

Original Communications**WHOLE BODY BEQUEATHMENT: PERCEPTION OF HEALTHCARE WORKERS IN SOUTHWESTERN NIGERIA****Sunday O. Popoola¹, Abidemi E. Omonisi², Owolabi D. Ojo³, Williams O. Odesanmi²**¹*Department of Anatomy, Ekiti State University, Ado-Ekiti, Nigeria.*²*Department of Anatomic Pathology, Ekiti State University, Ado-Ekiti, Nigeria.*³*Department of Orthopaedic and Trauma Surgery, Federal Teaching Hospital, Ido-Ekiti, Nigeria.***ABSTRACT**

Journey of anatomy as a discipline began from crude ancient civilizations with credit to cadavers at the centre up to this modern computerized creativity with reference to magnanimity of cadavers and donors. The study investigated various limitations in acquiring cadavers amongst healthcare givers in southwestern Nigeria: awareness of bequest program, religious beliefs, socio-cultural heritage and family influences. Questionnaire-based proforma was adopted with three sections: facility, socio-demographics and donation characteristics containing 20 item self-administered Likert-style: 'yes', 'no' and 'not sure'. Facilities visited and formal permission sought to engage the middle-aged healthcare workers for one month's period. Data subjected to statistical package for social scientists with statistical significance taking as $p < 0.05$. One hundred and thirty six middle-aged healthcare workers and above participated. Highest participants recorded in: tertiary institution; age group 50 to 54 years; gender male; Ekiti indigenes; tertiary educational degrees; married workers; Christianity; and doctors by profession. Cronbach's alpha reliability value of 0.801 established the study to be second to excellence. Issues on bequest program, sources of cadaver and affection independently explained poor awareness and alienation to bequeathment affairs. Influential factors on bequeathment synonymously judged unquestionable religious beliefs, veritable socio-cultural traditions and family dominancy as militating factors. Typically, awareness on bequeathment was still pitiful as the criteria were only known in papers rather than the hearts of healthcare workers who were meant to propagate the crusade of bequeathment. The need to establish a global policy for bequeathment affairs including social, moral, political and financial needs for broadcast was conclusively accented, and most especially, in Nigeria and the likes.

Keywords: *Bequeathment; Challenges; Healthcare Workers; Anatomy*

RESUMEN

El camino de la Anatomía como disciplina comenzó en las civilizaciones antiguas con un crédito central en los cadáveres hasta la aparición de la creatividad computarizada moderna en relación a la magnanimidad de cadáveres y

donantes. Este estudio investigó varias limitaciones en la adquisición de cadáveres entre donantes del sistema de salud en el sudoeste de Nigeria: conocimiento del programa de legado, creencias religiosas, herencia socio-cultural e influencia familiar. El cuestionario adoptado estaba basado en una proforma con tres secciones: Facilidad, características de la donación y características socio-demográficas, que contienen 20 ítems auto-administrados al estilo de la escala de Likert: 'Sí', 'No' y 'no estoy seguro'. Las instalaciones visitadas y el permiso formal requeridos para incluir a los trabajadores de mediana edad del Sistema de salud por el período de un mes. Los datos fueron sometidos al paquete estadístico para científicos sociales (SPSS) tomando como significación estadística valores de $p < 0.05$. Participaron ciento treinta y seis trabajadores del Sistema de Salud de mediana edad y mayores. Los participantes mayores registrados en: institución terciaria; grupos de edad de 50-54 años; del género masculino; Indígenas Ekiti; grado educativo terciario; trabajadores casados; Cristianismo; y doctores de profesión. El valor de la confiabilidad alfa de Cronbach de 0.801 estableció al estudio en segundo lugar a la excelencia. Algunas cuestiones en el programa del legado, la procedencia del cadáver y el afecto explican el pobre conocimiento y la enajenación en los asuntos del legado. Los factores influyentes en el legado que se juzgaron como indiscutibles fueron: la creencia religiosa, las verdaderas tradiciones socio-culturales y la dominancia de la familia como factores limitantes. Típicamente, el conocimiento del legado seguía siendo lamentable pues los criterios serán solo conocidos en los papeles más que en los corazones de los trabajadores del Sistema de Salud que fueron elegidos para propagar la cruzada del legado. La necesidad de establecer una política global para los asuntos del legado incluyendo las necesidades sociales, morales, políticas y financieras de la difusión fue concluyente-mente acentuada, especialmente, en Nigeria y similares.

