

IMPLEMENTATION AND EVALUATION OF A PROGRAM TO INCREASE ORGAN
DONATION AMONG THE AFRICAN AMERICAN COMMUNITY

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A Doctor of Nursing Practice Quality Improvement project submitted to the faculty at the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice in the Doctor of Nursing Practice Program in the School of Nursing.

Chapel Hill
2021

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ABSTRACT

Amanda Peay: Implementation and Evaluation of a Program to Increase Organ Donation among the African American Community
(Under the direction of Ashley Kellish)

Introduction: In the U.S., there are 112,283 candidates on the waiting list for an organ transplant and 3,472 on the waiting list in North Carolina (HRSA, 2020). The lack of organ donors in the U.S. and locally in NC is a major problem and can negatively impact candidates needing an organ transplant. *The purpose of this Doctor of Nursing Practice (DNP) project is to implement and evaluate a program to increase organ donor intentions and registration in the African American community.*

Methods: Using a distinct community-focused approach to promote a psychologically safe environment to learn about organ donation, participants were provided guidance on the topic from a trusted source and anonymous surveys collected data to capture the overall improvement.

Interventions: An online informational video conducted by a LifeShare representative, who is also a member of the congregation regarding organ donation was administered virtually over two weeks throughout May and June of 2020 and again in August of 2020. Data was collected via pre- and post-surveys before and after each informative video. Due to COVID, interventions and data collection were all completed virtually.

Results: There were 26 respondents that completed the pre-questionnaire survey. 100% of the respondents were African American, 19 were females and seven were males, 100% of the respondents were at least a high school graduate or had a higher education, and 13 indicated they were a registered organ donor and 13 respondents reported they were not. All 13 respondents

who indicated they were organ donors, registered at the local DMV. Sixteen respondents reported they had informed their family members of their organ donor wishes and 10 said they had not. After watching the video, 48 respondents completed the questionnaire. Of those 48, 33 (68.75%) indicated they will sign up to become a registered organ donor and 15 (31.25%) stated they will not sign up to become an organ donor.

Conclusion: The outcomes of this project were measured by the change in donor intention and/or registration based on pre- and post-survey results after watching an online informational video on organ donation and proven to be an effective intervention tool.

ACKNOWLEDGEMENTS

First, I would like to thank God for keeping me and helping me get through my trials and tribulations, while attending this DNP program at UNC-Chapel Hill. Thank you, Dr. Ashley Kellish, for serving as my committee chair for this DNP quality improvement project. I am so grateful and appreciative of your constant guidance and encouragement. Thank you, Dr. Carrie Palmer and Dr. Julie Page, for serving as my committee members. Your assistance and feedback on this DNP project have been greatly appreciated. I would also like to thank my church members and Pastor Dr. Haven O. Anderson, of Marvin AME Zion church for assisting me and allowing me to use the church as the setting to implement this quality improvement project.

Lastly, I would like to thank my family and special friends, who have kept me encouraged. I would like to specially thank my children, Tim, Sydney, and Kamran, for being patient with me as I have continued to embark on achieving my goals and striving for success. I do this for you all, for you all will see sky's the limit. You guys can do anything you put your mind to. Just know nothing comes easy, you must work for it.

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LIST OF ABBREVIATIONS AND SYMBOLS

AA	African American
AL	Alabama
β	beta
CTRL	control
DMV	Department of Motor Vehicle
DNP	Doctor of Nursing Practice
F/U	follow-up
GA	Georgia
HRSA	Health Resources and Services Administration
NC	North Carolina
p	p-value
QI	Quality Improvement
TPB	Theory of Planned Behavior
US	United States

CHAPTER 1: INTRODUCTION

In the United States (U.S.), currently there are 112,283 candidates on the waiting list for an organ transplant and 3,472 on the waiting list in North Carolina (NC) (HRSA, 2020). From January to December of 2019, there were 19,253 organ donors recovered including both deceased and living donors from all ethnicities in the U.S., and only 2,414 of the donors recovered were African American (HRSA, 2020). In NC there were 554 donors recovered, both living and deceased, and amongst the 554 donors recovered only 93 were African Americans (HRSA, 2020). The lack of organ donors in the U.S. and locally in NC is a major problem and can negatively impact candidates needing an organ transplant (HRSA, 2020 & DuBay et al., 2019). Approximately, 22 people die each day waiting on an organ transplant in the U.S. (DuBay et al., 2019). It is noted that minorities disproportionately have lower rates of organ transplantation, despite having the highest rate of risk factors for increasing the need of an organ transplant (HRSA, 2020).

An engaged health ministry team in an African American Church in a rural area of NC discussed the issue of African Americans having the highest need for organ transplantation in NC. Currently there are 1,566 African Americans on the waiting list for an organ transplant in NC compared to 1,299 Caucasian candidates (HRSA, 2020). There are 32,281 African American candidates on the waiting list for an organ transplant in the U.S. with the highest need of 30,060 waiting on a kidney (HRSA, 2020). The goal as health ministry members is to continue to bring awareness to the African American community, educate, and conduct interventions to decrease risk factors that African Americans face in the United States today.

The reasons African Americans may be more reluctant to become an organ donor are a lack of knowledge and awareness, cultural/religious beliefs, distrust in the healthcare system, fear of medical abandonment and fear of racism (Bratton et al., 2011). The purpose of this Doctor of Nursing Practice (DNP) project is to *implement and evaluate a program to increase organ donor intentions and registration in the African American community.*

CHAPTER 2: LITERATURE REVIEW

PubMed and CINAHL were the main databases utilized for this literature review, using the search terms (((("organ donation" OR organ donor)) AND African Americans) AND (mistrust OR culture OR cultural OR awareness OR knowledge OR barriers OR qualitative)); (((((((("organ donation" OR organ donor)) AND African Americans)) AND (education or intervention or pilot or random*)) date range 2008 through 2019 in order to review the effectiveness of current programs, achieve the most up to date statistics of organ donation among African Americans, and retrieve the current number of candidates on the waiting list for an organ. Federal and non-profit organization websites were also reviewed for related information including HRSA, Donate Life NC and LifeShare Carolinas.

