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Physicians' knowledge, attitude and practices towards autopsy in a Nigerian tertiary hospital

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Abstract

The post-mortem examination is a hospital service necessary to diagnose the cause and circumstances surrounding patients' death. This study assessed the knowledge, attitude and practices of physicians towards autopsy. Descriptive cross-sectional study of physicians that completed a semi-structured questionnaire assessing their knowledge, attitude and practices towards autopsy. Data collected were analysed. A total of 206 physicians participated. Most were young (69.4%), resident doctors (81.6%), in surgical specialties (52.9%) and Christians (72.8%). Majority had good knowledge (91.7%), positive attitude (81.1%) and positive practices (81.6%) of autopsy. Significant variables associated with good autopsy practices include age 35 years and above (OR = 3.23, 95% CI = 1.56-6.67, $p = 0.002$), Christianity (OR = 4.69, 95% CI = 2.24 – 9.84, $p < 0.001$) and positive attitude (OR = 21.15, 95% CI = 8.91 – 50.25, $p < 0.001$). Some physicians had poor knowledge, negative attitude and poor practices to autopsy. These physicians should be targeted in trainings on autopsy practices.

Keywords: attitude; autopsy services; knowledge; physicians; practices

Introduction

The autopsy or post-mortem examination is the gold standard of unravelling the mysteries about patients' health when fatalities occur⁽¹⁻³⁾. It involves the systemic dissection of the patient's corpse after death exclusively for medical and medico-legal reasons^(4,5). The autopsy is done to establish the cause of death, detecting lesions that were not obvious on clinical examination and investigations, ascertaining the exact progression of the disease, proper staging of diseases such as malignancies, clarifying diagnostic controversies especially when reports of investigations vary and seem to contradict one another and confuse or confound the managing team^(6,7). Autopsies also help to resolve relatives' doubts about the management of their deceased loved ones^(8,9). Though the benefits of the autopsy seem interminable, there has been reduction in the rates of autopsy request by clinicians worldwide in the last three decade particularly⁽⁹⁻¹¹⁾. Reasons adduced for the decline include the over-reliance of clinicians on the over-hyped versatility of the investigative capacity of the modern sophisticated medical equipment such as computerised axial tomography scanning and medical resonance imaging equipment, the certainty of diagnoses by medical experts, non-assent by relations, religious prejudices and poor communication between the clinicians and the pathologist⁽¹²⁻¹⁴⁾. There is also the subtle fear of medical litigations arising from autopsy revelations of misdiagnoses, missed diagnoses, clinical negligence and medical malpractice^(15,16). The assumed judicial role by the self-righteous pathologist with inflated academic pride to criticise and condemn the clinicians has also caused irritable withdrawal by clinicians demonstrated by failure to request for post-mortem examinations even in coroner's cases^(16,17). The poor attitude of some pathologists to conduct autopsies with due diligence and generate a post-mortem correspondence to address the reservations of the clinicians has also led to the lack of interest in the autopsy by the clinicians^(17,18). The failure of clinicians to request for clinical autopsies has resulted in sharp reductions in the conduct of autopsies by pathologists in many jurisdictions with resultant poor knowledge of the role of post-mortem examination in the care of patients among healthcare providers, undergraduates, physicians in training, postgraduate students of the health professions, young medical specialists and of course has emboldened the ignorance of the lay public^(18,19). The result of the reduction in refusing to request, assessing and conducting post-mortem examination is an evidence of the failure of clinical systems pathology⁽¹⁹⁾. Clinical systems pathology enables the rational design and testing of effective personalised predictive medical intervention and preventive measures for optimum patient centered care⁽²⁰⁾.

This study assessed the knowledge, attitude and practices of physicians working at the Obafemi Awolowo University Teaching Hospital Complex, Ile-Ife, Nigeria to autopsy.

Materials and Methods

Study location:

This is a descriptive cross-sectional study of physicians working at the Obafemi Awolowo University Teaching Hospital Complex, Ile-Ife, Nigeria. The hospital has several medical, surgical, laboratory departments including the Department of Morbid Anatomy and Forensic Medicine with full complements for histopathology, toxicology and forensic autopsy including embalment services. The hospital serves as a referral centre for Osun State and other States in the South western part of Nigeria and beyond.

Study design:

The study population include physicians working at the Obafemi Awolowo University Teaching Hospital Complex, Ile-Ife, Nigeria.

Inclusion criteria:

Inclusion criteria were all physicians working at the various clinical departments including the emergency, clinics and wards.

Exclusion criteria:

Exclusion criteria were physicians who did not consent to participate or who were not on duty during the study period.

Sample size calculation:

The sample size of 100 was calculated using an appropriate statistical formula for descriptive health studies [$n = Z^2 pq/d^2$] with 12.5% physicians previously consented to autopsy and non-responders were taken into consideration^(7,21).

