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Nurses' Knowledge and Attitude Related to Organ Donation

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Nurses' Knowledge and Attitude Related to Organ Donation

By

Maureen E. Bishop

A THESIS

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Grand Valley State University
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ABSTRACT

NURSES' KNOWLEDGE AND ATTITUDE RELATED TO ORGAN DONATION

By

Maureen E. Bishop

Nurses today are caring for a wide array of patients that may include potential organ donors or organ transplant recipients. The purpose of this descriptive correlational study was to explore the knowledge nurses possess and the attitude they hold regarding organ donation, using Jean Watson's theory of human caring as the conceptual framework.

A convenience sample of approximately 200 registered nurses in a 300-bed medical center, that does not have an organ transplant program was surveyed. The knowledge level had a mean score of 6.69 with a possible high of 11. This suggests that the knowledge level of the registered nurses regarding organ donation is insufficient. The registered nurses were found to have a positive attitude regarding the organ donation process and that their attitude would be influenced by increasing their knowledge of the organ donation process.

This study suggests the need for further research into the effectiveness of current education programs for healthcare professionals regarding the organ donation

process. Future research should also focus on alternative education programs.

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CHAPTER 1

INTRODUCTION

"More than 30,000 people are on a national waiting list for an organ transplant. Seven of those people will die today. Another person joins the waiting list every twenty minutes" (Partnership, 1993, p. i.). "The actual number of donors is only about 4,000 per year or about one third the donation potential" (United, 1990, p. 2). These statistics are staggering. Nurses today are caring for a wide array of patients that may include potential organ donors or organ transplant recipients. The nurse's knowledge and attitude regarding organ donation may influence the organ donation process.

A study by Stark, Reiley, Osiecki, and Cook (1984) suggested that positive attitudes of health professionals influenced the families toward organ donation. Bidigare and Oermann (1991) suggested that the nurse possessing positive attitudes and greater knowledge will be better able to provide comfort and support the donor's family in the decision-making process.

The purpose of this descriptive correlational study was to explore the knowledge nurses possess and the attitudes

they hold regarding organ donation. The study also described relationships between the nurse's education and the knowledge possessed regarding organ donation and the nurse's experience caring for organ donors/recipients and attitudes held regarding organ donation in a 300-bed medical center in the Midwest that does not have an organ transplant program.

CHAPTER 2

CONCEPTUAL FRAMEWORK

Jean Watson's theory of human caring provided the theoretical framework for this study. According to Watson, each nurse has a causal past and phenomenal field. The nurse's causal past and phenomenal field would include his or her knowledge and attitude regarding organ donation and experience in the care of the organ donor and recipient. The nurse's causal past and phenomenal field might affect his or her ability to realize and accurately detect feelings and the inner condition of the patient.

The nurse's knowledge and attitudes will determine if the nurse will be able to support the patient's and the family's choices. Effective caring, on the part of the nurse, promotes individual and family growth as well as allowing patients and/or families to choose the best action for themselves at a given point in time. The choice being whether or not to donate organs.

Watson's theory of human caring is an evolving nursing theory. She has described the nursing metaparadigm concepts in her work, which will be included in the following section of this paper. The variables of interest in this study will

also be described, as well as reconceptualization of the metaparadigm concepts and the concepts of interest from Watson's theory to fit the variables of interest in this study.

Watson's (1988) views person

as "a being-in-the-world" that possesses three spheres of being--mind, body, and soul--that are influenced by the concept of self. The notion of self is the subjective center that experiences and lives within the sum total of body parts, thoughts, sensations, desires, memories, life history, and so forth. One's self is a process; an unending process wherein new experience is turned into knowledge, each psychological moment shapes the next psychological moment (pp. 54-55).

Watson's (1988) view of environment encompasses the belief that

the human care transactions provided a coming together and establishment of contact between persons; one's mind-body-soul engages with another's mind-body-soul in a lived moment. The shared moment of the present has the potential to transcend time and space and the physical, concrete world as we generally view it in the traditional nurse-patient relationship (p. 47).

"The world refers to all those forces in the universe, as well as a person's immediate environment and situation that affect the person, be they internal, external, human, humanmade, artificial, natural, cosmic, psychic, past, present or future" (Watson, 1988, p. 56).

Health, as defined by Watson (1988), "refers to unity and harmony within the mind, body, and soul. Health is also associated with the degree of congruence between the self as perceived and the self as experienced" (p. 48). "If there is harmony within a person's mind, body, and soul then a

sense of congruence will exist between the I and me; between the self as perceived and the self as experienced by the person" (p. 56).

Watson (1988) defines nursing as

a human science of persons and human health-illness experiences that are mediated by professional, personal, scientific, esthetic, and ethical human care transactions, wherein the nurse as a person is engaged as an active coparticipant in the human care transactions (p. 54).

"The goal of nursing proposed is to help persons gain a higher degree of harmony within the mind, body, and soul which generates self-knowledge, self-reverence, self-healing, and self-care processes while allowing increasing diversity" (p. 49). This allows for a higher degree of harmony.

Causal past is an important concept in Watson's theory and this study. Causal past "involves collective but unique past experiences and events that each person brings to the present moment" (Watson, 1988, p. 47).

The last concept in Watson's theory that is important in this study is the phenomenal field.

