Depiction of organ donation on television negatively affects viewers’ decisions to become donors

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Abstract

BACKGROUND: There is a substantial gap in the number of people reporting they believe organ donation is a good thing and the number of people willing to identify themselves as potential donors by checking the box when applying for a driver’s license, signing a donor card, or joining a state registry. Despite overwhelming support for the idea of organ donation there are still myths and misinformation surrounding organ donation that prevent people from becoming “official” donors. One common source of inaccurate information is primetime television. American medical and crime dramas perpetuate the myths and capitalize on the fears of viewers, especially those who have not already designated themselves as organ donors, which ultimately can dissuade them from registering as donors.

METHODS: A comprehensive search of the literature was performed using Web of Science, CINAHL, MEDLINE-PubMed, and PsychINFO using the keywords; organ donation, television, and attitudes. The final articles were assessed using GRADE.

RESULTS: Two studies were included in this review having met inclusion criteria. One study surveyed 580 college students before and after viewing either a medical or crime drama with an organ donation storyline to determine how entertainment television influences the decision of whether or not to become an organ donor. The second study measured the same outcome but asked subjects to recall shows they had viewed over the past year that had organ donation storylines. Both studies found that viewers who were opposed to becoming organ donors and those who were undecided were likely to take the information presented on television as the truth and thus less likely to register as organ donors.

CONCLUSION: American primetime medical and crime dramas are often a major source of information for viewers regarding organ donation. Unfortunately, the information viewers are receiving is not only inaccurate but often outright deceptive, playing on the worst fears many people have about the organ donation process. This misinformation has led to a loss of potential organ donors. Would honest and accurate information in television programs lead to more viewers registering to donate their organs?

KEYWORDS: Organ donation, television, attitudes.

Degree Type
Capstone Project

Degree Name
Master of Science in Physician Assistant Studies

Keywords
organ donation, television, attitudes

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Depiction of organ donation on television negatively affects viewers’ decisions to become donors

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A Clinical Graduate Project Submitted to the Faculty of
the School of Physician Assistant Studies
Pacific University
Hillsboro, OR

For the Master of Science Degree, August 12, 2017

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ABSTRACT

BACKGROUND: There is a substantial gap in the number of people reporting they believe organ donation is a good thing and the number of people willing to identify themselves as potential donors by checking the box when applying for a driver’s license, signing a donor card, or joining a state registry. Despite overwhelming support for the idea of organ donation there are still myths and misinformation surrounding organ donation that prevent people from becoming “official” donors. One common source of inaccurate information is primetime television. American medical and crime dramas perpetuate the myths and capitalize on the fears of viewers, especially those who have not already designated themselves as organ donors, which ultimately can dissuade them from registering as donors.

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1. Quality Assessment of Reviewed Articles

List of Abbreviations

1. United Network for Organ Sharing ...........................................UNOS

2. Physician’s Orders for Life-Sustaining Treatment..........................POLST
Depiction of organ donation on television negatively affects viewers’ decisions to become organ donors

BACKGROUND

Despite the fact that more Americans than ever support the idea of organ donation only a small percentage take action to make their wishes to become donors known by designation on a driver’s license, registration with a state registry, or signing a donor card. According to a 2012 national survey, 40% of respondents listed television shows and movies as important sources of information regarding organ donation.¹ There are still many myths surrounding the process of organ donation and American primetime television is playing a large role in perpetuating those myths. According to findings by Morgan et al (2007),² medical and crime shows air the largest number of storylines that play on the fears people report as reasons they are not organ donors.

Over the past few decades, mass media has worked in concert with the medical community to raise awareness about the dangers of tobacco, dispel myths about HIV/AIDS, and promote nutrition and exercise. There are public service announcements regarding everything from the dangers of texting and driving to the importance of getting a colonoscopy. But when it comes to the issue of organ donation, the media seems to be working in direct opposition to the medical community.

