Bryan D. Naelitz
Science Internship Program
Transplantation Attitudes: Minority Men’s Perspectives on the Multifarious Barriers to Organ Donation

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Minorities experience deceased and living donation disparities

- African-Americans comprise 13% of the US population, yet fill 34% of the kidney transplant waiting list
- African-Americans comprise only 14% of deceased donors and only 11% of living donors

Barriers to minority donation include distrust and misinformation
Purpose and Hypothesis

• The study’s purpose was to investigate the societal misconceptions and demographic factors that dissuade minorities from participating in organ donation.

• We hypothesized minorities with low quality-of-life scores, misinformation on transplantation, and absent personal connections to donors or recipients are less willing to donate.
Methodology

- Health and Wellness survey designed
  - Asked participants for demographic information, medical history, and opinions on organ transplantation
- Short Form-8 (SF-8™) included
  - Asked participants about quality-of-life in the past four weeks
  - Generates normalized PCS-8 and MCS-8 scores
Methodology

- Eight subscores determine composite scores
- Mean of 50
- Standard deviation of 10
- Higher scores indicate greater degree of health
Data Collection

• 326 surveys administered
• The survey sample includes minority (non-Caucasian) men who visited the Cleveland Clinic
• Each anonymous survey included 57 questions and required ten minutes to complete
• REDCap data capture tool utilized extensively
Study Population

Age Distribution of Study Population
- 18-29 years old: 30%
- 30-39 years old: 25%
- 40-49 years old: 13%
- 50-59 years old: 9%
- 60-69 years old: 2%
- 70-79 years old: 1%
- 80+ years old: 1%

Race Distribution of Study Population
- Asian: 14%
- Black: 53%
- White: 17%
- Hispanic: 7%
- Native American: 5%
- Mixed: 4%
- Other: 0%
Data Analysis

- Categorical variables summarized with counts and percentages
- Continuous variables summarized with means and ranges
- Two-tailed two-sample independent t-tests compared means
- ANOVA tests compared the means of three or more groups
- Chi-square tests compared two categorical variables
- One-sample test of means compared quality-of-life scores
Results

Affirmative Organ Donation Beliefs

<table>
<thead>
<tr>
<th>Statement</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to Register as Donor</td>
<td>62%</td>
</tr>
<tr>
<td>Willingness to Donate</td>
<td>44%</td>
</tr>
<tr>
<td>Registered as Donor as Open-Casket Funeral Possible</td>
<td>27%</td>
</tr>
<tr>
<td>Death in Emergency</td>
<td>25%</td>
</tr>
<tr>
<td>Fair Process Against Religion</td>
<td>17%</td>
</tr>
<tr>
<td>Know Registered Donor</td>
<td>24%</td>
</tr>
<tr>
<td>Know Organ Donor</td>
<td>25%</td>
</tr>
<tr>
<td>Know Recipient</td>
<td>25%</td>
</tr>
<tr>
<td>Know Dialysis Patient</td>
<td>21%</td>
</tr>
<tr>
<td>Organ Shortage Awareness</td>
<td>43%</td>
</tr>
<tr>
<td>Live Donation Possible</td>
<td>48%</td>
</tr>
</tbody>
</table>
Results

Reasons Offered to Explain Unregistered Donor Status

- Never Considered Donation: 29%
- Have Not Decided: 19%
- Unsure How to Register: 14%
- Do Not Want to Donate: 21%
- Do Not Understand Donation: 8%
- Too Old: 9%
- Too Unhealthy: 11%
- Afraid of Surgery: 24%
- Do Not Trust Medical System: 7%
## Results

### Statistical Significance of Organ Donation Opinions by Health Score

<table>
<thead>
<tr>
<th>Opinion</th>
<th>General Health</th>
<th>PCS-8</th>
<th>MCS-8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never Considered Donation</td>
<td>0.4148</td>
<td>0.0446*</td>
<td>0.3253</td>
</tr>
<tr>
<td>Undecided about Donation</td>
<td>0.0067*</td>
<td>0.0064*</td>
<td>0.0083*</td>
</tr>
<tr>
<td>Do Not Want to Donate</td>
<td>0.0402*</td>
<td>0.8022</td>
<td>0.9725</td>
</tr>
<tr>
<td>Do Not Understand Donation</td>
<td>0.8611</td>
<td>0.8586</td>
<td>0.0044</td>
</tr>
<tr>
<td>Too Old to Donate</td>
<td>0.0411*</td>
<td>&lt;0.0001*</td>
<td>0.2832</td>
</tr>
<tr>
<td>Too Unhealthy to Donate</td>
<td>&lt;0.0001*</td>
<td>&lt;0.0001*</td>
<td>&lt;0.0001*</td>
</tr>
<tr>
<td>Afraid of Surgery</td>
<td>0.9798</td>
<td>0.4311</td>
<td>0.0019*</td>
</tr>
<tr>
<td>Death in Emergency</td>
<td>0.3186</td>
<td>0.0004*</td>
<td>&lt;0.0001*</td>
</tr>
<tr>
<td>Pay for Surgery</td>
<td>0.0192*</td>
<td>0.0192*</td>
<td>0.0374*</td>
</tr>
<tr>
<td>Live Donation Possible</td>
<td>0.066</td>
<td>&lt;0.0001*</td>
<td>0.0004*</td>
</tr>
<tr>
<td>Organ Shortage Awareness</td>
<td>0.2941</td>
<td>0.0012*</td>
<td>0.0004*</td>
</tr>
</tbody>
</table>
Conclusions

• People aware of the need for organs are more willing to donate organs/tissues.
• People who know a registered as an organ donor, an organ recipient, a dialysis patient, or someone currently on the transplant waiting list are more willing to donate organs.
Conclusions

• People who do not feel that it is easy to register as an organ donor are less willing to donate organs.

• People who believe the transplant system is fair and who know donors may have an open-casket funeral are more willing to donate organs.
Conclusions

• People who are undecided about organ donation, do understand how donation works, believe they are too old or unhealthy to donate, or report being afraid of the surgery have lower health scores

• Incorrect answers to organ donation knowledge questions correlated with lower health scores
Recommendations

- Sample size, though large, must be expanded
- We cannot claim causality, merely association
- Minority men must be further educated about transplantation through community health initiatives
- Health of minority population must improve for minorities’ willingness to donate to improve
References


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