

Volume 25, No 1, 2022, 174-181

## ORIGINAL ARTICLE

# Yoruba ontology: perception of the physical body of the dead and its implications for cadaveric organ transplantation in south-west Nigeria

Jacob Olugbenga Awobusuyi

Lagos State University College of Medicine, Ikeja Lagos, Nigeria.

## ABSTRACT

**Introduction:** The perception of death differs by region, culture, religion, and ethnic group in Nigeria. These differences can affect the consent rate for cadaveric transplantation. Understanding the Yoruba concept of death and approaching families for consent in a culturally sensitive manner may increase family consent to deceased donor organ harvesting. This literature review explores the Yoruba concept of death and organ transplantation.

**Methods:** Three research questions were formulated and a search strategy was drafted by creating a SPIDER (Sample, Phenomenon of Interest, Design, Evaluation, and Research type) logic search grid. Relevant databases were then examined using the search terms, concepts and keywords so generated. The findings of publications retrieved on Yoruba beliefs regarding death were entered into a summary table based on the themes identified in them. These themes served as the basis for the interpretation synthesis.

**Results:** Fifteen of the eighty-five studies identified initially were deemed contextually relevant to the research questions and used in the analysis. These sources revealed that death in the Yoruba belief system signifies the dematerialization of the soul and its transformation from earthly existence into a spiritual one. Consequently, the physical body of the deceased is perceived as becoming dust and of little relevance to the afterlife.

**Conclusion:** In the Yoruba worldview, the state of the physical body after death has no relevance to afterlife and reincarnation. However, transplant teams must consider the circumstances of death when asking for consent. When death is viewed positively, success is more likely.

Keywords: Yoruba; death; ontology; organ transplantation.

## INTRODUCTION

Death is an inevitable fact of life. It entails the irreversible loss of the characteristics essential for a human being to live and, thus, connotes the inconvertible ending of consciousness combined with the immutable loss of the capacity to breathe [1].

With recent developments in medical technology, the diagnosis and confirmation of death are required in several different situations. For example, diagnosis and certainty of death are required when it occurs due to ageing or disease processes in which the individual is not on artificial interventions to sustain cardiorespiratory function. They are also needed in situations where

medical interventions are used to sustain cardio-respiratory function in patients on ventilators.

While most people would accept an absence of spontaneous respiratory and cardiac functions as confirmation of the death of an individual, the meaning of death can differ significantly from region to region, among different cultures, religions and ethnic groups – for example in Nigeria, the subject of this review.

Western cultures view death as the end of life, with the individual dying as a biological organism and nothing occurring after death. In some cultures, however, death



represents the transition to other forms of existence, while in others, death is conceived as involving a circular pattern of multiple deaths and rebirths. These different views about death have a notable influence on community lifestyles, the degree to which individuals fear death, their expressions of grief and mourning, and the nature of funeral rituals [2-4].

The Yoruba people are an ethnic group found in the West African countries of Nigeria, Benin and Togo. They mostly inhabit the south-western part of Nigeria and make up about 21% of its population. They constitute about 38 million people, thus making them one of the largest ethnic groups in Africa [5].

Since the start of organ transplantation in Nigeria over 20 years ago [6], twelve kidney transplantation centres have been established, four of which are in the South-Western geopolitical zone. However, only one of these four centres can be considered as active. Lack of funds and a scarcity of donors have been identified as major obstacles to the growth of kidney transplantation in the region [7,8]. Also, a lack of confidence by patients in the healthcare system, an absence of inter-programme collaboration, and inadequate government support are additional factors that have hampered the expansion of transplant practices.

All kidney transplantation procedures performed so far in the country have involved living donors, limiting the number of transplantable organs and restricting the scope of organ transplantation to activities feasible with living-donor programmes. For instance, heart transplants are not feasible within the scope of live donor organ transplantation.

Realising the limitations of relying solely on living donor organ transplantation programmes, the Lagos Nephrology Forum – a group comprising nephrologists active in Lagos State – has been working assiduously to establish cadaveric transplantation activity in the region. Towards achieving this aim, the group engaged with the Ministry of Justice to present the "Lagos State Organ Harvest and Transplantation Bill" to the state legislature. The draft legislation went through a public hearing at the Lagos State House of Assembly on 30 June 2021 [9].