Inclusion criteria included full text information available focused on (1) African Americans and organ donation intentions; (2) African American attitudes/beliefs, distrust in the health care system, fear of medical abandonment and racism, and knowledge regarding organ donation; and (3) interventions to increase organ donor registration among African Americans. Studies were excluded if they consisted of focusing on one specific organ; such as, kidneys only. Any studies conducted outside of the United States were excluded. In addition, studies regarding any other races outside of African Americans were excluded. Finally, studies that targeted only one particular group of African Americans (men, women, or clergy only) and the interventions were the same as all of the other studies were excluded as well.

Thirty-six references were found in the initial search. There were 12 duplicates. Twenty-four were screened. Six studies consisted of Haitian, Caucasian and Hispanic races, eight studies focused on only one specific organ and not all organs, two studies were conducted outside of the United States, one study consisted of African American men only, and another study consisted of African American clergy only. Six studies met inclusion criteria and read for full text review. Data were extracted using the Matrix Method tool (Appendix 1), which was used to synthesize the studies. Primary outcome measures were organ donor intentions and registration among African Americans. Secondary outcome measures were knowledge and awareness of organ donation, religion and beliefs, distrust in the healthcare system, familial notification, and racism and fear of abandonment. The results have been critically appraised for strength, consistency, reliability and validity. Some limitations of the search were some of the studies consisted of self-reported data and some of the studies measured organ donor intentions versus organ donor registrations, which were unobservable and unreliable.

Results

Problem

There were four studies identified addressing why African Americans are reluctant to become organ donors (Bratton et al., 2011; DuBay et al., 2019; Robinson, Klammer, Perryman, Thompson, & Arriola, 2014; Robinson, Perryman, Thompson, Lamonte Powell, & Jacob Arriola, 2015). Each study explored variables, such as, family notification, religion and beliefs, distrust in healthcare system, and knowledge and awareness. Two of the studies, (Robinson et al., 2015) and (Robinson et al., 2014), consisted of cross sectional designs and used the same sample of a larger study and the data collection method was a self-reported survey. The level of evidence for both studies were considered lower quality due to potential for bias as participants were recruited from personal social networks; however, the studies were considered valid with

strengths of having a moderate sample size at least 500 participants and the study population was representative of the study. Both of the studies measured the outcomes the same way and concluded that religious norms (anti-donation religious stance) were the most significant and consistent correlate of willingness to donate and written expression of donation intentions (driver's license or donor card) (Robinson et al., 2014). It also concluded that physician trust ($\beta = 0.49$; $p = 0.00$) and trust in the donation/allocation system ($\beta = 0.11$; $p = 0.02$) were each significantly associated with attitudes toward donation (Robinson et al., 2015).

A qualitative study by (DuBay et al., 2019) used a self-reported post questionnaire to explore the experiences of familial notification among recent African American registered organ donors obtained from the Department of Motor Vehicle (DMV) and identify ways to overcome potential barriers to the notification process. It was considered a lower quality level of evidence as a result of its small sample size; however, the study was considered valid as the population was representative of the study. The analysis of the study focused on motivation for the notification, notification conversation, and promoting familial notification. Findings revealed that participants were concerned about their own lack of knowledge regarding organ donation, their family's lack of understanding, or religious beliefs, such as, wholeness of the human body and that God can heal body parts without an organ transplant. Other findings indicated that some chose not to disclose their organ donor decision as they felt it was a private decision and personal matter, and some felt their families would not approve. Overall, the study findings concluded that participants valued familial notification and encouraged the use of social media in facilitating the notification process. In addition, the way one perceives one own self and expectations played an influential role in familial disclosure regarding organ donation.

A systematic review (Bratton et al., 2011) resulted in high quality level of evidence and low risk of bias. In this study, a meta-analysis of the associations between organ donation, racial disparities, and barriers were analyzed. The outcomes identified barriers; such as, decreased awareness, distrust of healthcare providers, and racism and fear of abandonment from the medical field. Results identified five key barriers to deceased organ donation, which were 1) lack of transplantation awareness, 2) religious beliefs and misperceptions, 3) distrust of the healthcare community, 4) fear of premature declaration of death after signing a donor card, and 5) fear of racism. Additional results analyzed, determined that African American men were least willing to become organ donors secondary to religious beliefs. Other findings from the systematic review indicated that African Americans compared to Caucasians were significantly less willing to donate organs or another's organs due to an overwhelmingly amount of lower levels of discrimination and mistrust in the healthcare system.

Solutions

Two studies reported on the effectiveness of educational interventions in increasing organ donation registrations and intentions (DuBay et al., 2019; Arriola, Robinson, Thompson, & Perryman, 2010). One study evaluated the use of an educational video at several DMVs on donor registration. The results showed that an increase in organ donor registration was consistently observed in each DMV while the video was on compared to off (mean= +2.3%) and the video was equally effective in Caucasians and African American. In the addition, organ donor registration was observable and a reliable measure (DuBay et al., 2019).

Another study tested the effectiveness of an educational intervention at an African American church to increase readiness for organ donation. They reported there was a baseline of 425 participants and 337 of the participants completed a one-year follow-up survey. The control group received currently available educational material for consumers regarding organ donation

and the intervention group received Project ACTS (About Choices in Transplantation and Sharing) educational material. The primary outcomes evaluated at one-year follow-up were readiness to express donation intentions via driver's license, donor card, and discussion with family. Findings of the study based on Prochaska's Stages of Change (i.e. action or maintenance) indicated the intervention group were 1.64 times more likely to be in the action or maintenance stage in their readiness to have a family discussion regarding organ donation intentions at follow-up compared to the control group ($p = .04$), participants were 1.53 times more likely to be in the action or maintenance stage for readiness to carry a donor card than at baseline ($p = .01$), and there were no significant effects of condition or condition by time on readiness to be identified as a donor on driver's license and by carrying a donor card (Arriola et al., 2010). In this study, organ donation intentions are unobservable, and therefore, unreliable. However, the study is valid and the strengths of the intervention were cultural sensitivity, representative population, and a moderate sample size. Both studies were high quality and low risk for bias.

