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Communication Apprehension about Death, Religious Group Affiliation, and Religiosity: Predictors of Organ and Body Donation Decisions

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Predictors of Organ and Body Donation Decisions

Abstract

Communication willingness has previously been identified as an important communication factor in influencing individuals’ decisions to become an organ donor. Missing from this conversation is the role of communication apprehension about death and its impact on donation decisions. The purpose of this study was to examine the relationships between communication apprehension about death, religiosity, and religious affiliation, and donation decisions. Three hundred and thirty-three individuals participated in an online survey. Findings suggest that communication apprehension about death, especially communication avoidance about death, negatively impact donation decisions. Additionally, religiosity and affiliation with a specific religion also negatively impact donation decisions. These variables were also predictors of organ and body donation. The findings show a need for more research on what prevents conversations about donation. Additionally, the stark difference between organ donation likelihood and body donation likelihood underscore the need for communication scholars to examine communication about body donation.

Keywords: communication apprehension about death, religiosity, organ donation, body donation, health communication, death
Communication Apprehension about Death, Religious Group Affiliation, and Religiosity: Predictors of Organ and Body Donation Decisions

“For I was hungry and you gave me food, I was thirsty and you gave me drink, I was a stranger and you welcomed me.” (Matthew 25:35)

This popular Biblical passage highlights one of Christianity’s fundamental tenets: the generosity of giving to others in need. Absent from the Bible is the passage, “For I needed a kidney, and you gave me one,” but the idea of giving a kidney to someone in need mirrors the idea communicated in Matthew of helping others in need. Although ancient religious texts do not specifically state whether organ and tissue donations are allowed, they do speak to practitioners of their faith engaging in practices which show acts of selflessness, charity, love, and bettering human life. Christianity is not alone in its approval of organ donation; other faiths, including Buddhism, Islam, Mormonism, and Judaism also support their practitioners donating organs (Spector, 2012). Religious leaders have not been as vocal about their religion’s support of body donation (also known as whole body donation) for scientific advancement and education; only Reverend Gyomay Masaso Kubose of the Buddhist Temple of Chicago has addressed Buddhism’s acceptance of body donation: “We honor those people who donate their bodies and organs to the advancement of medical science and to saving lives” (“Religion and Organ Donation, n.d.).

Important to conversations about organ and body donation is religiosity (i.e., observance of organized religious rituals and/or beliefs). Different religions have a variety of different views about the donation process, often focused on compassion, stewardship, and love of humanity (Stephenson, Morgan, Roberts-Perez, Harrison, Afifi, & Long, 2008). Communication scholars have explored the impact of religiosity in a number of communication situations, including
politics and ethnicity (e.g., Croucher, Juntunen, & Cheng, 2014; Croucher, Spencer, & McKee, 2014; Punyanunt-Carter, Corrigan, Wrench, & McCroskey, 2010), personal relationships (e.g., Forward, Sansom-Livolsi, & McGovern, 2008; Sheldon, 2014; Sheldon & Honeycutt, 2011), and health care seeking behaviors (e.g., Croucher, 2013; Egbert, Mickley, & Coeling, 2004; Meng, McLaughlin, Pariera, & Murphy, 2016; Muturi & An, 2010). Less research has explored religiosity in relation to organ donation (Morgan, 2004; Morse et al., 2009; Stephenson et al., 2008), and none has explored the role of religiosity in body donation.

Discussions about organ and body donation are tied to conversations about death. These conversations, made difficult because they require individuals to talk openly about death and dying (Corr & Corr, 2012), mean that significant others, children, siblings, and friends must talk about not only their decisions to donate, but also other end-of-life and aftercare decisions, including living wills, extraordinary measures, and burial decisions. Although individuals’ willingness to communicate about organ donation directly impacts donation decisions (Morgan, 2004), missing from the conversation is the communication apprehension individuals may experience talking about death and dying topics, including donation. In general, individuals have high levels of communication apprehension about death (Carmack & DeGroot, 2016); to date, communication scholars have yet to examine communication apprehension about death and the impact it has on donation decisions.

The purpose of this study is to identify the relationships between communication apprehension about death, religiosity, religious group affiliation, and organ and body donation decisions, as well as what variables are predictors of donation decisions. The article begins by exploring the decision-making strategies associated with organ and body donation, the role of religiosity in decision-making, and how communication apprehension about death could impact
that decision-making. After detailing the methodology, the findings are presented, emphasizing the connections between the variables as predictors of organ and body donation. The implications of these results have the potential to impact how families, friends, providers, and religious leaders communicate about donations.

