

REVIEW ARTICLE

OPEN ACCESS

Ethical Considerations in the Use of Unclaimed Bodies for Anatomical Dissection: A Call for Action

Terkuma Chia 

Oluwatosin Imoleayo Oyeniran 

¹ Department of Anatomy, Faculty of Basic Medical Science, College of Health Sciences, Nile University of Nigeria, Abuja, Nigeria

² Department of Physiology, Basic Medical Science, College of Health Sciences, Nile University of Nigeria, Abuja, Nigeria

Introduction: The continued practice of anatomical dissection in medical training has placed great demands on body acquisition. This paper aims to provide an overview on the ethical considerations in the use of unclaimed bodies for anatomical dissection.

Materials and Methods: We explored major databases such as PubMed, MEDLINE, Ovid MEDLINE, Researchgate, Google Scholar, Web of Science, and Science Direct, from January 2004 to October 2019, using selected keywords to identify and extract articles relating and peculiar to the use of unclaimed bodies for Anatomical dissection.

Results: This review yielded 40 publications with 28 meeting our quality and inclusion requirements. This paper highlighted the use of unclaimed bodies for anatomical dissection as seen in some medical schools, and the various ethical considerations associated with its continuous use in medical training globally.

Conclusion: In conclusion, the continuous use of unclaimed bodies for anatomical dissection still carries strong ethical and legal uncertainties. It is therefore recommended that there is need to formulate an all-inclusive regulation to control the use of cadavers for anatomical dissection. If appropriate legislation and guidelines are not put in place with strict monitoring, we may soon return to the cadaver trafficking era to meet up with the demand.

Keywords: Anatomy, dissection, unclaimed bodies, ethics

Introduction

The importance of anatomical dissection in the training of healthcare professionals cannot be overemphasized (1, 2). It is well documented that because the emergence of anatomy, cadaveric dissection has thrived as a major means of teaching and learning anatomy (3-5). While the debate for and against its continued use is still ongoing, dissection is widely practiced alongside didactic lectures and other methods of learning anatomy (6-8).

The continued practice of dissection has placed great demands on body acquisition to meet up with the demand for anatomical dissection. In time past, the criminal supply of cadavers which involves the stealing of buried corpses and murder was accepted as a means of making up for cadaver scarcity (9). For instance, in Nigeria, a study conducted by (10) reported that only around 10% of medical schools in the country had sufficient cadavers for dissection. Without other means of sourcing for bodies, the use of

Corresponding: Terkuma Chia, MD; Department of Anatomy, Faculty of Basic Medical Science, College of Health Sciences, Nile University of Nigeria, Abuja, Nigeria

ORCID ID: 0000-0002-3257-459X

E-mail: terkumachia@hotmail.com

Received: Dec 23, 2019 **Accepted:** Jan 28, 2020

Published: Mar 17, 2020

This is an Open Access article distributed under the terms of Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, or reproduction in any area, original work is properly cited.

The Ulutas Medical Journal © 2020



unclaimed bodies has become unprecedented in many countries (6, 11). A three-year study by (12) at the University of Ibadan, Nigeria, revealed that all bodies used for dissection were unclaimed bodies. Of the figure, 78.6% were bodies of suspected felons who died during gunfire with law enforcement agencies while the remaining 21.4% were accident victims or some other form of unclaimed bodies (12). This situation is not very different in many parts of the world as reported by (8).

The use of unclaimed bodies remains an ethical burden (13). A study conducted by (14) noted that ethical consideration for cadavers falls under respect for human life, whether donated or unclaimed bodies. Authors have concurred that voluntary donation remains the most ethical method of body acquisition available (15, 16). Not until recently much attention was not directed at how cadavers were procured (17). A study carried out by (18) proposed that anatomists ought to lead the campaign against the use of unclaimed bodies as the practice contravenes ethical principles of beneficence and non-maleficence. Findings from this study (19) also supported the view that accepting unclaimed bodies in the first instance is simply acting to meet the demand at hand. Therefore, (16) advocates that good body donation practices should be adopted wherever possible. According to him, this will prevent the use of unclaimed bodies whose origin may even be suspicious. Already, in some places, there is a move towards eliminating the use of unclaimed bodies (9). Brazil is a case in point where the use of unclaimed bodies for studies is even supported by law (20).

