

The Causes Of Shortage Of Cadavers In Medical Schools Across Nigeria

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Abstract

The study was designed to find out the causes of shortage of cadavers in medical schools across Nigeria. It is a descriptive study, and a total of 150 semi-structured, self-administered questionnaires were distributed to lecturers, laboratory technologists and students during the 3rd annual scientific conference of Anatomical Society of Nigeria held in Ilorin. All the respondents agreed that there are shortages of cadavers in our various medical schools across the country as evidenced by the student ratio per cadavers. We conclude from the study that the varying degree of shortage of cadavers in the medical schools needs to be urgently addressed.

Keywords: Cadavers, Shortages, medical Schools, Nigeria

Introduction

Cadavers are dead human bodies that may be used by physicians and other scientist to study anatomy, identify disease sites, determine cause(s) of death and provide tissue(s) to repair a defect in living humans¹.

The collection of these cadavers has come a long way because most societies initially outlawed the utilizations of the remains of dead for any purpose except that of Internment and as such, justifications and the use of cadavers are set by the society²⁻³

Before 1832, when British parliament made legal provisions for medical schools to receive unclaimed and donated bodies for anatomical studies, practical research and instruction in human anatomy has depended on judicial executions as the sole legitimate source of corpses⁴

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The legal provisions of cadavers was always insufficient to meet the demands of medical science, hence, prossected specimens are used but learning is most efficient and retention is highest of when didactic study is combined with the experience of dissection. Dissection of cadavers is only a means to the end of a fuller understanding of function, hence the most effective means of studying human internal organs is through the dissection of cadavers^{5,6,7}.

Sources of cadavers to medical schools in the present day are similar to those of the past but for activities of grave robbers. In addition to the sources in the past such as: unclaimed bodies, road accident victims, short armed robbers, legal executions, etc. there are now voluntary donors who bequeath their corpse to medical schools, these are not common in Nigeria because of religious and socio-cultural beliefs, as well as low level of education³.

Materials and Method

The study was descriptive cross sectional survey conducted at the University of Ilorin during the 3rd Annual Scientific Conference of the Anatomical Society of Nigeria in October 2005 attended by lecturers, laboratory technologists and students of Medicine, Anatomy and Physiology across the country.

A total of 150 structured questionnaires were distributed to the participants at the conference. The questions were self administered and respondents were given ample time to respond. The researchers were always around for any clarification wherever necessary. Most of the responses were received on the spot while few others were collected later.

The questionnaires were used to collect data on the respondent's demographic data,. Ratio of cadavers to student populations. Source(s) of cadavers in their various schools, possible causes(s) of shortages and possible solutions to the problem.

The data collected was analyzed using Analysis of variance (ANOVA).

Results

One hundred and fifty respondents answered the questionnaire from fourteen (14) medical schools in Nigeria, (Table) 117 (78%) were males and 33 (22%) were females. Majority of the respondents are students 107 (71.3%), 37 (24.7%) lecturers, 6 (4%) are laboratory technologists. (Table I and II)

All the respondents agreed that there are shortages of cadavers in our various medical schools across the country as evidenced by the student ratio per cadavers 39 (26%) claimed that students ratio per cadavers is 1:20, 58 (38.7%) reported that 1:40 while about 22 (14.7%) claimed that the ratio is 1:60 and the remaining 31 (20.7%) reported that the ratio is between 61 and above per cadaver. (Table-III).

About 68 (45.3%) of the respondent recommend the ratio to be 1:2 while 67 (44.7%)

suggested 6 to 10 per cadaver, 6 (4.0%) recommend between 1:11 to 1:15 and 9 (6.0%) are undecided as to the ratio. see (Table - IV).

99 (66%) reported that unclaimed corpses and short armed robbers are the sources of cadavers to their medical schools, road traffic accident account for about 24% while volunteer donors and prisoners account for 10% (see table - V).