**Literature Review**

**Organ and Body Donation Decision-Making**

According to the US Department of Health and Human Services Organ Procurement and Transplantation Network (2018), 95% of US adults support organ donation, however, only 54% are actually signed up to be an organ donor. It is difficult to reconcile this disparity, especially in light of increased need of organ donations. Communication scholars have explored the attitude-registration discrepancy, hypothesizing a number of reasons for why it occurs (Quick, Anker, Feeley, & Morgan, 2016). Individuals engage in a complex decision-making process when considering organ donation intentions. Individuals generally position the perceived benefits of organ donation (e.g., altruistic, saving lives, karma impact) opposite a host of negative considerations, such as body integrity, medical mistrust, and disgust with the organ donation process (Guttman, Siegel, Appel, & Bar-On, 2016; Hyde & White, 2013; O’Carroll, Foster, McGeechan, Sandford, & Ferguson, 2011). Knowledge and attitudes appear to not be major indicators of donation intentions, because people are generally aware of and support the idea of organ donation (Morgan et al., 2008, 2011). Instead, anxiety, fear, and uncertainty appear to be at the heart of the attitude-registration discrepancy (Morse et al., 2009).

Given the differing positions about organ donation, what drives communication about organ donation? The Organ Donation Model (ODM; Morgan, 2004) posits that positive attitudes toward donation, knowledge about donation, and positive social norms about donation drive
donation intention and lead to willingness to communicate with individuals about organ donation decisions (Morgan, 2004). In the model, intention and willingness to donate is the most important determinant of donation behavior (Morgan & Miller, 2002a, 2002b). These positive attitudes, knowledge, and social norms are influenced by family talk, mediated representations of organ donation, and in-group identification (Dillow & Weber, 2016; Morgan & Miller, 2002a, 2002b; Morgan et al., 2005; Morgan et al., 2007). Missing from the model, as Robinson, Perryman, Thompson, Amaral, and Jacob Arriola (2012) pointed out, is the role of religion in impacting these intentions.

Although communication and medical scholars have deeply explored organ donation decision-making, less is known about body donation decision-making. There has been a spike in whole body donation in recent years (Boddy, 2016), mainly because the stigma associated with body donation has decreased, and families are looking for cheaper alternatives because of the increasing costs of traditional funerals (Begley, 2016). Body donation includes a wide variety of options, including donating bodies to medical schools and to science programs, such as the University of Tennessee, Knoxville’s body farm, where donated bodies are prepared and permitted to decompose under different conditions in order to train forensic anthropologists and law enforcement officers (Killgrove, 2015; Roach, 2004). Individuals seek out body donation options for a number of reasons, including seeing it as an altruistic, valuable contribution to humans, a way to give meaning to life and death outside of religion, contribute to medical progress, and as a means to avoid waste, funeral ceremonies, and funeral expenses (Bajor et al., 2015; Bolt et al., 2012-2013; Richardson & Hurwitz, 1995). However, body donation continues to be less popular than organ donation due in part to a of lack of motivation about completing the donation process, underlying beliefs about what should happen after death, specific cultural and
religious beliefs about donations, and fear and uncertainty that comes with death (Delaney & White, 2015; Lambert South & Elton, 2017; Maseghe Mwachaka et al., 2016; Saha et al., 2015). Popular press coverage of body donation has contributed to individuals’ relatively high awareness and positivity about body donation, but it does not seem to impact their decision to actually donate (Bharambe et al., 2015; Richardson & Hurwitz, 1995; Saha et al., 2015).

A number of demographic factors impact individuals’ body donation decisions. Older individuals are more likely to donate their bodies (Bajor et al., 2015; Boulware et al., 2004). Women are also more likely to donate, especially if they are widowed (Bajor et al., 2015); women are also more likely to co-donate with the spouses than register alone (Anteby et al., 2012). Race, education, and occupation also are important factors in body donation decisions; African Americans and individuals with lower education levels are less likely to donate their bodies (Boulware et al., 2004) and individuals who work in “pink collar” jobs (e.g., nursing, teaching) are more likely to donate (Anteby et al., 2012).

