Knowledge, Attitudes, and Practices Towards Brain Death and Organ Donation Among Physicians in the Philippines

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ABSTRACT

Introduction

Brain death occurs in patients who suffer from severe brain injuries, leading to coma, loss of brainstem reflexes, and apnea. Research indicates that misdiagnosis of brain death often arises from insufficient adherence to established guidelines. This study aims to evaluate and identify any significant variations in physicians' knowledge, attitudes, and practices regarding brain death and organ donation.

Methodology

This cross-sectional study was conducted among physicians using random sampling. The questionnaire was validated prior to distribution. After obtaining informed consent, participants completed the questionnaire. Data analysis involved the use of frequency and distribution tables, as well as analysis of variance and multivariate analysis of variance.

Results

A total of 113 participants were involved in the study. While years of experience and position influenced knowledge, field of specialization did not show a significant effect. Overall, attitudes remained consistent across different levels of experience and positions. The data revealed a notable lack of training and institutional resources. Although there were some differences in practices, they were not statistically significant.

Conclusion and Recommendation

Significant differences in knowledge were observed based on years of practice. However, no significant differences were found in attitudes and practices, despite variations in responses. Regular seminars and workshops are crucial for staying updated with the latest guidelines. Additionally, it is important to ensure that local guidelines are readily accessible to the broader medical community.

Keywords: brain death, organ donation, knowledge, attitudes, practices

INTRODUCTION

Brain death, or death by neurologic criteria (DNC), occurs in patients with devastating brain injuries including traumatic brain injury, subarachnoid hemorrhage, and intracerebral hemorrhage resulting in coma, absence of brainstem reflexes, and apnea.[1] A brain-dead patient is clinically and legally declared deceased at the time of brain death determination in which family members have the option to withdraw life support and start organ harvest, as applicable.[2] Inappropriate and inaccurate diagnosis of brain death results from lack of attention to guidelines.[1] There are inconsistencies in the concept, criteria, practice, as well as documentation in different countries.[3] There were noted differences between countries in determining

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brain death as well as legal standards on organ donation and transplantation.[4]

The need for organ donation is increasing and Southeast Asia (SEA) has the lowest rates of deceased donors.[5] On the contrary, developed countries have more potential for deceased organ donors as they allocate more budget on education and healthcare.[5] Between 2017 to 2018, there were only 26 recorded deceased organ donors in the Philippines.[5] In 2022, there was a noted rise in deceased donors from three in 2021 to 20.[6] Forty organs from deceased donors were able to save 38 lives in which some of the recipients received double kidney transplantation.[6, 7]

Surveys on the knowledge, attitudes, and practices (KAP) of healthcare workers towards brain death and organ donation are limited. Published studies target the notion of the general population. A study by Szydlo et al (2022) showed that 97% of the participants had positive attitudes toward organ transplantation but more than 50% had insufficient knowledge in brain death declaration (BDD) and more than 53% never had a formal training in BDD.[8] A systematic review done by Saleh et al (2024) found out that non-recognition of brain death and limited communication with the organ transplant team and families of potential donors led to a lack of confidence of healthcare workers in promoting organ transplantation. The study by Robles et al. (2021) revealed a limited understanding of the 2017 brain death criteria established by the Philippine Neurological Association (PNA). The PNA released new standardized procedures in November 2023, aimed at unifying BDD practices in the Philippines.

There are limited local studies and data on the level of knowledge as well as attitudes and practices on brain death and organ donation in the Philippines. Therefore, the need to investigate the KAP is essential especially during this time.

This study aims to evaluate the knowledge, attitudes, and practices (KAP) of physicians concerning brain death and organ donation. Specifically, the objectives are (1) to assess physicians' knowledge, attitudes, and practices regarding brain death and organ donation, and (2) to identify significant differences in their knowledge, attitudes, and practices based on years of experience, administrative position, and area of specialization.

Study Design

The study took place in a tertiary government hospital in Quezon City. It utilized a descriptive cross-sectional design, employing a self-administered questionnaire directed at physicians selected according to the specific inclusion and exclusion criteria.