Of all the respondents, 37 (24.4%) believes that increased student population account for the shortages of cadavers, 26 (17.7%) says inadequate funds to source for the bodies, 17 (11.2%) hold religious and cultural beliefs responsible, 21 (14.4%) are of the view that absence of good and able bodies caused the shortages and 31 (20.7%) says it is due to increased numbers of medical schools while 17 (11.6%) held communication gap between various mortuaries and anatomy department responsible for the shortages. (Table- vi)

Table I: Frequency distribution of respondent by sex

Sex	Frequency	Percentage
Male	117	78
Female	33	22
Total	150	100

Table II: Frequency distribution of respondent by profession

Occupation	Frequency	Percentage
Students	107	71.3
Lecturers	37	24.7
Laboratory technologist	6	4.0
Total	150	100

Table III: Ratio of students to cadaver in various Medical schools

Cadaver: Students	Frequency	Percentage
1:20	39	26.0
1:40	58	38.7
1:60	22	14.7
1:>61	31	20.6
Total	150	100

Table IV: Recommended ratio of students to cadaver by respondents

Recommended	Frequency	Percentage
1:2	68	45.3
1:6-10	67	44.7
1:11-5	6	4.0
undecided	9	6.0
Total	150	100

Table V: Sources of cadavers to various medical schools.

Source	Frequency	Percentage
Unclaimed corpses	60	40
Shot armed robbers	39	26
Traffic accident victims	36	24
Volunteer donors	6	4
Dead prisoners	9	6
Total	150	100

Table VI: Causes of cadavers shortage in various medical schools.

Causes of shortage	Frequency	Percentage
Increase students population	37	24.4
Inadequate funds	26	17.7
Religious and cultural beliefs	17	11.2
Availability of good bodies	21	14.4
Increase in number of medical schools	31	20.7
Lack of communication	19	11.6
Total	150	100

Discussion

Results from this present study show that there is varying degree of shortage of cadavers to medical schools across Nigeria as evidenced by student ratio population to one cadaver. This finding is consistent with earlier report from China, where about 12 to 15 students use a body against the International Standard that recommend 4 students to one body⁸. The National Universities Commission recommends an average of eight (8) students per body in Nigeria⁹. The pressure to produce more doctors in the country keeps mounting every year and so the students' population has continued to rise while provisions of facilities including cadavers supply are limited.

Inadequate funding to source for bodies and preserve them is another cause of cadavers' shortages in our various medical schools. Today, we neither have a fully equipped anatomy museum with prosected specimens nor do we have a developed method of preserving specimens in medical schools.

Religions and cultural beliefs are contributing factors to the shortage of cadavers in medical schools. Most societies outlawed the utilization of the remains of the dead for any purpose other than for internment. In the United Kingdom for example, the anatomy act of 1984 was one of the conditions that would guide the utilization of human remains for dissection³. This act is highly regulated with a government

appointed inspector who visit anatomy departments regularly. Despite aid provided by this legislation in act of dissection, a lot of grey areas still need to be ironed out and countries in developing world like Nigeria seems to be lagging behind their Caucasian counterparts in enacting their own enabling regulations.

Absence of good and dissectible bodies' couple with increased number of medical schools in Nigeria had not helped matters. In most cases, cadavers used are from unclaimed victims of road traffic accident whose part(s) are often mutilated resulting in organ distortion and in some cases complete absence of body parts. The number of medical schools in the country has also double from less than 10 in the 80's to about 30 currently especially with the addition from states and private Universities.

The communication gap between donor hospitals and medical schools has significantly affected the availability of cadavers to medical schools. This lack of mutual understanding between the two authorities have often led to shortage of cadavers in the medical schools and in most cases, the mortuary attendant seems not to appreciate the need to inform the medical schools earlier before decomposition of the bodies set in.

Since human anatomy is the science concerned with the structure in the human body. Those structures can't be fully understood from written descriptions, to dimensional pictures or

plastic models. The dissection of human body cadavers has served as the basis for understanding the structure and function of the human body for many centuries¹⁰. In other words, to fully understand the Internal Structure of the human body, the importance of cadavers to man is far beyond what we should ever look.

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