**Religiosity**

Individuals’ decisions about donation intent are connected to their religious connections and beliefs. Although researchers operationalize *religiosity* in a variety of ways, they broadly agree that it includes aspects related to how much a person accepts beliefs and/or performs rituals of a religious organization (Ebaugh, Chafetz, & Pipes, 2006; Peterman, Fitchett, Brady, Hernandez, & Cella, 2002). Although a slight overlap among religiosity and spirituality certainly exists (i.e., they include an aspect of being connected to a higher power), the two are distinctly different (Beckwith & Morrow, 2005; Wink & Dillon, 2003). Religiosity tends to be defined by using measures such as frequency of church attendance and self-reported engagement in religious activities (e.g., prayer). Conversely, spirituality focuses more so on subjectively
exploring the idea that there is something greater than oneself, and individuals consider this outside the domain of organized religion. Allport and Ross (1967) conceptualized religiosity into two different constructs: intrinsic and extrinsic religiosity. Individuals who have intrinsic religiosity see religions as a way of life, not necessarily affiliating with a specific religion, but focusing more on the tenets of the religion, such as compassion and altruism. Conversely, extrinsic religiosity individuals are driven more about the performance of specific religious practices, such as attending religious services. Extrinsic motivated religious individuals do not necessarily try to incorporate religious beliefs into their daily lives, but rather focus on how religion can be used to achieve their personal goals.

The limited research connecting religiosity and donation intentions paints an uneven picture of the impact of religiosity on donation intentions. Most communication research has found that religiosity does not have a significant impact on organ donation decisions (Morgan, 2004; Stephenson et al., 2008), or only has a secondary connection through another variable (Morse et al., 2009). Ryckman et al. (2004), in one of the few studies to distinguish between intrinsic and extrinsic religiosity, found that extrinsic religiosity was significantly related to organ donation; intrinsic religiosity was not. Digging deeper, individuals who identified as religious were more likely to make donation decisions based on perceived or actual religious guidance from religious texts or leaders (Morse et al., 2009). Boulware and colleagues (2004) observed that individuals who saw religion/spirituality (combined in the study) as somewhat or very important to their lives were less likely to donate than those who did not rate religion/spirituality as somewhat or very important to their lives; in the same study, people who affiliated with a specific religion were 60-70% less likely to donate. Conversely, Bajor et al. (2015) found that the majority of people who donated their bodies were Catholic. The disparate
findings show the importance of continuing to examine the role of religion and religious affiliation on body donation decisions.

Communication research primarily focuses on organ donation; however, given the lack of interest in body donation, it is possible that high levels of religiosity will also be negatively related to body donation.

H1: Individuals with high levels of religiosity will have lower intentions to donate their organs and bodies after death.

**Communication Apprehension about Death**

Discussing health information of any kind can be difficult and the topic may impact individuals’ willingness or anxiety about those communication. Communication apprehension is an individual’s fear or anxiety in communicating with others (McCroskey, 1977). Framed as either a state or a trait, communication apprehension is concerned with the anxiety and avoidance individuals experience when communicating. Communication apprehension has a negative impact on individuals’ ability to communicate effectively with health care providers and effectively seek and receive treatment (Perrault, & Silk, 2015; Richmond, Heisel, Smith, & McCroskey, 1998; Wheeless, 1984, 1987). Although communication apprehension about health is impacting how individuals communicate with their providers, it does not appear to have an impact on health decisions and behaviors (Booth-Butterfield, Chory, & Beynon, 1997).

Organ and body donation are specific to death, so a communication apprehension approach that focuses on apprehension about death and dying is important for this study. Communication apprehension about death is “an individual’s fear associated with real and anticipated communication about the experience of dying and death” (Carmack & DeGroot, 2016, p. 240). Communication research focusing on communication apprehension and death has
been limited to the study of the way communication apprehension about death influences individuals’ decisions to work with terminally ill patients (Ayres & Hopf, 1995), the role of education in reducing communication apprehension about death (Pagano, 2016), and the development of a communication apprehension about death measure (Carmack & DeGroot, 2016). Carmack and DeGroot (2016) developed and validated the Communication Apprehension about Death Scale (CADS) based on the Collett-Lester Fear of Death-Revised Scale (Collett & Lester, 1969; Lester, 1990) and the Death Attitude Profile-Revised (Wong, Reker, & Gesser, 1994) scales. CADS is a 12-item, two-factor (communication anxiety and communication avoidance) measure that evaluates a person’s anxiety and avoidance when communicating about death. In the initial CADS study, women tended to report higher levels of communication apprehension and death anxiety than did men (Carmack & DeGroot, 2016). Additionally, age appeared to play a role in one’s level of communication apprehension about death. While younger adults’ scores of general communication apprehension and communication avoidance about death were low, they did report high levels of anxiety related to talking about death. Older adults tended to report increased levels of general communication apprehension, increased communication avoidance, and lower levels of anxiety when it came to death-related communication. To date, communication apprehension about death has only focused on demographic variables; it has yet to be used to examine health issues directly related to death.