The totality of the experience at any given moment constitutes a phenomenal field. The phenomenal field is the individual's frame of reference and comprises the subjective internal relations and the meanings of objects, subjects, past, present, and future as perceived and experienced (Watson, 1988. p. 51).

The two variables of interest in this study are knowledge and attitude of the nurse regarding organ donation. The theoretical definitions of these two

variables are as follows: Morris (1973) states knowledge "is the familiarity, awareness, or understanding gained through experience or study" (p. 725) and attitude "is a state of mind or feeling with regard to some matter" (p. 85).

For the purpose of this study, Watson's concept of person was conceptualized as the registered nurse. Causal past was conceptualized as the knowledge the nurse possesses regarding organ donation. The background variables of interest (eg. age, religious affiliation, education) were conceptualized as part of the nurse's causal past. The phenomenal field was conceptualized as the attitude the nurse holds regarding organ donation. The situational variables of interest (eg. number of organ donors/recipients cared for, personal/family experience with organ donation) was conceptualized as part of the nurse's phenomenal field. The environment was conceptualized as the time and place the nurse starts caring for the patient. The goal of nursing, is achieved when the nurse supports any decision the patient and/or family makes regarding organ donation. At this point, the nurse can gain a higher degree of harmony, which is conceptualized as health.

The three research questions are: What knowledge do nurses possess and what attitudes do they hold regarding organ donation? What is the relationship between the nurse's education and the knowledge possessed regarding

organ donation? What is the relationship between the nurse's experience caring for organ donors/recipients and the attitudes held regarding organ donation?

This study is important to nursing because one must be able to describe the knowledge possessed and the attitude held by nurses regarding organ donation before one can begin to correlate these variables with other variables of interest: for example, the relationship between nurses' knowledge and attitude regarding organ donation and how they affect the organ donation process. Once the registered nurses' knowledge related to organ donation is determined, then appropriate education can be offered to improve or enhance. Knowledge enhancement may improve the nurse's ability to communicate with potential organ donors and/or their families and also improve the nurse's ability to identify potential donors. Attitudes are sometimes very difficult, if not impossible, to change; but with knowing the attitudes a nurse holds one may then correlate them with other variables.

Literature Review

The majority of the research done in the area of nurses' attitudes and knowledge regarding organ donation has focused on nurses working in the intensive care/critical care setting. Only one study looked at the broad range of nurses working in areas other than intensive care.

A two phase qualitative, quantitative study conducted

by Sophie, Salloway, Sorock, Volek, and Merkel (1983) looked at intensive care nurses' perceptions of cadaver organ procurement. In phase I, a staff of three social scientists observed 10 donor calls from first telephone contact with the organ procurement coordinator by a donor hospital until final distribution of organs. Operating procedures and coordinator perceptions regarding intensive care nurses' roles were compared across geographical regions and organizational structures for organ recovery. Phase II consisted of the distribution of questionnaires to 560 intensive care nurses employed in 27 hospitals. Three hundred and twelve nurses responded to the mailed questionnaires (55.7%). Ninety-six percent of respondents were female; 72% were associate degree graduates while the remaining 28% were graduates of colleges or universities. They had a mean of 8.4 years of nursing experience and a mean of 5 years intensive care experience. Forty-four percent had actual nursing experience in the care of a potential cadaver organ donor.

The results of the study showed that in clear-cut cases 65.8% of the nurses were able to identify instances in which donors were suitable, but only 20.7% could do so in cases that were less clear-cut. Also, 86% of the nurses approved of organ donation, and 80% stated they wanted to be donors themselves. Only 28%, though, actually carried donor cards. Twenty-five percent of the nurses did not know the

hospital's policy regarding cadaver organ donation. Lastly, 48.8% of the intensive care nurses were unaware of the attitudes of the neurologists and the neurosurgeons with whom they worked. These findings suggested that there may be inadequate knowledge regarding donor eligibility criteria.

The study had a good sample size that was randomly obtained (N=312) and was conducted in several hospitals of varying sizes, which facilitates generalization of findings. One limitation was the use of only intensive care nurses. The other limitation was the lack of information in the article on the reliability and validity of the instrument.

A descriptive study conducted by Stark, Reiley, Osiecki, and Cook (1983) examined attitudes affecting organ donation in the intensive care unit. Eight hospitals participated from the Boston area, of which 2 were metropolitan teaching institutions, 3 were community based with medical school affiliations, and 3 were community based with no medical school affiliations. Only one nurse from each intensive care unit collected data on a seven-item questionnaire each time a potential donor presented in the intensive care unit. The questionnaire looked at when a individual was recognized as a donor and by whom, the general attitude of family, nurses, physicians, and, if applicable, reasons why donations did not occur.

Twenty-six questionnaires were returned over 1 year.

Seventy-seven percent of the patients were recognized as potential kidney donors within 24 hours of admission to the intensive care unit, the physician was the first to recognize the patient as a potential donor in 35% of the cases, the nurse in 42% of the cases, and the nurse and physician concomitantly in 23% of the cases. Only eight donations actually took place, in which 88% of physicians, 100% nurses and 66% family members favored donation. Of the 18 donations that did not take place, 7 were for physiologic reasons, fear of physician litigation in 6, physician assessment of family inability to cope or agree in 2, and family reluctance in 3.

The fact that the nurse was the first person to recognize the patient donor in 42% of the cases could be explained by the nurse spending more time with the patient and the nurse researchers having had preliminary education about transplant opportunities. The study suggested that the attitudes of physicians and nurses dealing with the families whose attitudes were initially assessed as unsure but eventually became favorable were also described as favorable. The findings suggested a need for education of healthcare personnel and the public on organ donation.