Patient Selection

The inclusion criteria consisted of physicians employed at the institution, aged 21 and older, regardless of gender, who provided informed consent. Respondents were excluded if they failed to return the questionnaire or withdrew their consent to participate. Random sampling was utilized, resulting in 113 participants who completed the questionnaire. The independent variables in this study included years of clinical practice, position, and specialty, while the dependent variables were knowledge, attitudes, and practices.

Data Collection

The questionnaire was adapted from Robles et al. (2021) and Braksick et al. (2019) (Appendix A). A pilot test was conducted prior to the distribution of the questionnaire (Appendix B). The questionnaire was administered to a representative group of respondents. It was subjected to validation and reliability testing, with revisions made as necessary. The finalized questionnaires were then given to the participants after securing their informed consent (Appendix C). The first section collected respondents' personal information, including their years of clinical

practice, position, and area of specialization. The subsequent sections included questions that required checklist responses, yes or no answers, agree or disagree options, and open-ended responses from the participants.

Statistical Analysis

Frequency and percentage distribution tables were created to characterize the respondents. The physicians' knowledge, attitudes, and practices regarding brain death and organ donation were evaluated based on various statements included in the questionnaire. Their level of knowledge was assessed using one-way analysis of variance (ANOVA) and multivariate analysis of variance (MANOVA). All analyses were conducted using the Statistical Package for Social Sciences (SPSS®) version 28.

Ethical Consideration

The study was approved by the institution's Institutional Ethics Review Board (IERB).

RESULTS

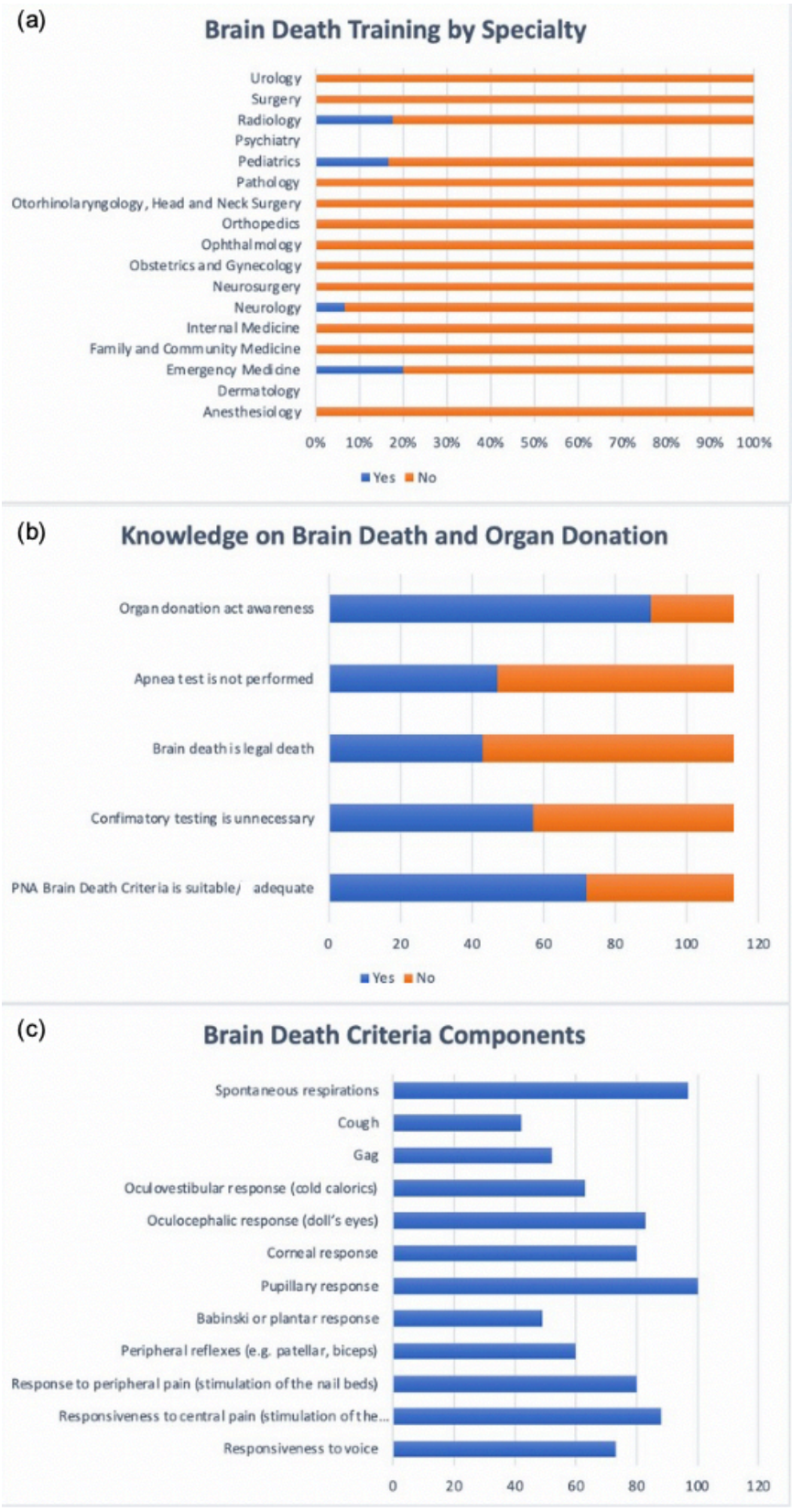
Majority of the respondents have an experience of less than 5 years and most occupy the Medical Officer III position (see Table 1). Most of the respondents were from Internal Medicine (26%), followed by Radiology (17%), and Neurology (15%).

