

AWARENESS AND ACCEPTANCE TOWARDS ORGAN DONATION IN SELECTED BARANGAYS: BASIS FOR ORGAN DONATION CAMPAIGN

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Abstract: The Philippines faces a rising demand for organ transplants, with one person dying daily while waiting. This study focused on awareness and acceptance of deceased organ donation to address this crisis.

Following ethical standards, a descriptive correlational design, with purposive sampling for data gathering was employed. A survey tool, validated, was used on participants aged 18 to 65. The pilot study was done and excluded from the main data collection, which included face-to-face surveys in selected barangays of Parañaque City.

Most respondents were aware of the importance of legal next of kin's consent in organ donation, but not as familiar with PhilNOS, its allocation criteria, donating organs posthumously, including in cases of HIV, Hepatitis B, and C. Aware of potential bodily changes when donating organs, but are unaware that signing a donation card does not guarantee success. Social media is their main awareness source. Family agreement and discussions are highly accepted, but willingness to donate from a brain-dead relative is slightly accepted. Religious beliefs lean towards high acceptance with less concern for body preservation. Registering through the I-HOPE app is slightly accepted.

Research findings show significant relationships between age and sex regarding awareness, age and employment status in terms of acceptance, and awareness and acceptance towards deceased organ donation.

Increased awareness and education to public and healthcare providers, can appreciate its life-saving importance, thereby increasing the likelihood of participation, and can help dispel myths and reduce fears, leading to a more supportive attitude toward deceased organ donation.

Keywords: Acceptance, Awareness, Deceased Organ Donation, Organ Donation Campaign, Selected Barangay, Sources of Information, Willingness to donate.

I. INTRODUCTION

“Awareness is the first step to the path of acceptance.” - Psychologist Nathan Branden

The Department of Health (DOH) has been at the forefront of advocating for deceased organ donation – that one deceased organ donor can save up to eight lives, but despite the initiatives such as the “Dugtong Buhay: Ako, Kabahagi Mo!”, NKT1’s I-HOPE app, and Republic Act No. 7170. The World Health Organization (WHO) reports that up to 230,000 Filipinos died from organ related illnesses. In the Philippines, with over 109 million population as of 2020. Here's a startling reality: Only 149 are registered as organ donors as of February 8, 2023. But the urgency doesn't end there – leaving 7,000 ESRD patients in dire need of renal transplants.

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Globally, the disparity between the supply of organs and the demand for transplants is a critical concern, with many countries facing similar challenges of organ shortages. For instance, in the United States, 17 individuals die daily waiting for a transplant, while over 105,800 people remain on waiting lists. In the Philippines, the situation is equally dire, with an increasing number of patients suffering from end-stage organ failure, particularly kidney diseases, requiring transplants to survive. However, the deceased donation rate remains significantly low, with less than one donor per million population per year (National Kidney and Transplant Institute [NKTII], Human Organ Preservation Effort [HOPE]). The urgency of addressing organ donation as a public health issue cannot be overstated, as it involves an interplay of medical, legal, ethical, organizational, and social factors (Darlington et al., 2019). Organ donation, defined as the voluntary act of providing organs without compensation (Al Darwish et al., 2021), has the potential to restore normal life to individuals suffering from organ failure, yet in the Philippines, the gap between patients in need and available donors remains vast.

Despite ongoing campaigns, such as the DOH's "Dugtong Buhay: Ako, Kabahagi Mo!" initiative, misconceptions, cultural beliefs, and ethical concerns continue to hinder public willingness to participate in deceased organ donation. Religious and societal values play a role in shaping public opinion, further complicating the adoption of organ donation practices. These challenges, compounded by the lack of registered donors—only 149 as of February 2023—the need for a more structured and culturally sensitive approach to raising awareness and increasing donor registrations.

This study was aimed to explore and determine the awareness and acceptance of participants from selected barangays towards deceased organ donation. The study fills a gap by providing essential data on organ transplantation and donors. The lack of existing data motivated the researchers to do this research that will support the development of effective deceased organ donation campaigns. This also examines the role of healthcare professionals, particularly nurses, in facilitating the process. By identifying gaps in knowledge and addressing the reasons for public reluctance, this offers recommendations that can significantly impact the success of organ donation programs in the country. Addressing these barriers will not only enhance public health outcomes but also provide individuals suffering from organ failure with a renewed chance at life.