Two limitations of this study were the small sample size (N=26) and a singular focus on kidney donors thus limiting the ability to generalize findings. Also, the preliminary training received by the nurse researchers at

the eight facilities may have biased the results of the nurse recognizing potential donors first. Lastly, estimates of reliability and validity of the instrument were not presented in the article.

Another study conducted by Prottas and Batten (1988) described a random sample of neurosurgeons (n=246), hospital administrators (n=222), directors of nursing (n=227), and ICU nurses (n=878). The neurosurgeons were mailed a 50-item questionnaire on organ donation and separate surveys (90-item questionnaire) were mailed to the other three groups from 344 hospitals. The hospitals were acute care of more than 100 beds and without their own transplant program. All four surveys were different but designed to measure attitudes and opinions about organ donation for each group. Subjects were randomly selected from each of the four groups. A representative sample of the public (n=750) also was surveyed by telephone about their attitudes towards organ donation.

The study found that more than 90% of all the professionals who supported organ donation, would donate their own organs and would consider giving permission for procurement of a relative's organs. Ninety percent of the public approved of organ donation, 72% would donate their own organs, and 53% would consider giving permission for procurement of a relative's organs. Seventy-one percent of the neurosurgeons saw themselves as supportive of organ

donation, whereas 26% of the nurses saw physicians as opposing organ donation. Lastly, 50% of the nurses thought brain death criteria were not well established.

The limits to the study included age variations within the groups surveyed, as well as education levels and gender differences between groups. Also, smaller hospitals (less than 100 beds) were excluded which may have influenced in the results. The study used only ICU nurses in the survey, which prohibits generalization to nurses working in other areas in acute care hospitals. Lastly, reliability and validity of the instruments were not discussed in this article.

A cross-sectional survey descriptive research design was utilized by Matten, Sliepcevich, Sarvela, Lacey, Woehlke, Richardson, and Wright (1988) to study nurses' knowledge, attitudes, and beliefs regarding organ and tissue donation and transplantation. A 70-item questionnaire based on two primary sources, the Donation of Human Organs for Transplantation Survey, and two public survey instruments with established content validity and reliability was used. Data were collected from 1,683 nurses employed in 62 hospitals in rural and urban centers in three states in the Midwest. Hospital size ranged from 29 - 1,054 beds. Eighty-eight percent of the sample were registered nurses with 27.8% holding an associate certificate, 28.2% a diploma certificate, 22.8% a bachelor's degree in nursing, 4.2% a

bachelor's degree in another discipline, and another 5.2% holding a degree beyond the bachelor's level. Twelve percent were licensed practical nurses. Medical/surgical (26.1%) and intensive care (16.1%) were the two most frequently identified units of assignment.

The authors found the nurses' knowledge of the criteria for organ donation had a mean score of 7.5 (with 10 as the possible high). A mean score of 62.29 (total possible score of 80) was found for nurses' personal beliefs toward organ and tissue donation and transplantation.

Strengths of the Matten et al., (1988) study were large sample size (N=1,683), nurse representation from differing educational programs, hospitals of varying sizes from multiple sites, and complete survey information. The authors did not discuss the strategies that contributed to the high response rate in a 3 week period.

Stoeckle (1990) used a convenience sample of critical care nurses (N=44) from a level one trauma center (n=17) and a private hospital (n=27) to examine the attitude of critical care nurses toward organ donation. The study correlated knowledge, selected situational and background variables to nurses' attitudes. The study used a descriptive correlational design. The Organ Donor Attitude Questionnaire, that was used, had established content validity and reliability.

Ninety-five percent of the critical care nurses surveyed reported a positive to strongly positive attitude toward organ donation. The belief in donating one's own organs was 86.4% but only 65.9% for donating the organs of a family member. No difference was seen between the attitudes of the critical care nurses from the trauma center and from the private hospital. Four of the six major areas demonstrating knowledge level of the organ donor identification and management criteria were poorly understood. Those four were: Electroencephalogram requirements (63.9%), initial injury under the influence of barbiturates (56.8%), less than 10 minutes needed to resume a heartbeat following cardiac arrest (47.7%), and age requirements (36.4%). Two major factors influenced the critical care nurses' attitude toward organ donation: increased knowledge about organ donation (75%) and previous experience caring for either organ donors or recipients (88.4%).

A limitation of the study was the sample (N=44) that included only critical care nurses, which impeded generalization. The questionnaire's reliability and content validity were discussed in the article.

The last relevant study used a descriptive correlational design (Bidigare and Oermann, 1991). The purpose of the study was to examine critical care nurses' attitudes and knowledge regarding organ donation. The

sample consisted of 75 registered nurses employed in critical care areas in a university-affiliated, 350-bed level 1 trauma center in the Midwest with no transplant program or institutional protocol for organ donation. Ninety percent of the nurses were female. Fifty-two percent held bachelor's degrees in nursing, 25% diplomas, 20% associate degrees, and 3% master's degrees. The respondents had a mean of 8 years of nursing experience. Seventy-one percent had previously cared for an organ donor, and 27% had previously cared for an organ recipient.