The views of the Yoruba about death have been described variously as ancestral worship, a belief in life after death, and reincarnation. A few publications have examined the ontological and epistemological perspectives of this belief [10,11]. The emphasis has centred more on the metaphysical and phenomenological interpretation of the afterlife in the Yoruba worldview. However, the pertinent question that bears direct relevance to cadaveric transplantation is of the perception of the physical body of the dead and its relationship to the reincarnated body of the departed soul. A question such as, "Will the harvested organ be absent

from the rebirthed body?", is common not only among the lay public but also in the medical community. Answering this question and similar ones is crucial as they are fundamental to determining the acceptability of organ harvesting from deceased donors for transplantation in the cultural setting of this ethnic group.

This review explores the concept of death in the worldview of Yoruba culture, to clarify the viewpoint about the physical body of a deceased individual and reincarnation. The implication of the perception of death for the acceptability of cadaveric transplantation in the region is also examined.

### **METHODS**

An exploratory literature review on the ontology of the "dead body" by the Yoruba people of south-western Nigeria was conducted. The consequences were evaluated in the context of their implications for cadaveric organ transplantation in the south-western region of Nigeria.

#### Search strategy

The SPIDER (Sample, Phenomenon of Interest, Design, Evaluation, and Research type) tool [12] was used to frame three search questions and create a grid of search terms, keywords, and concepts (Table 1).

Although this search tool has a lower yield rate as applied to databases than the Population, Intervention, Comparison, and Outcomes (PICO) process [12], it was deemed adequate for this review due to its ease of use in formulating search terms and its high level of specificity, which reduces the time required to interrogate a large number of publications to find relevant articles.

In order to complement the limitations of the SPIDER tool and to broaden the scope of the literature survey, searches of free text were also conducted.

#### **Search questions**

- I. For the Yoruba people, what is the meaning of death?
- 2. What are the dimensions of death in the Yoruba worldview?
- 3. What are the Yoruba people's beliefs on the afterlife?

The search terms, concepts and keywords in each concept cell were combined using the Boolean operator "OR" or "AND" with truncation "\*" as appropriate and used to conduct the literature search in Scopus, PubMed (Medline), Google Scholar, the ProQuest Sociology Database, Sociological Abstracts, Web of Science, and ProQuest Social Science Journals.



175

|                                       | Sample<br>[A]         | Phenomenon of<br>interest<br>[B]    | Design<br>[C]             | Evaluation<br>[D] | Research type<br>[E] |
|---------------------------------------|-----------------------|-------------------------------------|---------------------------|-------------------|----------------------|
| What is the meaning<br>of death?      |                       | "Death"                             |                           |                   |                      |
|                                       |                       | OR                                  |                           |                   |                      |
|                                       |                       | ''Dying''                           |                           | "Experiences"     |                      |
|                                       |                       | OR                                  |                           | OR                |                      |
|                                       |                       | "Meaning of death"                  |                           | "Understanding"   |                      |
|                                       |                       | OR                                  |                           | OR                |                      |
|                                       |                       | "Transition"                        |                           | "Attitudes"       |                      |
|                                       |                       | "Good death"                        | "Reincarnation"           | OR                |                      |
|                                       |                       | OR                                  | OR                        | "beliefs"         |                      |
|                                       |                       | "Dignified death"                   | "rebirth"                 | OR                |                      |
| Vhat are the<br>mensions? Dying       |                       | OR                                  | OR                        | "Views"           |                      |
| What are the beliefs<br>on afterlife? |                       | "Dying with dignity"                | ''abiku''                 | OR                |                      |
|                                       | Yoruba people''       | OR                                  | OR                        | "opinions"        | "Qualitative"        |
|                                       | "Yoruba ethnic group" |                                     | ''Akudaaya                | OR                | OR                   |
|                                       |                       | "Dying with grace"                  | (Living-Wraith)''         | '' attributes''   | ''Quantitative''     |
|                                       | "O O I I II           | "Reincarnation"                     | OR                        | OR                | OR                   |
|                                       | "Omo Oduduwa"         | OR                                  | ''Abarameji"              | "perceptions"     | "Mixed methods       |
|                                       |                       | "rebirth"<br>OR                     | OR                        | OR                |                      |
|                                       |                       | "abiku"                             | "Egungun                  | "beliefs"         |                      |
|                                       |                       | OR                                  | (Masquerade)''            | OR                |                      |
|                                       |                       | "Akudaaya<br>(Living-Wraith)"<br>OR | OR<br>"Ancestral worship" | ''feelings''      |                      |
|                                       |                       |                                     |                           | OR                |                      |
|                                       |                       |                                     |                           | "knowledge"       |                      |
|                                       |                       | "Abarameji"                         |                           | OR                |                      |
|                                       |                       | OR                                  |                           | "antecedents"     |                      |
|                                       |                       | ''Egungun                           |                           | OR                |                      |
|                                       |                       | (Masquerade)''                      |                           | "consequences"    |                      |
|                                       |                       | OR                                  |                           | ·                 |                      |
|                                       |                       | "Ancestral worship"                 |                           |                   |                      |