Ryckman and colleagues (2004) theorized that demographic and cultural variables may be what impacts donation intention decisions; however, as noted above, that research is inconclusive. Communication researchers, however, have built a strong case for communication variables being important to decision intentions. Morgan (2004) found that communication willingness to talk with family about donations was directly related to pledging to be a donor, but
missing from this discussion is the communication reverse that could impact decisions—communication apprehension, more specifically, communication apprehension about death. The emphasis on death is important here—it may be that individuals are not necessarily afraid of talking about donation, but the act that begets the donation. Based on this, the following hypotheses were proposed:

\( H_2 \): There will be significant inverse relationships between communication apprehension and religiosity and organ and body donation intentions.

\( H_3 \): Individuals who affiliate with a specific religion will report lower levels of communication apprehension about death, higher levels of religiosity, and lower intentions to donate their organs and bodies after death.

\( H_4 \): Communication apprehension about death, religiosity, and religious affiliation will be predictors of organ and body donation intentions.

**Methods**

**Participants**

Three hundred thirty-three individuals completed the online survey: 276 participants identified as female (82.9%) and 57 participants identified as male (17.1%). Participants’ ages ranged from 18 to 61 (\( M = 19.96, SD = 5.303 \)). Most participants identified as Caucasian (\( n = 292, 87.7\% \)), followed by Hispanic/Latinx (\( n = 12, 3.6\% \)), African American (\( n = 10, 3.0\% \)), Asian (\( n = 10, 3.0\% \)), Other (\( n = 8, 2.4\% \)), and Hispanic-White (\( n = 1, .3\% \)). Participants’ educational level varied, with most participants reporting some college education (\( n = 208, 62.5\% \)) or receiving a high school diploma or GED (\( n = 83, 24.9\% \)). Participants also reported completing some high school (\( n = 6, 1.8\% \)), receiving a 2-year associate’s degree (\( n = 1, .3\% \)), receiving a 4-year baccalaureate degree (\( n = 9, 2.7\% \)), completing some graduate school (\( n = 11, \))
3.3%), receiving a Masters degree ($n = 9, 2.7%$), receiving a professional degree (JD, MD; $n = 4, 1.2%$), and receiving a doctoral degree ($n = 2, .6%$). A variety of religious affiliations were represented across the sample. Christian faiths were the most represented, including Christian ($n = 126, 37.8%$), Catholic ($n = 85, 25.5%$), Episcopalian ($n = 10, 3.0%$), Methodist ($n = 9, 2.7%$), Baptist ($n = 8, 2.4%$), Protestant ($n = 6, 1.8%$), Presbyterian ($n = 5, 1.5%$), and Lutheran ($n = 4, 1.2%$). A smaller number of participants identified with other faiths, including Judaism ($n = 6, 1.8%$), Latter-Day Saints ($n = 2, .6%$), and Other (e.g., Pagan, Russian Orthodox; $n = 9, 2.7%$). Twenty-five participants identified as agnostic (7.5%), 19 identified as atheist (5.7%), and 19 identified as spiritual but not religious (5.7%).

A majority of participants stated they declared as an organ donor with the organ donor designation on their driver’s license or state ID ($n = 190, 57.1%$), while 42.9% did not have the organ donor designation on their license or ID ($n = 143$). Although 190 participants had the organ donation designation, 251 participants said they were likely ($n = 93, 27.9%$) or very likely ($n = 158, 47.4%$) to donate their organs after death. Other participants were undecided ($n = 64, 19.2%$), unlikely ($n = 10, 3.0%$), or very unlikely ($n = 8, 2.4%$) to donate. Most participants, however, were undecided about donating their entire bodies (such as to a medical school or for scientific research; $n = 129, 38.7%$). The rest of participants were more evenly split about body donation, with 114 participants unlikely ($n = 78, 23.4%$) or very unlikely ($n = 36, 10.8%$) to donate to their body and 90 likely ($n = 43, 12.9%$) or very likely ($n = 47, 14.1%$) to donate their body. Participants were comfortable ($n = 142, 42.6%$) or very comfortable ($n = 134, 40.2%$) knowing that a loved one would donate the participants’ organs, with fewer reporting being undecided ($n = 40, 12.0%$), uncomfortable ($n = 12, 3.6%$), or very comfortable ($n = 5, 1.5%$) with their organs being donated by a loved one. Participants were less certain about their consent
to donate their loved ones’ organs, with most participants reporting being undecided \((n = 116, 34.8\%)\), unlikely \((n = 75, 22.5\%)\), or very unlikely \((n = 33, 9.9\%)\) compared to being likely \((n = 80, 24.0\%)\) or very likely \((n = 29, 8.7\%)\).