The instrument was a self-administered questionnaire, in which part 1 consisted of questions regarding attitudes toward organ donation, and part 2 consisted of questions assessing the nurses' knowledge regarding organ donor protocol used in their hospital. Reliability was not established by the authors and validity was not discussed in the article.

The results of the knowledge section of the questionnaire included 30 items where the scores for the variables were summed and a knowledge score obtained. The mean score for the entire group was nine ($SD=3$). Differences in scores were based on different demographic variables. Surgical intensive care nurses had the highest scores on knowledge of organ procurement procedures ($F[6, 53]=2.99, p=.01$). There was also a difference in the knowledge levels of nurses who had previous donor experience

and those without ($F[1, 58]=5.54, p=.02$). Nurses with higher knowledge scores were found to have more positive attitudes toward donating their own organs ($r=.33, p=.005$), the extent to which they would attempt to influence family members in donation ($r=.53, p<.001$), and the extent to which they would participate in the care of a patient for organ donation ($r=.44, p<.001$).

The limitations of this study included a convenience sample and the use of one hospital, thereby limiting the ability to generalize results. Reliability and validity of the instrument were not discussed in the article.

Summary of literature review.

The findings of all these studies suggested that overall nurses' attitudes toward organ donation were favorable. The literature also suggested that there appeared to be insufficient knowledge on the part of nurses regarding organ procurement. Because nurses are at the bedside of the patient around-the-clock and take the time to talk with patients and families, they are key to helping decrease the shortage of donated organs.

CHAPTER 3

METHODOLOGY

Research Design

The purpose of this descriptive correlational study was to explore the knowledge nurses possess and the attitudes they hold regarding organ donation. The study also described relationships between the nurse's education and the knowledge possessed regarding organ donation and the nurse's experience caring for organ donors/recipients and attitudes held regarding organ donation. The design allowed for the collection of basic data needed to further research in this area.

Setting and Sample

The setting for this study was a 300-bed medical center in southwestern Michigan that does not have an organ transplant program. This medical center has a policy and procedure for the organ, tissue, eye and/or other body parts donation process, as well as a policy and procedure on determination of brain death. Nurses are required to determine if the patient, upon admission, has an advance directive for healthcare. It is also part of the nurse's or supervisor's responsibility in post-mortem care to ask the families about their wishes for organ donation, if this was

not determined on admission. This medical center offers yearly education programs for the nursing staff on organ procurement, conducted by the Organ Procurement Agency of Michigan.

Eligible subjects for this study were registered nurses who practice in emergency room, critical care, medical/surgical, oncology, dialysis, or pediatric units. A convenience sample of approximately 200 registered nurses was obtained.

The characteristics used to describe the sample are listed in Tables 1, 2, and 3. The characteristics are divided into background variables and situational variables. To summarize the characteristics of this study's sample the subjects were generally female (95.9%), mean age of 36, with a Diploma/ADN (63.4%) or BSN (23.6%) education, and greater than 5 years of nursing experience (66.7%). The majority of the subjects had no experience caring for organ donors (60.2%), but more experience caring for transplant recipients (62.5% \geq 1 recipient). Ninety percent of the subjects have had no personal or family experience with organ donation and only about half (48%) have personally signed the back of their driver's license, indicating consent to be an organ donor.

Table 1

Demographic Background Variables of the Subjects (N=123)

Background Variables	n	%
Gender (N=123)		
Female	118	95.90
Male	5	4.10
Religious Affiliation (N=123)		
Catholic	28	22.80
Jewish	1	0.80
Protestant	30	24.40
Seventh-Day Adventist	27	22.00
No religious affiliation	14	11.40
Other	23	18.70
Education (Highest level) (N=121)		
Diploma/ADN	78	63.40
BSN	29	23.60
BS/BA non-nursing	7	5.70
MS in nursing	5	4.10
MA/MS non-nursing	2	1.60
Doctorate	0	0.00

Table 2

Professional Background Variables (N=123)

Background Variables	n	%
Attended organ donation/transplant seminar (N=123)		
Yes	55	44.70
No	68	55.30
Seminar attendance mandatory (N=55)		
Yes	27	22.00
No	28	22.80
Attended Values, ethics, moral development seminar (N=122)		
Yes	74	60.20
No	48	39.00
Seminar attendance mandatory (N=74)		
Yes	38	30.90
No	36	29.30
Area of specialty (N=123)		
Critical Care	46	37.40
Emergency Room	10	8.10
Medical/Surgical	34	27.60
Oncology	11	8.90
Dialysis	8	6.50
Pediatrics	14	11.40
Years of nursing experience (N=123)		
Less than 1 year	3	2.40
1-5 years	38	30.90
More than 5 years	82	66.70

Table 3

Professional Situational Variables (N=123)

Situational Variables	n	%
Number of cadaver organ donors cared for in career (N=123)		
None	74	60.20
1-2	20	16.30
3-4	18	14.60
5-6	5	4.10
7 +	6	4.90
Number of transplant recipients cared for in career (N=122)		
None	45	36.60
1-2	34	27.60
3-4	19	15.40
5-6	9	7.30
7 +	15	12.20
Personal/family experience with organ donation (N=123)		
Yes	12	9.80
No	111	90.20
Personally signed back of driver's license, consenting to be an organ donor (N=122)		
Yes	59	48.00
No	63	51.20

