



Attitude of Morticians towards Health Hazard and Safety Practices in Hospitals and Private Centres in Rivers State

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Authors' contributions

This work was carried out in collaboration between both authors. Author GOO designed the study, performed the statistical analysis, wrote the protocol and draft the manuscript. Author KFP managed the analysis of the study and the literature searches. Both authors read and approved the final manuscript.

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ABSTRACT

Background: Mortuary services are integral to the compendium of services provided by a tertiary healthcare centre. It is a procedure involved in the receipt, storage and release of the deceased. Managing this process safely, securely, efficiently, effectively and appropriately is the core business of mortuary services teams.

Objective: The study investigated attitudes toward health hazards and safety practices among Morticians in hospitals and private centres in Rivers state.

Methods: Descriptive survey design was used for the study. The study population consisted of three hundred and seven (307) morticians in all registered mortuaries both government and private centres in Rivers state. A structured questionnaire was used for data collection. The validity of the questionnaire was established as valid by three experts. The reliability coefficient of 0.86 was obtained. Research questions were answered using mean, standard deviation and percentage, while data were analysed using the z-test to test hypotheses.

Results: The finding of the study showed that the majority of the morticians had a positive attitude toward health hazards and safety practices (\bar{X} 2.7, \pm 0.98). The findings show a significant

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difference in attitude toward safety practices based on age (z -cal = 1.669, df = 305, p < 0.01). The findings of this study show a significant difference in the attitude towards safety practices based on gender (z -cal = 2.464, df = 305, p < 0.01).

Conclusion: Based on the findings, it was concluded that morticians in Rivers State have a positive attitude toward health hazards and safety practices in hospitals and private centers.

Keywords: Attitude; morticians; health hazard; safety practice and rivers state.

1. INTRODUCTION

A mortuary (in a hospital or elsewhere) is used for the storage of human corpses awaiting identification or removal for autopsy or disposal by burial, cremation or other methods. Mortuary services are integral to the compendium of services provided by a tertiary healthcare center and privates. It is a procedure involved in the receipt, storage and release of the deceased. Managing this process safely, securely, efficiently, effectively and appropriately is the core business of mortuary services teams. The main job of a funeral director is to arrange for the disposal of the body of the deceased person while an embalmer uses chemicals to prevent any danger to public health (sanitation), to retard the process of decay (presentation) and to restore a more life-like appearance (presentation). In modern times, corpses have customarily been refrigerated to delay decomposition. A person responsible for handling and washing bodies is now known as a diener, morgue attendant, mortician, or autopsy technician.

Members of the funeral profession are potentially exposed to a plethora of infectious organisms through various exposure routes. Mortuary or postmortem rooms have potential hazards and risks for health personnel and attendants of the deceased. According to [1] that many occupations are now recognized as an important factor in causing disabilities to workers. Most workplaces embody hazards and risks, often resulting in occupational-related injuries and often times lead to deaths. Injuries from manual tasks in the funeral industry result from ongoing wear and tear to joints, ligaments, tendons, muscles, and discs. Lifting bodies that are in an awkward position can strain muscles. However, studies pointed that over 2.3 million annual deaths from occupational accidents and work-related diseases most especially morticians [2], the rate of related injuries (both reported and non-reported) is believed to be much higher, especially in developing countries where Occupational Health and Safety (OHS)

administration is minimal and still associated with industries.

The mortuary is designed to have adequate space for corpse's storage and this was determined by peaks and seasonal variations, information on average daily post-mortems performed [3]. The size of the storage facilities in a mortuary is also determined by the location, efficient performance of the pathologists, length of time to perform a post-mortem, the number of staff that are available and the time required for preparation of the body prior to and after the examination, all these must be put into consideration [4,5].

Due to the very nature of morticians, both occupations come into contact with cadavers, some of which may have died from or have been being affected by an infectious disease. They are also exposed to work place hazards and these include; chemical hazards (formalin, detergent, dyes etc.), physical hazards (allergic reactions, electrical shocks, burns, hearing impairment, eye strain, radiations, etc.), mechanical hazards (cuts, sharps, pricks, trips, slips, falls etc.), biological, and non-biological hazards inherent in the cadavers (fungi, bacteria, viruses etc.), psychosocial hazards (stress, stigmatization, depression, substance abuse). Ergonomic hazards may also be included due to musculoskeletal disorders from poor body positioning [6,7]. Based on these hazards, there is a need to determine good occupational safety to reduce the hazards. Other infectious pathogens in the recently deceased present particularly high risks to funeral directors include tuberculosis, group A streptococcal bacteria, gastrointestinal organisms, agents that cause TSEs, hepatitis B and C viruses, HIV and possibly meningitis and septicaemia (especially meningococcal).