II. BODY OF ARTICLE

End-stage organ failure is becoming more common in Filipinos, a debilitating condition for which organ transplantation is the sole means of survival. Patients on organ waiting lists are critically ill, and one person dies every day while waiting for a transplant. Although organ transplantation is a globally accepted medical treatment that enhances the quality of life for these patients, the nation and the rest of the globe are plagued by a scarcity of sources for transplantable organs.

The attitude, perception, and knowledge of the Filipino public about organ transplantation were studied by Carrillo et al. (2021), but none have looked into the level of awareness and acceptance of deceased organ donation for research objectives. Therefore, the researchers are eager to pursue this study because they aim to determine the level of awareness and degree of acceptance of selected barangays on deceased organ donation. It is also expected to identify the factors that contribute to the degree of acceptance of the participants. The awareness and acceptance will determine if necessary interventions, such as implementing programs are needed to raise awareness towards deceased organ donation and help solve the problem regarding the shortage of organ donors. The researchers' goal is additionally to assist public health organizations in determining if further activities are required to improve Filipino awareness and trust in the deceased organ donation procedure, hence increasing the number of potential donors.

III. METHODOLOGY

The researchers applied the quantitative correlational research design, which enabled them to determine if a significant relationship exists between the demographic profiles of participants from selected barangays and their levels of awareness and acceptance of deceased organ donation.

This research was conducted in two selected barangays in Paranaque City, Barangays A and B. These barangays were chosen for their diversity in terms of socioeconomic status, education levels, and access to healthcare, which are variables for understanding the community's awareness and acceptance of deceased organ donation. The dynamic environment in these areas, characterized by commerce, schools, and a strong sense of spirituality, made them ideal for conducting a study focused on healthcare attitudes and practices.

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The research instrument was formulated and enhanced based on the guiding principles of World Health Organization (2010) and Department of Health (2010) towards organ donation; the study of Carillo et al. (2021) entitled “Knowledge, Attitudes, and Perceptions of Tertiary Level Students in a University in Manila regarding Organ Donation and Transplantation;” the study of Sayedalamin et al. (2017) entitled “Awareness and Attitudes towards Organ Donation among Medical Students at King Abdulaziz University, Jeddah, Saudi Arabia;” the study of Saikia, B., Tamuli, R., & Sarmah, S. (2019) entitled “Organ donation–Attitude and Awareness among undergraduates and postgraduates of North-East India;” the study of Rajvir Singh (2018) entitled “Validation Questionnaire of Organ Donation: An Arabic world scenario”; the study of Venkatesan et al. (2022) entitled “Strategies to Improve Organ Donor Pool: A Study on the

Knowledge, Attitudes, and Performance of Higher Secondary School Teachers Towards the Organ Donation;” the study of Luo et al. (2022) entitled “A qualitative study in Family units on Organ Donation: Attitude, Influencing factors and communication patterns;” Hawryluck L. & Knickle K. (n.d) entitled “Cultural considerations in Donation;” and the articles of Mayo Clinic Staff (2022) entitled “Organ donation: Don't Let these Myths Confuse You;” Creative Commons Zero (n.d.) entitled “Organ and Tissue Donation;” Permalink (n.d) entitled “Organ Donation online questionnaire;” Noriega R. (2022) entitled “NKTI launches mobile app to help patients who need Organ Donors”; and Hoffman A. (2021) entitled “10 Reasons to Become an Organ Donor.”

The finalized instrument, divided into three sections, allowed for a detailed exploration of participants’ socio-demographic profiles, levels of awareness, and degrees of acceptance towards deceased organ donation. Utilizing Rensis Likert’s 4-point scale facilitated an understanding of awareness and acceptance levels, while maintaining participant anonymity throughout the process. This approach ensured that the research instrument was well-suited to capture relevant data in alignment with global best practices, contributing meaningfully to the ongoing discourse on deceased organ donation awareness and acceptance.

For conducting the study, a letter of approval was addressed to the Local Government Unit of the selected barangays and to the Dean, School of Nursing, Mary Chiles College, those included was 18 years old to 65 years old, able to complete the survey in English and further translated in Filipino assisted by the grammarian of Mary Chiles College. This was noted by the adviser of Nursing Research II, and validated by three (3) experts on the field of the study and approved by the Dean, School of Nursing of Mary Chiles College.

The participants were selected by means of purposive sampling. It was helpful for getting a broad picture of attitudes, behaviors, or circumstances, such as understanding the range of concerns facing respondents about an issue. This is used to make statistical inferences about a population in order to assess the population awareness and acceptance towards deceased organ donation. The selected sample size represented the characteristics of the whole community population.