Palabras clave: *Legado; Desafíos; Trabajadores de la salud; Anatomía*

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INTRODUCTION

In reasoning about the past event as a way to understand the present status of the mortal body, the journey of anatomy as a naturalistic discipline might have started by the cave dwellers from anthropological documentation on remains of *Homo sapiens loquens* in the stone age but typically credit on origin is consecrated to the crude ancient civilizations of Egypt, Babylonia, Syria, Chinese and Hindu according to Wilcox (2016). Albeit in these civilizations, there was really no in-depth study of anatomy other than negotiation on spiritual and supernatural facts in the repose of spirit and soul of the dead through embalment until the instance of Edwin Smith Surgical Papyrus in 1600 BC as illustrated by Lindermann (2010).

The initiation of systematic study of anatomy was attributed to the Greeks in his study (Singer, 1957). Alcmaeon (500 BC), while in Italy was the first person to perform dissection on humans for research and identified the brain as the centre of intelligence. Empedocles (490-430 BC) while in Sicily described the heart as 'the life-giving heat' to the body; and delicate substance 'pneuma' which is air flowing with blood. Hippocrates (460-377 BC), the ordained father of medicine made impact in anatomy (without dissection) and treatment of diseases which were believed to be punishment from the gods in the study by Elizondo-Omaña et al (2005). Aristotle (384-322 BC), a philosopher had influence on healthcare givers who began dissection of animals to extrapolate the findings to treat humans according to most of authors (Siraisi, 1990; Nutton, 2004; Klestinec, 2004). Claudius Galenus (Galen) made his own contributions in anatomy with errata that lasted till 16th century. Andreas Vesalius (1514-1564) was credited as father of anatomy and challenged Galen's ideas to expose some inaccuracies through his extensive dissection on humans and animals; and publication *De Humani Corporis Fabrica* in his study by Klestinec (2004).

Nevertheless, dissection of human as an integral appraise in anatomy was initially on sacrificial or legally executed criminals. At about 17th century, human dissection with explanatory diagrams coupled with constitution of anatomic theatre adopted to further reinforce anatomic education in the study by Howse (2009). The need for human body in dissection, prosection and researches escalated with resultant illegal acquisition of cadavers through robbery of the graves and criminal killing of innocent persons for financial aggrandizement. Burke and Hare saga (1827-1829) ensued in public execution, dissection and exhibition of Burke while equally London

Burkering in 1831 were of note that finally led to the various pronouncements of anatomic acts thereby steering the modern innovative practice of anatomy in terms of body donation, advancement in tissue handling, tissue preservation and embalment by the authors (Rosner, 2010; Martinez, 2013; Tward and Patterson, 2002; London Anatomy Office, 2015). The historical perspective of Gangata alluded to five cardinal categories in the possession of cadavers for anatomic education: grave robbing, unwilling claimed body, purchased body, unknown body and body bequeathment by the authors (Roach, 2003; Gangata, 2015). To this list, the use of legally executed humans was added. The category of people who were enshrined with the rapture and resurrection of the dead was neither in support of grave robbing nor unwilling body as earlier documented by Magee (2001). Nevertheless, so many security measures were being put in place to prevent grave robbing according to an historical corroboration on grave robbing era in his study by Hulkower (2011). Purchasing of body appeared similar to Burke and Hare heroic tale as well as London Burkering and had been banned in many countries culminated in propagation of laws to take charge of how cadavers be sourced for medical utilization by Martinez (2013). In those days, in some countries financial transaction of dead ones were made popular for quite some years, most especially, amongst the less privileged and marginalized tribes due to substandard legal proceedings as authenticated by Halperin (2007). In a nutshell, the idea of taking charge of unknown bodies and legally executed criminals for anatomic education is still very popular in Nigeria and some other developing countries by most of the authors (Popoola et al., 2018; Ewonubari, 2012).

