

THE RELATIONSHIP BETWEEN MOTIVATION TO VOLUNTEER, GENDER, CULTURAL MISTRUST, AND WILLINGNESS TO DONATE ORGANS AMONG BLACKS

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The relationship between motivation to volunteer, gender, cultural mistrust, and the willingness of blacks to donate their organs, as well as the organs of relatives, was explored. Participants consisted of 107 black students attending a university located in the southwest. All participants were given the Volunteer Functions Inventory (VFI), Cultural Mistrust Inventory (CMI), Organ Donation Questionnaire (ODQ), and a background information questionnaire. It was found that individuals with low scores on the VFI and high scores on the CMI were less willing to consent to donating their organs. Also, females and individuals with high CMI scores were less willing to permit the recovery of organs from relatives. Some theoretical and applied implications for mental health professionals are suggested. (*J Natl Med Assoc.* 2004;96:53–60.)

Key words: mistrust ♦ organs ♦ blacks

Research indicates that, in general, there is an ongoing need for organ donations in this country. According to the United Network for Organ Sharing (UNOS) during the calendar year 1999, slightly over 21,000 transplants were done. However, for that same period, over 71,600 individuals were on the waiting list for a transplant. Thus, recent statistics indicate that less than 30% of those needing transplants will ultimately receive one.

Previous findings indicate that the shortage of transplantable organs has had a major adverse effect upon the mortality of African Americans. According to Siminoff and Arnold,¹ African-American

persons are more likely to have end-stage renal disease and require a kidney transplant than Americans of other ethnic groups. Further, blacks are less likely to receive donor kidneys. For example, although 35.6% of the 39,924 persons on the kidney transplant waiting list were black, this population waited a median of 39.7 months for a kidney before either dying or receiving a transplant. In comparison, white Americans were on the waiting list approximately 20.1 months.

A major impediment to increasing the number of transplants available within the black community is the lack of blacks either volunteering to donate their organs or willing to consent to the recovery of organs from relatives. Small sample studies have reported that African Americans decline to donate organs two to three times more often than white Americans. Siminoff and Arnold¹ found that among in-hospital requests for organ donations, 47.9% of white families consented to donating their organs, compared with 33.3% of African Americans.

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Table 1. Correlations Among Measures of Volunteerism, Gender, Cultural Mistrust, and Willingness to Donate Organs (N=107)

| Measure | 1 | 2 | 3 | 4 | 5 |
|--------------|-------|------|--------|----------|---------|
| 1. VFI | -- | 0.01 | -0.18* | 0.28** | -0.01 |
| 2. Gender | | -- | -0.19* | -0.01 | -0.27** |
| 3. CMI | | | -- | -0.44*** | -0.16* |
| 4. Self | | | | -- | 0.22* |
| 5. Relatives | | | | | -- |
| M | 91.45 | | 137.41 | 3.70 | 2.98 |
| SD | 32.76 | | 27.16 | 2.12 | 1.80 |

Note: N=107

VFI=Volunteer Functions Inventory
 CMI=Cultural Mistrust Inventory
 Self=Willingness to Donate Own Organs rating
 Relative=Willingness to Consent to Harvesting of Relatives' Organs rating

*p <0.05 **p <0.01 ***p <0.001

Other research indicates that, without some form of intervention, this trend may not improve in the foreseeable future. For example, a recent survey² found that only one-third of African Americans and Hispanics planned to be organ donors, compared with more than half of white Americans.

Several theories have been proposed to account for why people in general are less willing to donate their organs. One common explanation is that individuals who agree to donate their organs tend to be more altruistic. Altruism is typically defined as the extent to which an individual is willing to volunteer to help others³.

Various theories have been proposed to account for why people volunteer. According to Badcock³, Freud believed that individuals help others in order to preserve their species. In contrast, Skinner⁴ argued that individuals would be willing to help others if they are reinforced for that behavior. However, Skinner argues that no single reinforcer is predictive of the extent to which a person is willing to engage in altruistic behavior³. Instead he proposes that the extent to which the person is altruistic depends upon the availability of a broad class of reinforcers, which, he argues, results in the person feeling contented³. Eisenberg⁵ essentially agrees with Skinner and defines altruism as a manifestation of prosocial action that is directed toward alleviating another's need. She argues that whether a

person will help another is due to the socialization process. Thus, an individual is more likely to help others when that person believes the behavior will result in favorable recognition from others⁵. However, Eisenberg admits that while an individual may engage in prosocial behavior in order to receive recognition from others, it cannot account for all reasons individuals may or may not volunteer to assist others. That is, individuals may volunteer to help for reasons other than concern about others. More recently, Clary and Snyder⁶ have suggested that some additional reasons people may help others might include peer pressure, whether they believe it is important to their career, or to relieve feelings of guilt.