**Instrumentation and Data Collection**

Data collection began after the authors received Institutional Review Board (IRB) approval from their respective institutions. Participants were recruited using convenience and snowball sampling techniques. Recruitment flyers and calls were posted on a variety of social media platforms, including Facebook and Twitter. Participants were also recruited using a communication studies department research participant pool, where all first-year students enrolled in the basic course and advanced communication studies students are required to participate in studies or other learning opportunities. Participants were also able to share the survey link with other interested parties. Participants completed the survey using Qualtrics, a secure online websurveying system. The survey consisted of demographic questions, organ and body donation questions (reported above in the participant demographic section), and validated measures focused on communication apprehension about death and religiosity.

**Communication apprehension about death.** The Communication Apprehension about Death Scale (CADS; Carmack & DeGroot, 2016) was used to assess individuals’ communication unwillingness to talk about issues related to death and dying. CADS is a two-factor, 12-item instrument focusing on two components of communication apprehension about death: communication anxiety about death and communication avoidance about death. The instrument uses a 5-point Likert type scale, ranging from strongly disagree to strongly agree, with higher scores denoting more communication apprehension about death. The overall CADS measure is
highly reliable ($\alpha = .933, M = 2.29, SD = .873$), which is consistent with previous study reliabilities (Carmack & DeGroot, 2016).

The communication anxiety about death (CANX) subscale focuses on the emotional response (anxiety) associated with communication about dying and death. This subscale included questions such as “I feel anxious talking about the fact that I am going to die one day” and “I feel anxious about how it will feel to be dead.” The reliability for the communication anxiety about death subscale was high ($\alpha = .924, M = 3.07, SD = 1.08$). The communication avoidance about death subscale (CAV) focuses on the specific communication approach of avoidance when communicating about dying and death topics. Item questions for this subscale include “I avoid talking about death at all costs” and “I have an intense fear of talking about death.” This subscale is highly reliable ($\alpha = .925, M = 2.22, SD = .866$) as well.

Religiosity. The Measure of Religiosity (MOR; Croucher, Turner, Anarbaeva, Oommen, & Borton, 2008) was used to assess individuals’ level of religious practice. This one-factor, 25-item instrument measures religious activities, practices, and how religion shapes everyday decisions as a way to determine the religiosity of individuals, regardless of faith. Although the MOR scale has used a 7-point that uses never to very often for some questions and not at all important to very important for other questions. For the purposes of this study, the authors adapted the scale to be a 5-point Likert type scale ranging from strongly disagree to strongly agree. The scale included items such as “I actively participate in religious services,” “I provide financial support to my religious organization,” and, “Religion is important when I choose what kind of music to listen to.” The scale was found to be highly reliable ($\alpha = .972, M = 2.30, SD = .958$), which was consistent with previous study reliabilities (Croucher et al., 2008).
Donation actions. The survey included four questions about donation efforts. The first question focused on the comfortability level of knowing a loved one would donate the participants’ organs ($M = 4.17, SD = .881$). It relied on a 5-point Likert type scale, ranging from very uncomfortable to very comfortable. The second question asked about the likelihood of participants consenting to donate a loved one’s organs without knowing that loved one’s wishes ($M = 2.99, SD = 1.102$). The third question asked about the participants’ actual likelihood of donating their organs ($M = 4.15, SD = .995$), and the fourth question asked about the participants’ actual likelihood of donating their body ($M = 2.96, SD = 1.171$). These questions relied on a 5-point Likert type scale, ranging from very unlikely to very likely. Each item was summed and averaged.

Religious affiliation. Participants identified a variety of religious affiliations. The categories were combined into three groups: religious (for individuals who affiliated with a specific religion; $n = 263$), spiritual but not religious ($n = 48$), and atheist/agnostic ($n = 22$).

Data Analysis

Data were analyzed using the Statistical Package for Social Sciences (SPSS 24). One-tailed Pearson product-moment correlations were calculated to determine relationships between communication apprehension about death, religiosity, and donation actions ($H_1$ and $H_2$), analysis of variance (ANOVA) tests were calculated to identify differences between religious group affiliation and communication apprehension about death, religiosity, and donation actions ($H_3$), and a forward regression was calculated to determine predictors of donation decisions ($H_4$).