Whole body bequeathment can be defined as a will of leaving or giving a whole body after death for dissection, prosection, research and or therapeutic purposes in hospital and medical/teaching institutions. To this explanation, the donation for exhibition in Body World of Gunther von Hagens is added (Moore and Brown, 2004). Nevertheless, the origin of body donation (bequeathment) was credited to Punamas at about 1st to 11th century CE according to the Hindu's documentation on a troublesome evil supernatural being called Vrutasoor of whom the gods and man wanted to eliminate as evidenced by Rokade and Bahete (2013). A great sage called Dadhichi donated his body on the request from Lord Indra and his bones harvested as a weapon to kill Vrutasoor. In these days an age, whole body donation is basically for anatomic volitions. Body donation

brings about provision of different kinds of cadaver necessary for dissection, prosection, research and therapeutics to appreciate the forms of structure as against the use of unclaimed bodies and legally executed criminals which are not reliable sources in ideal sovereignties.

Of note is the authorization in donation of a body for anatomical examination by London Anatomy Office (2015). Stepwise process of whole body donation is elucidated by the authority engaging the donor (testator/testatrix) to carefully read through the booklet containing the information on body donation before signing the consent forms. The office coordinates the operation for medical institutions in need of cadavers. The receiving institution is made responsible for preservation and burial disposal if necessary thereafter. There is incorporation of Human Tissue Authority (HTA) responsible for regulating the use of bodies donated for anatomical examination within the legal framework set out in the HTA (2004). A body donation form is made available in the booklet of which a consent form is included for the donor to digest with the nearest relatives and or executor/executrix. Duration of body donation has two options for how long the body may be retained by the institution: indefinite or maximum of 3years and thereafter. The imaging of a donated body may be for education or training relating to human health; and research in connection with disorders or functioning of the human body. However, images including photographs, films and electronic images are outside the scope of the HTA withcode of practice encourages good principles set out in guidance issued by relevant professional and regulatory bodies. Total body bequeathment has a guide to reasons for non-acceptance including: post-mortem examination; some infectious diseases like viral hepatitis, HIV/AIDS, tuberculosis; if organs, other than corneas, have been donated for transplantation or medical research; obesity; some forms of dementia; severe bedsores or varicose ulcers, or recent surgery when the wound has not healed; gross peripheral edema; and severe deformity of the spine. If the donation cannot be accepted, the relatives or executor/executrix will be informed as soon as possible and on the other hand if a donation is accepted; an undertaker employed by the office will be instructed to transfer the body to the receiving institution. On expenses about funeral disposal, the office arranges the venue and meets the costs, even though, the next of kin or executor/executrix may assist. In addition, for final disposal in which cremation is preferred, further options are given to the relations or executor/executrix: to be notified of the date and

time of cremation; to attend the service at cremation; and to take possession of the ashes. Thanksgiving services are organized annually by the office in collaboration with interested relatives for remembrance of the donors. It is vital that the death is registered with the local registrar of deaths as a matter of urgency and certificate will be issued as appropriate for the donation process. If a donation is not accepted the next of kin or executor/executrix must proceed with normal arrangements for disposal, either burial or cremation. The witness can be a person of choice, including spouse, next of kin, executor/executrix, legal professional, health professional, friend, neighbour and so on. Consent can be withdrawn at any time by simply notifying the office, in writing, and thereafter the details will be removed from the system and the consent form be destroyed.

At this juncture, allusion should be made to individuals having interest in both organ and wholebody donation. Organ donation will go for life-saving transplantation in case of end organ failure while whole body donation will upgrade teaching, dissection, prosection, exhibition, research and therapeutic purposes. In that wise, the individual in question will be properly registered as an organ and wholebody donor by appropriate authorities who will have to work together just in case they are independent.