Figure 1a illustrates the distribution of subspecialties with training in brain death assessment, with radiology having the highest number of physicians trained in brain death examination. Figure 1b presents varied responses concerning awareness of organ donation, apnea testing, legal death criteria, confirmatory testing, and PNA brain death standards. Figure 1c depicts the components evaluated by physicians when determining brain death. The most frequently assessed components include pupillary response, spontaneous breathing, reaction to central

Table 1. Baseline distribution of the respondents based on years of practice, position, and specialty.

		Frequency (%)
Years of clinical practice	<5 years	68 (60.2)
	5-10 years	44 (38.9)
	10-20 years	0
	20-30 years	0
	>30 years	1 (0.9)
Position	Medical Officer III	83 (73.4)
	Medical Officer IV	28 (24.8)
	Medical Specialist II	2 (1.8)
	Medical Specialist III	0
	Medical Specialist IV	0
	Others	0
Specialty	Anesthesiology	4 (3.5)
	Dermatology	0
	Emergency Medicine	10 (8.8)
	Family and Community Medicine	10 (8.8)
	Internal Medicine	26 (23.0)
	Neurology	15 (13.3)
	Neurosurgery	1 (0.9)
	Obstetrics and Gynecology	7 (6.2)
	Ophthalmology	2 (1.8)
	Orthopedics	2 (1.8)
	Otorhinolaryngology, Head and Neck Surgery	2 (1.8)
	Pathology	1 (0.9)
	Pediatrics	6 (5.3)
	Psychiatry	0
	Radiology	17 (15.0)
	Surgery	7 (6.2)
	Urology	3 (2.6)

Figure 1. Brain death training by specialty and knowledge on brain death and organ donation.



pain, oculocephalic response, and lastly, response to peripheral pain and corneal reflex.

Table 2 presents the relationship between physicians' knowledge of brain death and organ donation and several factors, such as years of practice, position, and specialization. Physicians with 5-10 years of experience demonstrates a significant negative correlation with knowledge. In terms of position, Medical Officer III is significantly associated with greater knowledge of brain death and organ donation compared to Medical Officer IV, with this positive association being statistically significant in the multivariate analysis (β = 2.7168, p = 0.015). Regarding specialization, no significant associations were identified across most specialties.

Table 3 presents physicians' attitudes toward brain death and organ donation across varying years of experience and positions. Overall, attitudes are largely similar among respondents, with some minor variations that are not statistically significant.