Summary

Based on the body of evidence, the quality of the studies reviewed are moderate to high quality. Although some studies may have had a higher risk of bias, there were sound study designs and validity of the outcome measures. All of the studies met inclusion criteria identified sufficiently and support the need to influence the African American community in order to increase organ donation through a safe and respected area such as their local church.

CHAPTER 3: THEORETICAL FRAMEWORKS

The Theory of Planned Behavior (TPB) is a behavioral theory proposed by Ajzen and Fishbein in 1975 and 1980 to predict and explain health behaviors and intentions as well as to aid in interpreting study findings (Glanz, Burke, & Rimer, 2018). Therefore, TPB is descriptive, explanatory, and predictive in its use. The TPB makes a central assumption that behavioral intentions are essential determinants of behavior (Glanz et al., 2018).

The six constructs of TPB are *attitudes*, *behavioral intentions*, *subjective norms*, *social norms*, *perceived power*, and *perceived behavior control*. *Attitudes* examines the extent to which a person has a favorable or unfavorable evaluation of the behavior of interest. For example, examining attitudes consists of exploring the reasons *why* African Americans are reluctant to become organ donors. *Behavior intentions* are the motivational factors that influences a behavior. Behavior intentions helps to predict if the behavior will occur or not; the stronger the intention to donate organs, the more likely it will occur. *Subjective norms* are the beliefs about how others approve or disapprove of the behavior. With regards to subjective norms, individuals may seek the opinion of others whom they deem as important (i.e. family members, peer, pastors) whether they should become an organ donor or not. *Social norms* are normal codes of behavior in group or cultural context. If it is the social norm for African Americans from cultural aspect to not donate organs, then it will not be perceived as a problem or important to change. *Perceived power* is perceived presence of things that may aid or inhibit performance of the behavior; and *perceived behavior control* is the final construct that was added last and shifted Theory of

Reasoned Action to Theory of Planned Behavior (Glanz et al., 2018; Behavior Change Models, 2019). Perceived behavior control is the individual's perception of the ease or difficulty of performing the behavior of interest. For instance, African Americans may feel motivated to donate organs, if they believe they can do it (Behavior Change Models, 2019; Glanz et al., 2018).

The Theory of Planned Behavior fits with the metaparadigm of nursing by looking at humans as individuals and their uniqueness. It considers an individual's societal beliefs, values, and morals. Also, in line with nursing, it encompasses the perception of health and wellness and combined with a need to advocate, it supports a nurse's instinct to improve healthcare and create change (Butts, 2018).

The Theory of Planned Behavior has helped to guide this DNP project in order to successfully create behavior change in African American community. African Americans' reluctance to become organ donors and their disproportionately lower rate in organ transplantation among other races has contributed to this disparity. With the framing provided by the TPB, this project can assess and identify attitudes and beliefs, and subjective norms regarding the reluctance of organ donation in the African American community (Hyde & White, 2010). In a study conducted by (DuBay et al., 2014), there was an emphasis on how the TPB informed identification of factors associated with organ donation among the African American community; such as, religious beliefs and distrust in the healthcare system.

The TPB offers a descriptive approach for the identification of noticeable behavioral influences, which is an essential first step in the design of relevant interventions (Young, Lierman, Powell-Cope, Kasprzyk, & Benoliel, 1991). Furthermore, the TPB is particularly helpful when designing educational programs intended to change specific health behavior by taking into account one's beliefs, attitudinal factors, and subjective norms, which are secondary

outcomes of this DNP Project (Bastable, 2019). As such, when looking at factors causing the problem, the TPB has helped to shape the intervention of the informational sessions conducted in collaboration with LifeShare, an organ procurement organization.

The Iowa Model (2015) (Appendix 5) was utilized to provide the framework of this DNP quality improvement project. The Iowa Model (2015) helped to identify the problem on a national and local level, *the lack of organ donors in the U.S. and locally in NC is a major problem and can negatively impact candidates needing an organ transplant*, the purpose (*implement and evaluate a program to increase organ donor intentions and registration in the African American community*), key stakeholders, literature review, design and methodology, and results.

CHAPTER 4: DNP PROJECT PLAN

Design

The primary goal of this quality improvement project was to implement informational sessions in African American communities using a psychologically safe approach in order to increase organ donor intentions and registrations among African Americans. The design included a multi-model approach to reach African Americans by trusted leaders in their community with specific information regarding organ donation. A survey was utilized before and after the informative informational video session.

Setting and Population

This DNP Project targeted a large, rural African American-based church in North Carolina. The church has approximately 350 active members. Participants were adults over 18 years of age. All participation was voluntary and survey responses were anonymous.

Methods

An online informational video recording conducted by both a member of the congregation and a LifeShare representative regarding organ donation was administered virtually over two weeks throughout May and June of 2020 and again in August of 2020. Data was collected via pre- and post-surveys before and after each informative video. Due to COVID, interventions and data collection were all completed virtually. The intervention utilized an informational video uploaded to YouTube which was created by a LifeShare representative; this person is also an African American member of the church to help maintain a psychologically safe place and help reduce some of the anxieties, fears, and distrust African Americans have in

the healthcare system. The informational session was administered weekly for two weeks continuously sent via mass email and took place in May-June 2020. However, due to a low response rate, the informational video and post-questionnaire was re-administered in August 2020 for two consecutive weeks.

Data Collection Instruments

Data was obtained from the pre- and post-questionnaire surveys. The pre-questionnaire survey collected baseline data and consisted of eight questions. Specific variables included: demographics, such as, age, race, gender, highest level of education, whether they were registered organ donors or not, if they were which method did, they use to sign up, if they would ever consider signing up if they were not an organ donor, and if a family member had been informed of the organ donor wishes. Post-questionnaire survey consisted of the same eight questions as the baseline survey to determine if the intervention of the informational video was successful in gaining more organ donors.