Ethical considerations:

Eligible physicians after an informed consent completed a self-administered pretested semi-structured questionnaire that assessed autopsy knowledge, attitude and practices. The physicians were allowed to complete the questionnaire in their spare time at their convenience. Questionnaire information were anonymised.

The ethical approval was obtained from the Ethics and Research Committee of the Obafemi Awolowo University Teaching Hospital Complex, Ile-Ife, Nigeria.

Statistical analysis:

Data obtained were analysed using SPSS version 16. Simple descriptive and inferential statistics were done. Test of significance was conducted using appropriate statistical methods. Bivariate regression analysis was performed to evaluate socio-demographic variables and other variables that are independently associated with good autopsy practices. Odd ratio (OR) and 95% confidence interval (CI) were presented and used as measures of the strength of association. Significant level was put at $p < 0.05$.

Results

Out of 300 physicians approached to participate in the study, 16 declined, 37 did not return their questionnaire while 41 questionnaires were not included in analysis because of non-completeness. A total of 206 questionnaires with completed data were analysed (response rate 68.7%). The mean age of the study participants was 31.8 years, range 25 – 49 years. Most were young (69.4%), resident doctors (81.6%), in surgical (52.9%) and medical (47.1%) specialties. Most (54.9%) were married and Yoruba (81.1%). There were 150 (72.8%) Christians and 56 (27.2%) Muslims (*Table 1*).

Table 1 Socio-demographic characteristics of physicians.

Variable	Frequency (n = 206)	%
Age group (years)		
25 – 34	143	69.4
≥ 35	63	30.6
Gender		
Male	183	88.8
Female	23	11.2
Specialty		
Medical	97	47.1
Surgical	109	52.9
Job title		
Consultant	2	1.0
Senior registrar	85	41.3
Registrar	83	40.3
House officer	36	17.4
Marital status		
Single	93	45.1
Married	113	54.9
Religion		
Christianity	150	72.8
Islam	56	27.2
Ethnicity		
Yoruba	167	81.1
Igbo	35	17.0
Hausa	4	1.9

Table 2 reported the knowledge, attitude and practices towards autopsy. Majority had good knowledge (91.7%), positive attitude (81.1%) and good practices (81.6%). All the participants correctly defined autopsy with specific uses identified as medicolegal (87.9%), cause of death (82.5%) and deaths excepted from autopsy including those occurring in suspected haemorrhagic viral diseases (81.6%) and HIV/HBV (80.1%). Majority were willing to consent for autopsy for self (82.0%) and relative (71.8%). Also, majority believed that doctors should observe autopsy (66.0%) and were willing to counsel family to allow autopsy (64.1%). Majority have ever requested for autopsy in line of practice (81.5%), with challenges faced in autopsy request including delay in obtaining family consent (57.2%), or refusal of family in allowing autopsy due to religious practices (23.0%) and cultural belief (19.8%). Suggested solutions to these challenges include Increasing community awareness about autopsy (90.8%) and waived procedural fees when payment is a problem (58.3%).

Table 2 Autopsy knowledge, attitude and practices.

Variable	Frequency (n = 206)	%
Composite score of autopsy knowledge, attitude and practices		
● Knowledge		
Good	189	91.7
Poor	17	8.3
● Attitude		
Positive	167	81.1
Negative	39	18.9
● Practices		
Good	168	81.6
Poor	38	18.4
1. Knowledge		
Anatomic procedure on the dead (correct)	206	100
1.1. Uses of autopsy		
Medico-legal	181	87.9
Ascertain cause of death	170	82.5
Improve medical diagnosis and practice	133	64.6
Research purpose	122	59.2

Table 2 (Continued) Autopsy knowledge, attitude and practices.

Variable	Frequency (n = 206)	%
1. Knowledge (Continued)		
1.2. Deaths that are excepted from autopsy		
Deaths from suspected haemorrhagic viral diseases	168	81.6
Deaths from HIV/HBV	165	80.1
1.3. Source of information		
Medical book	150	72.8
Lectures/seminars	56	27.2
2. Attitude		
Approved autopsy	180	87.4
Willing to consent for autopsy for relative	148	71.8
Willing to counsel for autopsy for relative	138	67.0
Willing to consent for autopsy for self	169	82.0
All doctors should observe autopsy	136	66.0
Willing to counsel family to allow autopsy	132	64.1
3. Practice		
Ever request for autopsy in line of practice (yes)	168	81.5
3.1. Situations autopsies were performed without permission (n = 168)		
Medico-legal cases	121	72.0
Sudden death	37	22.0
Research purpose	10	6.0
Faced challenges in autopsy request (yes)	152	90.5
3.2. Challenges faced in autopsy request (n = 152)		
Delay in obtaining family consent but autopsy eventually done	87	57.2
Family refusal of autopsy request due to religious belief/practices	35	23.0
Family refusal of autopsy request due to cultural belief	30	19.8

Table 2 (Continued) Autopsy knowledge, attitude and practices.

