

Short Communication

**QUALITATIVE EXPLORATION OF EBOLA
RISK PERCEPTION AMONG MORTUARY
WORKERS IN IBADAN METROPOLIS,
NIGERIA- A QUALITATIVE STUDY**

ABSTRACT

Aims: To explore the knowledge of Mortuary workers to Ebola Viral Disease (EVD), risk perception and adherence to infectious control practices.

Study design: A qualitative research approach method using Focus Group Discussions (FDG) conducted among 36 mortuary workers in Ibadan.

Place and Duration of Study: This study was conducted between October and November, 2014 in Ibadan, Oyo state Nigeria.

Methodology: We developed a structured moderating approach with a non-directive style Focus Group Discussion (FGD) guide was used to explore into participants ideas and opinions. The FGD guide consisted of five sections, each section was framed to probe into the following issues: 1). Knowledge of EVD 2). Participant's attitude to EVD 3). Adherence to infection control practices 4). Risk perception on EVD and 5). Behavioral predisposition to the risk of mortuary related infections. A total of six FGD sessions were conducted among 36 mortuary attendants drawn from two government and four private health facilities in Ibadan. Eight participants made up each focus group and One focus group discussion was conducted at a time in the respective health facilities.

Results: The qualitative exploration of mortuary workers revealed gaps in knowledge of workers to EVD, high risk perception of mortuary workers to Ebola virus disease and unavailability of PPE in conducting autopsy and daily operations, poor attitude to convalescent individuals and certain harmful behavioural practices in the morgue were revealed as key findings.

Conclusion: Bridging knowledge gaps among mortuary workers on EVD should be sustained despite the decline in Ebola outbreaks. It is also recommended that standard precautions should be followed when handling corpse due to the risk of infections.

Keywords: Ebola Viral Disease, FGD, Risk Perception, Mortuary workers, Ibadan

1. INTRODUCTION

Ebola virus disease (EVD) is a fatal disease with almost 90% fatality [4], [6]. The 2014 EVD pandemic affected West African countries like Sierra Leone, Liberia and Guinea. Bouts of the disease outbreak were recorded in Nigeria before Nigeria was certified free of the disease on the 21st of October 2014 by the World Health Organization. In spite of this

certification, Nigeria still remains at risk due to the ongoing Ebola Epidemic within neighboring West African countries [3], [20]. The 2014 EVD outbreak is the largest outbreak on record with over 25,000 suspected cases and 10,301 deaths recorded so far [1]. More than 494 health workers have died while treating Ebola patients [10], [12].

Mortuaries are a potential source of Ebola infection posing occupational risks due to the hazards involved with handling dead bodies that might be on the verge of decay or contamination [18]. In most developing countries, mortuaries are underdeveloped, understaffed with lack of funds and other infrastructural resources placing a lot of strains on its operations [14], [18]. Like other health workers, mortuary workers are at risk of contracting EVD due to associated occupational risks [15]. Several reports have documented diseases contracted by mortuary workers during washing, dressing and embalming processes [11], [13]. Cultural practices like risky burial rites, washing and touching of dead bodies are shown to be responsible for about 60% of EVD cases in Guinea [16]. Similar practices were also reported as the main source of transmission of EVD in Gabon, Uganda and Sierra Leone [9]. In Sierra Leone, for instance, 365 Ebola deaths were linked to a single funeral ceremony of a famous traditional healer [21].

People's perceptions are importantly influential on preventive practices [14]. Knowledge of risk perception is even more useful in developing communication messages that enhance the peoples understanding of a disease which in turn increase publics support for the control [7], [9]. Studies have shown that the risk perceptions for viral hemorrhagic fevers are high especially when people witness outbreak. Therefore adequate adherence to infectious disease control practices is key to prevention of infection in health facilities [8]. There is dearth of data regarding risk perception of Ebola virus disease among mortuary workers in Nigeria. Hence, this study was aimed to assess the risk perception on EVD among mortuary attendants in Ibadan metropolis. This paper reports high stigmatization rates for convalescent individuals to Ebola virus disease and a high perception rate about the disease.

2. METHODOLOGY

This study was conducted between October and November, 2014 among mortuary attendants in Ibadan, Oyo state Nigeria. We developed a structured moderating approach with a non-directive style Focus Group Discussion (FGD) guide was used to explore into participants ideas and opinions. The FGD guide consisted of five sections, each section was framed to probe into the following issues: 1). Knowledge of EVD 2). Participant's attitude to EVD 3). Adherence to infection control practices 4). Risk perception on EVD and 5). Behavioral predisposition to the risk of mortuary related infections. Prior to the FGD, forms containing participants' demographic information was completed by discussants. Forms were coded corresponding to alphabets worn by individual participants during the discussion. Completed forms were securely stored and accessible only to the researchers. Participants were further assured that written reports will not include names and that recorded information will not be shared outside the research team. Participants were reminded of the group's responsibility to guard the confidentiality of the discussion. Discussants were also made to understand that there was no right or wrong responses. All opinions were welcomed during the discussion.