Results

There were 26 respondents that completed the pre-questionnaire survey (Table 1), of which 100% were African American, 19 were female, seven were male, 100% had at least a high school graduate or had a higher education, 13 were registered organ donors and 13 were not. All 13 respondents who indicated they were organ donors, registered at the local DMV. Sixteen respondents reported they had informed their family members of their organ donor wishes and 10 said they had not. After disseminating the video, 48 respondents completed the post-questionnaire survey (Table 2). Of those 48, 33 (68.75%) indicated they intend to become a registered organ donor and 15 (31.25%) stated they will not sign up to become an organ donor. Twenty-five respondents reported they would consider registering as an organ donor in the future

and nine stated they will not. Twenty-nine respondents specified they will sign up at the local DMV, two stated they will

Table 1: Pre-Questionnaire Survey Results

Question	Pre-Survey % 26 Respondents
How old are you?	≥ 55 years of age – 65.38% 35-54 years of age – 30.77% 18-21 years of age – 3.85%
What is your race?	African American - 100% Hispanic – 0.00% White – 0.00% Other – 0.00%
What is your gender?	Male – 26.92% Female – 73.08%
Highest level of education completed?	Less than high school – 0.00% High school graduate/GED – 3.85% Some college – 7.69% College graduate – 88.46%
#8 - Have you signed up to become a registered organ donor?	Yes – 50% No – 50%
#9 - If your answer is Yes to Question #8, how did you sign up?	Advance Directive – 0.00% Local DMV – 100.00% Organ Procurement Organization (LifeShare, Donate Life) – 0.00%
#10 – If you did not register as an organ donor, would you consider registering to become an organ donor in the future?	Yes – 50% Maybe – 37.50% No – 12.50%
#11 – Did you inform your family member of your organ donation wishes?	Yes – 61.54% No – 38.46%

Table 2: Post-Questionnaire Survey Results

Question	Post-Survey %
How old are you?	48 Respondents ≥ 55 years of age –26% 35-54 years of age 21% 18-34 years of age –0%
What is your race?	African American - 100% Hispanic – 0.00% White – 0.00% Other – 0.00%
What is your gender?	Male – 23.40% Female – 76.60%
Highest level of education completed?	Less than high school – 2.08% High school graduate/GED – 2.08% Some college – 14.58% College graduate – 81.25%
Will you sign up to become a registered organ donor?	Yes – 68.75% No – 31.25%
If you answered yes to the previous question, how do you intend to sign up? Please choose one:	Advance Directive – 5.88% Local DMV – 85.29% Organ Procurement Organization (Lifeshare, Donate Life) – 2.94% iPhone Heart APP - 5.88%
If you did not register as an organ donor, would you consider registering to become an organ donor in the future?	Yes – 73.53% No – 26.47%
Did you inform your family member of your organ donation wishes?	Yes – 64.58% No – 35.42%

sign up via advance directives, one reported they will sign up through an organ procurement organization, and two stated they will sign-up through the iPhone Heart App. Thirty-one respondents stated they will inform their family members of their organ donor wishes and 17 reported they had not.

The outcomes of this project were measured by the change in donor intentions based on pre- and post-survey results after watching an online informational video on organ donation. The expectation of this project is that it would be an increase organ donor registration, which will help save lives of people of all ages, genders, races, creeds, and color. The outcomes were proven successful as there was an increase in the number of respondents indicating they would become a registered organ donor. The informational video is a convenient and straightforward tool that could be implemented by health ministries or other medical teams in African American churches throughout the country. For sustainability, an assigned liaison or leader from the health ministry team of this church could be over community outreach introducing this tool to other African American churches, at health fairs, and other events; therefore, this intervention could be sustained by continuing to provide informational sessions in the African Community at health fairs and other African American churches and events.

CHAPTER 5: DISCUSSION

The pre-survey results collected baseline data on how many African American church members were registered organ donors, how many were not registered organ donors, and how many had informed their family members of their organ donor wishes. The pre-survey results also indicated the method in which the registered organ donors had signed up. Members who indicated they were registered organ donors were asked not to continue participating in the study. The post-survey results determined the number of church members who intended to become registered organ donors, the method in which they intended to sign up, and how many will inform their family members of their organ donor wishes. Results of this study had similar outcomes with the study conducted by DuBay et al. (2019). In comparison, the study utilized an educational video at several DMVs on donor registration and had proven successful outcomes with the educational video intervention. There are no opportunity costs associated with this informational video intervention. This intervention is cost-effective, and the video could be updated as data and information changes.

Key Stakeholders

LifeShare, the Pastor of the church, and the Health Ministry Team were the key stakeholders for success in this project. The Health Ministry team consisted of doctors, pharmacists, nurses, nurse practitioners, social workers, and other health care professionals. The key stakeholders assisted with the implementation of this DNP project by facilitating the organizational structure, assisting with dissemination of the information and participant buy in.

Barriers and Limitations of DNP Project

A major limitation of this DNP Project was the inability to conduct the intervention face-to-face and/or offer in-person focus groups due to the COVID-19 pandemic. A face-to-face format would have allowed for participants to ask questions and would allow participation by members without access to technology. In addition, based on the literature presented, gaining trust and buy-in from the African American community in regards to health concerns is hugely valuable to promote behavior change.

Another barrier that could possibly have occurred and cause an impact of the project could be lack of participation and/or engagement due to distrust in the healthcare system. Distrust in the healthcare system has dated back over 100 years and is a result of racism. Historical medical abuses such as, the Tuskegee Syphilis Experiment contributed to African Americans' distrust in the healthcare system. Furthermore, African Americans fear whether physicians would readily try to save an organ donor's life or whether the potential organ donor would be declared deceased prematurely in order to obtain organs (Russell, Robinson, Thompson, Perryman, & Arriola, 2012).

Establishing trust as a health care provider is vital within the African American community. One study concluded that physician trust ($\beta = 0.49$; $p = 0.00$) and trust in the donation/allocation system ($\beta = 0.11$; $p = 0.02$) were each significantly associated with attitudes toward donation (Robinson, Perryman, Thompson, Lamonte Powell, & Jacob Arriola, 2015). Therefore, it is imperative for the intervention to be delivered face-to-face and/or presented by an African American in a culturally sensitive manner (Bratton et al., 2011). Addressing this barrier included enlisting church members, who are representatives for LifeShare, to help deliver and pre-record the online informational session. Furthermore, all of the members of the Health

Ministry team are African American, one has had a transplant, and one team member is a respected physician and deaconess in the church.