In addition to altruism, another possible reason which may be related to the organ donation rate among blacks may be that they do not trust whites. Several theorists seem to agree with this possibility. Crawley⁷ has argued that blacks tend to have a general distrust of the medical system. There is some limited research which is consistent with this possibility. Kittur, McGaw, Roy, and Nelson⁸ conducted a telephone survey and held group discussion sessions consisting of individuals who were either for or against donating organs. These investigators reported that the nondonors demonstrated a high level of mistrust of the fairness of the organ allocation system. Those in the donor focus group, on the other hand, believed that the system was equitable. Additional analyses indicated that a significantly higher number of individuals in the non-donor group were black relative to those in the donor group. Indeed, this mistrust extended to the entire medical profession. No differences in knowledge about organ donation and transplantation were found between donors and nondonors.

Previous research has found that blacks tend to be mistrustful of whites and that this mistrust tends to be related to their behavior in mental health settings⁹. For example, it has been found that blacks who tend to mistrust whites are more likely to terminate counseling prematurely especially when they believe that they will be seen by a white counselor or they perceive the healthcare facility as being controlled by whites.⁹ In studies further exploring the relationship between mistrust level and participation in the health system among blacks, it was found that blacks who do not trust whites do not believe that they will receive the same quality of care from whites.¹⁰ Given the tendency of

blacks to mistrust whites in a wide variety of situations, including counseling centers, it is also possible that this tendency could influence their willingness to donate organs or consent to permitting the organs of relatives to be recovered. However, whether the extent to which blacks trust whites is related to their willingness to either donate organs or agree to allow the recovery of organs from relatives has not been systematically examined.

The identification of those variables, as well as the relative contributions of those variables related to organ donations among blacks, is viewed of as being an essential initial step to identifying where to focus efforts directed toward devising counseling and other intervention strategies which may be useful for motivating blacks to donate organs, as well as agreeing to allow the recovery of organs from relatives. This study was designed to fill that void.

METHOD

Participants

Our original sample consisted of 120 black students enrolled in psychology courses at a predominantly white, public university located in the southwest. However, three females became upset while completing the questionnaires and could not continue. These individuals were immediately referred to a black, licensed clinical psychologist. An additional 10 participants were not included in this study, because they provided incomplete information. Of the remaining participants, 35 were males and 72 were females.

MEASURES

All participants were given the following inventories: Clary, Snyder, Ridge, Copeland, Stukas, Haugen & Miene¹¹ Volunteer Functions Inventory (VFI). This inventory is based upon functional theory and attempts to identify the reasons why individuals are willing to help others and consists of subscales measuring these reasons¹¹. However, the authors point out that the VFI is a generic inventory and that total VFI scores may be used to assess general level of willingness to volunteer. The VFI consists of 30 items. Participants respond to each statement using a seven-point Likert format ranging from "not at all important/accurate" to "extremely/important/accurate." Higher scores indicate a higher level of willingness to volunteer. Using Cronbach's alphas, the authors report an

average internal reliability estimate of 0.82 and an average four-week test-retest reliability estimate for the subscales ranging of 0.71. Finally, the construct validity of this inventory was explored. It was found that individuals with high VFI scores had greater satisfaction with their volunteer activities and greater intentions to continue to volunteer in the future.¹²

Terrell and Terrell¹³ Cultural Mistrust Inventory (CMI)

This inventory was designed to identify the extent to which blacks trust whites and consists of 48 items which uses a seven-point Likert-type scale ranging from "strongly agree" to "strongly disagree."¹³ This inventory has demonstrated a low correlation with a social desirability test. Also, a two-week test-retest reliability estimate of 0.82 has been found between item correlations and total score on the CMI range between 0.34 to 0.47. There is extensive support for the construct validity of this instrument. Numerous studies by both the authors and others have been conducted using this inventory.¹⁴⁻¹⁶

Organ Donation Knowledge Questionnaire (ODQ)

This measure was developed especially for this study. This measure is composed of 20 questions and consists of three parts. Part A contains 10 questions designed to assess an individual's knowledge about facts and myths regarding organ donations. For example, one question asks respondents whether they will be disfigured if they consent to donating their organs. Participants are asked to answer each question using a true-or-false format. These questions are based upon the United Network for Organ Sharing, Top 10 Myths about Donation, 2000.

Part B is composed of five questions designed to obtain information about participants' own current and previous experience with organ donations. These questions ask participants whether they have ever had an organ transplant, if they currently need an organ transplant, whether they have a relative who needs an organ transplant, whether they have a relative who has had an organ transplant, and whether they have had a relative die because they were not able to obtain a transplantable organ.