The content validity of the guide was ensured using pertinent variables teased out from related literatures reviewed. Individual input as well as suggestions from experts in related fields was used to enhance the face and content validity of the guide. The FGD guide was translated into Yoruba, the predominant language spoken in Ibadan and later back to English to ensure that the instrument maintain its originality. The FGD guide was pretested

among two groups of mortuary workers of both government and private owned health centers offering mortuary services in Lagos which has similar social and environmental setting with Ibadan to determine the reliability of the guide.

Ibadan has a limited number of mortuary attendants. A total of six FGD sessions were conducted among 36 mortuary attendants drawn from two government and four private health facilities in Ibadan. Eight participants made up each focus group and One FGD was conducted at a time in the respective health facilities. A letter of Introduction and ethical approval for the study were served to heads of the six health facilities to obtain permission.

Eligible participants were approached individually and made clear about the focus group participation. Mortuary attendants who had been working at the morgue for at least three months from the day they were approached were deemed eligible for the study. Some participants were reached by phone calls. If they agreed, consent was obtained and information about meeting venue and time were appropriately disclosed. During the contacting, no female mortuary worker was identified, hence the homogeneity of the study with regards to gender.

The FGD sessions were conducted between the hours of Five to Seven O'clock PM. An average of 58 minutes was used to conduct each FGD session. Each of the FGD was recorded with an audio recording device and facilitated by a moderator, note-taker and an observer. The moderator asked the questions and used the FGD guide to facilitate and probe into different ideas and opinions from discussants. Clarifications were made where necessary to guide the discussion. The note-taker took notes quickly and unobtrusively on each participant's contribution and used a good audio recorder to record the discussions to prevent loss of important information. The observer took note of subtle attitude, gestures and useful non-verbal communications among discussants.

Before the commencement of each session, the moderator introduced the members of the team, the purpose of the discussion and obtained a verbal consent from each participant to record the discussion on an audio recording device. In a case where participants failed consent to the use of a recorder, the note-taker efficiently captures ideas and opinions of the discussants as clearly stated. The discussants were assured that expressed opinions would be kept secret, so they were advised to freely express their views. Sessions were flexible and friendly as possible with interest to probe out points that were not originally in the guide. Mild refreshment was served to motivate discussants.

The discussion on the audio recorder was replayed and carefully transcribed into a note book by the note-taker and written as a report which was analyzed thematically. Ideas of concurrence and disagreements as stated by participants were noted and presented.

3. RESULTS AND DISCUSSION

There were a total of six FGD's conducted among 36 mortuary attendants. There were six participants across the six focus groups. The mean age of the participants was 38.14 (range 29-56). Among them, 63.9% were Christians, 33.3% worked in public mortuaries (Table 1).

Table 1: Facility-wise socio-demographic variables of FDG the participants in Ibadan, Nigeria (n=36)

Type of health facility	Age range Years	Mean age years	Christians(%)	Muslims(%)
Public health facility	30-42	37	5(83.3)	1(16.7)

Public health facility	40-56	47.1	3(50)	3(50)
Pivate health facility 1	32-45	38.5	5(83.3)	1(16.7)
Pivate health facility 2	32-45	37.6	5(83.3)	1(16.7)
Pivate health facility 3	29-40	34.5	2(33.3)	4(66.7)
Pivate health facility 4	31-40	36	3(50)	3(50)
Total	29-56	38.1	23(63.9)	13(26.1)

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119

120 **3.1 Knowledge on Ebola Viral Disease (EVD)**

121

122 Overall awareness on the severity of Ebola disease was very high. Almost all participants
123 had sufficient knowledge on EVD especially on its cause and symptom. All six groups
124 agreed that Ebola is a deadly disease which is reflected in the comments given below such
125 as:

126

127 *"Ebola is a deadly disease, despite the fact that there is no known cure for it shows how*
128 *terrible and deadly the disease is. I pray we would not be infected". .*

129

130 *"According to what people say all over the world, people proclaim Ebola to be a very serious*
131 *and deadly disease that no one can play with and if we see anyone with this disease, we*
132 *should run away totally from that person".*

133

134 Of the six groups, five had sufficient knowledge on EVD, its causes and symptoms.
135 Most of the respondents mentioned radio, television and health seminar as their source of
136 information. Some of their view points on ways in which they got enlightened about EVD was
137 like:

138

139 *"We were told through health seminars that certified Ebola patient must not be hand shaken.*
140 *Any fluid from such patient like sweat, blood, urine must not touch another person not even*
141 *eating with such a person".*