Table 4 provides a comprehensive overview of physicians' practices and attitudes toward brain death and organ donation, categorized by years of experience and position. Across all experience levels, the majority of physicians reported insufficient training and information on diagnosing brain death. Similarly, resources and programs related to organ donation were limited, with only a small percentage of physicians noting their availability. There are also noted variations in the different practices but these are not statistically significant.

DISCUSSION

Overall, the findings of this study are consistent to other KAP studies on brain death and organ donation.[3, 8, 9, 10, 11] A notable observation is that the majority of the participants had not received formal training in BDD, a trend also seen in the study by Robles et al. (2021). In their research, only 20% of participants, primarily neurologists, had formal brain death examination (BDE) training.[10] Similarly, Szydło et al. (2022) found a lack of knowledge and expertise in declaring brain death, despite it being part of specialized training in anesthesiology and critical care. In the present study, respondents who received training in brain death examination obtained it from other institutions. The results of Robles et al. (2021) were also comparable to those of our study regarding the components most frequently assessed in determining brain death, which aligns with the PNA Unified Standard Procedures for the Declaration of Brain Death/DNC. However, despite these similarities, there were still varying responses concerning apnea and ancillary testing—42% of respondents stated that apnea testing was unnecessary, and 51% indicated they would not request confirmatory tests. In contrast to the findings of Kwek et al. (2015), which revealed that 63% of respondents requested confirmatory tests for liability purposes, our study indicated a different trend. These differences may due to the fact that majority of the respondents have not received formal training. With the rise of technology, many guidelines and supplementary materials are now accessible online through the websites of relevant societies. However, it could also be a contributing factor that the local PNA guidelines are not readily available for download online.

In our study, we aimed to evaluate whether years of practice and position influenced the respondents' levels of knowledge. As shown in Table 2, physicians with 5-10 years of experience exhibited a positive significant association with their knowledge levels. Similarly, the multivariate analysis indicated a negative association for Medical Specialist II, although this was not statistically significant. This finding may appear contradictory, as one would typically expect that a physician's level of knowledge would increase proportionally with their years of experience and learning. However, this discrepancy may be attributed to the random sampling method used, which did not involve proportional allocation of respondents. Factors that may influence the level of knowledge include a lack of formal training, insufficient information, and

Table 2. Knowledge on brain death and organ donation according to years of practice, position, and specialization.

Variable	β (95% CI) Univariate	p-value	β (95% CI) Multivariate	p-value
Years in Clinical Practice (*Reference: <5 years*)				
5-10 years	-5.226 (-0.911- -0.134)	0.009	-0.5551(-1.029--0.0809)	0.022
>30 years	0.0108 (-1.940-1.962)	0.991	-2.8943 (-5.858-0.0691)	0.055
Position (Reference: Medical Officer IV)				
Medical Specialist II	0.946 (-0.511-2.404)	0.201	0.0428 (-0.45-0.5358)	0.863
Medical Officer III	0.041 (-0.410-0.492)	0.857	2.7168 (0.533-4.9004)	0.015
Specialty (Reference: Neurology)				
Internal Medicine	0.3417 (-0.349-1.032)	0.328	0.5062 (-0.179-1.1917)	0.146
Neurosurgery	-0.2629 (-2.373-1.847)	0.805	-0.3976 (-2.434-1.6392)	0.699
Emergency Medicine	0.6484 (-0.233-1.53)	0.147	0.5802 (-0.271-1.4316)	0.179
Family and Community Medicine	0.2839 (-0.571-1.139)	0.511	0.1578 (-0.674-0.99)	0.707
Surgery	-0.2629 (-1.333-0.807)	0.627	-0.1755 (-1.214-0.8626)	0.738
Radiology	0.207 (-0.552-0.966)	0.589	0.4033 (-0.352-1.1588)	0.292
Otorhinolaryngology, Head and Neck Surgery	0.7623 (-0.782-2.307)	0.329	0.9266 (-0.574-2.4271)	0.223
Urology	-0.0351 (-1.337-1.267)	0.957	0.2003 (-1.076-1.4769)	0.756
Obstetrics and Gynecology	-0.3768 (-1.38-0.627)	0.458	-0.0418 (-1.05-0.9662)	0.935
Anesthesiology	0.7623 (-0.4-1.925)	0.196	0.6384 (-0.489-1.7658)	0.263
Pediatrics	-0.2629 (-1.266-0.741)	0.604	-0.466 (-1.511-0.5792)	0.378
Orthopedics	0.4206 (-1.689-2.53)	0.693	0.8838 (-1.209-2.9768)	0.404
Ophthalmology	0.4206 (-1.124-1.965)	0.59	0.2859 (-1.207-1.7789)	0.704
Pathology	0.4206 (-1.689-2.53)	0.693	0.3287 (-1.754-2.4115)	0.754