In view of the fact that whole body donation program is practically not existing in Nigeria, perhaps, due to so many limitations including: validated socio-cultural heritage and spiritual beliefs, this study was then curiouslydesigned to demonstrating the challenges militating against whole body bequeathment as a reality in Nigeria and other countries alike amongst a cross-section of healthcare givers. Specific objectives included; investigationof awareness on whole body bequeathment program across a section of healthcare workers; inquiry into religious and socio-cultural influences on body bequeathment; and demonstration of influencesconcerning family members about whole body bequeathment.

MATERIALS AND METHODS

The study was conducted across a section of healthcare workers (45 years and above) in Ekiti, Southwestern Nigeria with an anonymous proforma formulated from available indexed journals and literature. There were three sections: facility, socio-demographics and donation characteristics which contained 20 item self-administered questionnaire with Likert-style option of: 'yes', 'no' and 'not sure'. Facility

represented the various healthcare centres: tertiary, secondary and primary in both public and private sectors. Socio-demographics contained: age, gender, marital status, state of origin, tribe/ethnicity and occupation. The questionnaire was structured to address: awareness on wholebody donation; sources of cadaver; willingness to whole body donation; influences from family, religion and diverse cultures; mode of burial disposal; predilection to continuing utility of legally executed criminals and unidentified bodies; and human cadaver substitutes. The authors visited the facilities, sought formal permission from managements and engaged the middle-aged healthcare workers for period of a month going from one section/department to another in distributing the questionnaire. Some workers filled the questionnaire immediately while others sent theirs to the authors later. A very few groups of middle-aged workers did not participate on the reasons best known to them. Data collated and subjected to statistical analysis using IBM statistical package for social scientists (version 21) to determine Cronbach's alpha value for reliability/internal consistency of the study, Kendall Coefficient of Concordance (KCC) along with analysis of frequency were estimated while statistical-significance was taken as $p < 0.05$. Results were represented in words, tables and figures.

RESULTS

A total of 136 healthcare workers of middle-aged and above participated in the study with tertiary 83 (61.0%); secondary 29 (21.3%); educational institution health centre 16 (11.8%); private 6 (4.4%); and primary 2 (1.5%). Highest age group

was 50 to 54 years with 61 (44.9%); followed by 45 to 49 years with 48 (35.4%); 55 to 59 years with 19 (13.9%); and the rest 8 (5.8%). Male was higher with 71 (52.2%). Participants state of origin: Ekiti 63 (46.3%); Osun 20 (14.7%); Ondo 16 (11.8%); Kwara 9 (6.6%); Oyo 5 (3.7%); Kogi 5 (3.7%); Lagos 3 (2.9%); Ogun 3 (2.9%); and others 11 (8.1%). Majority was of Yoruba tribe 125 (90.4%). Education status: tertiary 121 (89.0%); secondary 6 (4.4%); and others 9 (6.6%). Marital status: married 123 (90.4%); single 9 (6.6%); and widow 4 (3.0%). Religion: Christianity 122 (89.7%) and Islam 14 (10.3%). Profession included: doctor 53 (39.0%); nurse 43 (31.6%); health assistance 9 (6.6%); other therapist 9 (6.6%); health information officer 5 (3.7%); physiotherapist 4 (2.9%); professional embalmer 3 (2.2%); and laboratory scientist 3 (2.2%).

Bequeathment Program	Q1	Q11	Q1	Kendall's Coefficient of Concordance
			2	
Mean Rank	1.69	2.01	2.30	0.001

Table 1: Issues related directly to program on whole body bequeathment

Training and Body Bequeathment	Q5	Q19	Kendall's Coefficient of Concordance
Mean Rank	1.46	1.54	0.172

Table 2: Influence of training and whole body bequeathment

Bequeathment Source	Q3	Q4	Q17	Q18	Q20	Kendall's Coefficient of Concordance
Mean Rank	3.09	3.05	3.02	2.41	3.43	0.001

Table 3: Source of bequeathment

Bequeathment Reason	Q6	Q7	Q8	Q9	Kendall's Coefficient of Concordance
Mean Rank	2.56	2.48	2.55	2.42	0.542