The attitude of Morticians toward health hazards and safety practices in the mortuary setting seems to be of great concern. [8], argued that issues of poor attitude of mortuary workers toward the use of PPEs, compliance in reporting

and operations control mechanisms, vaccination and poor reaction time might become dangerous if at all relevant authorities fail to act positively when there are breaches in occupational harm/exposure. Failure to adhere to hygiene procedures and failure to vaccinate against common diseases may lead to health effects such as respiratory irritation, eye irritation, skin irritation, dermatitis, respiratory sensitization (possibly leading to occupational asthma), cancer and allergies.

Morticians should have a positive attitude toward exposure to formaldehyde, disinfectants, fixatives and solvents during the autopsy process or subsequent processing of tissue or cleaning of the environment, dust/aerosol from cutting and latex consumables [9]. Positive attitude demands that morticians perform activities such as evaluation of the physical state of facilities for compliance with safety and health standards, safety protocols and their implementation, workers orientation, training, knowledge and practices and risk surveillance/assessment of facilities, immunization of the workers, safety and comfort of workers and customers in mortuary settings.

Due to the lack of educational training, deplorable state of affairs of morticians, poor infrastructure and lack of human resources in the field, the attitude of morticians toward safety practices is poor. If the above issues concerning morticians are not addressed and measure not taken, morticians will continue to be exposed to health hazards and have a negative attitude toward safety practices, hence this makes the researcher to investigate the knowledge and attitude toward health hazards and safety practices among morticians.

Health and safety, particularly the prevention of infection, are vital in mortuaries and postmortem rooms, [10] since it is generally accepted that safety reduces accidents and injury rates besides improving productivity [11]. The mortuary and its environment can be a dangerous place to workers, which include the pathologists, technicians, funeral directors, and embalmers, those involved in cremation even the visitors and relatives of the deceased are also at risk. But, when the awareness is there and there is the adoption of safe work practices, this tends to reduce the risk to an extent. Mortuaries need to be built a good standard and safety measures that are in line with modern technology.

Consequently, risks in the morgues should be reduced as much as possible by providing and maintaining a safe working environment and ensuring that the staff are personally protected, [12]. It is therefore critical that staff who work in mortuaries are properly trained and are aware of their environmental risks to avoid or minimize their exposure. This study aims at examined the attitude of morticians toward safety practices in hospitals and private centres.

2. METHODS

Descriptive survey design was used for the study. The population for the study consisted of three hundred and seven (332) morticians in all registered mortuaries both government and private centres in Rivers state. A purposive sampling technique was used in selecting the sample size of 307 for this study. The choice of this sampling technique is informed by the fact that the population of morticians in Port Harcourt metropolis were small. A thirty-six (36) item structured questionnaire was used as an instrument for data collection for the study. The instrument was thereafter referred to as "Knowledge and Attitude of Morticians on Health Hazards and Safety Practices Questionnaire (KAMHHSPQ)". The instrument was constructed by the researcher based on the specific objectives of the study. The questionnaire comprised of two sections; section A and B. section A was used to generate demographic data relating to Gender, Age, Marital Status, Level of Educational attainment and Religion. Section B contains thirty-one (31) questions eliciting information on the knowledge and attitude of morticians towards health hazards and safety practices. Face and content validity of the questionnaire was established as valid by three experts. Test-retest method was used to establish reliability of the instrument. The reliability coefficient of 0.86 was obtained. Research questions were answered using mean, standard deviation and percentage, while data were analysed using z-test to test hypotheses.

3. RESULTS

Table 1 shows that the majority of the morticians had a positive attitude toward health hazards and safety practices (\bar{X} 2.7 and \pm 0.98). This implies that the overall morticians had a positive attitude toward safety practices. However, negative

attitude was found on mortician concerns about using PPE.

Table 2 findings showed that those within the age of 18–30 years had a more positive attitude toward safety practices with a grand mean of \bar{X} 2.90 and $\pm .83$ than those aged 31 years and with a grand mean of \bar{X} 2.64 and $\pm .95$.

Table 3 shows the attitude of morticians toward safety practices based on respondents' gender. The findings of the study showed that the male respondents had a positive attitude toward safety practices as the grand mean (\bar{X} 2.71 and $\pm .98$) was greater than the criterion mean (2.5), whereas the female respondents had a negative attitude toward safety practices as the grand mean (\bar{X} 2.38 and $\pm .88$) was lesser than the criterion mean.