Search protocol: ["A" AND "B"] AND [("C" OR "D") AND "E"]

Physical searches of the literature in libraries were also conducted to seek journal articles and books not currently accessible via the internet. The survey results were restricted to publications in English.

Publications on Yoruba beliefs regarding death were retrieved. The themes identified in them were then entered into a summary table and served as the basis for the interpretation synthesis (Table 2).

#### **Ethics considerations**

This article does not report any studies with human participants performed by the author.

#### RESULTS

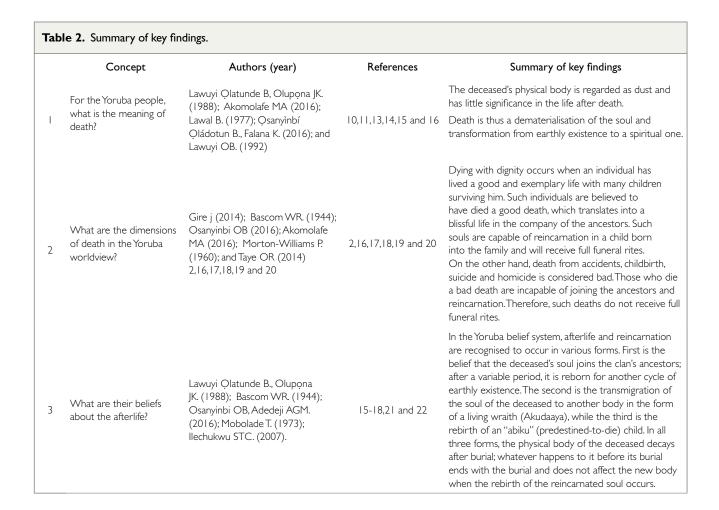
A total of 85 potential articles were initially identified. Eight duplicates were removed. Following eligibility screening

by title and abstract, 35 of the remaining 77 studies were excluded. Twenty-seven of the remaining 42 full-text articles that were evaluated for eligibility were also eliminated. The most common reason for exclusion after fulltext screening was that their contents were irrelevant to the topic of this review. The remaining 15 studies appropriate to the study questions were used for the analysis (Figure 1). Most of the publications were narratives, chronicling the historical events underlying the beliefs of the Yoruba as derived from oral tradition (Table 2).

#### The meaning of death to the Yoruba

Death is perceived as a dematerialisation of the soul and transformation from earthly existence into a spiritual one [10,11,13-16]. It represents a separation of the soul from the tangible body when it transits from the world of men to the spirit world. The physical body of the deceased decays after burial and is of little relevance to the afterlife.

176



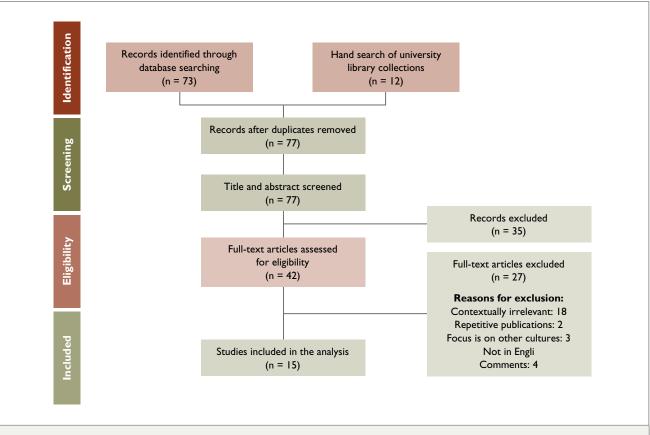




Figure 1. Preferred reporting items for systematic reviews and meta-analyses (PRISMA) flow chart of the sequence of record identification, screening, assessment and study inclusion process of the literature review.