Table 3. Attitudes and Factors of Physicians on Brain Death and Organ Donation.

	<5 years n (%)	5-10 years n (%)	>30 years n (%)	p- value
Willing to donate your organ.	49 (77.8)	31 (75.6)	1 (100)	0.883
To help others for humanitarian reason is the purpose of organ donation.	62 (98.4)	41 (100)	1 (100)	0.714
Buying from a brain dead-dead or living donor be restricted to donation rather than being legalized.	34 (54.0)	24 (58.5)	1 (100)	0.607
Patients or their consented families will still receive proper care, even if they choose to be organ donors.	63(100)	41(100)	1 (100)	-
	Medical Specialist II	Medical Officer III	Medical Officer IV	p-value
Willing to donate your organ.	2 (100)	62 (80.5)	17 (65.4)	0.209
To help others for humanitarian reason is the purpose of organ donation.	2 (100)	76 (98.7)	26 (100)	0.832
Buying from a brain dead-dead or living donor be restricted to donation rather than being legalized.	2 (100)	45 (58.4)	12 (46.2)	0.249
Patients or their consented families will still receive proper care, even if they choose to be organ donors.	2 (100)	77 (100)	26 (100)	-

Table 4. Practices and Factors of Physicians on Brain Death and Organ Donation.

	<5 years n (%)	5-10 years n (%)	>30 years n (%)	p-value
Institution provides you with adequate seminar and training regarding in diagnosing brain death.	6 (9.5)	6(14.6)	0 (0)	0.68
Institution have sufficient programs and information campaigns on organ donation.	6 (9.5)	8 (19.5)	0 (0)	0.714
Refuse to allow your brain-dead relative to donate their organs.	24 (38.1)	17 (41.5)	0 (0)	0.682
Refuse to keep a brain-dead patient on life support until cardiac death.	32 (50.8)	21 (51.2)	0 (0)	0.597
Willingness to stop life support in case of brain death.	36 (57.1)	16 (39.0)	1 (100)	0.119
Prohibition from removing the patient from life support.	30 (46.7)	19 (46.3)	1 (100)	0.569
Willingness to offer the relative organ donation of a brain dead relative.	54 (85.7)	40 (97.6)	1 (100)	0.125
Advocate of organ donation.	52 (82.5)	37 (90.2)	1 (100)	0.504
	Medical Specialist II	Medical Officer III	Medical Officer IV	p-value
Institution provides you with adequate seminar and training regarding in diagnosing brain death.	2 (100)	69 (89.6)	22 (84.6)	0.69
Institution have sufficient programs and information campaigns on organ donation.	0 (0)	11 (14.3)	3 (11.5)	0.802
Refuse to allow your brain-dead relative to donate their organs.	0 (0)	30 (39)	11 (42.3)	0.497
Refuse to keep a brain-dead patient on life support until cardiac death.	0 (0)	43 (55.8)	10 (38.5)	0.109
Willingness to stop life support in case of brain death.	2 (100)	38 (49.4)	13 (50.0)	0.367
Prohibition from removing the patient from life support.	2 (100)	35 (45.5)	13 (50.0)	0.301
Willingness to offer the relative organ donation of a brain dead relative.	2 (100)	71 (92.2)	22 (84.6)	0.469
Advocate of organ donation.	2 (100)	67 (87.0)	21 (80.8)	0.619

discrepancies in concepts and criteria, among others, as previously mentioned.[3, 8, 11, 13, 14] Aside from the lack of formal training, other possible factors were not within the scope of this study.