Instrument

The instrument used to collect data for this study was The Organ Donor Attitude Questionnaire (see Appendix A). This instrument investigates nurses' attitude and knowledge concerning organ donation. The questionnaire was divided into three sections: situational and background variables, knowledge level, and attitudes concerning organ donation. The first section provided data for correlational analysis. The background variables (eg. age, religious affiliation, education) were conceptualized as part of the nurse's causal past; and, the situational variables (eg. number of organ donors/recipients cared for, personal/family experience with organ donation) were conceptualized as part of the nurse's phenomenal field. These variables were used to describe the subjects (registered nurses) and to determine any correlation between selected background and situational variables and the nurse's knowledge and attitude regarding organ donation. Section two, which dealt with knowledge level, was related to the causal past of the nurse in Watson's theory. Section three, which dealt with attitudes, was related to the phenomenal field of the nurse in Watson's theory. The Organ Donor Attitude Questionnaire used three different levels of measurement. The levels of measurement were nominal (items 1-7A, and 10-16), ordinal (items 7B, 8, and 9), and interval (items 17-24). Items 17-24 (attitude toward donation) were rated using strongly agree=5, except

for questions 18, 21, and 23, which were inversely rated with strongly agree=1. The higher the total score for this section, the more positive the attitude of the nurse toward organ donation. The scores, from items 17-24, were used to measure the phenomenal field related to the nurses' attitude.

The knowledge level items (12-16) were measured at the nominal level. Each question was scored using 1 point for the correct answer, and 0 point for an incorrect answer. The lowest possible score for the knowledge level items was 0; the highest was 11.

Content validity was supported by the administrator of the Ohio Valley Organ Procurement Center and a panel of three masters-prepared critical care nurses. Cronbach Alpha was used to test the reliability of the questionnaire. The results of the Cronbach Alpha reliability for each section were knowledge level (.54) and attitudes concerning organ donation (.84). The KR-20 was used to reestablish reliability for the knowledge level items because they were dichotomous. Another Cronbach Alpha was done for the attitude items. The KR-20 for the knowledge items was .36, and the Cronbach Alpha for the attitude items was .76.

Procedure

A list of the registered nurses who were employed at the hospital and who worked in the emergency room, critical care, medical/surgical, oncology, dialysis, or pediatric

units was obtained from the nursing office, after permission was obtained to conduct this study from the Human Research Review Committee of Grand Valley State University (see Appendix B). The study hospital agreed to participate (see Appendix C). The investigator obtained permission from each of the directors of the nursing units to attend a staff meeting to explain the study to the nursing staff, ask for their assistance and distribute the questionnaires with a cover letter (see Appendix A) and self-addressed, stamped envelope to each nurse in attendance. The investigator mailed the questionnaire, with the cover letter and self-addressed, stamped envelope, to those staff nurses who were not at the staff meeting. The investigator placed a follow-up letter by the nurses' mailboxes on the units 2 weeks after the questionnaires were delivered.

Consent from each nurse was implied with the return of the completed questionnaire. No consent form was required. The data was collected over a 4 to 6 week period by the investigator. The investigator analyzed the data.

CHAPTER 4

RESULTS

A total of 123 eligible subjects returned the questionnaire (57%). Some subject did not answer all of the questions on the questionnaire. This fact accounted for the variation in the number of subjects among the tables.

The knowledge items listed in Table 4 described the frequency and percentages of each item answered correctly. The knowledge scores of the sample subjects showed that 87% of the scores fell within ± 1 SD from the mean score of 6.69. Only 6.5% had a knowledge score of 9 and there were no higher scores. The other 6.5% had scores of ≤ 4 . The lowest score was 2. Table 5 shows the frequency and percentage for each total score obtained with the nurses who participated in the study.

Table 4

Frequency Distribution of Knowledge Items - Correct Answers
(N=123)

Knowledge Items	Frequency	Percent
Brain death defined	117	95.10
Relative can give permission to donate	107	87.00
Physician can give permission to donate	3	2.40
EEG required to verify brain death	19	15.40
Candidacy for organ donation is diagnosed without brain activity by physician:		
60 yo malignant cancer/hypertension	8	6.50
39 yo subarachnoid hemorrhage	117	95.10
20 yo fell from roof, + barbiturates	76	61.80
18 yo motorcycle accident	121	98.40
20 yo head trauma, BP 90/60	110	89.40
30 yo required 2 min. CPR to get pulse	88	71.50
74 yo motor vehicle accident	57	46.30

Table 5

Frequency Distribution of Knowledge Scores (N=123)

Score	Frequency	Percent
2	1	0.80
4	7	5.70
5	14	11.40
6	29	23.60
7	35	28.50
8	29	23.60
9	8	6.50

Mean score 6.69, SD 1.35

Note. 87% of the knowledge scores fell within ± 1 SD from the mean score. Only 6.5% had a score of 9, which was the highest score out of a possible 11. The other 6.5% had scores of ≤ 4 .

The attitudes held by the nurses in this study are summarized in Table 6. Attitudes were rated using a scale of 1 to 5. The higher the score, the more positive the attitude of the nurse toward organ donation. The attitude scores, on the individual items, showed a mean of 3.60 to 4.47 (agree) when asked about approving of cadaver organ donation, willingness to donate one's own or a child/family members organs, and willingness to discuss organ donation with one's family. The subjects' attitude concerning organ donation were influenced most by increased knowledge of the subject (mean=4.27, SD=.74) and least by friends' attitudes (mean 2.49, SD=1.17). Because the attitude items were scored separately, there is no frequency distribution table included.