Interestingly, the television shows most responsible for perpetuating the myths are primetime medical dramas. Shows like Grey’s Anatomy and House play on viewers’ worst fears about the organ donation process. Among those fears are the ideas that: medical personnel will not do everything possible to save a person’s life if that person is known to be a registered organ donor, doctors get to choose which patients receive organs, and that the rich and powerful can “buy” their way to the top of the transplant list. Another source of myths in television is crime dramas. Numb3rs, CSI: NY, and Law and Order have all aired episodes that exploit the common fear that there is a black
market for organs in the United States.

Several studies (Harrison et al,3 Harbaugh et al,4 and Morgan et al (2007)2) have clearly demonstrated that entertainment television shows have focused on sensationalism and playing on viewers’ emotions rather than depicting accurate information regarding the organ donation process.

**METHODS**

An exhaustive search of the literature was performed using MEDLINE-PubMed, CINAHL, Web of Science, and Psychinfo. Keywords included; organ donation, television, and attitudes. In order to be included a study had to be in English and performed in the United States using American primetime medical and crime dramas. Studies were excluded if they merely reviewed how organ donation is portrayed in American television. Included studies were assessed for quality using GRADE.5

**RESULTS**

The initial literature search yielded 81 possible articles. After screening titles and abstracts for content and eliminating duplicates 6 articles remained. Upon application of eligibility criteria 3 articles were identified but one study, Morgan et al (2009)6 was later excluded due to inaccuracies in reporting of the sample. See table 1.

*Morgan et al (2010)*

In this randomized control study Morgan et al (2010)7 conducted a stimulus-response test of 580 students at a Midwestern University. Fifty one percent of the subjects were female, 48% male, 78% were Caucasian, 6% African American, 4% Hispanic/Latino, 8% Asian/Pacific Islander, and 4% of the subjects did not respond to the question regarding ethnicity. Of the respondents, 67% stated they had already decided to become organ donors. Subjects completed a questionnaire prior to and after viewing an episode of a medical or crime drama which either had an organ donation storyline
treatment) or had no mention of organ donation (control). Treatment subjects were matched with controls who watched the same program but an episode with no mention of organ donation. All episodes featuring organ donation were one episode storylines. Episodes were ineligible if the storylines were ongoing. Morgan et al (2010)\(^7\) used questionnaires to rate subjects’ attitudes toward organ donation as well as belief in common myths surrounding organ donation. The rating system was based on a scale from one (strongly disagree) to five (strongly agree). The overall results did not support the researchers’ hypotheses that viewing an episode with a negative storyline or myth regarding organ donation would negatively affect viewers’ attitudes about organ donation or were more likely to believe the myth. However, in a head to head comparison between donors and nondonors, it was found that on both points nondonors were significantly more likely than donors to report negative feelings regarding organ donation and to believe that the information presented in the episode was accurate even if portrayed a myth. Nondonors were matched with a control who had watched the same episode.

**Yoo and Tian (2011)**

Yoo and Tian\(^8\) used an online survey to measure attitudes, behavioral intention, and medical mistrust. The participants were undergraduate students studying communications at a Midwestern university. Four hundred twenty-nine people responded to the survey. Potential subjects were excluded from the study if they failed to respond to questions that measured the variables of interest. Also excluded were those who already identified themselves as organ donors in order to target the attitudes and behaviors of those who were not organ donors. The final sample included 161 subjects (43 males and 118 females). The average age was 24 years, 59% identified as Caucasian, 29% African American, 6% Asian, 4% Hispanic, and 1% Native American.

This study used a scale similar to the one described by Morgan et al (2010)\(^7\) to rate subjects’ knowledge about organ donation although the scale used by Yoo and
Tian asked respondents to answer “true or false” versus rating their level of agreement (strongly disagree, agree, etc.). Participants were then asked to recall whether or not they had viewed a medical or crime drama in the past year that had a storyline line that revolved around organ donation (examples of shows were offered to help the subjects remember). Medical mistrust was gauged by agreement or disagreement (7-point scale from 1) strongly disagree to 7) strongly agree) with statements regarding doctors prematurely pronouncing death in order to procure organs. Attitudes regarding organ donation were measured with the 7-point scale on statements about whether or not the subjects viewed organ donation as “good/beneficial”. Lastly, subjects’ intent to become a registered organ donor was measured using the 7-point scale regarding two statements.  