Results

The first hypothesis posited that individuals with higher levels of reported religiosity would be less likely to intend to donate their organs and bodies after death. Religiosity was only
significantly negatively correlated with participants’ likelihood to donating their body for scientific or medical purposes ($r[334] = -0.139$, $p < .05$). Similar to previous studies (Morgan, 2004; Ryckman et al., 2004; Stephenson et al., 2008), religiosity was not significantly related to organ donation (see Table 1 for complete reporting of correlations). The findings suggest that the more religious an individual reports to be, the less likely they are to donate their body.

The second hypothesis posited there would significant negative relationships between communication apprehension about death, religiosity, and donation actions. Communication apprehension about death was significantly negatively correlated with comfortability with others’ donating their organs ($r[334] = -0.135$, $p < .05$), and the likelihood participants would donate their organs ($r[334] = -0.110$, $p < .05$). More specifically, communication anxiety about death was significantly negatively correlated with comfortability with others’ donating their organs ($r[334] = -0.109$, $p < .05$). Communication avoidance about death was also significantly negatively correlated with comfortability with others’ donating their organs ($r[334] = -0.137$, $p < .05$) and the likelihood participants would donate their organs ($r[334] = -0.117$, $p < .05$). Religiosity was not significantly related to communication apprehension about death, communication anxiety about death, and communication avoidance about death. No other significant relationships were observed (see Table 1 for correlations). The findings suggest that the more apprehensive participants are about talking about death, the less comfortable they are with their loved ones donating the participants’ organs and the less likely they are to donate their organs. The hypothesis was mostly supported.

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Insert Table 1

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The third hypothesis posited there would be differences between religious group affiliation and communication apprehension about death, religiosity, and donation decisions. The different religion groups were combined into three variables: identified religion, spiritual but not religion, and atheist/agnostic. Significant differences between noted between religious groups and communication avoidance about death \( F(2, 330) = 5.607, p < .01 \) and religiosity \( F(2, 330) = 54.130, p < .01 \). Tukey post-hoc analyses revealed individuals who identified with a specific religion were significantly more likely to avoid communication about death \( M = 2.285 \) than individuals who identified as spiritual but not religious \( M = 1.837 \); individuals who identified with a specific religion were also more likely to report higher levels of religious involvement \( M = 2.542 \) than individuals who identified as spiritual but not religious \( M = 1.307 \) and individuals who identified as atheist/agnostic \( M = 1.508 \). Religious group affiliation was also significantly different for likelihood of body donation \( F(2, 330) = 5.030, p < .01 \); a Tukey post-hoc analysis revealed individuals who identified with a specific religion reported being less likely to donate their body \( M = 2.86 \) than individuals who identified as spiritual but not religious \( M = 3.40 \). No other differences were observed.

The fourth hypothesis explored whether communication apprehension about death, religiosity, and religious identification would be predictors of donation likelihood. Forward regressions were performed to determine if these variables were predictors of organ and body donation likelihood. The organ donation regression model was significant, \( F = 4.508 (1, 331), p < .05 \), determining that 1.4% of the variance was significantly related to communication avoidance about death, \( \beta = -.133, t = -2.123, p < .05 \). No other variables predicted organ donation likelihood. The body donation regression model was also significant, \( F = 44.141 (2, 330), p = .000 \). The analysis determined 21.2% of the variance was related to organ donation likelihood, \( \beta \).
= .514, \( t = 8.889, p = .000 \), followed by religious affiliation, \( \beta = .268, t = 2.622, p < .001 \). No other variables predicted body donation likelihood.

**Discussion**

The purpose of this study was to identify the relationships between communication apprehension about death, religiosity, and organ and body donation decisions. The findings suggest that communication apprehension about death may have a negative impact on individuals' decisions to donate, especially communication avoidance. If individuals avoid or are apprehensive about talking about death, they be less likely to agree to donate their organs or their bodies. Religiosity does not appear to play a significant statistical role in individuals' decisions; religiosity only negatively impacted individuals' decisions to donate their bodies. Affiliation with a specific religion was also related to communication avoidance about death and body donation likelihood. The forward regressions found conflicting information: whereas communication avoidance about death was the only predictor of organ donation decisions, organ donation likelihood and religious affiliation were predictors of body donation decisions. There are several implications from these findings.