Table 6

Means for Attitude Items (N=123)

Attitude Items	Mean	SD
Approve of cadaver organ donation	4.35	.94
Would donate own organs	4.02	1.16
Would donate organs of child/family	3.96	1.10
Would discuss organ donation - family	4.25	.75
Do not feel it is right to prolong life through human organ transplant	4.39	.91
Removal of organ's before heart stops violates person's rights	3.60	1.28
Organ donation is more trouble than it's worth	4.47	.81
<hr/>		
Attitude concerning organ donation influenced by my:		
Family attitudes	3.15	1.36
Friend's attitudes	2.49	1.17
Work experience with organ donation	3.59	1.16
Nursing school education	3.49	1.17
Increased knowledge of subject	4.27	.74
Religious beliefs	3.27	1.14

Note. The higher the score (mean), the more positive the attitude regarding organ donation.

The last two research questions dealt with relationships; correlations were measured using Spearman's rho (r). The second research question looked at the relationship between the nurse's education and the knowledge possessed regarding organ donation. The number of valid subjects for this question was 121. The correlation coefficient was $\rho=.64$, $p=.48$. The education was coded to incorporate all levels of education. The third research question looked at the relationship between the nurse's experience caring for organ donors/recipients and attitudes held regarding organ donation. The correlation between the nurse's experience caring for organ donors and attitudes held regarding organ donation was $\rho=.35$, $p=.71$. The correlation between the nurses's experience caring for organ recipients and attitudes held regarding organ donation was $\rho=.19$, $p=.04$, which shows a weak relationship.

CHAPTER 5

DISCUSSION/CONCLUSIONS

Watson's theory of human caring focuses on two transpersonal dimensions that include the nurse and the patient. This study focused on the transpersonal dimension of the registered nurse. The transpersonal dimension includes the registered nurse's causal past and phenomenal field.

Causal past included the background variables describing the registered nurses in the study and the knowledge possessed by those registered nurses regarding organ donation. It does not appear, from this study, that the levels of nursing education makes any difference in the knowledge and attitudes regarding organ donation. The knowledge level of registered, nurses regardless of education, appears inadequate. This along with the low knowledge scores may affect the causal past of the registered nurse in a negative way. According to Watson (1988), "each person's causal past has the potential to influence the future" (p. 47). Therefore, the lack of knowledge the registered nurse has regarding the organ donation process may affect their ability to recognize a

potential organ donor and their ability to support the decisions of the patient and/or family in relations to organ donation.

The phenomenal field of the registered nurses in this study included the attitude of the registered nurses regarding organ donation and the situational variables describing the registered nurses. The phenomenal field is, according to Watson (1988), "the totality of the experience at any given moment and is the individual's frame of reference" (p. 51). The registered nurses frame of reference includes a positive attitude regarding organ donation but no relationship was found between their experiences in caring for organ donors/recipients and their attitudes. According to Watson (1988), "how a person perceives and responds in a given situation depends upon the phenomenal field (subjective reality) and not just upon the objective conditions or external reality" (p. 55). Therefore, the registered nurse's phenomenal field may affect their ability to support decisions of the patient and/or family in relations to organ donation.

Using Watson's concepts of causal past and phenomenal field, this study suggests that it might be difficult for the nurse to realize and accurately detect the feelings and the inner condition of the patient. Because of their lack of knowledge, the nurse might not be able to communicate with potential organ donors and/or their families. Also,

the nurse's ability to identify potential donors may be hampered. As a result, the registered nurse, according to Watson, may not be able to reach the goal of nursing, which is to support any decision the patient and/or family makes regarding organ donation and therefore not gain a higher degree of harmony, which is health.

Relationship of findings to previous research

The relevance of this study's findings to previous research will be discussed now. Sophie et al. (1983) found that the intensive care nurses (N=312) surveyed were able to identify potential organ donors in clear-cut cases (65.8%), but only 20.7% could do so in cases less clear-cut. This suggested inadequate knowledge, on the part of the intensive care nurses, regarding donor eligibility criteria. This study found that 86% of the nurses approved of organ donation, but only 28% actually carried donor cards. This study supported Sophie's et al. (1983) work in that even though the nurses have positive attitudes toward organ donation, their knowledge level of the organ donation criteria/process is inadequate.

Stark et al. (1983) found that attitudes of nurses in the ICU increased organ donation of kidneys in eight hospitals. This study suggested that the attitudes of nurses dealing with families whose attitudes were initially assessed as unsure, but eventually became favorable, were favorable. This study suggested that the nurse's attitude

regarding organ donation might be affected by the family's attitude.

Stark et al. (1983) also described a lack of knowledge of the organ donation process on the part of the nurses. The findings of this study supported Stark et al. (1983) in that the knowledge level of the nurses regarding organ donation was found inadequate. Stark et al. (1983) findings about the attitudes of the nurses was different from this study, but this might be due to a variety of variables such as the nurse spending more time with the patient, the patient donating only kidneys, and the nurse researchers having had preliminary education about transplant opportunities.

Prottas and Batten (1988) surveyed intensive care nurses (n=878) to measure attitudes and opinions about organ donation. Ninety percent of the nurses supported organ donation, would donate their own organs and would give permission of a relatives's organs. Fifty percent of the nurses thought brain death criteria were not well established. The findings from this study, positive attitudes toward approval of organ donation (mean=4.35), donation of own organs (mean=4.02), and donation of organs of child/family (mean=3.96), supported the findings of Prottas and Batten (1988).

