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Governmental agencies, as this would prevent psychological effects on the upbringing of children by making them to be fearless and have no regard for humans.

CONCLUSION

This study showed that home embalming is still common in our environment owing to its cheapness. Thus, government needs to venture into regulation, certification, training and legislature pertaining to the practice of home embalming.

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DISCUSSION

Embalming is a process of preserving the dead body pending conduct of funeral rites or accommodating its use for anatomical dissection by medical students.^{3,4,6,8} The practice of embalming differs from culture to culture with modern embalming methods using chemicals such as formaldehyde, acetone, and glycerine being widely practised globally.^{3,4,6,8} In our study, most respondents had heard about embalming (77.7%) and home embalming (75.0%) with majority being involved as depositors (41.9%). This finding is supported by the fact that most of the respondents were literate and young adult males who are usually not frightened to talk about death and embalming or consider the touching of corpses as a taboo. Other studies in Nigeria and beyond had demonstrated an increase in awareness of the practice of embalming with most respondents being either depositors or embalmers.¹⁻⁶ On the other hand, a study in Ilorin, North Central Nigeria adduced low level of competency in embalming techniques by the Nigerian laboratory technologists and mortuary attendants to poor attendance at conferences and workshops on modern embalming techniques.²

Widespread acceptability of embalming of corpses could be traced to Egypt as far as 3200 B.C when Jacob and Joseph's remains were embalmed before burial, although the nature of embalming materials were not mentioned.^{5,9} The likely reason for embalming during the aforementioned era may be due to the cheapness of the embalming methods including use of extreme cold or dry heat as forms of natural preservatives to prevent decomposition of dead bodies.^{5,9} Other reasons ascribed to the popularity of embalming in Africa include providing enough time for burial rites, means of giving last respect to the dead, allowing transportation of the dead to their ancestral home, and prevention of spread of infection both before and after burial.^{1,6}

Embalming services also help in medico-legal activities, provide financial justification, create an opportunity for loved ones to see the deceased before burial, source of cadavers for anatomical dissections in medical schools by medical students and their allied health discipline and preservation of unclaimed bodies.^{1,2,5,10} From the foregoing, it is pertinent to mention that the practice of embalming is influenced by culture, religion, socio-economic status, geographic location and climate changes. Also documented is

the role of education/enlightenment associated with industrialization and socialization among the people in positively influencing the practice of embalming.⁵

Health workers were the leading embalmers (59.7%) with living residential home of deceased being the most commonly used for this practice (53.5%) on account of cheapness (73.6%). This finding concurs with other studies.²⁻⁵ It is obvious that most studies reported cheapness as the principal reason for being involved in home or traditional embalming methods. In Africa, some cultural attitudes are known to affect the practice of embalming.^{5,6} These include delayed burial of dead persons to allow sacrifice to be offered and appeased to the gods, inability to conduct funeral rites during certain festivals and the need to transport corpses of married women to their ancestral homes for funeral rites. Other causes of delayed burial necessitating embalmment in our environment include a need to investigate medicolegal deaths such as accidents, suicide, drowning or manslaughter, and homicide.

Nsit Ibom Area of Uyo city is a settlement for low, middle income earners mainly who probably preferred home embalming for dead bodies of their beloved relations, many of whom are elderly (72.7%). Popularity of home embalming in our environment (70.1%) is further corroborated by the fact that most embalmers live in the same communities with the depositors, thus gaining the trust of the depositors and permitting the relations of the deceased to pay for embalming fees in piecemeal as well as visiting the embalmed corpses at convenience.