The attitudes and practices of respondents were generally consistent across different positions and years of practice, with no statistically significant differences observed. While there was an overall positive attitude toward organ donation, there appeared to be a preference for restrictions on organ donation rather than full legalization. These findings are similar to those reported in other studies on the topic.[8, 14, 15] In a study done by Szydło et al (2022), the major limiting factor for organ donation was the society's reluctance and objection of the potential donors' families. Enhancing education on brain death determination could improve communication between the physicians and the families leading to a potential increase in organ donation.[16] Although laws regulating organ donation are in place, Asian societies are heavily influenced by ethnicity, culture, and religious beliefs, which can shape attitudes and practices surrounding organ donation.[13] The local cultural and other factors affecting the knowledge, attitudes, and practices of the respondents were not explored in this study.

Since the study by Robles et al. in 2021, there has been little improvement in knowledge regarding BDE and organ donation. This suggests that the current approach to disseminating information about brain death determination may be ineffective, as reflected in the varying levels of knowledge among individuals. Therefore, it is recommended that physicians participate in regular training sessions and workshops. Additionally, creating a prognostication team in each institution can help standardize brain death declarations, addressing the growing demand for organ donors. It is also advised that agreements between institutions be updated regularly to facilitate potential organ donations. Furthermore, it is crucial that guidelines be made easily accessible to the broader medical community.

Scope and Limitation of the Study

This study was limited to physicians and did not include other healthcare professionals. Additionally, there was no standardized questionnaire specifically focused on brain death and organ donation; instead, an adapted questionnaire was used to address this limitation. Furthermore, the study did not explore the challenges faced by physicians in declaring brain death.

CONCLUSION

Overall, the respondents displayed varying levels of knowledge regarding brain death and organ donation. However, there was a significant difference in knowledge based on years of practice, while no significant differences were observed in knowledge levels with respect to position and specialty. Similarly, there were no significant differences in attitudes and practices, although some variability in responses was noted. Special attention should be given to reinforcing brain death examination (BDE) concepts through regular training sessions and workshops.

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APPENDIX A

Part I: Profile of the Respondent

Directions: Please provide the needed information by putting a check mark fl inside the box opposite the appropriate response.

ID (to be filled up by researcher): _____

Years in Clinical Practice

- ☐ < 5 years
- ☐ 5 – 10 years
- ☐ 10 – 20 years
- ☐ 20 – 30 years
- ☐ >30 years

Position

- ☐ Medical Officer III
- ☐ Medical Officer IV
- ☐ Medical Specialist II
- ☐ Medical Specialist III
- ☐ Medical Specialist IV
- ☐ Others _____

Department/Specialty

- ☐ Anesthesiology
- ☐ Dermatology
- ☐ Emergency Medicine
- ☐ Family and Community Medicine
- ☐ Internal Medicine
- ☐ Neurology
- ☐ Obstetrics and Gynecology
- ☐ Ophthalmology
- ☐ Orthopedics
- ☐ Otorhinolaryngology, Head and Neck Surgery
- ☐ Pathology
- ☐ Pediatrics
- ☐ Psychiatry
- ☐ Radiology
- ☐ Surgery
- ☐ Urology
- ☐ Others _____

Part II. Knowledge

Directions: Please choose applicable answers.

1. Have you received formal training in completing a brain death examination?

- ☐ Yes
- ☐ No

If yes, where?

_____
_____
_____

2. What components do you assess in completing a brain death examination? Choose all that apply.

- ☐ Responsiveness to voice
- ☐ Responsiveness to central pain (stimulation of the supraorbital ridge)
- ☐ Response to peripheral pain (stimulation of the nail beds)
- ☐ Peripheral reflexes (e.g. patellar, biceps)
- ☐ Babinski or plantar response
- ☐ Pupillary response
- ☐ Corneal response
- ☐ Oculocephalic response (doll's eyes)
- ☐ Oculovestibular response (cold calorics)
- ☐ Gag
- ☐ Cough
- ☐ Spontaneous respirations
- ☐ Others

_____
_____

3. Are the current criteria for diagnosing brain death set by the Philippine Neurological Society inadequate or unsuitable for our current setting?