Although organ donor registration and intentions were measured, measuring donor intentions could have impacted the effectiveness of this project. Measuring intentions are unobservable and self-reported and therefore, can be difficult to measure. This issue was to be addressed by measuring organ donor intentions by using formal means, such as, driver's license, donor registries, an organ donor card, and/or a living will or health care directive (Korda, Wagstaff, & McCleary, 2007); however, as a result of the current COVID-19 pandemic, only responses given on the post-questionnaire survey were measured.

Funding

This DNP Project will not require any outside funding. LifeShare provided pre-existing power point presentations and toolkits needed for the informational session.

CHAPTER 6: CONCLUSION

Organ donor shortage is a major problem in the United States. With more than 112,000 candidates on the waiting list for an organ transplant, the severe acute respiratory syndrome coronavirus-2, also known as COVID-19, could lead to increased waitlist mortality. As a result of the COVID-19 pandemic, it has become priority to ensure to select uninfected donors to transplant uninfected recipients as it is contraindicated for positive COVID-19 deceased patients to be considered for organ donation (Galvan et al, 2020; Shah et al, 2020). The pandemic has added a layer of complexity as health care systems has not yet developed a standard approach to evaluate donors and recipients with possible COVID-19 (Galvan et al., 2020).

It is more important than ever to educate people on registering as organ donors, with more focus on educating the African American community rather sooner than later due to COVID-19 virus. African Americans are at a higher risk for needing an organ transplant due to co-morbidities yet are the most reluctant group to register as organ donors. Although, there were not as many respondents as anticipated due to the COVID-19 virus and an elderly church population, the informational video regarding organ donation, can be an effective tool to increase awareness of organ donation. It is a convenient and direct way to target the African American community and could be more effective if given face-to-face. This tool can be implemented and sustained in a variety of settings and can help break barriers in the African American community and start saving lives with candidates waiting for an organ transplant by changing non-organ donors to registered organ donors.

APPENDIX 1: TABLE OF CRITIQUE ARTICLES

Title: Organizing and Critiquing Articles Related to Organ Donation among African Americans

Problem Statement: The lack of organ donors in the nation and locally in NC is a major problem and has negatively impacted candidates needing an organ transplant.

Purpose Statement: Implement and evaluate a program to increase organ donor intentions and registration in the African American community.

Citation	Purpose Aims Objectives	Study Design/ Method	Study Sample/ Setting	Major Variables (outcome variables)	Measurement of variables	Analysis	Results/ Findings	Quality of the Evidence
(Arriola et al., 2010)	To test the effectiveness an educational intervention to increase organ donation intentions among AA	RCT; 9 AA churches randomly assigned: 5 church assigned to ctrl group (received donation education materials pamphlets and videotapes that were already available) and 4 churches assigned to intervention group (received the Project ACTS video and written	425 participants; AA church	Readiness to donate	Post questionnaire based on the transtheoretical model & stages of change; Donate intentions were unobservable; as the study was an assessment related to the intentions and based off a self-reported questionnaire and as such, unreliable	Analyzed via χ^2 statistics to determine confounding variables differed by condition and logistic regression Outcome analysis used generalized estimating equations	Baseline-425 participants, 337 completed 1-year f/u survey. Intervention (n=175)/ Ctrl (n=162); intervention group were 1.64 times more likely to be in action or maintenance at f/u than ctrl group ($p=.04$); effect size small (OR <2), but still significant	Based on Melnyk & Fineout-Overholt level of evidence- Level II (Levels of Evidences, 2019) Strengths: Intervention culturally sensitive; population representative of the study; adequate sample size Weakness: participants were given the material to take home; as such, some could not