Part C consists of five questions about their own organ donation behaviors and attitudes. This

Table 2. Summary of Hierarchical Regression Analysis for Variables Predicting Willingness to Donate Organs (N=107)

| Step and variable ¹ | Own Organs ¹ | | B | Relatives' Organs ² | | B |
|--------------------------------|-------------------------|------|----------|--------------------------------|------|----------|
| | B | SE B | | B | SE B | |
| Step 1 | | | | | | |
| VFI | 1.29 | 0.01 | 0.25*** | 4.36 | 0.01 | 0.01 |
| Step 2 | | | | | | |
| VFI | 0.24 | 0.01 | 0.24 | 1.35 | 0.01 | 0.03 |
| Gender | 0.39 | 0.36 | 0.10 | -0.91 | 0.35 | -0.25** |
| Step 3 | | | | | | |
| VFI | 5.82 | 0.01 | 0.11 | 5.79 | 0.01 | -0.12 |
| Gender | 9.74 | 0.35 | 0.02 | -1.20 | 0.33 | -0.33*** |
| CMI | -2.42 | 0.01 | -0.39*** | -2.56 | 0.01 | -0.44*** |

VFI=Volunteer Functions Inventory; CMI=Cultural Mistrust Inventory
 1. R²=0.06 for Step 1; Δ R=0.01 for Step 2; Δ R=0.13 for Step 3
 2. R²=0.00 for Step 1; Δ R=0.06 for Step 2; Δ R=0.21 for Step 3

Note: Δ R = R² Change
 *p<0.05; **p<0.01; ***p<0.001

includes their willingness to donate their organs, willingness to consent to allowing the recovery of organs from a close relative if asked to do so, a question asking if they had ever consented to having an organ of a relative recovered, and a question asking if they had consented to having their organs donated. Those questions in Part C pertaining to behavior are answered using a yes-or-no response format, while those questions regarding willingness are answered using a seven-point Likert scale format, ranging from "unlikely" to "highly likely." The face validity of this measure has been examined by five doctorate-level clinical and counseling psychologists, a physician, and a second year medical student. These individuals were asked to review the questions for accuracy and clarity. The feedback from these individuals was used to rewrite the items for accuracy and clarity. These rewritten items were then resubmitted to the judges for additional recommendations. This process was continued until all judges agreed that all items were clearly written and that the part of the ODQ assessing respondents' knowledge was correct answers to the questions. A copy of the ODQ is available in Appendix A.

Background Information Questionnaire

This inventory was also designed especially for

this project. This questionnaire was used to obtain descriptive information regarding participants' age, gender, marital status, educational level, and income level.

PROCEDURE

Participants were recruited from a large university located in the Dallas–Fort Worth area and given experimental credit that could be used to improve their grades in some classes in exchange for participating in this study. After completing the informed-consent form, all participants were initially given the ODQ, Background Information Questionnaire, and VFI. The CMI was given last. As many participants as possible were also contacted after a two-week time period had elapsed and asked to fill out the ODQ again. These participants, a sample of 67 students, were given additional experimental credit.

DATA ANALYSES

To explore the psychometric properties of the ODQ, a two-week test–retest reliability study was conducted which yielded a value of 0.87. Kuder-Richardson estimates, which yielded values of 0.93 and 0.92 respectively, were obtained for parts A and B of the ODQ. The internal reliability of the other measures was also examined. A Cronbach's

alpha of 0.89 was found for Section C of the ODQ, while a value of 0.74 was found for the VFI, and a value of 0.79 was obtained for the CMI. Initially, the correlations as well as the means and standard deviations were computed for all measures. These results are available in Table 1.

To explore the hypotheses of this study, two hierarchical regression analyses were performed. This is a procedure which has been described elsewhere by Cohen and Cohen¹⁷. The predictor variables consisted of scores on the VFI and CMI. Because gender differences have been found in a number of studies¹⁸ in the literature, this was also included as a predictor variable. The outcome variable for the first regression consisted of participants' ratings of the extent to which they would be willing to donate their own organs. The second outcome variable consisted of students' rating of the extent to which they would be willing to consent to permitting the recovery of organs from relatives.

