

Evaluation of the Stigmatization of Ebola Survivors Four (4) Years After the Epidemic in the Special Zone of Conakry from 2016 to 2020

Sadou Sow^{1,2}, Alpha Oumar Diallo², Abdoulaye Sow², Kevin Yohou Sylvestre¹, Manengu Casimir Tshikolasoni¹, Dadja Essoya Landoh¹, Mouctar Kande¹, Katende Ntumba Alain¹, Boubacar Sow², Jean Konan Kouame¹, Mamadou Alpha Diallo¹, Mamadou Mouctar Balde², Ahmadou Barry¹, Kadiata Bah², Mandian Camara², Amadou Bailo Diallo³, Mamadou Oury Balde¹

¹World Health Organization, WHO Guinea Office, Conakry, Guinea

²Faculty of Health Science and Technology, Department of medicine, Chair of Public Health, Gamal Abdel Nasser University of Conakry, Conakry, Guinea

³World Health Organization, Dakar Office, Dakar, Senegal

Email address:

Sadousow1968@yahoo.fr (Sadou Sow), docta135@gmail.com (Alpha Oumar Diallo), mbalde@who.com (Mamadou Oury Balde), drsowab@msn.com (Abdoulaye Sow), boubamorelsow37@gmail.com (Boubacar Sow), mbarry@who.int (Ahmadou Barry), diallomalpha@gmail.com (Mamadou Alpha Diallo), dialloa@who.int (Amadou Bailo Diallo), katendea@who.int (Katende Ntumba Alain), bahkadiata86bappe@gmail.com (Kadiata Bah), drasowab@msn.com (Abdoulaye Sow), konank@who.int (Jean Konan Kouame), landohd@who.int (Dadja Essoya Landoh), mandiansona@yahoo.fr (Mandian Camara), yohouk@who.int (Kevin Yohou Sylvestre), manenguc@who.int (Manengu Casimir Tshikolasoni)

To cite this article:

Sadou Sow, Alpha Oumar Diallo, Abdoulaye Sow, Kevin Yohou Sylvestre, Manengu Casimir Tshikolasoni, Dadja Essoya Landoh, Mouctar Kande, Katende Ntumba Alain, Boubacar Sow, Jean Konan Kouame, Mamadou Alpha Diallo, Mamadou Mouctar Balde, Ahmadou Barry, Kadiata Bah, Mandian Camara, Amadou Bailo Diallo, Mamadou Oury Balde. Evaluation of the Stigmatization of Ebola Survivors Four (4) Years After the Epidemic in the Special Zone of Conakry from 2016 to 2020. *Central African Journal of Public Health*. Vol. 8, No. 5, 2022, pp. 213-216. doi: 10.11648/j.cajph.20220805.14

Received: August 21, 2022; **Accepted:** September 27, 2022; **Published:** October 21, 2022

Abstract: *Introduction:* Ebola virus disease (EVD) is a haemorrhagic fever considered as an emerging infectious disease with high morbidity and mortality. In 2013-2016 the Ebola virus disease (EVD) epidemic affected Guinea and thousands of people in Guinea were infected with the devastating virus and survived. EVD has spread to neighbouring countries, resulting in tens of thousands of deaths and a difficult situation for the victims, including stigmatization. Years after the epidemic ended, stigma towards EVD survivors still remains a major concern. This study aimed to assess the stigmatization of Ebola survivors four (4) years after the epidemic in the special zone of Conakry. *Methodology:* this was a cross-sectional, descriptive and analytical study that focused on all the survivors from the database of the national health security agency, using "Epi data 3.1" software. and "SPSS 21" for logistic regression and univariate and multivariate analyses. *Results:* A total of 130 Ebola survivors out of a total of 267 participated in our study, including 69 men and 61 women, the average age was 31 years \pm 13.02 with extremes (Min= 6 years; Max= 70 years). The forms of stigma observed were rejection by family (49%), rejection by family and spouse (22%), and rejection by the health worker (8%). The level of education is the only factor linked to stigmatization ($p=0.023$). *Conclusion:* Rejection by surrounding and spouse were highest among EVD survivors, education level being the only factor related to stigma. Sensitization of the community and relatives of Ebola survivors should be considered by EVD teams in Guinea to stop the stigma.