3.1 Hypothesis 1

There is no significant difference in the attitude of morticians toward safety practices in Rivers State based on age.

Table 4 shows Hypothesis 1, Z-test result showing the significant difference in attitude of morticians toward safety practice based on age.

Table 4 findings show a significant difference in the attitude toward safety practices based on age (z-cal = 1.669, df = 305, p = 0.000). This finding study a significant difference in the attitude toward safety practices based on gender (z-cal = 2.464, df = 305, p = 0.000).

4. DISCUSSION

The findings of the study showed that morticians in River state have a positive attitude toward safety practices. The attitude of Morticians toward health hazards and safety practices in the mortuary setting is of great concern because of the hazardous nature of the occupation. The finding of this study conforms to that of [13], who noted that morticians have a positive attitude of 51% toward exposure to formaldehyde, disinfectants, fixatives and solvents during the autopsy process or subsequent processing of tissue or cleaning of the environment, dust/aerosol from cutting and latex consumables and that positive attitude demands that morticians carry out activities such as evaluation of the physical state of facilities for compliance with safety and health standards, safety protocols and their implementation, workers orientation, training, knowledge and practices and risk surveillance/assessment of facilities, immunization of the workers, safety and comfort

Table 1. Attitude of morticians toward safety practices

SN	Items	\bar{X}	SD	Decision
1	Morticians feel unconcerned about using PPE	2.40	1.181	-ve
2	Morticians are uncomfortable in PPE	2.33	1.08	-ve
3	Morticians use PPE occasionally	2.26	1.07	-ve
4	PPE slows morticians work pace.	2.41	1.08	-ve
5	Sight of PPE irritates morticians	2.28	.95	-ve
6	Morticians do not see PPE as hazard prevention	2.35	.89	-ve
7	Morticians stop working immediately when faced with a challenge	2.69	1.01	+ve
8	Morticians continue to work when faced with a challenge	2.76	.93	+ve
9	During contact with a hazard, morticians go for a medical test/checkup	2.94	.91	+ve
10	When exposed to hazard, morticians take medication	3.03	.86	+ve
11	When faced with depression, morticians take alcohol to calm it	2.94	.99	+ve
12	Morticians retaliate at any provocation from stigmatization	2.75	.98	+ve
13	Morticians isolate themselves from family and friends when faced with stigmatization/depression	2.79	.99	+ve
14	Morticians report all hazard situations encountered	2.94	.92	+ve
15	Morticians see hazard as part of the job	3.16	.91	+ve
16	Morticians dislike their job due to less pay and more hazard	3.18	.94	+ve
	Grand mean	\bar{X} 2.7	± 0.98	+ve

of workers and customers in mortuary settings. The findings are similar to that of. [14], where 81% possessed good attitudes toward the compulsory use of gloves, whereas in this study it was 100%. The findings revealed that morticians demonstrated a good attitude toward risks and adherence to good practices with regard to health hazard and safety of their work. These findings are contrast to [15], in their study, knowledge, attitudes and practices of hand hygiene among the final year medical and nursing students revealed that attitudes, practices and satisfaction of facilities of all participants were overall poor (<50%). This study shows that with daily exposure to cases and stories of deceased people coming through the mortuary in a forensic setting have a variable, and overall sad tone, with cases involving children, elderly in nursing homes, accidents, suicides and homicides, has

improved attitude and making the mental impact on the staff inevitable.

The result of the study showed that the male respondents had a positive attitude toward safety practices with the grand mean of (2.71) was greater than the criterion mean (2.5), whereas the female respondents had a negative attitude toward safety practices as the grand mean (2.38) was lesser than the criterion mean. However, male dominance remains a major factor and some cultural practices consider touching of corpse by the female as a taboo, discouraging most women from choosing it as a profession [16].

The findings of this study show a significant difference in the attitude toward safety practices based on age(z-cal = 2.464, df = 305, p = 0.000). The finding is contrary to [17]

