brain death criteria (Harvard)

1. Unreceptivity and unresponsiveness
2. No movement or breathing
3. No reflexes
4. Flat EEG -- 10 minutes
 - a. No hypothermia
 - b. No CNS depressants
5. Fear of hastiness to remove organs -- not dead prior to procurement

B. Age -- no limits newborn to 75 years

C. Religion -- no limits -- most see it as an act of charity -- gift of life

D. Mutilation -- believe body is chopped up and sent away. No open casket after this procedure. Not so! Surgical procedure used for removal - don't want damaged organs. Normal funeral afterwards.

E. Dealing With Death -- Signing organ donor card - must face one's own death. Causes increase stress and makes people feel uncomfortable. Easier not to sign then to deal with this subject of death.

F. No thought -- just never thought about it!

G. Lack of communication with family -- family is unaware of potential donor's

wishes, so what to do? Many don't donate due to fear of going against donor's wishes. Important to discuss this issue before the time is upon them.

H. Lack of knowledge -- some believe donor cards must be registered with the government to be valid. They believe the process is too complicated. Unaware of how to become a donor.

I. Difficult to make request -- some believe that it places undue stress on families during a difficult time. Requesters must be comfortable with their own feelings first. Can't save everyone. The end of one life may be the re-beginning of another.

V. Distribution -- United Network for Organ Sharing (UNOS) -- Government established in 1984 to distribute organs fairly. National computer listing of all recipient. Criteria for matching organs to recipients are: blood type, size, urgency, geographic location, and waiting time.

VI. Laws

A. Uniform Anatomical Act -- 1968

Anyone 18 years or older, in the presence of 2 witnesses, may express their wish to donate by will, donor card or written document before his/her death.

B. Michigan Uniform Anatomical Gift Act -- 1970

Anatomical gifts can be made per a Uniform Donor Card/driver license (back). Signed card must have 2 witnesses. Gives next of kin authority to make donation decision at time of death. Gift may also be made through a will. Also provides protection against liability to those acting in good faith

when making a donation referral.

C. Required Request Act -- 1986

All Medicare funded facilities must make requests for donations. Hospitals must keep accurate records.

VII. What's Next!

A. Xenografting -- cross-species transplants

B. Presumed consent -- organ donation would be routine unless opposed by the potential donor prior to death or by the family

C. Organ Donor Registry -- national computer listing for potential donors - easy access to determine potential donor wishes

D. Non-heart beating donors -- cardiac oriented death not brain death

E. Condemned prisoners -- death row - repay debt to society -- still have basic rights

F. Financial incentives -- form of assistance in paying funeral expenses, a cash reward to donor's estate, or cash reward to a charity of the family's choice.

G. Mechanical devices -- success for short term while searching for an organ -- long term complications.

H. Anencephalic -- potential donors for infants and small children . Born without cerebral vault, have brain stem. Do not met brain death criteria.

APPENDIX B

APPENDIX B

DEMOGRAPHIC INFORMATION

Directions: Please check appropriate responses.

GENDER: Female _____

INCOME: <\$15,000 _____

Male _____

\$15,000-\$24,999 _____

AGE: 18-24 _____

\$25,000-\$34,999 _____

25-34 _____

\$35,000-\$44,999 _____

35-44 _____

\$45,000-\$54,999 _____

45-54 _____

\$55,000 and over _____

55 + _____

Don't know/Refuse _____

RACE: Caucasian _____

EDUCATION:

Afro-American _____

High School _____

Other _____

Some College _____

ETHNICITY: Hispanic _____

Associate _____

Nonhispanic _____

Bachelor _____

RELIGION: Protestant ____

Masters _____

Catholic _____

Baptist _____

Christian _____

Nondenominational ____

Other _____

None _____

QUESTIONNAIRE

THE AMERICAN PUBLIC'S ATTITUDES TOWARD ORGAN DONATION AND TRANSPLANTATION

Please answer the following questions truthfully and to the best of your knowledge.

Directions: Circle the answer that best describes your response to each of the following questions.

- | | | | |
|--|--------|------------|------------|
| 1. In general do you support the donation of organs for transplants? | yes | no | don't know |
| 2. How likely are you to want to have your organs donated after your death? | likely | not likely | don't know |
| 2a. If answered not likely --
Is there a particular reason you are not likely to want to have your organs donated upon your death? What might that reason be? Check as many as apply.
Medical reasons _____
Too old _____
Don't feel right about it _____
Don't want body cut up/want to be buried as whole person _____
Against religion _____
Other _____
No reason/Don't know/Haven't given it much thought | | | |
| 3. Organ donation allows something positive to come out of a person's death. | yes | no | don't know |
| 4. Organ donation helps families cope with grief. | yes | no | don't know |
| 5. Most people who receive transplants gain additional years of healthy life. | yes | no | don't know |
| 6. Organ transplantation is an experimental medical procedure. | yes | no | don't know |
| 7. Most of the people who need an organ transplant receive a transplant. | yes | no | don't know |
| 8. Would you accept an organ transplant? | yes | no | don't know |

Directions: Circle the answer that best describes your response to the following questions.