The researchers accounted for possible confounding variables that have been found to play a role in the decision-making process regarding organ donation. These included: altruism, death avoidance, religiosity, body integrity, and personal experience with organ donation.  

Upon analysis, it was found that while greater knowledge about organ donation in and of itself was a positive predictor of attitude toward organ donation, it also led to greater recall of television episodes which in turn was a positive predictor of medical mistrust. Medical mistrust subsequently had a negative impact on attitudes toward organ donation and ultimately, negative attitudes negatively affected subjects’ intention to become organ donors.  

DISCUSSION  
Both of the reviewed studies revealed that medical and crime dramas have a negative effect on viewers’ attitudes toward organ donation. These shows also perpetuate the myths that prevent people from registering to become organ donors. In fact, Morgan et al (2007) found in a survey of medical and crime shows, nearly 90% of the information given about organ donation was inaccurate.
One of the most common fears people report regarding organ donation is that doctors will not do everything possible to save a person’s life if that person is known to be an organ donor. Morgan et al (2007) report that storylines dealing with doctors declaring patients dead prematurely in order to use their organs for transplant was the second most common theme regarding organ donation second only to the myth that there is a black market for organs in the United States. Stories featuring a black-market theme were most often episodes of crime dramas such as *Numb3rs* and *Law and Order*.

Another common misperception is that individual doctors or even hospital committees get to choose which patients receive organs and that they can somehow manipulate the system, ensuring that a particular patient will receive an organ. In reality, organ donors and recipients are matched by the United Network for Organ Sharing (UNOS). This is a computerized system that takes many factors into account. While most people refer to the “waiting list”, the process of matching donors to recipients is much more complex than being given a number and then waiting your turn. UNOS describes the “list” as more of a “pool” of those waiting for transplant organs. When a donor is identified, the relevant information regarding that patient is entered into the UNOS system which then generates a ranked list of potential recipients. Once that list is made the organ is offered to waiting patients based not only on urgency status of the recipient but potential for successful transplant, size of the donor organ, and distance of the recipient from the donor.

That the recipient may not be deserving of a transplant is another reason people are reluctant to donate organs. It is often felt that those in need of transplants may have caused their own disease and thus won’t “take care of” the donor’s organ or that the recipient may generally be a “bad” person. For example, the studies reviewed discussed an episode of *Grey’s Anatomy* in which an abusive father in need of a transplant causes a car crash that kills his son who is a “match” for his father. Transplant recipients are chosen based on objective measures such as medical need not subjective ones such
as personality. However, portraying unlikeable characters creates tension and drama that plays on viewers’ emotions and makes for good viewing. In reality, just because the child was a match for his abusive father wouldn’t mean the father would be first in line to receive a donation. There may be better suited matches on the list or even less suited matches but with more urgency. This also doesn’t take into account the fact that one donor has the potential to save eight lives. Even if an “unlikeable” person did receive an organ, what are the chances the other seven people who could benefit are equally “unworthy”? 

There are limitations to the reviewed studies. Both are small and include a very narrow range of ages of the subjects. However, this may underestimate the effect, given that college students are in the age group most likely to register as organ donors. While the Morgan et al (2010)\textsuperscript{7} study did not discuss the fields of study of the participants the Yoo and Tian\textsuperscript{8} study was limited to communications majors. How would the numbers look if the studies targeted physical and/or social science majors? What if the participants had only a high school education or less? What if they were elderly? Yoo and Tian\textsuperscript{8} were also limited in that their study relied on recall of programs watched over the course of a year. The accuracy of recall may have been greatly decreased if the episode was watched many months earlier versus a few days or even weeks. On the other hand, perhaps the episode had such a strong impact on the viewer that he or she was able to clearly recall feelings about the program. This study also did not consider whether participants had viewed only one organ donation storyline or a storyline that arced over multiple episodes of the same show or if they watch multiple shows that had organ donation storylines. Morgan et al (2010)\textsuperscript{7} conducted a real-time study in which participants were interviewed, shown an episode, then interviewed again. In terms of measuring “gut reaction”, which is the one people often go with, this format seems more practical. They did eliminate storylines that stretched over multiple episodes so that viewers did not need to be “in on” the story. This brings up another interesting point however. Is there a difference in how much influence a television
program has on a viewer’s decision to become an organ donor depending on whether the viewer is seeing the program for the first time or is a loyal viewer who is emotionally invested in the characters?