Keywords: Ebola, Survivors, Stigma, Conakry, Guinea

1. Introduction

The Ebola virus disease (EVD) outbreak in West Africa began in south eastern Guinea in December 2013, before spreading to Liberia and Sierra Leone. Nigeria, Mali, the United States, Senegal, Spain, the United Kingdom and Italy were also affected to a lesser degree. It was then the first time that this virus, without known treatment, caused contamination outside of Central Africa and then outside of the African continent [1].

This epidemic was far more deadly than that seen since the discovery of the virus in 1976, caused by the Zaire strain of the virus. Semen samples from EVD survivors in Kikwit, Democratic Republic of Congo, were positive for Ebola virus by RT-PCR up to 101 days after illness onset, and a sample taken 82 days after onset appearance of the disease gave rise to an infectious virus [2]. The sexual route has also been implicated in the transmission of the virus in Liberia [3].

Ebola virus has now been isolated from the aqueous humor of the eye [4], semen [5] and cerebrospinal fluid [6] of patients in whom the initial viremia resolved.

According to the World Health Organization (WHO), patient zero is a child who died in December 2013 near Guéckédou (Miliandou-Guinea), in southeastern Guinea. In August 2014, the WHO called the outbreak a "public health emergency of global concern". For several Western heads of state, it represents "the most serious health emergency of recent years" [7].

Efforts to control the epidemic have gradually reduced transmission and managed, since March 2015, to limit its expression to small-scale resurgences. Maintaining significant surveillance is essential. The WHO has identified a total of nearly 28,000 cases for more than 11,000 deaths, as well as more than 10,000 survivors with sequelae mainly in Guinea, Sierra Leone and Liberia [8].

The Guinean government and its bilateral and multilateral partners have made considerable efforts to stop the spread and limit lethality. However, despite these efforts, the epidemic has spread to almost all the prefectures and communes of the country. Thus, the following data were recorded: 26 prefectures/communes were affected, 3814 confirmed cases, 2544 deaths, 1272 Ebola survivors, 6220 orphans and 500 widows or widowers [9].

While understanding presumed disease transmission from recovering patients is critical to EVD prevention, clinicians and public health professionals must also study and address the sequelae of the disease and the social stigma associated with it. EVD in affected populations [10-12].

In addition to the medical burden associated with recovery, survivors must deal with considerable psychological issues such as fear, denial and shame. In severe cases, the social stigma associated with the disease can run deep, leading to abandonment of patients by family and friends [13].

Studies carried out from 2014 to 2015 in Guinea, Sierra Leone and Liberia for the identification of Ebola virus particles in semen showed that initially negative results

turned positive after several months [14]; Similarly, the virus was found in the semen of Ebola survivors 23 months after leaving ETCs [14].

Beyond understanding the presumed transmission of the disease by recovering patients is essential to the prevention of EVD, clinicians and public health professionals must also study and treat the sequelae of the disease on the one hand; the fate and social stigma associated with EVD among affected populations on the other hand.

Currently, we have no knowledge of the future of Ebola survivors in terms of stigma in Guinea. What is the fate of Ebola survivors 5 years after leaving the Ebola Treatment Centres (CTE) in the special zone of the city of Conakry?

General objective

To assess the stigmatization of Ebola survivors 4 years after the epidemic in the special zone of Conakry.

Specific objectives:

- 1) Determine the frequency of stigmatization of Ebola survivors 4 years after the epidemic in the special zone of Conakry.
- 2) Describe the forms of stigmatization of Ebola survivors 4 years after the epidemic in the special zone of Conakry.

2. Methodology

Study framework: The setting of this study was the special area of the city of Conakry.

Conakry is the capital of the Republic of Guinea, it is a peninsula covering an area of 450 km², with a population of 2,317,376 inhabitants. It is subdivided into five municipalities and 130 districts (source: report of the second CTRS 2018). The choice of this area is justified by the high number of survivors living in this locality.

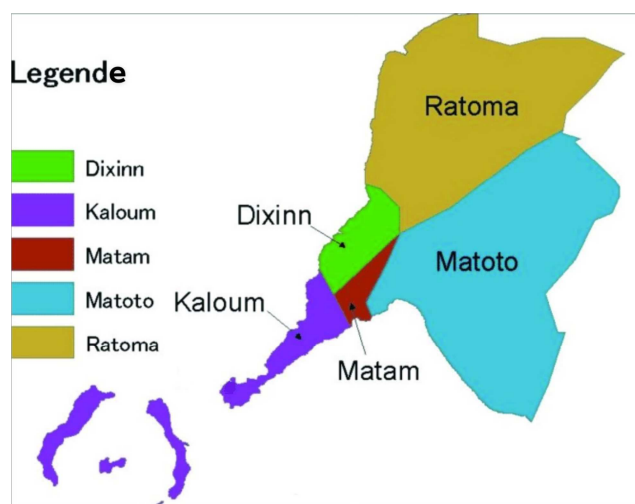


Figure 1. Geographical map of the special zone of the city of Conakry, 2020.