		material); 1-year follow-up						have watched it; intervention mainly focused on religious beliefs
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(Bratton et al., 2011)	To review the impact of organ donor shortage, racial disparities, barriers; and if educational intervention is important in helping to increase organ donor registration	Systematic Review; inclusion criteria was African-Americans, deceased and living donors	11 studies were reviewed	Barriers in AA to become an organ donor and organ donor registration	Via other studies identified by the author; measured barriers to organ donation and measured donor registrations and attitudes after interventions via quasi-experimental studies Systematic reviews are more objective, less risk of systematic errors, high quality and therefore reliable	Via Statistical Meta-analysis	AA make up 12.9% of US population, 34% of the kidney transplant waiting list are AA, but only 13.8% of deceased donors. Identified Barriers to AA deceased donation: decreased awareness, religious, distrust of healthcare providers, fear of abandonment from medical field and fear of racism	Based on Melnyk & Fineout-Overholt level of evidence- Level I (Levels of Evidences, 2019) Strengths: multiple studies were included; population representative of the study, Meta-analysis conducted, individual studies were clearly defined (characteristics, data, findings, interventions) Weakness: although article was completed in 2012, the data presented regarding statistics were from 1999 to 2008;
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(D. DuBay et al., 2019)	To increase organ donor registration at the DMV via 10 min educational video	A video was presented via an interrupted time series design, repeating on 2 months, off 2 months on TVs; 12-month study. A QI study	162,387 patrons visited 6 regional DMVs in Alabama (Caucasian 39.59% AA; 1.7% Hispanic; unknown 3.8%)	Outcome Variables: Organ donor registration	Organ donor registration was observable and therefore a reliable measure	fixed effects logistic regression used to analyze data;	Increased in organ donor registration were consistently observed in each DMV while the video was on compared to off (mean= +2.3%). 54.91% There was no video-dependent effect on registration between Whites and Black Americans (p=0.62)	<p><i>Level of Evidence</i>-a QI study not intended to be generalizable</p> <p>Weakness: there was no sound to the video while it was playing; DMV staff were familiarized with the study, which may have caused bias, which could minimize the effectiveness of the video; Population did not target only AA</p> <p>Strengths: the design allowed a comparison population of demographics prior to and after the video intervention; Large sample size; Being able to obtain 6 months of control baseline data and data</p>
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								acquired from AL DMV offices not enrolled in the intervention; inexpensive intervention
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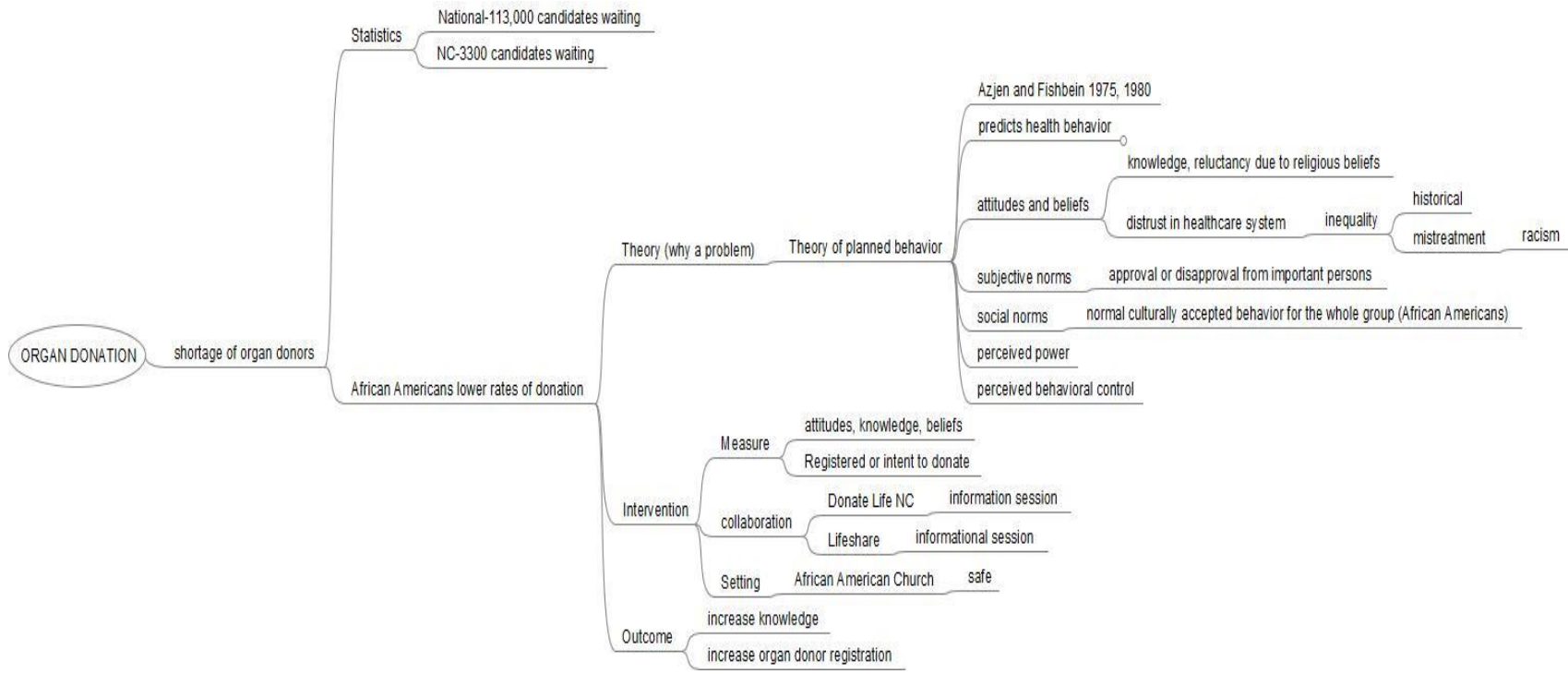
(D. A. DuBay et al., 2019)	To explore the experiences of familial notification among recent AA registered organ donors and identify ways to overcome potential barriers to the notification process	Qualitative study/ focus group approach	50 AA participants (19 years and older, men and women) whom visited the DMVs in Alabama	Outcome Variable: Notification family members about their decisions to become a registered organ donor	7 focus groups of 50 AA participants that registered as organ donor, given a questionnaire Questionnaire is self-reported; as such; unobservable; unreliable	Digitally recorded focus group discussion was transcribed & analyzed using inductive thematic analysis, a multifunctional software system for qualitative data analysis, NVivo10, used to organize data coding process	Findings revealed that AA registered organ donors recognized the importance of notifying family, but remained reluctant to let them know	Based on Melnyk & Fineout-Overholt level of evidence- Level VI (Levels of Evidences, 2019) Strengths: population representative of the study, moderate sample size Weakness: Not generalizable due to experiences of AA from Alabama may or may not be representative to the US AA as whole
(Robinson et al., 2014)	To find the complexities of beliefs/religion, with intent to donate organs in AA	Cross-Sectional Study	585 AA participants; however only 505 participants who identified as Christians were included/ Local community	Outcome Variable: Donation intentions among AA	Survey measures consisted of religious service attendance, subjective religiosity (how religious would you say you are?), spirituality (how spiritual would you say you are?), religious norms (I	Outcomes variables measured using bivariate analysis and a logistic regression model	Results revealed religious norms (anti-donation religious stance) was the most significant and consistent correlate of willingness to donate and written expression of donation intentions	Based on Melnyk & Fineout-Overholt, level of evidence- Level VI (Levels of Evidences, 2019) Strengths: population representative