## The dimensions of death in the Yoruba worldview

The life achievements of the deceased, the age at death and circumstances surrounding the individual's demise shape the perception of the type of death the person is considered to have experienced. Two characteristics of death are typically recognised: dying with dignity and dying in terrible circumstances [2,16-20]. Individuals who lived a good and exemplary life, with many children surviving them before death, are believed to have died well, which translates into a subsequent blissful life in the company of the ancestors after death. In contrast, death from accidents, childbirth, suicide, and homicide is considered terrible. Those who die a terrible death ("okuofo") [11,20,31] are incapable of joining the ancestors and of undergoing reincarnation, and do not receive full funeral rites.

#### Beliefs in the afterlife and reincarnation

Publications referencing beliefs in the afterlife and reincarnation recorded a consistency in this belief across all the geographic locations inhabited by the Yoruba. Reincarnation is recognised to occur in three different forms [15-18,21,22]. The first is reincarnation after a variable period of dwelling with the clan's ancestors. Then, the soul is reborn back into the family for another cycle of earthly existence [18]. The second is the transmigration of the deceased's soul to another body in the form of a living wraith ("Akudaaya"), which involves the transmigration of the soul of the deceased to another body with remarkable semblance to the body of the newly dead [15,16]. The living wraith typically reappears in another town, where it continues to live until its earthly destiny is fulfilled. The third form is the rebirth of an "abiku" (predestined-to-die) child [16,21,22]. Abiku children are believed to die and be reborn several times by the same mother, and belong to a fraternity of demons living in the woods who are capable of inhabiting the bodies of foetuses; when delivered, the children have "expiry tags" and are predestined to die before puberty regardless of the level of care provided by their earthly parents [21].

In all three forms, after death, the physical body of the deceased is recognised to have ceased to live, and the physical body of the dead person decays after burial; whatever happens to it before its burial ends with the internment and does not affect the new body when the reincarnated soul is reborn.

#### DISCUSSION

In Nigeria, a country with a population of around 217 million in 2022 [23] and an estimated end-stage renal disease prevalence of about 12.3–14.2% [24], only 14

transplant centres are performing kidney transplantation after 20 years of transplantation activities, with the majority of these centres conducting fewer than five kidney transplants a year. The reasons for these numbers not being greater have been identified as lack of funds, too few donors, and religious beliefs [7,8,25]. In addition, insufficient patient confidence in the healthcare system, poor interprogramme collaboration, and the absence of government support are other obstacles to the expansion of transplant programmes [7]. In a study conducted by Onowa et al. in the Northern region of Nigeria, lack of funds was identified as the most significant barrier to kidney transplantation among patients (67%). Umeizurike obtained a comparable result (66%) in a study conducted in the country's Southern region.

In most African countries where organ transplantation is carried out, the practice is limited only to living kidneys. This is due to reliance on donation from the living as the only source of organs for transplantation. In addition to limiting the scope of transplant practices in these countries, reliance on living donors as the source of organs has also restricted the number of transplantations that can be performed.

Bone marrow transplantation is conducted in only one centre in Nigeria and comea transplantation in one other. The transplantation of other organs so far has not been feasible in the country [6,26]. Apart from South Africa, where the transplantation of organs such as heart, liver, lungs and other parts from cadaveric donors is performed [27,28], other African nations have been limited in their capacity to expand the scope of their transplant programmes because of reliance on living donors [29,30]. As a result of the lack of progress in such activities, transplantation associations in several African countries are beginning to consider the feasibility of establishing their respective cadaveric organ transplantation practices to address the problem [30].