First, communication apprehension about death, specifically communication avoidance about death, appear to be a roadblock in deciding to donate one’s organs or one’s body. Conversations about organ and body donation inherently mean that individuals have to talk about death; organ and body donation become a small part of a larger discussion about end-of-life and aftercare decisions. These are not easy conversations to have, and evidenced by the findings from this study, participants have moderate to high communication apprehension about death. This supplements Morgan’s (2004) findings that communication willingness directly impacted
individuals’ decision to donate their organs. Communication apprehension is sometimes considered the reverse of communication willingness, but conceptually, they explore different communication factors. Communication apprehension focuses on the anxiety or fear associated with communication, while communication willingness focuses on communication initiation (McCroskey, 1978). Morgan and Miller’s (2002a) Willingness to Communicate about Organ Donation scale only asks three questions: willingness, comfort, and perceived competency in having organ donation conversations. Although this scale has been positively connected to knowledge, attitude, and intent (Morgan & Miller, 2002a, 2002b), it does not examine the complexity of discussing the death that lead to the organ donation. Exploring willingness becomes difficult if there is underlying communication anxiety about the topic.

Second, and somewhat surprisingly, affiliation with a specific religion was one of the strongest predictors of donation. Those who indicated a specific religious affiliation showed higher communication death avoidance levels and were less likely to donate their bodies. It was participants who did not identify with a specific religion who were more likely to donate their organs and their bodies. This is counterintuitive to the altruistic and compassionate nature of many religions, especially since these religions identify altruism and compassion as guiding reasons for donation. What could account for this discrepancy? Although many religions support organ donation (body donation is unknown), many clergy believe that the decision is ultimately up to the individual (“Religion and Organ Donation,” n.d.). Based on this study’s findings, there is something else impacting individuals who identify with specific religion’s lack of likelihood to donate. Is it possible that how a religion conceptualizes death and the afterlife is a defining factor? Although there are some overlapping values across religions, such as compassion and helping others, there is variety in how these religions talk about death and the afterlife. For
example, Christianity states individuals go to heaven or hell depending on how good they were during life whereas Hinduism says the soul is reincarnated until moksha (enlightenment) is reached. These different conceptualizations about what comes after death could influence an individual’s decision.

Third, messages from churches often encourage their parishioners to tithe (give) throughout their lifetime, but they rarely discuss giving in death. Morse et al. (2009) determined that one’s religious identity was strongly correlated with making decisions, such as whether to donate one’s organs, based on perceived or actual religious guidance from religious texts or leaders. Part of religious leaders’ hesitancy about organ and body donation may come from a lack of understanding of medical definitions of death. Gallagher’s (1996) assessment of clergy’s (including hospital chaplains and seminary students as well) understanding of organ donation revealed numerous inaccurate beliefs. For example, 25% of the participants demonstrated a fundamental misunderstanding of brain death, believing that organ donors are not really dead. Additionally, the majority (88%) of her respondents indicated a desire for more information about organ donation. Clergy have the ability and platform to rectify their parish’s misconceptions as well if properly educated themselves. If individuals are receiving messages from clergy about organ and body donation, clergy must receive education on medical definitions of death and donation. Then, religious leaders would be able to incorporate discussions of organ and body donation into their homilies.

Finally, this is the first (and as far as the authors know, only) communication study to include body donation as part of the donation conversation. Organ donation is not the only option, and in some cases, may not be an option. However, body donation could be an option for individuals who want to make an impact on medical and scientific advancement or who are able
to donate their organs because of damage or cause of death. The findings from this study underscore two important factors: in general, participants were not as open to considering donating their bodies (the mean score for body donation was 2.96 compared to the mean score of 4.15 for organ donation) and feelings about organ donation impact feelings about body donation. As mentioned earlier, communication scholars have not explored the communication around body donation. There are no national or regional campaigns increasing awareness of and registration for body donation. Although the United States does not maintain a national database for body donation, reports estimate that approximately 20,000 Americans donate their bodies to medical schools or scientific organizations (McCall, 2016), far below what is needed for medical school gross human anatomy classes, forensics and law enforcement training, and scientific advancement. If, as the findings suggest, organ donation likelihood predicts body donation likelihood, organ donation may be the ingress needed to change beliefs about and decisions to donate bodies.