Most respondents (72.8%) agreed that government has a role to play in the practice of home embalming either in regulation (31.5%), training (19.6%) legislature (19.0%) or certification (13.0%). This concurs with findings from other studies in Nigeria.^{2,4} Although home embalming may be cheap but the health related risks are geometrically higher. These include mucosal irritation of the upper respiratory tract, skin irritation, eczema, allergic dermatitis or hives, reddening and burning sensations, cancers of the lung, nasopharynx, oropharynx and nasal passages.^{2,4,7,8} In addition, transmission of infectious diseases such as HIV, hepatitis B and C, and tuberculosis are common with this practice.⁵

It is our belief that the practice of home embalming would be stopped by all stakeholders including depositors, embalmers, and

Perception and Practice of Home Embalming by Residents in Uyo City of Niger - Delta Region of Nigeria

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ABSTRACT

Death is inevitable. Home embalming is still common in our communities. An assessment of perception and practice of home embalming among residents of Nsit Ibom Area of Uyo city of Akwa Ibom State was conducted at the Department of Histopathology in University of Uyo Teaching Hospital. The objective of this study is to assess the perception of residents of Nsit Ibom Area of Uyo city on home embalmment and document the reasons for this practice. A descriptive, cross-sectional study among residents older than 15 years in Nsit Ibom area of Uyo city was carried out. Two hundred (200) participants selected by stratified sampling method were administered with semi-structured self-filled questionnaires. Variables included socio-demographic characteristics, education level, perceptions and practice of home embalming. Data analysis was done using a statistical package, SPSS version 13. A total of 184 (92.0%) respondents were included in the study. The respondents were males in 54.3%, many of who were in the 26-35 years age group (45.7%). Overall literacy rate of 95.7% was recorded. Approximately seventy eight percent (77.7%) of the respondents had heard about embalmment while 129 respondents had been involved in home embalming as depositors (41.9%), spectators (29.5%), mourners (20.2%) and embalmers (8.5%). Health workers were the leading embalmers (59.7%). Living residential home of deceased was most commonly used (53.5%). The commonest reason for home embalming was for cheapness (73.6%). Most respondents (72.8%) agreed that government has a role to play in the practice of home embalming either in regulation (31.5%), training (19.6%) legislature (19.0%) or certification (13.0%). This study showed that home embalming is still common in our environment owing to its cheapness. Thus, government needs to venture into regulation, certification, training and legislature pertaining to the practice of home embalming.

Keywords: Perception, Practice, Home Embalming, Uyo City, Niger - Delta Region, Nigeria

INTRODUCTION

Death is inevitable. Embalming is a procedure performed on dead bodies (corpses) awaiting funeral rites or intended for use during anatomical dissection.¹⁻⁶ This involves the use of both traditional and modern methods of embalming to prevent decomposition and likelihood of risks of infection.^{1,4-8} The embalming methods that are commonly practised in different communities vary; these are determined by certain socio-economic variables including income, education, occupation, and health.¹⁻⁶ The history of embalming could be traced to Egypt as far as 3200 B.C. which was characterized by embalming of Jacob and Joseph's remains before burial.^{5,9} In the past, numerous materials including

oil of cedar, sodium salt solution, honey and wax, alcohol concentrate (dry gin), potash, herbal leaf (*Ocimum gratissimum*), kernel oil, spices, aloes, and fire roasting had been used in the traditional embalming method.^{1,5,6} However, with increasing knowledge of science and fruitful outcome of many researches, the use of traditional embalming method has faded out, thus leading to emerging modern embalming methods involving the use of chemicals such as formaldehyde, acetone, glycerine and glutaldehyde.^{7,8} Of all these chemicals, formaldehyde is widely accepted and most popular among embalmers, and anatomical demonstrators.^{7,8}

Despite the popularity of modern embalming methods commonly used in public and private mortuaries, it is surprising that home embalming is still common in our communities.

Home embalming is a process by which corpses are preserved in residential apartments using either artificial organic chemicals or natural materials. The practice of home embalming is associated with risk of infections and lung carcinoma as well as psychological effects on the

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upbringing of children in the neighbourhood^{2,7,8}, thus there is need to stem the practice by regulation, certification, and training.

Literature on this subject was relatively scare in our country and hence the need for this study. This study was aimed at assessing the perception of residents of Nsit Ibom Area of Uyo city on home embalming and documents the reasons for this practice.