The researchers incorporated inclusion and exclusion criteria in selecting the participants who are relevant in acquiring the main source of information from the survey questionnaire. The participants were chosen based on location and age specifically, those included were 18 years old to 65 years old, literate and able to complete the survey in Filipino. A total of 399 participants from two barangays namely Barangay A and B, Parañaque City were studied. Barangay A and B will have a sample size of 220 and 179 using the Slovin’s Formula.

Slovin’s Formula

The formula is as follows:

$$n = \frac{N}{1 + Ne^2}$$

Where:

- n = is the number of respondents needed
- N = Population size
- e = error of 5%

$$n = \frac{164,824}{1 + 164,824 (0.05)^2}$$

$$n = \frac{164,824}{1 + 164,824 (0.05)^2}$$

$$n = 164,824 \cdot 13.06$$

$$n = 399$$

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Table 1. Sampling size allocation as of 2021

Barangay	Population	Sample Size
Barangay A	90, 925	220
Barangay B	73, 899	179
<i>Total</i>	<i>164, 824</i>	<i>399</i>

The pilot study involved 30 individuals from residing specifically within Barangays A and B. The Cronbach's alpha was used in the pilot study to test the internal reliability of the questionnaire before the data collection in the selected Barangays. Prior to data collection, bias in the questionnaire design was removed, participant differences were considered, and result accuracy was guaranteed.

The selected participants were asked to fill out the informed consent explained by the researchers prior to answering the questionnaire for the participants to know their rights during the entire research. The participants were chosen in the selected barangays from Barangay A and Barangay B in Parañaque City. A face-to-face survey was conducted to the participants and a printed copy of the questionnaire was disseminated as well as the utilization of Google Forms with the coordination and assistance of barangay officials.

Weighted Mean, Chi-Square, Yate's Continuity Correction and Pearson Product Moment Correlation Coefficient were employed to analyze overall participant responses and determine variable relationships.

ETHICAL CONSIDERATIONS

The present research proposal has undergone review and approval by the ethics committee of Mary Chiles College to ensure compliance with ethical and legal standards such as the Privacy and Confidentiality, Informed Consent Process, Declaration and Management of Vulnerability, and Risks and Benefits. Ethical approval is deemed essential to safeguard the rights and welfare of research participants and to ensure that the research is conducted with due regard for ethical and responsible practices. The researchers ensured that all participants gave an oral and written consent prior to the study. The researchers explained to the participants the objectives of the study and ensured that they may choose whether or not to take part in the study and that they were free to withdraw at any time. The identity of the participants was treated with anonymity. All the gathered information in the study was kept with utmost confidentiality. The obtained data in the study was documented and may be published as research journals and/or presented at academic conferences but will not divulge identity or include any identifiable references to the selections.

IV. FINDINGS AND DISCUSSIONS

A total 399 responses were received from the targeted 2 barangays with a total population of 164, 824 potential respondents, constituting a 100% response rate for the survey. Out of 399 respondents, 100% have completed all the questions that were required to be answered. The responses gathered from the online survey have been analyzed using Pearson's chi-squared test.

Table 2. Level of Deceased Organ Donation Awareness of the Participants in terms of:

Indicator	Weighted Mean	Standard Deviation	Verbal Interpretation
Purpose	3.01	0.73	Aware
Guiding Principles	2.68	0.79	Aware
Process	2.46	0.79	Slightly Aware
Attitude and Perception	3.03	0.77	Aware
Sources of Information	2.82	0.75	Aware

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With regard to the process, the first indicator shows that respondents have a slight level of awareness about the organization responsible for overseeing the management and transfer of organ donors and transplants involving deceased donors in the country, which is the Philippine Network for Organ Sharing. The second indicator suggests that respondents are somewhat aware of the step involving informing PhilNos about obtaining consent for organ donation to ensure its availability. The third indicator indicates an aware understanding among respondents regarding the possibility that even registered donors may face refusal of their organs or tissues after death due to medical reasons such as blood poisoning (sepsis), viral infection, acquiring tattoos, or piercings within six months before death. The fourth indicator reflects that respondents possess a slight level of awareness that individuals can still donate organs after death despite testing positive for HIV, hepatitis B, and C. The fifth indicator highlights that respondents have an awareness that not all organs and types of tissues are suitable for transplant. The sixth indicator emphasizes the respondents' somewhat aware comprehension of the process involving Brain Death Certification. It must be conducted twice: the first certification requires the signatures of two qualified medical practitioners, and the second declaration should occur four hours later, also signed by two qualified medical practitioners. The official time of death corresponds to the time on the second Brain Death declaration, which is reflected on the Death Certificate. A Brain Death Certification is a prerequisite before discussing Organ Donation.