- | | | | |
|---|--------|------------|------------|
| 9. Thinking about your own death makes you uncomfortable. | yes | no | don't know |
| 10. Have you made a personal decision about whether or not you would want your organs donated in the event of your death? | yes | no | don't know |
| 11. Have you made a personal decision about whether or not you would want your family members' organs donated in the event of their death? | yes | no | don't know |
| 12. Have you granted permission for organ donation on driver's license or on a signed donor card? | yes | no | don't know |
| 12a. If no---- Would you be willing to sign a donor card giving permission for YOUR organs to be donated? | yes | no | don't know |
| 13. Before an individual can donate their organs that person must carry a signed donor card giving permission. | yes | no | don't know |
| 14. Before an individual can donate their organs that person's next of kin must give their permission. | yes | no | don't know |
| 15. Most members of your family support the idea of organ donation. | yes | no | don't know |
| 16. It is important for people to tell their families whether or not they would want their organs to be donated after death. | yes | no | don't know |
| 17. If you are <u>likely</u> to be an organ donor:
Have you told some member of your family about your wish to donate your organs after your death?
OR
If you are <u>not likely</u> to be an organ donor :
Have you told some member of your family about your wish not to donate your organs after your death? | yes | no | don't know |
| 18. How likely are you to discuss your wishes about organ donation with your family. | likely | not likely | don't know |

Directions: Circle the answer that best describes your response to the following questions.

- 18a. If you are unwilling to discuss your wishes with your wishes with your family is there a particular reason?
 What might that reason be?
 Don't discuss death/makes nervous _____
 Family won't understand _____
 Family believes people buried whole _____
 I'm too young _____
 Not in good health _____
 Personal/None of their business _____
 It's their decision _____
 Other _____
 Don't know/Haven't given it much thought/No reason/Not applicable _____
19. Has any member of your family told you about their wish to donate or not to donate their organs after death? yes no don't know
20. Have you discussed with your family any of the arrangements you would like to take place at the time of your death such as special funeral arrangements, or the specifics of your will? yes no don't know
21. If you had NOT DISCUSSED organ donation with a family member, how likely would you be to donate their organs upon death? likely not likely don't know
22. In the past year, have you read, seen or heard any information about organ donation? yes no don't know
23. Organ donation is against your religion. yes no don't know
24. People your age are too old to donate organs. yes no don't know
25. Doctors will do everything they can to save a person's life before that person's organs are removed for transplant. yes no don't know
26. It is possible for a brain dead person to recover from his/her injuries. yes no don't know
27. People who choose to donate a family member's organs end up paying extra medical bills. yes no don't know

Directions: Circle the answer that best describes your response to the following questions.

- | | | | |
|--|-----|----|------------|
| 28. It is impossible to have a regular funeral service following organ donation. | yes | no | don't know |
| 29. It is important for a person's body to have all of its parts when it is buried. | yes | no | don't know |
| 30. You are worried that a loved one's body would be disfigured if their organs were donated. | yes | no | don't know |
| 31. Given equal need a poor person has as good a chance as a rich person of getting an organ transplant. | yes | no | don't know |
| 32. Racial discrimination prevents minority patients from receiving the organ transplants they need. | yes | no | don't know |
| 33. Organs for transplant can be brought and sold on the black market in the U.S.. | yes | no | don't know |

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE!

APPENDIX C

APPENDIX C

Dear prospective participant,

I would like to thank you for your interest and desire to learn about organ donation. The need for organ donation increases daily. As of March 1995 there were 38,549 individuals waiting for an organ transplantation. Approximately every twenty minutes another person is added to the national waiting list for an organ donation. It is estimated that seven of those individuals will die each day while awaiting transplantation. We can put a stop to these needless deaths by increasing everyone's awareness of this problem and clarifying the misconceptions that surround organ donation. As a participant in this study you will become knowledgeable of the facts about organ donation and help to increase the number of organs being donated. Thank you for your time. Please feel free to call me if you have any questions.