MATERIALS AND METHODS

Setting and Participants

This community based descriptive, cross sectional, and prospective study was conducted among residents of Nsit Ibom area of Uyo city of Akwa Ibom State, located in the South South region of Nigeria. This study was carried out by staff of the Departments of Histopathology and Family Medicine in the University of Uyo Teaching Hospital. Stratified sampling technique was used to recruit consented residents of Nsit Ibom area of Uyo city of Akwa Ibom State. Akwa Ibom State is one of the 36 states in Nigeria, and is located in the South-South geo-political region. It has a population of 3.91 million people (Census 2006) spread across 31 local government areas. Its capital is Uyo city and its ethnic groups are Ibibio, Annang, Oron, Eket, Ibeno and Mbo.

A total of 200 participants were approached; these were stratified into four (4) groups according to their streets, each group consisting of 50 participants. This sample size was chosen because the population of Nsit Ibom area of Uyo city is relatively homogenous in terms of ethnicity, religion and socioeconomic factors. The principal inclusion criteria for the study population was consenting residents who were older than 15 years while the exclusion criteria comprised those who declined to participate willingly or health ground or younger than 15 years old.

Ethics

The researchers visited the Nsit Ibom area of Uyo city prior to starting the study so that background information could be provided and to help resolve any query. Participation in the study was voluntary and without any form of compensation. Informed consent was obtained from all participants.

Questionnaire

The Data was collected through a self administered questionnaire. The questionnaire was intended to analyze information in three categories which included, assessing the individual perception, reasons for the practice of home embalming and role of government on home embalming. Demographic information such as age, gender, religion, ethnicity, marital status, occupation and educational status were also included. The questionnaires were administered to the residents of Nsit Ibom area of Uyo city with no prior information or announcements in order to minimize response bias. Questionnaires were distributed over a period of 1 month in 2014.

Data Collection and Statistical Analysis

Data were collected between 1st April and 30th April 2014. Data were entered and analyzed on Statistical Packages for the Social Sciences (SPSS) version 20 by IBM Corporation, America. All qualitative variables were described through frequencies and percentages and all quantitative variables are illustrated through mean and standard deviation. Chi-square test was applied and P values < 0.05 were considered significant. The data for these patients were also presented in tables, figures and photomicrographs.

RESULTS

A total of 184 (92.0%) respondents were included in the study while 16 incompletely filled questionnaires were excluded. Ages ranged from 16 to 87 years with a mean of 44.9 years. Respondents within the 26-35 years age group were frequently recruited for this study (n = 84, 45.7%) while 18.5% and 20.6% were in the 16-25 years and 36-45 years age groups respectively (Figure 1). Most of the respondents were males (54.30%) while the remaining 45.70% were accorded to females (Figure 2). Christianity was the most widely practised religion among the respondents (92.9%) with majority of them being Ibibio tribe (55.4%). Most of the respondents had some degrees of formal education with a very high overall literacy rate of 95.7%. The leading occupation of the respondents was civil servants (41.3%) while self-employed respondents accounted for 39.7%.

Majority of the respondents had heard about embalming (n=143, 77.7%). Of these, 129 respondents had been involved in home embalming as depositors (41.9%), spectators (29.5%), mourners (20.2%) and embalmers (8.5%). Home embalming was heard of by most respondents (75.0%). Health workers were the leading embalmers (59.7%). Other categories of embalmer included relatives (17.8%), community leaders (9.3%), herbalists (7.8%), and church member (5.4%).

Regarding the category of persons commonly subjected to home embalming. Elderly persons older than 65 years were the most common persons predominantly subjected to home embalming (72.7%).

Regarding whether the embalmers had prior formal training in embalming, most of the respondents (n = 77, 55.0%) believed that they did not have formal training while 45.0% of the respondents felt that they had formal training.

Regarding the buildings commonly used for home embalming, living residential home of deceased was most commonly used (53.5%). Other buildings commonly used for embalming included living residential home of embalmers (19.6%), semi-detached residential home of relatives (10.5%) and detached, isolated buildings (14.7%).

Majority of the respondents knew the name of chemicals commonly used in home embalming (n=99, 76.7%) as formalin (67.7%), fuming chemical (19.2%), water and formalin (13.1%).