142

143 *"I don't know much about Ebola, I just heard of it from radio station".*

144

145 A brief probe into various possible treatment options revealed that all the groups except for
146 one, believed that western treatment was the better alternative in managing cases of Ebola.
147 Participants responded as such:

148

149 *"I am a Yoruba man and I believe so much in orthodox treatments but the white man's*
150 *medicine appears to be more potent for Ebola patient, because some were treated in Lagos*
151 *where they built camps for treating Ebola patient and all of those sick with the disease are*
152 *totally okay now from what we heard in the news. Among them was the nurse that welcomed*
153 *Patrick sawyer; she survived it"*

154

155 *"Traditional medicine would work on Ebola if it is allowed to be tested on Ebola patient by*
156 *our traditional doctors. The concern I have is that the government would not allow such*
157 *initiative to be carried out".*

158

159 Although, all the groups were well informed about the symptoms of EVD, some of their
160 perceived symptoms were misconstrued. The most frequently mentioned symptom was
161 bleeding from the nose as reflected in the comment below:

162
163 *"I have heard that people with Ebola bleed through the nose, mouth and urinate blood due to*
164 *the severity of the Ebola infection in the body".*

165
166 Participants seemed to be well acquainted with necessary precautionary measures as
167 respondents cited frequent washing of hands, use of hand sanitizers and observing good
168 personal hygiene practices. Surprisingly, the idea of bathing with salted water as a
169 precaution to EVD was highly held in one group. One of the most striking comments was:

170
171 *"I believe that bathing with salted water would prevent someone from having Ebola, I and my*
172 *family did it when the news of the outbreak was growing wild"*

173 174 **3.2 Risk perception regarding EVD**

175
176 Participants across the six groups seemingly had high perceived risk regarding EVD and
177 expressed fear of contracting it due to the job associated risky; several of them expressed
178 much gratitude for the early warning adverts and seminar conducted by the state ministry of
179 health and other affiliated non-governmental organizations to enlighten them about the
180 disease. Participants' feelings were expressed like this:

181
182 *"The type of work we do is very dangerous, different type of corpses are being brought into*
183 *mortuary almost on a daily basis without knowing its primary cause of death"*

184
185 *"This job we do exposes us to different kinds of disease, even the Ebola we've just talked*
186 *about now, if we do not take heed to proper embalming procedures or follow every*
187 *necessary step to protect ourselves. I tell you, this job allows us to be exposed and afflicted*
188 *by different diseases"*

189
190 However, some participants had mixed reactions on the possibility of contracting infections if
191 they adhere to universal control practices. Some said:

192
193 *"Anyone who does not take care of himself early enough is capable of being infected by any*
194 *disease that comes with a corpse. For me, I cannot contract Ebola through any corpse*
195 *because, to the best of my ability, I use to take care of myself all the time".*

196
197 *"I don't believe I can contract any disease through the mortuary job I do because from the*
198 *senior medical officer to our most senior worker in this unit, I have not heard of any of them*
199 *being sick as a result of this job we do, therefore, likewise, we junior workers cannot contract*
200 *any disease".*

201
202 *"I'm afraid of Ebola so much that when we heard of it (at first), we were so afraid to the*
203 *extent that we no longer shook each other hands like we normally do when we resume duty*
204 *every morning; we avoided each other for a very long time"*

205
206 *"Ebola can be contracted through corpse. Besides, I hear all sorts of news about the disease*
207 *and I am very worried because of the kind of job I do. We seriously pray against the disease*
208 *hoping that God will bring a lasting cure for this deadly pestilence".*

209
210 A cross-examination of participants brought to light again different and interesting positions
211 from which they stood based on their impressions concerning eventualities that could cause

one to handle a corpse presenting Ebola like symptoms. An additional probe into how they might relate with convalescent patients in public health facilities was quite satisfactory as opposed to counterpart's opinion from private health facilities. Opinions were expressed by discussants as found below:

"I will run for my dear life if I get to know that someone who has died of Ebola has been brought into our facility. The disease is deadly and I heard it can be contracted through the air, which means danger to anybody"

Response to a probed question on the cause of Ebola was thus like:

"Going by the religion I practice, I strongly believe that Ebola is a punishment from God, venting his annoyance on mankind."

3.3 Behavioral risks predisposing to infection

Most participants claimed to use protective gears in their places of work. Although, a few from public health facilities reiterated about insufficient Protective Equipment and gears, they were forced to buy the gears by themselves due to the insufficiency. Typical responses were:

"We were never given any protective wear at all, we improvise by ourselves. We even don't protect ourselves when we are carrying out a task that is not too serious in the mortuary"

"Personally, I don't have an apron not even a nose mask for protection, we were not given by our management team, but there is this cloth-like apron commonly used in our mortuary to cover ourselves when working"

"Nothing should stop me from performing my duties of Washing and embalming any corpses brought into our facility. I think what I need is absolute carefulness. Once I am well covered with rubber clothes, then I should have no fear"

Eating in the morgue was identified as a practice among some participants. Of the six groups, one in group reported eating and occasional cooking as a common phenomenon in the mortuary during normal working hours. One commented:

"We buy food from hawkers that come around and we eat while we are at work, we cook in the morgue at times, if such condition warrants"

In response to questions on cultural practices that promote Ebola Virus Disease. Five groups opined that eating bush meat or improperly cooked food could lead to an infection.