The major purpose of this study was to examine the relative unique potential contribution of cultural mistrust to participants' willingness to participate in the organ donation system. Therefore, other possible reasons which might be related to willingness to donate organs were removed first. Since altruism—as defined by willingness to volunteer to help others—has most often been implicated as the reason individuals are willing to donate their organs, VFI scores were entered first for both regressions. Recently, Person and Bieschke¹⁹ has suggested that black females develop a special attachment to their family, and this relationship has an impact upon their behaviors, including career choices. Since gender may have been an important influence upon blacks' willingness to donate organs, this variable was entered next. The final predictor variable entered were scores on the CMI. Those questions asking participants if they had ever consented to allowing organs from relatives to be removed were not used in any analyses, since none of the respondents indicated that they had ever donated an organ or been asked to make a decision regarding the donation of a relative's organs. Also, the knowledge section of the ODQ was not used in the analysis, since the participants got all or almost all of these questions correct ($M=9.23$, $SD=0.56$). Therefore, for this particular sample, knowledge about organ donation did not seem to be an important consideration. The results of the two regression analyses can be found in Table 2.

As can be seen for the first regression, scores on the VFI were predictive of participants' willingness to donate their organs [$R=0.25$, $F(1, 105)=7.15$, $p<0.001$] and accounted for 0.06% of the variance. CMI scores were also a significant predictor of participants' willingness to donate their organs [$R=0.44$, $F(1,103)=8.59$, $p<0.001$] and accounted for an additional 6% of the variance. For the second regression in which participants' willingness to consent to allowing the recovery of organs from relatives was used as the outcome variable, scores on the VFI did not account for a significant percentage of variance. However, gender was a significant predictor of participants' willingness to consent to allowing the harvesting of organs from relatives [$R=0.24$, $F(1, 104)=3.29$, $p<0.05$]. Thus, gender accounted for an initial 6% of the variance. Scores on the CMI were also a significant predictor [$R=0.45$, $F(1, 103)=9.12$, $p<0.001$] and accounted for an additional 15% of variance.

To further explore whether a relationship exists between participants' willingness to donate their organs and level of mistrust, a Multivariate Analysis of Variance (MANOVA) was conducted comparing differences between participants who did and did not sign donor cards. An overall significant difference was found between donor and nondonor groups, Wilk's Lambda=0.245, $F(2,103)= 7.99$, $p<0.001$. Univariate F tests further revealed significant differences between groups on both the VFI [$F(2, 104)=3.72$, $p<0.027$] and CMI [$F(2,104)=16.54$, $p<0.001$]. The means and standard deviations between groups may be found in Table 3.

DISCUSSION

As anticipated, a significant relationship was found between motivation to volunteer and participants' willingness to donate their organs. More precisely, individuals who were more willing to engage in volunteer activities were more willing to donate their organs. However, motivation to volunteer was not found to be related to the extent to which blacks were willing to consent to the recovery of organs from relatives. This finding is consistent with the literature indicating that altruism is, at least in part, an important predictor of one's willingness to consent to donating their own organs. However, at least for our sample of black students, apparently, while altruism may be a significant predictor of an individual's willingness to volunteer their own organs, it is not a significant predictor of their willingness to

Table 3. Means and Standard Deviations of Donor and Nondonor Groups on the Volunteer Functions and Cultural Mistrust Inventories

| Group | Volunteer Functions Inventory | | Cultural Mistrust Inventory | |
|-----------------|-------------------------------|-------|-----------------------------|-------|
| | M | SD | M | SD |
| Donor (n=35) | 101.37 | 39.02 | 121.22 | 27.53 |
| Nondonor (n=72) | 86.63 | 28.30 | 145.27 | 23.38 |

allow the harvesting of organs from relatives. This may be a potential problem since, in many instances, individuals who are candidates for donating their organs are not permitted to decide whether their organs may be used for transplantation. Only the relatives of those individuals can consent to allowing that person's organs to be removed. Therefore, intervention strategies designed to increase one's willingness to allowing the recovery of organs from relatives seems to be essential.

An unexpected finding was that females were less willing than males to consent to the removal of organs from relatives. This was a surprising finding at least to us, since it has been suggested that females are more caring than males about others.¹⁷ Thus, if anything, it would seem as if females would be more willing than males to permit the removal of organs from relatives. Several possible reasons may account for this finding. One is that, traditionally, females have not assumed a decision making role in this society. Therefore, females may have been less willing to consent to the removal of organs from relatives with the assumption that another, perhaps male member of the family would be the more appropriate person to make that decision. Another, more plausible possibility for this finding may be that black females were less willing to allow the recovery of organs from relatives because they care so intensely about family members. Therefore, females were less willing to allow what they might view as permitting the bodies of relatives to be damaged. Assuming that gender differences are replicated in other studies, research designed to identify exactly why black females are less willing to permitting the harvesting of organs from relatives would be useful.