Andrea Perri

759 - 0554

CONSENT FORM

I, _____ agree to serve as a subject in the investigation examining the effects an educational session about organ donation can have on an individual's attitudes. The study will be conducted by Andrea Perri R.N., MSU student. The data collected in this study is expected to add to the data base that education does effect beliefs and attitudes and this may be the access point to increasing organ donations.

I understand that I will be asked to answer a questionnaire prior to an educational session on organ donation and again one month later. The information obtained will be confidential and used only for the purpose of this study. There are no expected risks to myself. My course grade will not be affected in any way and I am free to withdraw from this investigation at any time.

I have read and fully understand the foregoing information.

Date: _____

Signed: _____

APPENDIX D

APPENDIX E

APPENDIX E

**THE AMERICAN PUBLIC'S ATTITUDES TOWARD ORGAN DONATION AND
TRANSPLANTATION QUESTIONNAIRE POSITIVE RESPONSES**

	Pretest	Post test
1. In general do you support the donation of organs for transplants?	22	23
2. How likely are you to want to have your organs donated after your death?	13	19
3. Organ donation allows something positive to come out of a person's death.	20	22
4. Organ donation helps families cope with grief.	13	16
5. Most people who receive transplants gain additional years of healthy life.	20	23
6. Organ transplantation is an experimental medical procedure.	11	19
7. Most of the people who need an organ transplant receive a transplant.	19	21
8. Would you accept an organ transplant?	21	22
9. Thinking about your death makes you uncomfortable.	10	14
10. Have you made a personal decision about whether or not you would want your organs donated in the event of your death?	14	15
11. Have you made a personal decision about whether or not you would want your family member's organs donated in the event of their death?	9	10
12. Have you granted permission for organ donation on driver's license or on a signed donor card or would you be willing to sign a donor card giving permission for YOUR organs to be donated?	14	15

	Pretest	Post test
13. Before an individual can donate their organs that person must carry a signed donor card giving permission.	11	17
14. Before an individual can donate their organs that person's next of kin must give their permission.	7	20
15. Most members of your family support the idea of organ donation.	7	8
16. It is important for people to tell their families whether or not they would want their organs to be donated after death.	23	23
17. If you are likely or not likely to be an organ donor: Have you told some member of your family about your wish to donate or not donate your organs after your death?	12	14
18. How likely are you to discuss your wishes about organ donation with your family.	14	18
19. Has any member of your family told you about their wish to donate or not to donate their organs after death?	9	8
20. Have you discussed with your family any of the arrangements you would like to take place at the time of your death such as special funeral arrangements, or the specifics of your will?	8	10
21. If you had NOT DISCUSSED organ donation with a family member, how likely would you be to donate their organs upon death?	5	9
22. In the past year, have you read, seen or heard any information about organ donation?	15	20
23. Organ donation if against your religion.	19	22
24. People your age are too old to donate organs.	22	23

	Pretest	Post test
25. Doctors will do everything they can to save a person's life before that person's organs are removed for transplant.	22	23
26. It is possible for a brain dead person to recover from his/her injuries.	18	20
27. People who choose to donate a family member's organs end up paying extra medical bills.	11	23
28. It is impossible to have a regular funeral service following organ donation.	13	20
29. It is important for a person's body to have all of its parts when it is buried.	19	21
30. You are worried that a loved one's body would disfigured if their organs were donated.	17	22
31. Given equal need a poor person has as good a chance as a rich person of getting an organ transplant.	8	12
32. Racial discrimination prevents minority patients from receiving the organ transplants they need.	12	19
33. Organs for transplant can be brought and sold on the black market in the U.S..	5	8

STUDENTS' INDIVIDUAL QUESTIONNAIRE SCORES FOR EACH VARIABLE

ID Number	Pre Attitudes	Post Attitudes	Pre Beliefs	Post Beliefs	Don't Knows Pre	Post
1	13	11	12	13	1	1
2	7	13	13	17	4	0
3	4	7	6	18	12	5
4	8	10	9	12	7	4
5	12	13	14	17	2	1
6	3	5	9	15	10	4
7	5	7	14	14	4	3
8	6	9	10	18	9	1
9	12	13	13	14	4	3
10	4	6	14	15	5	3
11	12	13	15	14	2	0
12	13	15	12	16	3	0
13	8	9	5	11	9	7
14	15	12	14	14	0	2
15	4	7	10	16	11	2
16	9	10	17	16	2	1
17	13	13	8	17	9	0
18	14	13	12	16	6	2
19	9	11	10	15	9	4
20	4	6	10	17	11	4
21	4	4	15	18	6	3
22	12	14	13	13	4	4
23	7	11	12	16	7	1

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