Matten et al. (1988) conducted a study similar to this study. Their study looked at nurses who practiced in a

variety of settings in the hospital. The study's results suggested a lack of nurses' knowledge of the organ donation criteria, but an overall positive attitude toward organ and tissue donation and transplantation. The findings from this study supported the findings of Matten et al. (1988).

Stoeckle (1990) looked at the attitudes and knowledge of critical care nurses (N=44). The results suggested that critical care nurses had a positive attitude toward organ donation, but a lack of knowledge in 4 of the 6 major areas demonstrating knowledge of the organ donor identification and management criteria. Another similar finding in Stoeckle's (1990) study and this study was that a major factor that influenced the critical care nurses' attitude toward organ donation was an increased knowledge about organ donation. The findings of this study supported the work of Stoeckle (1990).

The last study conducted by Bidigare and Oermann (1991) examined critical care nurses' attitudes and knowledge regarding organ donation. The study revealed positive attitudes toward organ donation but a lack of knowledge regarding organ donation criteria. Findings from their study noted similar positive attitudes of and knowledge deficits in nurses from a variety of clinical units. Bidigare and Oermann (1991), and Prottas and Batten (1988) conducted studies in hospitals that had no organ transplant programs. Likewise, this study was conducted in a hospital

that had no organ transplant program.

The results of this study are similar to previous studies related to this topic. Even though nurses have a positive attitude regarding organ donation, the knowledge they possess regarding organ donation is insufficient. These factors may influence the organ donation process by not allowing the nurse to identify potential donors.

This study contributed to the research in this area by obtaining results similar to previous research. It also broadens the database from previous research by including registered nurses that practice in a variety of clinical settings.

Limitations and recommendations

One major limitation of this study is the low reliability score (.36) of the knowledge level items on the Organ Donor Attitude Questionnaire. This severely limits the ability to use the data from this area, both to describe the sample and to obtain accurate correlation coefficients. Two other limitations are the use of a convenience sample and the use of one hospital, which limits the ability to generalize results. Another limitation is that the hospital used to collect the data does not have a transplant program, which may affect the knowledge level of registered nurses regarding the organ donation process.

The first recommendation, before this study is replicated or as an idea for future research, is that the

questionnaire needs to be revised, especially the knowledge level items, to improve the reliability of the instrument. Future research needs to randomly select nurses from multiple hospitals of varying sizes to enhance generalizability.

Implication for nursing

Through the use of Watson's theoretical framework in this study, it is important that change occur in the registered nurse's causal past and phenomenal field in order for the nurse to support any decision of the patient and/or family regarding organ donation. An important implication of this study, as with previous studies, is the need to increase the registered nurses' knowledge level as it relates to the organ donation process. Even with the increased number of programs to promote awareness of healthcare professionals toward organ donation, the need for more or for a different type of education is needed. Future research might focus on the type of education provided, its effectiveness and the need for a different education focus.

APPENDICES

Appendix A

STANDARD RELEASE FORM

38

May 1, 1994

Dear Registered Nurse,

I am a graduate nursing student at Grand Valley State University and conducting a study on the knowledge nurses possess and the attitude they hold regarding organ donation. There are more than 30,000 people on a national list for organ transplant, seven of them will die today, and another person joins the waiting list every 20 minutes. There is a continuous debate about the knowledge level of people about organ donation and how much knowledge is necessary. There are many ethical questions being asked about organ donation. I hope you will feel free to answer the questions in this survey honestly.

I am asking for your participation in this survey, which will require about 30 minutes of your time. You will complete a series of questions, but at no time will your name be asked on the survey form. By completing and returning the questionnaire, you are giving your consent to participate in this study.

In completing this questionnaire, you will be contributing to your profession overall by adding to the growing body of nursing literature and research. Your responses will help determine the need for education for nurses on their role in the organ procurement process.

Please return the survey in the self-addressed envelope by June 1, 1994.

Thank you very much for your participation.

Sincerely,

Maureen Bishop, RN, MA

ORGAN DONOR ATTITUDE QUESTIONNAIRE

Do not write in this space

1. What is your age? _____
2. What is your gender? 1. Female _____ 2. Male _____
3. What is your religious affiliation?
 1. Catholic _____
 2. Jewish _____
 3. Protestant _____
 4. Seventh-Day Adventist _____
 5. No religious affiliation _____
 6. Other _____
4. What is your education background? (Check your highest degree level only)
 1. Diploma program _____
 2. BSN program _____
 3. BS/BA non-nursing _____
 4. MS in nursing _____
 5. MA/MS non-nursing _____
 6. Doctoral program _____
5. Have you ever attended a course, seminar, or workshop concerning organ donation or transplantation?
 1. Yes _____
 2. No _____

If yes, was this mandatory to fulfill degree, work, or continuing education requirements?

 1. Yes _____
 2. No _____
6. Have you ever attended a course, seminar, or workshop concerning values, ethical, or moral development?
 1. Yes _____
 2. No _____

If yes, was this mandatory to fulfill degree, work, or continuing education requirements?

 1. Yes _____
 2. No _____
7. A) What is your area of specialty?
 1. Critical Care _____
 2. Emergency Room _____
 3. Medical/Surgical _____
 4. Oncology _____
 5. Dialysis _____
 6. Pediatrics _____

B) What are your years of nursing experience?