Cultural mistrust was also found to be related both to the extent to which participants were willing to donate their organs as well as allowing the transplantation of organs from their relatives. More

precisely, blacks who mistrust whites were less willing to consent to either donating their own organs or agreeing to the recovery of organs from relatives. This finding is consistent with previous research exploring the relationship between the extent to which blacks trust whites and their attitudes toward the healthcare system.^{9,10}

Ultimately documentation of one's attitude should be supported by behavior. To explore whether attitudinal and behavioral patterns were consistent regarding willingness to donate organs, scores on the CMI and VFI were compared with participants who had and had not signed organ donor cards at the time they either received their driver's license or had it renewed. Significant differences were found between these two groups on both the VFI and CMI. More precisely, it was found that those who had not signed organ donation cards had lower volunteer and higher mistrust scores than those who had signed organ donation cards. Thus, the finding of a relationship among willingness to donate ones' organs, volunteerism, and cultural mistrust was further supported by the finding that individuals who had not signed up to donate their organs tended to be less willing to volunteer and more mistrustful than those who had signed donor cards. However, this finding should be viewed with caution, since, among other things, it is possible that participants may not have been aware that they could donate their organs by signing a donor card when they renewed their driver's license.

This study has several limitations. First, college students were used. It is possible that different results may have been found using blacks varying in level of education and age. Also, none of the participants in this study had ever needed, received, or been asked to donate an organ. It is possible that different results would have been found among blacks who had been either the recipients of organs or had a relative who needed an organ. Therefore, results of this

study should be interpreted with caution. Assuming that the findings of this study are replicated by others, these results may have important theoretical and applied implications. At the theoretical level, findings from this study are consistent with those who have speculated that the extent to which blacks trust whites is related to their behavior in both medical and mental healthcare settings. At an applied level, mental health and other members of the helping professions may serve a vital role in a vital area by serving as a member of teams who must work with minority clients to encourage them to donate their own organs and the organs of loved ones.

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APPENDIX A

Organ Donation Questionnaire*

Directions. The following are some questions regarding your beliefs about donating organs. Read each statement carefully and answer the statement by circling a "yes" or "no." If you are not sure about the answer to a question, please circle the alternative you think is correct. **Do not leave any questions blank.**

1. Wealthy people and celebrities are moved to the top of the list faster than "regular people." for organ transplants. Yes No (N)
2. A person's family will be charged for donating his or her organs. Yes No (N)
3. If a person is in an accident and the hospital knows that person wants to be an organ donor, the doctors will not try as hard to save that person's life. Yes No (N)
4. A person must be 18 years of age or older to consent to donating their organs. Yes No (Y)
5. Many religions oppose organ donations. Yes No (N)

6. Only heart, liver and kidneys can be transplanted. Yes No (N)

7. People with medical illnesses can not donate any of their organs or tissues. Yes No (N)

8. A person does not need to tell their family that they want to be a donor if it is written in that person's will. Yes No (N)

9. There are probably many instances in which a person has been heavily drugged, then awakens to find he or she has had an organ removed for a black market transplant. Yes No (N)

10. Donation of organs disfigures that person's body. Yes No (N)

11. Using the scale below, please circle the extent to which you would be willing to consent to donating your organs for transplantation if asked to do so.

1=very unlikely 2=unlikely 3=slightly unlikely
4=not sure 5=slightly likely
6=likely 7=very likely

12. Using the scale below, please circle the extent to which you would be willing to consent to allowing the removal of organs for transplantation from a close relative if asked to do so.

1=very unlikely 2=unlikely 3=slightly unlikely
4=not sure 5=slightly likely
6=likely 7=very likely

13. Have you ever received an organ transplant? Yes No

14. To the best of your knowledge, do you need an organ transplant? Yes No

15. To the best of your knowledge, do you know of a relative who has received an organ transplant? Yes No

16. To the best of your knowledge, do you know of a relative who needs an organ transplant? Yes No

17. Have you ever been asked to allow an organ from a relative to be transplanted? Yes No

18. Has any of your relatives ever told you whether or not they would like to have their organs donated? Yes No

19. To the best of your knowledge, do you know of a relative who has died because they were not able to obtain an organ transplant? Yes No

20. Have you ever signed a driver's license card or any other document consenting to having your organs transplanted? Yes No

*Part A consists of questions 1–10. The letters in parentheses represent the correct answer to each question.

Part B consists of questions designed to obtain information about participants' own experiences with organ donations and consists of the following questions: 13, 14, 15, 16, 19

Part C consists of questions regarding respondents' organ donation behaviors and attitudes and consists of the following questions: 11, 12, 17, 18, 20

To reduce the potential of response bias, participants were asked to respond to the questions in the sequence listed above.

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