Beneficial as the establishment of cadaveric organ transplantation practices would be for the thousands of potential patients with severe organ failure in Nigeria, medical professionals see setting up such facilities as an uphill task with a slim chance of success as the concept may not be culturally acceptable. Furthermore, the necessary infrastructure for cadaveric transplantation is lacking and may be difficult to establish given the current healthcare policies in the candidate countries and the government's unwillingness to provide the necessary support for such a complex and culturally alien therapy.

One of the cultural barriers to organ transplantation in the south-western region of Nigeria is the Yoruba worldview of death, the afterlife and reincarnation, which has variously



been referred to as a form of ancestor worship [13]. The perception is that the body of the dead is held sacred by this group, as the deceased person has joined the ancestors, so that obtaining consent from relatives of the deceased is almost impossible. The physical body of the deceased (now perceived as an ancestor), is perceived as dust and of little relevance to reincarnation nor to the life cycle of human beings [14,15], even though the provision of traditionally respectable burial rites is desired. Recognition of the separation of the physical body from the soul after death in Yoruba ontology is potentially helpful in being used to support advocacy for the use of organs from the deceased individual. Knowledge of this by the medical team can be valuable and should be used when designing public health campaigns in support of cadaveric organ transplantation among the Yoruba.

To gain an insight into the origin of the Yoruba worldview on death, a closer look at the origin of man in the Yoruba ontological view of creation is necessary. This tells us that the primordial Obatala (one of the oldest of all the gods in heaven) was asked to mould man's physical body from clay by "Olodumare" (the supreme being) during the process of creating man [14,17]. After that, Olodumare breathed life into the sculpted clay, which made it come alive. The sculpture (known as ara), animated by the vital breath of the supreme being (the soul "emi"), became man. A man remains alive for as long as the soul dwells in his or her body. Loss of the soul results in death, leaving the body static to decompose into clay when buried [10,14]. Thus, death to the Yoruba is conceptually a dematerialisation of the soul and transformation from earthly existence into a spiritual one [10]. Understanding this phenomenon is crucial as it provides a cultural belief to dwell on during publicity campaigns. An awareness of the dead body as having no influence on reincarnation will go a long way to convincing the general public of the desirability of consenting to organ harvesting from a deceased individual for the general benefit of humanity.

The Yoruba belief system holds also that human efforts and accomplishments do not end with death. As reported above, the Yoruba have a strong belief in the afterlife and reincarnation, both of which are thought to exist in various forms [17,19-22]. The "dead body" of the departed soul is recognised as quite distinct from the newly rebirthed body of the reincarnated soul. Therefore, whatever has happened to the dead body ends with its burial and does not affect the new body of the reincarnated soul.

As we have seen, however, even though the dead body has no role in the afterlife, the circumstances surrounding the individual's death may affect the willingness of the deceased's relatives to consent to the harvesting of its organs. Understanding cultural beliefs about a good and a bad (sorrowful) death is critical. In the case of a person considered to have "died well" (good death), the family mood in the immediate period of bereavement is one of gratitude; if such families could be convinced that the good work undertaken by the individual during his or her lifetime could extend beyond their death by donating organs to save the lives of others, family consent may be looked upon favourably, particularly in educated families. The main disadvantage from the standpoint of organ transplantation is that such sources tend to be extended criteria donors, which results in inferior allograft outcomes in recipients of such organs. The tragic death of a young person, on the other hand, is in stark contrast. The intense grief, anger and sadness within the family, combined with the notion of the unnaturalness of the death, with the subsequent accusations and counter-accusations among family members as to who was responsible for such an individual's death, makes approaching families for consent to organ donation risky in the immediate period of bereavement. The risk of anger and aggression being transferred to the organ procurement team and the institution is high, with potentially disastrous consequences. Workplace violence is common in Nigerian hospitals, resulting in severe injury and even the death of healthcare workers on some occasions. For instance, in a study on workplace violence against health workers in a Nigerian tertiary hospital, Ogbonnaya and colleagues found that approximately one-quarter of all study respondents had experienced physical assault in the previous year [31]. Similarly, Douglas and her colleague reported a high frequency of physical violence in their study among nurses [32].