The commonest reason for home embalming was for cheapness (73.6%). Cultural beliefs (10.9%), religious beliefs (3.1%), unsatisfactory hospital services (9.3%), and hiding of the exact causes and time of death (3.1%) were other reasons for home embalming.

Most respondents (72.8%) agreed that government has a role to play in the practice of home embalming either in regulation (31.5%), training (19.6%) legislature (19.0%) or certification (13.0%).

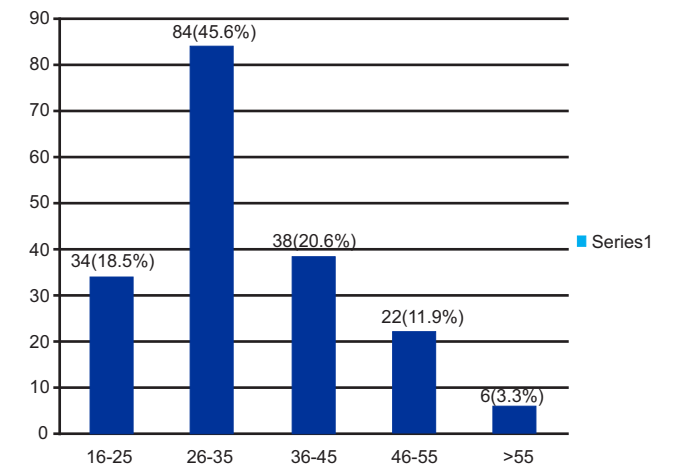


Figure 1: Age Distribution of the Participants

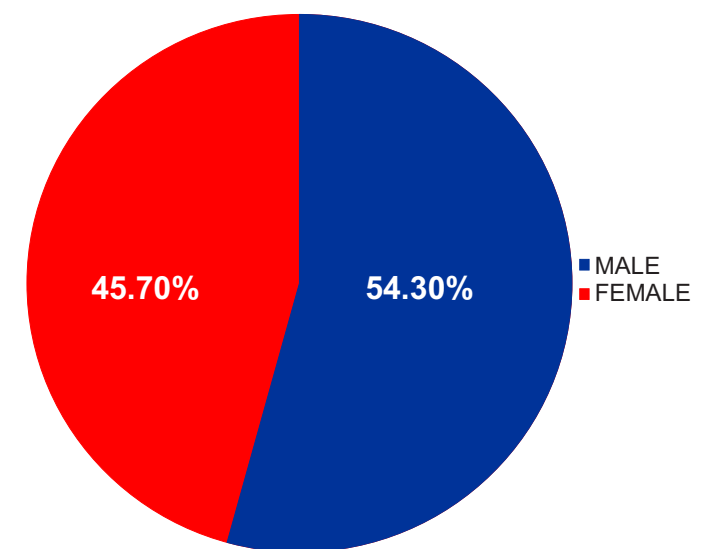


Figure 2: Sex Distribution of the Participants

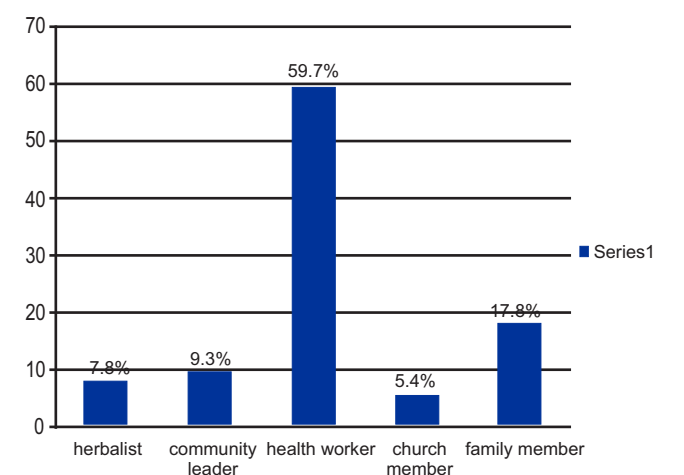


Figure 3: Categories of Embalmers