Variable	Frequency (n = 206)	%
3. Practice (Continued)		
Ever request for autopsy in line of practice (yes)	168	81.5
3.3. Suggested solutions to challenge (n = 152)		
Increase community awareness about autopsy	138	90.8
Waived procedural fees when payment is a problem	89	58.3
Ensure autopsy are done on time	78	51.2
Autopsy should be reported and explained to relative on time	54	35.5
Ever witness autopsy	12	5.8
Ever counselled patient's family on need for autopsy	50	24.3
3.4. Reason for counselling patient's family (n = 50)		
Cause of death not known	25	50.0
Sudden death	22	44.0
Departmental request	3	6.0
3.5. Outcome of counselling (n = 50)		
Positive	13	26
Negative	37	74

Table 3 reported the bivariate analysis of selected variables and autopsy practices among physicians. Significant variables associated with good autopsy practices include age 35 years and above (OR = 3.23, 95% CI = 1.56 – 6.67, $p = 0.002$), Christianity (OR = 4.69, 95% CI = 2.24 – 9.84, $p < 0.001$) and positive attitude (OR = 21.15, 95% CI = 8.91 – 50.25, $p < 0.001$).

Discussions

This study assessed the autopsy knowledge, attitude and practices of physicians working in a teaching hospital. This study finding reported that physicians have good knowledge, positive attitude and good practices towards autopsy. This finding differs from recent studies that reported that autopsy is no longer routinely requested by physicians for several reasons which included fears of litigations from family and other aggrieved parties⁽⁷⁻¹¹⁾. However, this study found that autopsy is rather requested for to avoid litigations, ascertain the definitive cause of death and improve medical diagnosis and practice.

Table 3 Bivariate analysis of selected variables and autopsy practices among the study population.

Variable	Odd ratio (OR)	95% Confidence interval (CI)	p-value
Age group (years)			
25 – 34	1	1.56 – 6.67	0.002
≥ 35	3.23		
Marital status			
Single	1	0.84 – 3.65	0.137
Married	1.75		
Religion			
Islam	1	2.24 – 9.84	< 0.001
Christianity	4.69		
Attitude			
Negative	1	8.91 – 50.25	< 0.001
Positive	21.15		

This study reported that deaths from suspected epidemic prone diseases such as haemorrhagic viral diseases are exempted from autopsy follow international practice to reduce the spread of such diseases to these healthcare workers and their close contacts including other patients and family members⁽²²⁻²⁴⁾.

Also, the study reported that physicians were willing to consent to autopsy for self and relatives. They counsel relatives of dead patients to consent to autopsy so as to improve medical practice. This finding is in contrast with some studies that reported that health workers were averse to autopsy due to litigation fears⁽²³⁻²⁸⁾. This could be because most deaths in some environment are usually taken to be either Gods wish which cannot be changed or has a diabolical cause or due to the witches and wizards hence the risk of litigation is very low⁽²⁵⁻²⁷⁾. However, this spiritual believes and practices of burying the dead immediately by the Islamic faith could be responsible for some physician using religious believe as the basis for not requesting for autopsy or the relatives refusing autopsy^(7,13,25).

Also, majority of the physicians believed that doctors should observe autopsy and were willing to counsel family to allow autopsy. A previous study among physicians in Ibadan reported that only 12.5% were willing to observe autopsy which is quite low when compared to our study finding⁽⁷⁾. This suggests remarkable positive attitude to autopsy improve with provision of more awareness creation activity.

The suggested solutions to challenges face in allowing autopsy include waived procedural fees when payment is a problem. This is related to high poverty level in the study

area where majority earned below the poverty level. Increasing awareness with partial or total reduction in procedural fees could increase acceptance of autopsy by the family members. Also, prompt reporting and giving feedback to family members could increase autopsy uptake by family members.

The factors associated with good autopsy practices include older age, religious belief and having positive attitude to autopsy. The older physicians were more experienced hence were more likely to request and encourage autopsy than younger doctors. Also, the doctors with the Islamic faith when compared to those with Christianity faith tend to resist autopsy because of their religious believes. Previous studies have reported religious objection to be a major hindrance to autopsy^(7-9,13).

This study being questionnaire based cross-sectional obtain information whose content may differ from actual behaviour of our respondents. It will be difficult to generalise the study findings as the study was conducted in a site in southwest Nigeria.

Conclusions

Generally, physicians demonstrate good knowledge, positive attitude and good practices towards autopsy. However, some physicians had poor knowledge, negative attitude and poor practices to autopsy. These physicians should be targeted in trainings on autopsy practices. Hospital should have postmortem management committees to train young physicians on counselling skills and counsel relatives of dead patients. Refresher courses on autopsy targeting the consultants will improve training of residents on counselling for the postmortem. The government should also put policies in place that enforces the postmortem examinations especially when the cause of death is unknown especially for coroners' autopsies. Government may also give waivers or subsidise autopsy fess in order to make more people to consent to the procedure.

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