- ☐ Yes
- ☐ No

4. Is confirmatory testing unnecessary for confirming Brain Death?

- ☐ Yes
- ☐ No

5. What are the diagnostic tests that can be used to diagnose brain death? Choose all that apply.

- ☐ EEG
- ☐ Nuclear medicine scan
- ☐ CT or MR angiogram
- ☐ Transcranial Doppler ultrasound
- ☐ Others _____

6. Is brain death synonymous with death?

- ☐ Yes
- ☐ No

7. In confirming a brain death declaration, how many physicians should conduct the assessment?

- ☐ Attending physician alone
- ☐ Attending physician plus another physician
- ☐ One, not the attending physician
- ☐ Two, both not the attending physician

8. Is an apnea test not performed in brain death assessment?

- ☐ Yes
- ☐ No

9. How long do you keep the patient disconnected from the ventilator prior to obtaining an ABG (in minutes)?

- ☐ 4-6 minutes
- ☐ 8-10 minutes
- ☐ 12-15 minutes
- ☐ >20 minutes

10. In your experience, what is the most common indication for seeking brain death declaration?

- ☐ Prognostication
- ☐ Withholding of treatment
- ☐ Organ donation

11. Do you consider time of brain death declaration as time of death?

- ☐ Yes
- ☐ No

12. Are you aware of the Organ Donation Act of the Philippines?

- ☐ Yes
- ☐ No

Part III. Attitudes

Directions: Please choose applicable answers.

1. Are you willing to donate your organ?

- ☐ Yes, why?

  _____
  _____
  _____
  _____

- ☐ No, why?

  _____
  _____
  _____
  _____

2. What do you think is the purpose of organ donation?

- ☐ To help others for humanitarian reason
- ☐ Religious factor
- ☐ Financial reason
- ☐ Others, please specify

  _____
  _____

3. In your opinion, should buying from a brain dead-dead or living donor be restricted to donation rather than being legalized?

- ☐ Yes
- ☐ No

4. In case a patient wishes to become an organ donor or if a family member consented to their relative's organ donation, they will still receive proper medical care.

- ☐ Agree
- ☐ Disagree

Part IV. Practices

Directions: Please choose an answer

1. Is the institution providing you with adequate seminar and training regarding in diagnosing brain death?

- ☐ Yes
- ☐ No

2. Does the institution have sufficient programs and information campaigns on organ donation?

- ☐ Yes
- ☐ No

3. Would you refuse to allow your brain-dead relative to donate their organs?

- ☐ Yes
- ☐ No

4. Would you refuse to keep a brain-dead patient on life support until cardiac death?

- ☐ Yes
- ☐ No

5. Are you willing to stop life support in case of brain death?

- ☐ Yes
- ☐ No

6. Are you legally prohibited to from removing the patient from life support?

- ☐ Yes
- ☐ No

7. In case you have a brain-dead patient, are you willing to offer the relative organ donation?

- ☐ Yes
- ☐ No

8. Are you an advocate of organ donation?

- ☐ Yes
- ☐ No

APPENDIX B

CERTIFICATION OF RELIABILITY TEST

This is to certify that the instrument used for the study, titled "Knowledge, Attitudes, and Practices towards Brain Death and Organ Donation among Physicians in the Philippines" has undergone validation by the undersigned and has established excellent reliability of data.

The results are presented below.

Reliability	N	Cronbach Alpha	Interpretation
Overall	36	0.736	Acceptable

This certification is issued upon the request of the following researchers from [ ] for whatever purpose it may serve.

1. [ ]

SHERIELYN GO BAYANI, LPT, MS
Research Statistician
statstreatment@gmail.com

APPENDIX C

PARTICIPANT INFORMATION AND INFORMED CONSENT FORM

Project Title:
Knowledge, Attitudes, and Practices towards Brain Death and Organ Donation among Physicians in the Philippines

Sponsor: N/A

Investigator: _____, MD

You are being invited to participate voluntarily in the study entitled: Knowledge, Attitudes, and Practices towards Brain Death and Organ Donation among Physicians in the Philippines under the supervision of _____, MD, a third-year neurology resident from the Department of Neurosciences.