Table 4: Reason for bequeathment

Affection on Body Bequeathment	Q13	Q14	Q15	Q16	Kendall's Coefficient of Concordance
Mean Rank	2.47	2.19	2.82	2.51	0.001

Table 5: Affection on body bequeathment

In Table 1, Kendall coefficient of concordance (KCC) revealed a value of 0.001 and null hypothesis was rejected. Therefore, there were significant differences among the items in Q1, Q11 and Q12 at 95% confidence interval: the questions are independent. KCC in Table 2 was greater than 0.05 and null hypothesis accepted: items in Q5 and Q19 are related. KCC in Table 3 was less than 0.05 and null hypothesis rejected: items in Q3, Q4, Q17, Q18 and Q20 explained source of whole body bequeathment independently. P-value in Table 4 was 0.542 and null hypothesis accepted: items in Q5, Q6, Q7, Q8 and Q9 synonymously explained the reasons for whole body bequeathment. KCC in Table 5 was 0.001 and null hypothesis rejected: items in Q13, Q14, Q15 and Q16 independently rationalized the issue on self-affection towards whole body bequeathment. Assessing body bequeathment characteristics, the study's Cronbach's Alpha value of 0.801 was second to excellence in determining reliability scale of a study (Tables 6 and 7).

Cronbach's Alpha	Number of items
0.801 (Good)	20

Table 6: Reliability statistics

Cronbach's Alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Table 7: Coefficient of reliability (internal consistency)²³. α = alpha

DISCUSSION

The estimate of only 136 healthcare workers of age 45 and above participating in this study could not be rationalized due to poor record keeping and inconsistency in management of data related to socio-demographics in this sovereignty. However, majority of the middle-aged healthcare workers in Ekiti, Southwestern Nigeria were from tertiary centres of the state: Ekiti State University

Teaching Hospital Ado-Ekiti (EKSUTH) and Federal Teaching Hospital Ido-Ekiti (FTHI). This showed that there were more of experienced hands in the tertiary centres to take charge of issues related to whole body bequeathment as against other centres which might have had many young inexperienced adults. Males were more, thereby, proving their dominance in family decision-making matters which might be extended to body and organ donation affairs. Even though the indigenes of Ekiti 63 (46.3%) dominated the health sector, for the fact that the figure was not up to 50% showed that the state still reckoned with lots of healthcare workers from other states moving forwards its health sector. Body donation for anatomic and medical education is purely tertiary educational affairs and majority of responders to this study 121(89.0%) attaining tertiary educational status was beneficial for precision of judgment about the source, donation and utility criteria of cadavers. Marriage brings about extra responsibility in decision-making amongst different families, most especially, in Africa with extended family influences. Of the majority who were married equally ascertained the validity of the study. Delaying of funeral rites and burial disposal could be beneficial in disguise to avail people in knowing what happened to the dead. Majority of respondents in this study are Christians 122 (89.7%) preferring a delay in funeral disposal to an extent unlike in Islamic injunction favouring immediate funeral rites and disposal. This delaying factor could be something contrived to meet the time to think and appreciate the usefulness of the body for anatomic and medical education. Doctors and nurses dominated the characters of healthcare workers who participated in the study. The utility of cadaver for dissection as a mandatory path in undergraduate medical training and most often in undergraduate/basic nursing training could have popularized the various issues being clarifying in the donation characteristics amongst doctors and nurses (table 8). Nevertheless, there were very few professional embalmers in Ekiti as majority of this category of healthcare workers managing the mortuaries in Nigeria broadly speaking had no formal degree qualifications in mortuary services and tissue preservation. Thereby, ascertaining the opinions of the very few professional embalmers in this study might be perceived as an exercise in futility. The Cronbach's alpha reliability score of 0.801 (tables 6 and 7) proved this study to be second to excellence and to be a reference point amongst its kinds in this sovereignty and the like as earlier illustrated by Gliem and Gliem (2013). Issues related directly to program on whole body donation were governed by three items: Q1, Q11

and Q12 and were considered independent interrogations going by p-value (0.001) in Kendall's test (table 1). Even though majority 70(51.4%) claimed to have been aware of the whole body bequest's program, equally majority 92 (67.6%) had no clue on the criteria for body donation and perhaps nobody seemed to have donated self for anatomic and or medical education. Whole body donation could then be

rightly demonstrated to be alien to this locality and Nigeria at large according to the study by Popoola and Sakpa (2018). The true professional body who was really aware of the criteria 31 (22.8%) might have been the doctors while being engaged during anatomic pathologic courses in undergraduate training on HTA which nevertheless had been incorporated into affairs of London Anatomic Office (2015).