However, the Department of Anatomy at the Federal University of Health Sciences of Porto Alegre, Brazil initiated body donation program

to enlighten their immediate community about voluntary body donation and the process thereto. A report by (21) stated that, since its inception, there has been a gradual increase of bodies resulting from willed donations. Details of bodies used for dissection at the department of anatomy showed that 50% were those of individuals who voluntarily donated themselves while alive, 46.4% were donated by family, and only 3.5% were unclaimed bodies (21). This sort of approach according to (18) is more about ethics than legality.

While we gravitate towards total elimination of the use of unclaimed bodies, in the interim, we can adopt palliative measures. These measures will standardize the use of human tissues for learning. The UK in this regard appointed Inspectors of Anatomy as far back as 1832 (22). Although their roles were recently overtaken by the Human Tissue Authority following a new law "the UK Human Tissue Act of 2004" (23). Similarly, In South Africa, Anatomy Inspectors liaise with institutions to ensure that bodies used for dissection are legally and ethically acquired and proper records kept. In doing this, they pay visits to departments of anatomy where they assess storage facilities (24).

Conclusion

The practice of cadaver dissection itself "still carries ethical and legal uncertainties" as stated by Winkelmann (25), and it is problematic to delineate (26). How much more the use of unclaimed bodies! Looking back at the criminal history of cadaver acquisition, coupled with ethical considerations, Jones and Whitaker (9) advocated for an active shift from the use of unclaimed bodies entirely. In creating acceptable means of voluntary body donation, sociocultural and religious considerations must be made (27). A study carried out by (28)

proposed that an all-inclusive regulation be made to regulate the use of cadavers for dissection as a whole. If appropriate legislation and guidelines are not put in place with strict monitoring, we may soon return to the cadaver trafficking era to meet up with the demand.

Conflict of Interests

The authors have declared no conflict of interest for the present article.