In cadaveric organ transplantation, most organs come from individuals who have died suddenly in emotionally challenging situations such as irreversible brain injuries from vehicle traffic accidents and cerebrovascular accidents. The transplant team must therefore endeavour to appreciate the family's position on the type of death that the deceased is considered to have suffered and, with great caution, approach the relatives with the request for organ donation without upsetting the family in the immediate period of bereavement [33,34]. Unfortunately, information is sparse on family grief and mourning reactions among the Yoruba. Making this a subject for future research will be of great value as the knowledge so gained will guide the design of the protocols for approaching relatives for consent by the transplant unit.

Another possible barrier to the establishment of cadaveric organ transplantation is the widespread practice of fetish ritual killings for monetary purposes [35,36]. This potentially



devastating belief can adversely affect public trust in the cadaveric organ transplantation programme if there is poor understanding of the purpose of organ harvesting. The organ procurement teams, transplant centres and hospitals involved must therefore ensure transparency in the reason for organ transplants and should exercise due diligence in the conduct of their duties.

#### Strengths and limitations of the study

This review's focus on the Yoruba's concept of the physical body of the deceased and assessment of the relevance of the associated beliefs about it for cadaveric transplantation is this article's strongest point and one of its most important contributions. The dearth of published research on this topic regarding Nigerian customs is a major limitation of this study, since it limits the scope of conclusions that can be drawn from the literature about these Yoruba beliefs.

#### CONCLUSIONS

The misconception that organs removed from the body of a deceased person will not be present in the body of the reincarnated soul is one that is not supported in the Yoruba concept of reincarnation. This fear is held by individuals who do not have a thorough understanding of the Yoruba's perception of death.

The dead body is recognised to have ceased living and will turn into dust after burial. Therefore, if public health campaigns can focus adequately on this fact and deliver this message professionally and convincingly, the chances of obtaining family consent to organ harvesting from a deceased individual are likely to be high. However, organ procurement teams must consider the nature of the individual's death and approach the family in a culturally sensitive manner.

The establishment of a universal organ procurement system by the Nigerian government, similar to the United Network for Organ Sharing (UNOS) in the United States, may be a good model to enhance organ procurement; however, the various parties involved in such a system, the organ transplantation units, and government regulating agencies must endeavour to be of the highest integrity and ethical in all of their activities to obtain public trust in a cadaveric organ transplantation programme.

#### Acknowledgment

None

Conflicts of Interests

180

#### REFERENCES

- Working Party established through the Royal College of Anaesthetists on behalf of the Academy of Medical Royal Colleges. A Code of Practice for the Diagnosis and. Media. 2010. Available: https://www. aomrc.org.uk/reports-guidance/ukdec-reports-and-guidance/ code-practice-diagnosis-confirmation-death/
- Gire J. How Death Imitates Life: Cultural Influences on Conceptions of Death and Dying. Online Readings Psychol Cult. 2014;6: 1–22.
- Eyetsemitan F. Cultural Interpretation of Dying and Death in a Non-Western Society: The Case of Nigeria. Online Readings Psychol Cult. 2002;3: 1–10.
- Aramesh K. History of attitudes toward death: A comparative study between Persian and Western cultures. J Med Ethics Hist Med. 2016;9: 1–6.
- Findlay J. Largest Ethnic Groups In Nigeria WorldAtlas. In: Society. 2019. https://www.worldatlas.com/articles/largest-ethnic-groups-innigeria.html [accessed 12 May, 2022]
- 6. Ulasi II, Ijoma CK. Organ transplantation in Nigeria. Transplantation. 2016;100: 695–697.
- Onowa VE, Shuaibu SI, Ofoha CG, Agbo AC, Uchendu DG, Gimba Z, et al. Barriers to kidney transplantation among patients on maintenance haemodialysis at the Jos University Teaching Hospital, Nigeria. Niger J Med. 2018;26: 255–259.
- Amira C, Busari A and Bello B. Challenges accessing kidney transplantation in Lagos, Nigeria. Nigerian Journal of Health Science. 2017;17(1):20-24.
- Lagos' Plan For Amendment To Organ Harvest, Transplant Bill