Q	Parameter	Yes (%)	No (%)	Not sure (%)
1	Are you aware of whole body bequeathment program?	70 (51.4)	44 (32.4)	22 (16.2)
2	I Prefer whole body bequeathment to organ donation?	21 (15.4)	82 (60.3)	33 (24.3)
3	Whole body bequeathment can be from unknown persons?	65 (47.8)	34 (25.0)	37 (27.2)
4	Whole body bequeathment can be from my family members?	58 (42.6)	55 (40.9)	23 (16.9)
5	I can bequeath myself for anatomic/medical education?	18 (13.3)	103 (75.7)	15 (11.0)
6	I cannot bequeath myself because of my religious belief?	36 (26.4)	81 (59.6)	19 (14.0)
7	I cannot bequeath myself because of socio-cultural heritage/my tradition?	40 (29.4)	77 (56.6)	19 (14.0)
8	I cannot bequeath myself because bequeathed body will not be treated with respect?	39 (28.7)	73 (53.7)	24 (17.6)
9	My family member/kinsfolk will never accept/honour body bequeathment?	66 (48.5)	30 (22.1)	40 (29.4)
10	I can bequeath for financial reason to assist my family and relations after my death?	21 (15.4)	102 (75.0)	13 (9.6)
11	Are you aware of criteria for whole body bequeathment at all?	31 (22.8)	92 (67.6)	13 (9.6)
12	Are you aware of anybody already registered self for body bequeathment?	0 (0.0)	123 (90.4)	13 (9.6)
13	Assuming I bequeath myself, nothing can change my mind?	49 (36.0)	49 (36.0)	38 (28.0)
14	If I bequeath myself, I prefer direct burial after dissection?	64 (47.0)	44 (32.4)	28 (20.6)
15	If I bequeath myself, I prefer cremation after dissection?	16 (11.8)	93 (66.4)	27 (19.8)
16	If I bequeath myself, parts of my body can be preserved in anatomy museum after dissection?	28 (20.6)	92 (67.6)	16 (11.8)
17	As for me, sacrificial bodies/executed criminals should remain the only source of cadaver?	62 (45.6)	55 (40.4)	19 (14.0)
18	Unclaimed/unknown body can continue to be used for bequeathment?	99 (72.8)	22 (16.2)	15 (11.0)
19	I would have loved to bequeath my body before training as healthcare official but now I cannot?	21 (15.4)	84 (61.8)	31 (22.8)
20	Even though human cadaver is better for medical education and research, I totally (100%) prefer artificial cadaver?	38 (27.9)	76 (55.9)	22 (16.2)

Table 8: Bequeathment characteristics (n=136)

Influence of training as ratified by items in Q5 and Q19 showed a p-value greater than 0.05 (table 2) thereby proving the items were either dependent or synonymous in which a very few 18 (13.3%) who wished to donate self might have valued the importance of generating ideas from the dead to integrate the living in healthcare training. All that was needed to increase this number of those willing to donate self might be for the teachers, students and researchers to strictly obey the rules guiding the utility of cadavers in order to attract many more people to value the same line of thought in donating self. Besides, there is a need for a feasible whole body bequeathment program in Nigeria and other sovereignties alike.

Contrarily, majority 103 (75.7%) who declined the wish of donating self might be the group of healthcare workers clinching on some other reasons including different complex inviolable socio-cultural heritages, unfalteringly aged-long traditions, extended family dominancy and steadfast religious beliefs.