Table 2. Attitude toward safety practices based on respondents' age

SN	Attitude toward safety practices	18-30years (N=67)		≥31 years (N=240)	
		X	SD	X	SD
1	Morticians feel unconcerned about using PPE	1.81	1.19	2.55	1.12
2	Morticians are uncomfortable in PPE	1.70	1.06	2.51	1.01
3	Morticians use PPE occasionally	1.66	1.00	2.44	1.02
4	PPE slows morticians work pace.	1.57	.89	2.65	1.01
5	Sight of PPE irritates morticians	2.15	.61	2.31	1.03
6	Morticians do not see PPE as hazard prevention	2.16	.54	2.40	.96
7	Morticians stop working immediately when faced with a challenge	3.43	.92	2.48	.93
8	Morticians continue to work when faced with a challenge	3.37	.93	2.60	.86
9	During contact with a hazard, morticians go for a medical test/checkup	3.55	.78	2.76	.87
10	When exposed to hazard, morticians take medication	3.48	.82	2.90	.82
11	When faced with depression, morticians take alcohol to calm it	3.55	.82	2.78	.96
12	Morticians retaliate at any provocation from stigmatization	3.46	.84	2.55	.92
13	Morticians isolate themselves from family and friends when faced with stigmatization/depression	3.54	.86	2.58	.93
14	Morticians report all hazard situations encountered	3.54	.76	2.78	.89
15	Morticians see hazard as part of the job	3.73	.62	3.00	.91
16	Morticians dislike their job due to less pay and more hazard	3.73	.68	3.04	.95
	Grand mean	2.90	.83	2.64	.95

Table 3. Attitude toward safety practices based on respondents' gender

SN	Attitude toward safety practices	Male (N=67)		Female (N=240)	
		X	SD	X	SD
1	Morticians feel unconcerned about using PPE	2.40	1.19	2.27	1.10
2	Morticians are uncomfortable in PPE	2.33	1.08	2.36	1.03
3	Morticians use PPE occasionally	2.28	1.08	2.00	.77
4	PPE slows morticians work pace.	2.43	1.09	1.91	.70
5	Sight of PPE irritates morticians	2.29	.96	1.82	.75
6	Morticians do not see PPE as hazard prevention	2.36	.89	2.00	.63
7	Morticians stop working immediately when faced with a challenge	2.72	1.00	2.00	.77
8	Morticians continue to work when faced with a challenge	2.80	.93	2.00	.77
9	During contact with a hazard, morticians go for a medical test/checkup	2.94	.92	2.91	.83
10	When exposed to hazard, morticians take medication	3.0	.86	3.18	.75
11	When faced with depression, morticians take alcohol to calm it	2.97	.97	2.27	1.19
12	Morticians retaliate at any provocation from stigmatization	2.78	.98	2.09	.83
13	Morticians isolate themselves from family and friends when faced with stigmatization/depression	2.82	.98	2.00	1.00
14	Morticians report all hazard situations encountered	2.95	.92	2.64	.92
15	Morticians see hazard as part of the job	3.15	.90	3.55	.93
16	Morticians dislike their job due to less pay and more hazard	3.18	.93	3.18	1.17
	Grand mean	2.71	.98	2.38	.88

Table 4. Z-test result showing the significant difference in attitude of morticians toward safety practice based on age

Group	N	Mean	SD	Df	z-cal	p-value	Decision
18-30 years	67	3.54	.765	305	1.669	0.000	H ₀ Rejected
31 and above	240	2.78	.887				

P<0.05 = Significant

opined that there is a deficit in the awareness of Safety Practices among laboratory personnel and demonstrates that attitude and practice of safety rules are unsatisfactory. This finding might be due to the fact that the males constituted a greater percentage of the morticians that were the respondents of the study. Also, the males would have been more acquainted with the work and have had more work experience, which must have exposed them to the hazards and consequences; hence, the positive attitude

expressed toward the safety practices, which will help them do their work without harm. However, this is contrary to the Northern part of Nigeria practices, where male attend to male patients and female to female patients, while in Eastern part (Igbos) the female corpses are treated and preserved by women (Umuada-female relations) and in some cases, these women are either called to service by supernatural forces or obtained calling through dream or specialize and become professionals corpse treatment [18].

5. CONCLUSION

Based on the findings of the study, it was concluded that the majority of morticians in Rivers State have a positive attitude toward safety practices. Also, their attitude toward safety practices was significantly different based on their gender. The attitude of the morticians toward safety practices was positive but negative attitude was found toward their concerns for PPE therefore, The morticians also make effort on their own to know more of the safety measures practicable in the job and make person effort on their own to practice them without been cajoled.

6. LIMITATIONS

- 1) One of the biggest limitation that the researchers faced was a time constraint.
- 2) A lack of education, discrimination against morticians and age was also a limitation.
- 3) Due to time, financial, and other constraints, data collection was limited to one State, Port Harcourt metropolis.
- 4) The paper focused was on mortuary workers, however, some of them were very scared of adverse repercussions from management if they said anything negative about their jobs.

CONSENT AND ETHICAL APPROVAL

Ethical clearance for the study was obtained from the Ethics Review Committee of the Ministry of Health of Government of Rivers State of Nigeria. As per international standard or university standard, respondents' written consent has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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