			center, local business, churches, private residence in Atlanta, GA		<p>have been taught that organ donation is against my religion?), willingness to serve as an organ donor, donation intentions, and demographics;</p> <p>Donation intention unobservable; however, the survey method utilized is valid</p>		<p>(driver's license or donor card); subjective religiosity remained significantly positively associated with willingness to serve as an organ donor ($p < .001$). on the full model</p>	<p>of the study, moderate sample size</p> <p>Weakness: selection bias as participants were recruited from personal social networks; did not clearly defined denomination of Christian (i.e. AME, Baptist, non-domination, etc.), overrepresented by females with higher income brackets</p>
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(Robinson et al., 2015)	To unravel the construct of trust by dividing measures related to the trust in healthcare system, trust in donation/allocation system, and trust with physicians; and determine the relationship of these areas to attitudes toward organ and tissue donation among AA	Cross-sectional research design, combining baseline data from both intervention and control groups; survey data gathered of 585 AA adults	585 AA adults, Atlanta, GA	Outcome Variable: attitudes towards donation	Survey consisted of attitudes/beliefs, trust in donation/allocation systems, physician level trust, and demographics; the authors gave examples of their questions for each area; The survey did have validity	Outcomes variables measured using bivariate analysis and a logistic regression model	Findings showed Physician trust ($\beta = 0.49$; $p = 0.00$) and trust in the donation/allocation system ($\beta = 0.11$; $p = 0.02$) were each significantly associated with attitudes toward donation.	Based on Melnyk & Fineout-Overholt, level of evidence- Level VI (Levels of Evidences, 2019) Strengths: population representative of the study, moderate sample size Weakness: selection bias as participants were recruited from personal social networks; participants; overrepresented by females with higher income brackets
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Legend: AA (African American); AL (Alabama); CTRL (control); DMV (Department of Motor Vehicles); F/U (follow-up); GA (Georgia); QI (Quality Improvement); US (United States)

APPENDIX 2: CONCEPT MAP



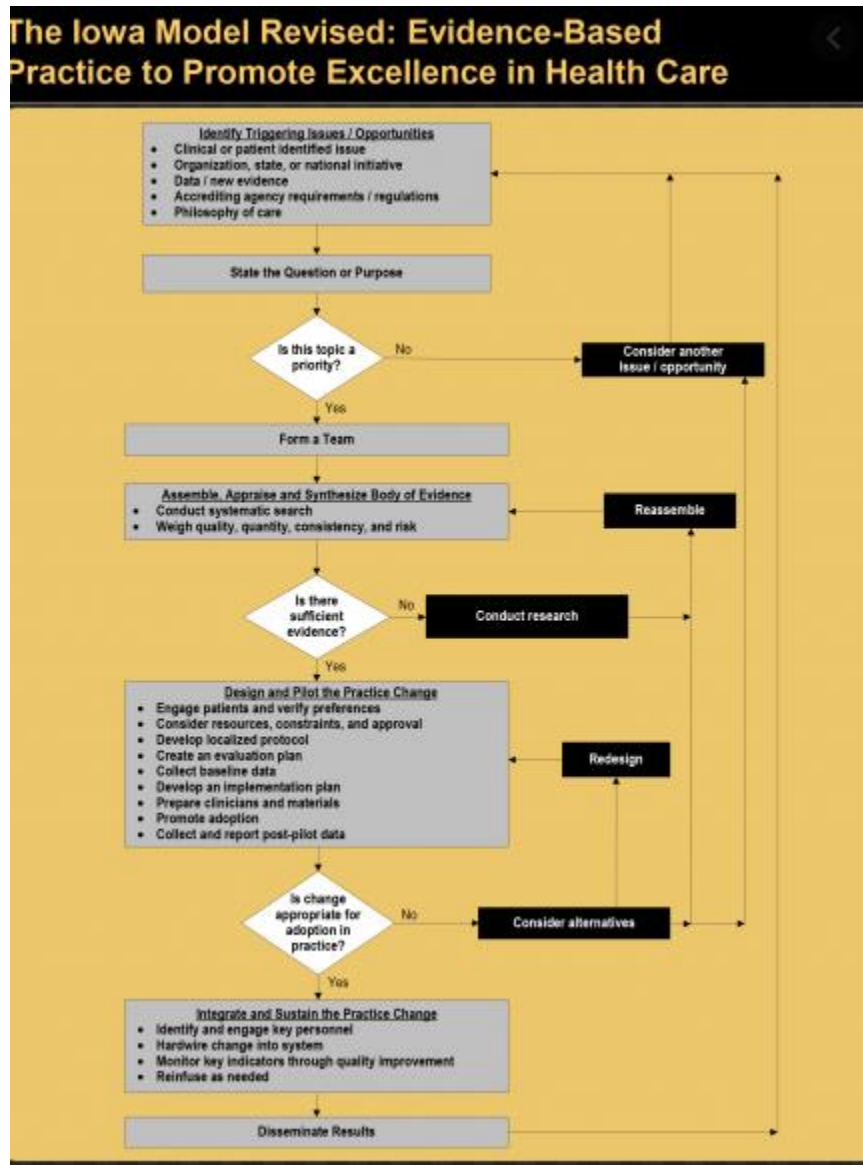
APPENDIX 3: PRE-QUESTIONNAIRE SURVEY

1. How old are you?
2. What is your race? Please choose one: African American
Hispanic
White
Other
3. What is your gender? Please choose one: Female
Male
4. Highest level of education completed? Please choose one: <high school;
high school diploma/GED;
Some College
College Graduate
5. Have you signed up to become registered organ donor? Yes or No
6. If your answer is **YES** how did you sign up? Advance Directive, Local DMV or Organ Procurement Organization (Lifeshare, DonateLife)
7. If you did not register as an organ donor, would you consider registering to become an organ donor in the future? Yes or No
8. Did you inform your family member of your organ donation wishes? Yes or No

APPENDIX 4: POST-QUESTIONNAIRE SURVEY

1. How old are you?
2. What is your race? Please choose one: African American
Hispanic
White
Other
3. What is your gender? Please choose one: Female
Male
4. Highest level of education completed? Please choose one: <high school;
high school diploma/GED;
Some College
College Graduate
5. Did you sign up to become registered organ donor? Yes or No
6. If your answer is **YES** how did you sign up? Advance Directive, Local DMV or Organ Procurement Organization (Lifeshare, DonateLife)
7. If you did not register as an organ donor, would you consider registering to become an organ donor in the future? Yes or No
8. Did you inform your family member of your organ donation wishes? Yes or No