   Independent Newspaper Nigeria. https://independent.ng/
   lagos-plan-for-amendment-to-organ-harvest-transplant-bill/ [Accessed
   23 Sep 2021]
- Lawuyi Qlatunde B., Olupona JK. Metaphoric Associations and The Conception of Death: Analysis of a Yoruba World View. J Relig Africa. 1988;18: 2–14.
- 11. Akomolafe MA. Yoruba Ontology: A Critique of the Conceptualization of Life after Death. J Pan African Stud. 2016;9: 33.
- Cooke A, Smith D, Booth A. Beyond PICO: The SPIDER tool for qualitative evidence synthesis. Qual Health Res. 2012;22: 1435–1443.
- James Thayer Addison. The Harvard Theological Review.1924;17(2):p. 155-171.
- Lawal B. The living dead: Art and immortality among the Yoruba of Nigeria. Africa.1977;47(1):50 – 61.
- Osanyinbí Oládotun B., Falana K. An Evaluation of the Akure Yoruba Traditional Belief in Reincamation. Open J Philos. 2016;06: 59–67.
- 16. Osanyinbi OB, Adedeji AGM. The Impact of the Yorùbá Traditional Belief in Reincarnation among Yorùbá Christians in Akurę. J Philos Cult Relig. 2016;15: 17–24.
- Lawuyi OB. The Obatala factor in Yoruba history. History in Africa.1992;19: 369 - 375.
- Bascom WR. The sociological role of the Yoruba cult-group. Am Anthropol. 1944;46:62.
- Morton-Williams P. Yoruba Responses to the Fear of Death. Africa. 1960;30: 34–40.
- 20. Taye OR. Questionable but Unquestioned Beliefs:A Call for a Critical Examination of Yoruba Culture. Thought Pract. 2014;5: 81–101.
- 21. Mobolade T. The Concept of Abiku. African Arts. 1973;7: 62.
- 22. Ilechukwu STC. Ogbanje/abiku and cultural conceptualizations of psychopathology in Nigeria. Mental Health, Religion and Culture. 2007;10:239-255.
- United Nations Population Fund. https://www.unfpa.org/data/ world-population/NG?msclkid=75b8783fcf4b11eca6410a9d735e58 de [accessed 9 May 2022].

- 24. Ijezie Chukwuonye I, Samuel Ogah O, Ndukaife Anyabolu E, Arinze Ohagwu K, Collins Nwabuko O, Onwuchekwa U, et al. Prevalence of chronic kidney disease in Nigeria: Systematic review of populationbased studies. Int J Nephrol Renovasc Dis. 2018;11: 165–172.
- 25. Okafor UH. Kidney transplant in Nigeria: a single centre experience. Pan Afr Med J. 2016;25:112.
- Muller E, White S, Delmonico F. Regional perspective: Developing organ transplantation in Sub-Saharan Africa. Transplantation. 2014;97: 975–976.
- 27. Thomson D. Organ donation in South Africa a call to action. South African J Crit Care. 2017;33: 36–37.
- Brink JG, Cooper DKC. Heart transplantation: The contributions of Christiaan Barnard and the University of Cape Town/Groote Schuur Hospital. World J Surg. 2005;29: 953–961.
- Osafo C, Morton B, Ready A, Jewitt-Harris J, Adu D. Organ transplantation in Ghana. Transplantation. 2018;102: 539–541.
- Ahmed MM, Tedla FM, Leichtman AB, Punch JD. Organ Transplantation in Ethiopia. Transplantation. 2019;103: 449–451.
- Ogbonnaya GU, Ukegbu AU, Aguwa EN, Emma-Ukaegbu U. A study on workplace violence against health workers in a Nigerian tertiary hospital. Niger J Med. 2012;21: 174–179.
- Douglas KE, Enikanoselu OB. Workplace violence among nurses in general hospitals in Osun State, Nigeria. Niger J Med. 2020;28: 510–521.
- Shaw D, Elger B. Persuading families.pdf. Intensive Care Med. 2014;40: 96–98.
- Vincent A, Logan L. Consent for organ donation. Br J Anaesth. 2012;108: 108–187.
- Igbinovia P edobor. Ritual Murders in Nigeria. Int J Offender Ther Comp Criminol. 1988;32: 37–43.
- Aghawenu GN. A Socio-Ethical Appraisal of Ritual Killings in Nigeria. 2020;8: 119–124.