Slight level of awareness about deceased organ donation can be attributed to lack of comprehensive and regional educational campaigns by the government and healthcare organizations. In regions with limited access to healthcare services, people might not have the opportunity to learn about organ donation. Language barrier and lack of communication is also evident as information might not be available in languages accessible to all segments of the general population, limiting the understanding of the process of deceased organ donation. Additionally, people might not be personally connected to the topic, leading to a lack of interest in seeking information. Being informed about the process enables the individuals to make ethical decisions about organ donation, considering the positive impact they have on others. Awareness helps dispel myths and reduce stigma associated with organ donation, allowing for more open conversations and informed decision-making.

The respondents, in general, were not aware that individuals with HIV, Hepa B and C can still donate their organs. They stated that if the donor has these, the recipient will also be infected. However, according to the Centers for Disease Control and Prevention (2019), individuals with a prior HIV and hepatitis B infection might still be eligible to offer their organs or tissues for donation. The transplant team will assess the suitability of specific organs or tissue through a clinical evaluation, review of medical history, and consideration of other relevant factors.

The respondents were also not aware of the Philippine Network for Organ Sharing (PhilNOS), which was established as the central organization responsible for the distribution of organs obtained from deceased donors. Lack of awareness about these processes towards deceased organ donation may result in fewer people registering as organ donors or expressing their intent to donate.

Table 3. Degree of Deceased Organ Donation Acceptance of the Participants in terms of:

Indicator	Weighted Mean	Standard Deviation	Verbal Interpretation
Family Belief	2.79	0.83	Accepted
Religious Belief	2.61	0.75	Accepted
Cultural Belief	2.16	0.88	Slightly Accepted
Willingness to Donate Organs	2.53	0.90	Accepted

With regard to the Cultural Belief, the first indicator suggests that respondents somewhat do not hold the belief that their body should remain intact after death. The second indicator signifies that respondents possess a slight level of awareness about the concept of reincarnation, where, for instance, donating their eyes might lead to blindness in the next life. The third indicator indicates a slight level of awareness that some cultural beliefs necessitate swift burial or cremation of the body after death. The fourth indicator reflects that respondents possess a slight level of awareness that some cultural beliefs involve the soul remaining in the body for a few hours after death. The fifth indicator highlights that respondents slightly believe that they might feel the removal of body parts even after death.

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The responses indicate that although certain cultural beliefs could present challenges to the acceptance of organ donation, the respondents still demonstrate a willingness to contemplate and embrace the idea of organ donation, albeit to a moderate extent. Even when faced with conflicting notions such as the belief in the preservation of the body after death or concerns about its impact on reincarnation, respondents display a level of acceptance toward organ donation. This implies that they value the medical advantages and the potential to save lives when making their decisions. In spite of cultural practices emphasizing rapid burial or cremation, respondents still express a degree of acceptance towards organ donation. This signifies an acknowledgment of the role of organ transplantation in life preservation.

The acceptance of organ donation appears to harmonize with cultural beliefs surrounding the soul's duration after death and the notion of removing body parts. This suggests a certain adaptability in considering the medical and compassionate aspects of organ donation.

Two separate studies delved into the fascinating relationship between cultural beliefs and attitudes towards organ donation. In Carillo et al.'s (2021) study, focused on university students in Manila, respondents generally shared a common perspective. They did not hold cultural beliefs dictating the preservation of their bodies after death. This marked a departure from earlier research suggesting that many Filipinos valued the postmortem integrity of the body.

On the other hand, Luo et al. (2022) study conducted in China uncovered a unique cultural element. Influenced by Buddhist beliefs, a significant number of participants embraced the concept of metempsychosis, the belief that the soul undergoes reincarnation after death. For them, the completeness of the body held profound significance, as an incomplete body could potentially lead to disability in the next life.

Furthermore, these studies brought to light other cultural beliefs that acted as barriers to organ donation acceptance. Some participants believed in the immediate burial or cremation of the body after death, while others thought that the spirit or soul might linger within the body for a period after death. This led to the conviction that having someone else's organs inside them was culturally inappropriate.

Additionally, a study by Hawryluck and Knickle (n.d.) emphasized another cultural consideration. It highlighted the belief that the act of cutting the corpse or removing organs caused distress to the deceased individual, even in the afterlife.

On the whole, the findings showed a balanced perspective held by respondents, demonstrating their readiness to harmonize their cultural beliefs with the possible advantages of organ donation. The consistent indication of an "Accepted" stance implies that respondents are prepared to thoughtfully deliberate and make informed choices that align their cultural values with the broader societal and medical significance of organ donation.