APPENDIX 5: THE IOWA MODEL



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REFERENCES

- Arriola, K., Robinson, D. H., Thompson, N. J., & Perryman, J. P. (2010). Project ACTS: an intervention to increase organ and tissue donation intentions among African Americans. *Health education & behavior: The official publication of the Society for Public Health Education*, 37(2), 264–274. doi:10.1177/1090198109341725
- Bastable, S. (2019). *Nurse as Educator: Principles of Teaching and Learning for Nursing Practice* (5th ed.). Burlington, MA: Jones & Bartlett Learning, pp. 241-243-489.
- Behavior Change Models. (2019). The Theory of Planned Behavior. <http://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehavioralChangeTheories/BehavioralChangeTheories3.html>. Accessed November 8, 2019.
- Bratton, C., Chavin, K., & Baliga, P. (2011). Racial disparities in organ donation and why. *Current Opinion in Organ Transplantation*, 16(2), 243–249. doi: 10.1097/MOT.0b013e3283447b1c
- Bresnahan, M., Lee, S. Y., Smith, S. W., Shearman, S., Nebashi, R., Park, C. Y., & Yoo, J. (2007). A theory of planned behavior study of college students' intention to register as organ donors in Japan, Korea, and the United States. *Health Communication*, 21(3), 201–211. doi:10.1080/10410230701307436
- Butts, J. B., & Rich, K. (2018). Philosophies and theories for advanced nursing practice. (3rd ed). In K. Glanz, L. Burke, & B. Rimer, *Health Behavior Theories* (pp. 248-250). Sudbury, Mass.: Jones and Bartlett Publishers
- Butts, J. B., & Rich, K. (2018). Philosophies and theories for advanced nursing practice. (3rd ed). In J. Butts, *Components and Levels of Abstraction in Nursing Knowledge* (pp. 95-96). Sudbury, Mass.: Jones and Bartlett Publishers
- Davis, K., Holtzman, S., Durand, R., Decker, P., Zucha B., & Atkins, L. (2005). Leading the flock: Organ donation feelings, beliefs, and intentions among African American clergy and community residents. *Progress in Transplantation*, 15(3), 211-216. doi: 10.1177/152692480501500303
- DuBay, D. A., Ivankova, N. V., Herbey, I., Redden, D. T., Holt, C., Siminoff, L., ... Martin, M. Y. (2019). An African American perspective on familial notification of becoming a registered organ donor. *Progress in Transplantation (Aliso Viejo, Calif.)*, 29(2), 164–172. doi:10.1177/1526924819835837
- DuBay, D. A., Ivankova, N., Herby, I., Wynn, T. A., Kohler, C., Berry, B., ... Martin, M. Y. (2014). African American organ donor registration: A mixed methods design using the theory of planned behavior. *Progress in Transplantation (Aliso Viejo, Calif.)*, 24(3), 273–283. doi:10.7182/pit2014936

- DuBay, D., Morinelli, T., Redden, D., Rodrigue, J., Ivankova, N., Herbey, I., ... Martin, M. (2019). A video intervention to increase organ donor registration at the department of motorized vehicles. *Transplantation*. doi:10.1097/TP.0000000000002880
- Galvan, N., Moreno, N. F., Garza, J. E., Bourgeois, S., Hemmersbach-Miller, M., Murthy, B., Timmins, K., O'Mahony, C. A., Anton, J., Civitello, A., Garcha, P., Loor, G., Liao, K., Shaffi, A., Vierling, J., Stribling, R., Rana, A., & Goss, J. A. (2020). Donor and transplant candidate selection for solid organ transplantation during the COVID-19 pandemic. *American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons*, 20(11), 3113–3122. <https://doi.org/10.1111/ajt.16138> Health Resources and Services Administration. (2019). Organ Procurement and Transplantation Network. National Data. <https://optn.transplant.hrsa.gov/data/view-data-reports>. Accessed November 30, 2019.
- Hyde, M. K., & White, K. M. (2010). Are organ donation communication decisions reasoned or reactive? A test of the utility of an augmented theory of planned behavior with the prototype/willingness model. *British Journal of Health Psychology*, 15(Pt 2), 435–452. doi:10.1348/135910709X468232
- Iowa Model Collaborative. (2017). Iowa model of evidence-based practice: Revisions and validation. *Worldviews on Evidence-Based Nursing*, 14(3), 175-182. doi:10.1111/wvn.12223
- Korda, H., Wagstaff, D. A., & McCleary, K. J. (2007). How African Americans express their intentions to be organ donors. *Progress in Transplantation*, 17(4), 275-280. Retrieved from <http://search.ebscohost.com/libproxy.lib.unc.edu/login.aspx?direct=true&db=rzh&AN=105867120&site=ehost-live&scope=site>
- Robinson, D. H. Z., Klammer, S. M. G., Perryman, J. P., Thompson, N. J., & Arriola, K. R. J. (2014). Understanding African American's religious beliefs and organ donation intentions. *Journal of Religion and Health*, 53(6), 1857–1872. doi:10.1007/s10943-014-9841-3
- Robinson, D. H. Z., Perryman, J. P., Thompson, N. J., Lamonte Powell, C., & Jacob Arriola, K. R. (2015). Exploring donation-related knowledge attitudes, beliefs and distrust among African Americans. *Journal of the National Medical Association*, 107(3), 42–50. doi:10.1016/S0027-9684(15)30050-X
- Russell, E., Robinson, D. H. Z., Perryman, J. P., Thompson, N. J., & Jacob Arriola, K. R. (2015). Distrust in the healthcare system and organ donation intentions Among African Americans. *Journal of Community Health*, 37(1), 40–47. doi: 10.1007/s10900-011-9413-3
- Shah, M. B., Lynch, R. J., El-Haddad, H., Doby, B., Brockmeier, D., & Goldberg, D. S. (2020). Utilization of deceased donors during a pandemic: argument against using SARS-CoV-2-positive donors. *American journal of transplantation: official journal of the American Society of Transplantation and the American Society of Transplant Surgeons*, 20(7), 1795–1799. <https://doi.org/10.1111/ajt.15969>

Young, H. M., Lierman, L., Powell-Cope, G., Kasprzyk, D., & Benoliel, J. Q. (1991).
Operationalizing the Theory of Planned Behavior. *Research in Nursing & Health*, 14(2),
137–144