References

- Holland JP, Waugh L, Horgan A, Paleri V, Deehan DJ. Cadaveric hands-on training for surgical specialties: is this back to the future for surgical skills development? *J Surg Educ* 2011; 68(2):110-6
- Moxham BJ, Plaisant O. The History of the Teaching of Gross Anatomy-How we got to where we are. *Eur J Anat* 2014;18(3): 219-44
- Rath G, Garg K. Inception of cadaver dissection and its relevance in present day scenario of medical education. *J Indian Med Assoc* 2006;104(6):331-3
- Memon I. Cadaver Dissection Is Obsolete in Medical Training! A Misinterpreted Notion. *Med Princ Pract* 2018;27(3):201-10
- Afsharpour S, Gonsalves A, Hosek R, Partin E. Analysis of immediate student outcomes following a change in gross anatomy laboratory teaching methodology. *J Chiropr Educ* 2018;32(2):98-106
- Biasutto SN, Sharma N, Weiglein AH, Benia FM, McBride J, Bueno-Lopez JL, Kramer B, Blyth P, Barros MD, Ashiru O, Ballesteros LE, Moxham BJ, Krishnan S. Human bodies to teach anatomy: Importance and procurement- Experience with cadaver donation. *Rev Arg de Anat Clin* 2014;6(1):72-86
- Ghazanfar H, Rashid S, Hussain A, Ghazanfar M., Ghazanfar A, Javaid A. Cadaveric dissection a thing of the past? The insight of consultants, fellows, and residents. *Cureus* 2018;10(4):1-9
- Habicht JL, Kiessling C, Winkelmann A. Bodies for anatomy education in medical schools: an overview of the sources of cadavers worldwide. *Acad Med*. 2018;93(9): 1293-300
- Jones DG, Whitaker MI. Anatomy's use of unclaimed bodies: reasons against continued dependence on an ethically dubious practice. *Clin Anat* 2012;25:246-54
- Anyanwu GE, Udemezue OO, Obikili EN. Dark Age of sourcing cadavers in developing counties: a Nigerian survey. *Clin Anat* 2011;24(7):831-6
- Gangata H, Ntaba P, Akol P, Louw G. The reliance on unclaimed cadavers for anatomical teaching by medical schools in Africa. *Anat Sci Edu* 2010;3(4):174-83
- Osuagwu FC, Imosemi IO, Oladejo OW. Sources of cadaver used for dissection at the Ibadan medical school, Nigeria- Analysis of a three-year data. *Afr J Biomed Res*. 2004;7(2):93-5
- Sawart SP, Rizvi S. Moral and ethical values of cadaver procurement for dissection. *Sch J App Med Sci* 2015;3(2G): 1043-5
- Sheikh ST. Cadaver dissection in anatomy: the ethical aspect. *Anat Physiol* 2015;5(007):2161-0940
- Jones DG. The anatomy museum and mental illness: The centrality of informed consent. *Exhibiting Madness in Museums: Remembering Psychiatry through Collection and Display*. New York: Routledge. 2011:161-77
- Riederer BM. Body donation today and tomorrow: what is the best practice and why? *Clin Anat* 2016;29(1):11-8
- Jones GD. Human anatomy: a review of the science, ethics and culture of a discipline in transition. In *Human Anatomy- Reviews and Medical Advances*. 2017 Nov 21. IntechOpen
- Jones DG. Searching for good practice recommendations on body donation across diverse cultures. *Clin Anat* 2016;29 (1): 55-9
- Varghese SP. Cadavers for anatomical dissection. *Indian J Med Ethics* 2005;2(1):16-7
- Brazil. 1992. Law for the Use of unclaimed corpse for the purpose of studies or scientific research. Law No. 8,501, Nov 30. Available from: http://www.planalto.gov.br/ccivil_03/leis/l8501.htm
- da Rocha AO, Tormes DA, Lehmann N, Schwab RS, Canto RT. The body donation program at the Federal University of Health Sciences of Porto Alegre: A successful experience in Brazil. *Anat Sci Educ* 2013;6(3):199-204
- Anatomy Act, 1832. An Act for regulating Schools of Anatomy. Irish Statute Book. Government of Ireland. Available from: <http://www.irishstatutebook.ie/eli/1832/act/75/enacted/en/print>
- Human Tissue Authority (HTA). HTA Codes of Practice and Standards. London: HTA. Available from: <https://www.hta.gov.uk/hta-codes-practice-and-standards-0>
- Pillay P, McQuoid-Mason DJ, Satyapal K. A study of the role and functions of inspectors of anatomy in South Africa. *S Afr J Bioethics Law* 2017;10(2):86-92
- Winkelmann A. Consent and consensus-ethical perspectives on obtaining bodies for anatomical dissection. *Clin Anat* 2016;29(1):70-7
- Champney TH. A proposal for a policy on the ethical care and use of cadavers and their tissues. *Anat Sci Educ* 2011;4(1):49-52
- Paul AD, Gaikwad MR, Avadhani RA. A crevice look to the indoors of body donation. *Int J Health Sci Res* 2017;7(6):322-30
- Khan MA, Anjum MI, Kazi AS. Recent ethical and technical issues of cadaveric Human bodies and tissues for educational

purposes in Pakistan: initiation of a discussion for making a policy. ISRA Medical Journal 2012;4(2):100-5

Contact Details

Terkuma Chia; Anatomy, Faculty of Basic Medical Science, College of Health Sciences, Nile University of Nigeria, Abuja, Nigeria; E-mail: terkumachia@hotmail.com; ORCID: 0000-0002-3257-459X

Oluwatosin Imoleayo Oyeniran; Physiology, Basic Medical Science, College of Health Sciences, Nile University of Nigeria, Abuja, Nigeria; Email: tosinoye niran1@gmail.com; ORCID: 0000-0001-6720-8453

How to cite?

Chia T, Oyeniran OI. Ethical Considerations in the Use of Unclaimed Bodies for Anatomical Dissection: A Call for Action. Ulutas Med J. 2020;6(1):5-8

DOI: 10.5455/umj.20201229101758