The items in table 3 independently defined scope and structural institution of sourcing for cadavers in this locality. Majority preferred sourcing for cadavers from unknown/unidentified and deceased family members while at these assertions, relatively-significant percentages could be acclaimed to have been on the fence: Q3 and Q4. Nevertheless, the same majority

seemed to have preferred sacrificial/executed and unclaimed bodies as alternatives to sources of cadaver: Q17 and Q18. One could then infer from all these affirmations that armed-robbery and other vices with resultant legal execution seemed to be advanced by the healthcare workers in this locality for the benefit of anatomic and medical education. The reason being that executed bodies are generally disowned and not reckoned in the community equalizing them to unknown/unidentified deceased bodies. The corollary encouraging anatomist to embark on aggressive enlightenment campaign for informed bequeathment should be extended to every healthcare worker as a crusade for the best source of cadavers as in the study by Osuagwu et al (2014). To buttress this point, majority 76 (55.9%) of Q20 declined to the utilization of artificial cadavers as substitutes and the minority of 22 (16.2%) who were not sure could be inspired to join the crusade of whole body bequeathment so as to have a re-think since the human cadavers give the real feeling and texture of tissue in hands-on experience dissection. Accepting null hypothesis ($p > 0.05$) meaning that the interrogative assertions in table 4 synonymously explained the reasons for non-acceptability of whole body bequeathment among healthcare workers in this locality. The influence of unquestionable religious beliefs, inarguable socio-cultural heritage and unfalteringly aged-long traditions, extended family dominancy and egocentric nature of individuals were portrayed in items Q6, Q7, Q8, and Q9. These developments were similarly affirmed to African and Asian sovereignties in a debate with eminent professors of anatomic sciences as participants across continents of the globe in Argentine Republic where Nigeria was potently represented as decently addressed by Biasutto et al (2014). Unequivocally, items in table 5 separately explained assertions on whole body bequeathment by rejecting null hypothesis. The process of whole body bequeathment was neither here nor there for self-donation as the 'yes' and 'no' options scored equal value in Q13. A close value of this kind was registered for 'Not sure' assertion yielding ratio of 9:9:7. This then called for an umpire either the next-of-kin or close family member to ascertain the submission of the deceased on whole body bequeathment thereby further proven the unparalleled influences of extended family dominancy in decision making in Nigeria and the likes. Majority supporting direct burial disposal and rejecting cremation Q14 and Q15 respectively further stressed the fact that people in this locality and Nigeria at large preferred established aged-long accepted funeral rites. These rites were gleefully being performed

with premium as demonstrated in Q16 where majority rejected preservation of parts of the tissue in anatomy museum after dissection. The stepwise process of whole body bequeathment as enshrined for anatomical examination by London Anatomy Office (2015) in terms of returning the muddled dissected body to the relations (as if it had passed through investigative operation before disposal or funeral rites with the body in absentia) was alien to Nigeria.

There were many factors militating against procurement of cadavers for their generosity in offering themselves one way or the other for anatomic and medical sciences. More often than not the awareness was still pitiful as the criteria were only known in papers rather than the hearts of healthcare workers who were meant to propagate the crusade of whole body bequeathment. Religious beliefs, cultural and traditional limitations were remarkable factors militating whole body bequeathment programs. Influence of family members with extended family dominancy in decision-making was still a factor that called for attention. The need for Anatomical Society of Nigeria (ASN) in collaboration with International Federation of Associations of Anatomists (IFAA) to establish a policy on strategies for getting bodies for medical education in this part of the globe is hereby further emphasized. The policy should include the social, moral, political and financial needs of whole body bequeathment affairs.

Conflict of interests

None.

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Ethical Approval

Duly approved by ethical and clearance committee of the institution.

Informed Consent

Consent was verbal and not written.

Contributions

SOP initiated and designed the research work based on my observations and difficulties in getting the rightful cadavers for medical education in Nigeria. Educated people about relevance of Anatomy through historical perspective before some agreed to endorse the questionnaire. AEO contributed in the collection and analysis of data. ODO contributed in collection of data. WOO reviewed the final manuscript before submission.

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