**Limitation and Future Directions**

Like any study, there are several limitations with this study. First, although there was a variety of participants, a large number were emerging adults (18-21 years old), female, and Caucasian. Previous research showed that older adults think differently about organ donation and religiosity than younger individuals, Caucasians approach these topics differently from other ethnicity groups, and females have differing opinions about the topics than males (e.g., Fiori, Brown, Cortina, & Antonucci, 2006; Levin, Taylor, & Chatters, 1994; Minniefield, Yang, & Muti, 2001; Sanner, 1998; Taylor, Chatters, Jayakody, & Levin, 1996). A more diverse population may respond differently to questions, resulting in different results. Second, the questions about organ donation speak generally about organ donation; however, people may feel
differently about organ donation based on the organ. Asking participants to specifically identify which organs they are willing to donate may impact how they respond to organ donation questions. Third, although participants were more familiar with and comfortable with the idea of organ donation, most participants were either unsure or uncomfortable with the idea of body donation. Organ donation is widely discussed; body donation is not. Lack of education about body donation and the donation process may impact participants’ perceptions. Finally, the unidimensional operationalization of religiosity by Croucher et al.’s (2008) Measure of Religiosity (MOR) prevents researchers from exploring the nuances of religiosity (as developed by Allport & Ross, 1967). The MOR was selected over other used religiosity measures because it is more inclusive of intrinsic and extrinsic religiosity; however, it does not treat them as separate constructs. Future researchers should work to develop a multidimensional measure that captures the complexity of religiosity. This would also allow researchers to examine the connections between religiosity and whether individuals engage in modern scientific advancements related to death, such as life support and organ and body donation.

The findings also help to move forward research on communication apprehension about death and organ and body donation. As a new measure (Carmack & DeGroot, 2016), more research using the CADS measure is still needed. The findings from this study call for a more nuanced examination of religious affiliation and religiosity related to communication apprehension about death. As mentioned above, different religions present the afterlife in different ways. Although this study did not delve into those specific beliefs, it is possible this is an important factor. Additionally, considering the role of fatalism (the belief that a higher power has absolute control over life, health, and death) is worth considering. Fatalism is associated with a number of religion, such as Catholicism, and this could be impacting communication
apprehension about death. It certainly raises the question: if a higher power has control, do you (or should you) be afraid to talk about death?

The lack of research about body donation also serves as a call for more research. The conclusions stemming from this study are a start, but communication researchers need to spend time exploring body donation with the same vigor as they have with organ donation. Third, researchers must begin to parse out the differences in organ donation based on each distinct organ or organ system (e.g., circulatory, respiratory, integumentary). It is possible that individuals’ support of organ donation is impacted by the types of organs individuals are willing to donate. Finally, more research is needed to parse out the paradox of religious affiliation and donation likelihood. If an individual’s specific religion supports donation because it meets the tenets of the religion, why might they choose not to donate? Are there ways religious leaders can impact donation decisions? This paradox warrants further consideration, as congregations are often “captive audiences,” listening intently to their leaders.

An individual is added to the national transplant waiting list approximately every 10 minutes and on average, 20 people die every day waiting for an organ (UNOS, 2017). Although there is wide support for organ donation, there continues to be a deficit in individuals registering and actually donating their organs. The findings from this study add to our discussions of organ donation and what prevents or stifles conversations about organ donation. Individuals’ overall communication avoidance about death could be an important communication factor impacting organ donation decisions; likewise, religious affiliation could be way to start important conversations about body donations. In the end, more honest and open conversation about death and donation is needed in order to meet the organ needs of all those on the national transplant list.
References


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Table 1

**Correlations Coefficients for Communication Apprehension about Death, Religiosity, and Donation Actions**

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<tbody>
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<td>1. CADS</td>
<td>---</td>
<td>.918**</td>
<td>.868**</td>
<td>-.003</td>
<td>-.135*</td>
<td>-.069</td>
<td>-.110*</td>
<td>-.097</td>
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<tr>
<td>2. CANX</td>
<td>---</td>
<td>.601**</td>
<td>.074</td>
<td>-.109*</td>
<td>-.089</td>
<td>-.084</td>
<td>-.077</td>
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<td>3. CAV</td>
<td>---</td>
<td>.087</td>
<td>-.137*</td>
<td>-.030</td>
<td>-.117*</td>
<td>-.103</td>
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<tr>
<td>4. MOR</td>
<td>---</td>
<td>-.107</td>
<td>-.029</td>
<td>-.040</td>
<td>-.139*</td>
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<tr>
<td>5. Comfort with loved ones’ donating</td>
<td>---</td>
<td>.434**</td>
<td>.637**</td>
<td>.368**</td>
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<tr>
<td>6. Likelihood of consenting to loved ones’ donation</td>
<td>---</td>
<td>.421**</td>
<td>.269**</td>
<td></td>
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<tr>
<td>7. Likelihood of donating organs</td>
<td>---</td>
<td>.443**</td>
<td></td>
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<td>8. Likelihood of donating body</td>
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</table>

* Correlation significant at .05 level (1-tailed)
** Correlation significant at .01 and .001 level (1-tailed)