"I don't believe someone could contract Ebola through eating bush meat, because people have been eating bush meat long before now, even during the time when the outbreak was still very hot, people were eating bush meat here, i ate too, and nothing happened afterwards. We heard Bats and Monkeys can transmit the disease yet some people have those monkeys in their homes as pets and they've not had Ebola at all"

"We were told not to eat bush meat, if people still eat it or do such things, Ebola could come into our society"

3.4 Adherence to infectious disease control practices

265 The three out of the six groups reported good adherence to infectious disease control
266 practices. Quotations from FGD participants portraying their opinion are documented below:

267
268 *"we use our PPEs at all times, for instance double gloves mentioned are worn, because,*
269 *putting on just one could be a risk to tear when working."*

270
271 *"It is compulsory for us to wear PPEs because we mix up with people at home and other*
272 *public places after leaving the mortuary".*

273
274 The most frequent cited PPE commonly in used among participants was the 'hand gloves'
275 and 'nose mask'. Routine seminars on how to handle corpses and on how to adhere to
276 universal preventive measures were stated across the groups; however, frequency of
277 attendance differ in that the secondary health facilities had seminars twice in the current
278 year.

279
280 This study has shown that there is improvement in the knowledge of health workers
281 regarding Ebola. However there is need for improved messages on the transmission route of
282 the diseases and preventive practices, this is because practices such as bathing with salt
283 water was still mentioned in the FGD sessions as a way to prevent EVD. However, myths
284 and norms such as traditional medicine was considered as the best cure for Ebola, air being
285 the route for the transmission of Ebola still need to be dispelled.

286
287 There was poor attitude to Ebola recovered individuals. This is due likely to misinformation
288 regarding EVD compounded with unhealthy fear. The erroneous belief that EVD is still
289 contagious even after an individual makes full recovery is still prevalent among respondents
290 in this study hence the poor attitude. The practice of cooking and eating in the mortuary as
291 mentioned by some participants is a risky behavior. This is a dangerous trend which can
292 lead to grave consequences. The exposure of cooking items and cutleries in the morgue can
293 lead to hospital acquired infection.

294
295 The risk perception of mortuary workers in regards to EVD was high, however most of the
296 groups believed that they were not at risk of contracting infectious diseases. This may be
297 based on a reasoning process that encourages them to think that the deadly virus is not a
298 real threat, resulting in a 'self-exempting' optimistic bias [20]. Understanding the community
299 views and responses to Ebola outbreak is important in order to lead to effective planning and
300 guide community participation [3, 9]. Community perceptions of Ebola can reduce or
301 escalate the spread of the disease. In light of the epidemic, messages relayed on how to
302 modify cultural practices and behaviors such as touching dead bodies of loved ones and
303 embalming in order to prevent the spread of the disease is important [11]. Corpses are
304 potentially infectious, therefore standard precautions should be followed when handling
305 corpse.

306
307 Strength and weakness of the study: However this study has its limitations in the sampling
308 size acquired for this study due to the low number of people practicing this population in
309 Ibadan, secondly the poor number of female workers in this study revealed that it is a male
310 dominated profession.

311
312 Strengths and weakness in relation to other studies: There is limited study conducted among
313 mortuary workers on safety and precautions regard Ebola virus disease and this study
314 explored the ideology of the participants, views and opinion on EVD that would not have
315 been fully capture with a quantitative study.

316

Unanswered questions and future research: Further studies can focus on the interaction of religion, cultural practices and traditional rites in relation to embalming procedures. Secondly an explorative study can be conducted on knowledge to EVD after a pre and post training assessment of mortuary attendants.

321

322 4. CONCLUSION

323

This study demonstrates the need for educational campaigns such as seminars, pamphlets, and workshops in bridging gaps in knowledge. Sustained health messages despite recent decline in Ebola Epidemics are necessary to create awareness on the risk of Ebola so that they can better perceive it. Programs integrating risk communication and behavioral risk modification should be provided to bridge gaps in knowledge. There is need for Health authorities to organize on a regular basis practice oriented training programs for mortuary attendants and embalmers on infectious disease control practices and preparedness.

331

332 ETHICAL APPROVAL

333

All authors hereby declare that this research have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki. Ethical approval for this study was sought and provided by the Ibadan Ethical research ethics committee (Ibadan /20000)

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APPENDIX