 1. Less than 1 year _____
 2. 1-5 years _____
 3. More than 5 years _____

(5-6)

(7)

(8)

(9)

(10)

(11)

(12)

(13)

(14)

(15)

8. How many cadaver organ donors have you taken care of in your nursing profession?

1. None _____
2. 1-2 _____
3. 3-4 _____
4. 5-6 _____
5. 7 + _____

(16)

9. How many transplant recipients have you taken care of in your nursing profession?

1. None _____
2. 1-2 _____
3. 3-4 _____
4. 5-6 _____
5. 7 + _____

(17)

10. Have you had any personal or family experience with organ donation?

1. Yes _____
2. No _____

(18)

11. Have you personally signed the back of your driver's license, consenting to be an organ donor?

1. Yes _____
2. No _____

(19)

12. Which of the following statements best describes the term brain death?

1. A) _____ When both the brain and the heart stop functioning.
2. B) _____ When the brain stops functioning, even if the heart is kept beating by artificial means.
3. C) _____ When either the brain or heart stops functioning.
4. D) _____ Don't know.

(21)

Please draw a circle around the letter under each statement which best represents your reaction to that statement. Try to respond to each statement. The meaning of the letters are:

Y = Yes
N = No
D = Don't know

13. A relative of an individual that has died can give permission for that person's organs to be donated.

Y N D

(22)

14. A licensed physician can give permission to donate organs of an individual that has died.

Y N D

(23)

15. An electroencephalogram (EEG) is required for all potential donors to verify brain death.

Y N D

(24)

16. Would you consider the following patients as candidates for heart, liver, or kidney donation if they were diagnosed by a physician to be without brain activity?

Circle one letter:

- A) Sixty year old male with malignant lung cancer and hypertension.

Y N D

(25)

- B) Thirty-nine year old male with a subarachnoid hemorrhage.

Y N D

(26)

- C) Twenty year old male who fell from the roof of a house under the influence of barbiturates. No injury to heart, kidneys, or liver.

Y N D

(27)

- D) Eighteen year old female in a motorcycle accident. No injury to heart, kidneys, or liver.

Y N D

(28)

- E) Twenty year old female with head trauma, blood pressure 90/60.

Y N D

(29)

- F) Thirty year old female in the intensive care unit; two minutes of CPR required to resume heartbeat.

Y N D

(30)

- G) Seventy-four year old male involved in car accident. No damage to heart, kidneys, or liver.

Y N D

(31)

Please draw a circle around the letter under each statement which best represents your reaction to the statement. Try to respond to each statement. The meaning of the letters are:

SA = Strongly agree
A = Agree
U = Undecided
D = Disagree
SD = Strongly disagree

17. I approve of cadaver organ donation.

SA A U D SD

(33)

18. I do not feel it is right to prolong life through the use of human organ transplants.

SA A U D SD

(34)

19. I would donate my own organs.

SA A U D SD

(35)

20. I would donate the organs of my child or family member.

SA A U D SD

(36)

21. The removal of a person's organs before the heart stops is a violation of a person's rights.

SA A U D SD

(37)

22. I would be willing to sit down and discuss organ donation with my family.

SA A U D SD

(38)

23. Organ donation is more trouble than it's worth.

SA A U D SD

(39)

Please fill in the sentence with each of the following statements and continue to draw a circle around the letter to the right of each statement which best represents your reaction to that statement. The letters represent:

SA = Strongly agree
A = Agree
U = Undecided
D = Disagree
SD = Strongly disagree

24. My attitude concerning organ donation is influenced by my _____

A) Family attitudes	SA	A	U	D	SD
B) Friend's attitudes	SA	A	U	D	SD
C) Work experience with an organ donor or recipient	SA	A	U	D	SD
D) Nursing school education	SA	A	U	D	SD
E) Increased knowledge of the subject	SA	A	U	D	SD
F) Religious beliefs	SA	A	U	D	SD

(40)

(41)

(42)

(43)

(44)

(45)

THANK YOU FOR YOUR PARTICIPATION IN THIS SURVEY !

Appendix B



1 CAMPUS DRIVE • ALLENDALE MICHIGAN 49401-9403 • 616/895-6611

March 25, 1994

Maureen Bishop
4559 Coloma Road
Coloma, MI 49038

Dear Maureen:

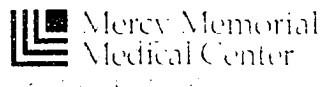
Your proposed project entitled "*Nurses' Knowledge and Attitude Related to Organ Donation*" has been reviewed. It has been approved as a study which is exempt from the regulations by section 46.101 of the Federal Register 46(16):8336, January 26, 1981.

Sincerely,

A black rectangular box redacting the signature of Paul Huizenga.

Paul Huizenga, Chair
Human Research Review Committee

Appendix C



Grand Valley State University
Kirkhoff School of Nursing
Graduate Program
Allendale, MI 49401

December 7, 1993

To whom it may concern,

This letter is written to give Maureen Bishop, RN, MA permission to use the nursing staff at Mercy Memorial Medical Center in St. Joseph, MI for her master's thesis. It is understood that Maureen will be using the nurses as her sample subjects for data collection and analysis.

If there are any questions, please feel free to contact me.

Sincerely,

[Redacted signature]

Katy Jones, RN, MS
Vice President of Inpatient Nursing
616-983-8133

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