While certain reservations rooted in cultural beliefs might be present, the respondents' slight level of acceptance highlights their ability to navigate these intricacies and recognize the value of organ donation in terms of saving lives and contributing to the welfare of others. This recognition emphasizes the potential of educational and awareness initiatives to further enhance the acceptance of organ donation within diverse cultural contexts.

Table 4. Test of Relationship Between the Respondents' Awareness and Acceptance Towards Deceased Organ Donation

Variables	r - value	Strength of relationship	p-value	Decision	Interpretation
Awareness and Acceptance	0.708	Strong Positive Correlation	Almost 0	Reject Ho	Significant

Note: Pearson Product Moment Correlation Coefficient. Level of Significance = 0.05

The computed r-value is 0.708, indicating a strong positive correlation between respondents' level of awareness and their acceptance towards deceased organ donation. This implies that as awareness increases, acceptance also tends to increase.

The p-value is reported as "Almost 0," which suggests its significance. Therefore, the null hypothesis (Ho) is rejected, and a significant relationship is confirmed between respondents' awareness and their acceptance towards deceased organ donation.

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In summary, the Pearson correlation analysis reveals a strong positive correlation between respondents' awareness and acceptance of deceased organ donation. As the level of awareness increases, the tendency to accept organ donation also increases. This highlights the importance of raising awareness to foster a higher level of acceptance in this context. The level of significance for this analysis was set at 0.05.

The findings affirm that the presence of a substantial level of awareness within the population signifies a heightened likelihood of receptiveness to the concept of organ donation. This observed correlation implies the necessity for further deliberate efforts aimed at enhancing awareness. This includes the dissemination of accurate information to individuals and educating the public about the significance of deceased organ donation. The goal of these endeavors is to elevate acceptance rates in this domain. By reinforcing their awareness, societies hold the potential to empower individuals, enabling them to make more informed decisions regarding deceased organ donation. This, in turn, contributes to the overall improvement of organ transplantation rates and, consequently, the preservation of a greater number of lives.

In the study by Ordoña B. et al. (2021), focused on driver's license applicants in Metro Manila, Philippines, it was discovered that education level did not seem to influence the willingness to donate organs. This finding contrasted with a similar study in Malaysia, suggesting that the connection between education and willingness to donate was inconsistent across different regions. When it came to knowledge about organ donation, most respondents demonstrated average knowledge levels, with only a small minority possessing low knowledge. While respondents generally had good awareness about organ donation, there were gaps in their understanding, particularly regarding brain death and specific qualifications for potential organ donors. Interestingly, the data indicated that having high knowledge was associated with a more positive attitude toward organ donation. However, this knowledge did not necessarily translate into granting consent on driver's license cards. This suggests that while knowledge plays a role in shaping attitudes, it may not be sufficient on its own to drive individuals to express an intention to donate. It could be seen as a potential mediating factor. In contrast, perceptions related to organ retrieval and distribution did not appear to influence the granting of consent on driver's license cards. On a related note, a study by Sridha et al. (2021) delved into the awareness of eye donation among medical and nursing students. It revealed that nursing students were more inclined to seek additional education about organ donation compared to their medical counterparts. Both nursing and medical students, however, were more open to receiving organs than donating their own.

Therefore, Pearson correlation analysis of this study shows a strong positive link: higher awareness leads to increased acceptance while lower awareness results in decreased acceptance.

V. CONCLUSION

There is a strong link between awareness and acceptance of deceased organ donation. Increased awareness leads to greater acceptance, as informed individuals better understand and value the process. In contrast, low awareness often results in misconceptions and resistance. To improve acceptance and support for deceased organ donation, more specific and comprehensive guidelines are needed to enhance public awareness. The researchers recommend campaigns that emphasize the life-saving impact of deceased organ donation through infographics and short videos. Educating the public and healthcare providers can improve understanding, dispel myths, and a supportive attitude. Future researchers can build on the researchers' findings to explore related issues and design more effective deceased organ donation campaigns.

Chinese philosopher Lao Tzu once said "*The journey of a thousand miles begins with a single step,*" through this research, they are hoping to open the eyes and hearts of the respondents and everyone who will read the paper to the life-saving act of deceased organ donation. They stand as advocates for change, urging individuals, communities, and health professionals to join in making a positive impact on deceased organ donation awareness and acceptance. Together, they can create a legacy of compassion and hope, saving countless lives through the gift of deceased organ donation.

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