What if we flipped the question around and started asking how much influence positive story lines have on behavior? Would stories or public service announcements accurately depicting the donation process from start to finish have a meaningful impact on increasing donation rates?

According to UNOS, there are currently over 77,000 people in urgent need of an organ transplant and another 42,000 who would benefit from one. There are also thousands more who are removed from the waiting list because their health has declined so much they are considered too sick to undergo transplant surgery. While over 100,000 wait, UNOS reported that from January through October 2016, there were only about 13,000 donors. Meanwhile, the Centers for Disease Control and Prevention reports that roughly 2.5 million people die every year in the United States from all causes. Why the gap between total deaths and number of donors? Did most of those the 2.5 million people who died expressly convey that they did not want to donate their organs? Did they not tell their families that they wanted to be donors upon their deaths? Did they mistakenly believe that pre-existing health conditions made them ineligible to become donors? Granted, not everyone can be an organ donor, but the majority can (most chronic health conditions do not exclude a person from becoming a donor). If all those eligible to be donors actually donated, it may be possible to help not only those who are in urgent need but also those who have been told they are “too sick” or “not sick enough” to be on the waiting list.

It is up to healthcare providers to counter the misinformation presented to patients. But when is the right time to bring up the subject? We talk about end of life care with our older patients—why not ask about organ donation at the same time we ask about advanced directives or physician orders for life-sustaining treatment (POLST)? If you were to be incapacitated and unable to make decisions about your healthcare, what
measures would you want taken to save your life? If your life could not be saved, would you be willing to donate your organs? Can we work it into our discussions about healthy decision making with our adolescent patients? Are you wearing a seatbelt every time you are in the car? Do you ever text and drive? If you died in a car accident would you want your organs donated?

CONCLUSION

The decision to become an organ donor is a complex one that is often based not only on information but on emotion as well. Unfortunately, the only information many Americans are getting about organ donation is what they see on television where medical and crime shows are presenting them with information that is inaccurate. The storylines play on the worst fears Americans have regarding becoming organ donors because it makes for “gripping” television. Writers and producers of these programs either don’t know or don’t care that the cost of better ratings is lives lost. Since better ratings bring in more profits, it is unlikely that the current formula for entertainment television writing will change anytime soon. As such, it is incredibly important that healthcare providers initiate this conversation with their patients and present clear and accurate information regarding the process to combat the myths and misinformation presented in the media. It should also be encouraged that patients communicate their wishes to loved ones who, in the end, may be the people making the final decision.
## Table 1: Quality Assessment of Reviewed Articles

<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Downgrade Criteria</th>
<th>Upgrade Criteria</th>
<th>Quality</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Limitations</td>
<td>Indirectness</td>
<td>Inconsistency</td>
</tr>
<tr>
<td>Morgan et al (2010)³</td>
<td>RCT</td>
<td>Serious&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Not Serious</td>
<td>Not Serious</td>
</tr>
<tr>
<td>Yoo and Tian (2011)⁸</td>
<td>Cross-sectional</td>
<td>Serious&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Not Serious</td>
<td>Not Serious</td>
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</tbody>
</table>

<sup>a</sup>Lack of diverse sample, lack of blinding, failure to control for confounding factors

<sup>b</sup>Lack of diverse sample, high risk of recall bias

GRADE: Grading of Recommendations, Assessments, Development and Evaluation.<sup>5</sup>
REFERENCES