Before you agree to join in the study, you need to know the risks and benefits so you can make an informed decision. This process is known as **informed consent**. This consent form tells you about the study that you may wish to join. Please read the information carefully and discuss it with your relatives or friends. If you have questions, please ask the Study Doctor to answer them.

PURPOSE AND CONDUCT OF THE STUDY
The objective of the study is to determine the knowledge, attitudes, and practices of physicians towards brain death and organ donation. In this study you will be answering a questionnaire. The duration it will take may range from 5-10 minutes. Your responsibilities as a study subject includes following the directions instructed by the Study Doctor. The study will include the following steps:

1. Sign a physical consent form or tick agree in a Google Form
2. Accomplish the questionnaire

The Study Doctor may remove you from this study for any justified reason according to the protocol. Examples why you may have to stop some or all study-related activities, including study treatment, are:

1. Those who will not give their informed consent.
2. Those who will not return or submit the questionnaire.
3. Participant withdrew consent to participate.

RISKS AND INCONVENIENCES
The risks you may encounter by participating in the study include online data being hacked or intercepted, breach of confidentiality, and/or some questions may be personal or upsetting. Problems that are not currently known can also occur. Be assured that you will be provided with new information that may affect your willingness to start or continue in the study.

BENEFITS
If you participate in this research, the results of this may reinforce guidelines on brain death and organ transplantation in _____.

FINANCIAL CONSIDERATIONS
There will be no monetary costs on your part for participating in this study. You will not be charged for the study.

PROVISION FOR INJURY OR RELATED ILLNESS
It is important that you carefully follow all the instructions given by the Study Doctor and his/her staff regarding this study. If you become ill or are physically injured as a result of participation in this study, please contact the Study doctor right away; he/she will treat you or refer you for treatment.

CONFIDENTIALITY

All of your information will be strictly held confidential. Unless required by law, your name will not be disclosed outside the research clinic. Your name will be available only to the following people or agencies: the Study Doctor and researcher staff; authorized representatives of the Study Doctor; ethics committees and health authority inspectors. While participating in this study, the Study Doctor will replace your name with a special code to identify you.

VOLUNTARINESS OF PARTICIPATION

Your participation in this study is voluntary and you may cancel this consent at any time and without any particular reason. It is important that you inform your Study Doctor. Your study doctor will continue to retain and use any research results that have already been collected for the study evaluation. No further study-related activities will take place. The choice to withdraw from research participation will not affect your medical care.

You have the right to review your study information and request changes to the study information if it is not correct. However, please note that during the study, access to study information may be limited if it weakens the integrity of the research. You may have access to the study information held by the Study Doctor at the end of the study.

CONTACT PERSON

You can call or ask questions regarding this study. The contact person for further information or for consultation on adverse events is _____ with contact number of _____ or email at _____.

This study has been approved for implementation by the _____ Institutional Ethics Review Board. If you have questions related to your rights as research subjects, please contact:

_____, Chair, Institutional Ethics Review Board

Address: _____

Email: _____

Telephone No.: _____

CERTIFICATE OF CONSENT

I have read this document/had its contents explained to me. I understand the purpose of this study and what will happen to me in this study. I do freely give my consent to join in this study, as described to me in this document.

By signing this consent form, I authorize the use, access, and sharing of my personal information as described in the section Confidentiality and Authorization to collect, use and disclose Personal Medical Information. This consent is valid unless and until I revoke it.

Participant's Signature:

_____	_____	_____
Name	Signature	Date

Witness or Legal Guardian's Signature:
(Only when patient cannot read or sign this Informed Consent)

_____	_____	_____
Legally acceptable representative Name (legally authorized to act as personal representative to sign for the patient)	Signature	Date

Physician's Signature:
I, the undersigned, certify that to the best of my knowledge, the participant signing this consent form has read the above information sheet fully, that this has been carefully explained to him/her, and that he/she clearly understands the nature, risks and benefits of his/her participation in this study.

_____	_____	_____
Name	Signature	Date