Type of study: it is a cross-sectional study of the descriptive and analytical type which concerned the active file of Ebola survivors followed since 2016 after their recovery.

Study population: This is all Ebola Survivors residing in the special zone of Conakry, diagnosed and treated at the ETC(s) level during the EVD epidemic.

Inclusion criteria: All Ebola survivors in the special zone of Conakry, registered in the National ANSS database and having benefited from medico-social monitoring for 4 years and possessing the mental capacity to respond to questions of our study.

Exclusion criteria: those who have not consented to participate in the study or have incomplete information in the ANSS database.

Variables studied: were socio-demographic and epidemiological ones.

Sampling: Sampling was exhaustive.

Data collection: Data was collected using a written questionnaire in French, tested in advance. The questionnaire was administered by the study manager. The data entered in the electronic tool were compared with those of the survey sheets to check their consistency, then cleaned using the Excel 2016 software before their analyzes using the software "Epi data 3.1" and "SPSS 21". Descriptive analysis and univariate and multivariate logistic regression were performed.

Ethical considerations: This study was submitted for the approval of the national ethics committee. Participation in this study was free and voluntary after clear explanation of the objectives and that their refusal will have no prejudice on them. The information provided will remain confidential and secure.

3. Results

A total of 130 Ebola survivors out of a total of 267 participated in our study, including 69 men and 61 women, the average age was 31 years \pm 13.02 years with extremes (Min= 6 years; Max= 70 year).

Table 1. Socio-demographic characteristics of Ebola survivors in the special zone of Conakry, 2016-2020. N= 130.

Characteristics	Number	Percentages
Age in years		
Average	31 ans \pm 13,02	
Maximum	70 years	
Minimum	6 years	
Sex		
Male	69	53
Female	61	47
Residence		
Rural	0	0
Urban	130	100
Level of education		
Not schooled	31	24
Primary	33	25
Secondary	15	12
Professional	28	22
University	23	18
Total	130	100

Table 2. Distribution of forms of stigma experienced by Ebola survivors, Conakry 2020.

stigma	Conakry	Total	%
wait longer	5	9	4%
Refused or Delayed Care	5	8	3%
Disclosure of cured status	12	17	7%
Discharge by health worker	12	20	8%
Rejection by entourage	17	125	49%
Rejection by spouse	0	10	4%
Less attentive	0	1	0%
Rejection by Entourage and Spouse	0	56	22%
Avoidance	9	9	4%
TOTAL	60	255	100%

It appears from this table that the types of stigmatization, at least 49% of the participants said they had been rejected by those around them. We also noted that 22% of patients claimed to have been rejected by their spouses CT-EPI.

Table 3. Univariate and multivariate analysis of stigma experienced by Ebola survivors by age, gender, and education levels, Conakry 2020.

stigma	Uni varied			Multi varied		
	OR	p- value	IC à 95%	OR	P – value	IC à 95%
Age		0,976		0,982	0,243	[0,954 – 1,012]
Sex	0,573	0,227	[0,233 – 1,413]	0,972	0,943	[0,454 – 2,084]
Level of education		0,330		0,742	0,028	[0,568 – 0,968]

4. Discussion

This study aimed to determine the outcome of Ebola survivors in terms of stigma four years after the outbreak in the special zone of Conakry. A total of 130 Ebola survivors out of a total of 267 participated in our study; the average age of the participants is 31 years (standard deviation of plus or minus 13.02) with extremes ranging from 6 to 70 years. The sex ratio was 1.13 male to female. In our series, 25% of participants have a primary level followed by 24% who have never been to school. This could be explained by the fact that the school enrolment rate is relatively low in Guinea. Our results are contrary to those found by Mohammed A et al [15] who in

their study found that 65.8% of participants having a higher level of education and 66.7% of participants were women. Despite sensitization sessions for the reintegration of survivors into their respective communities, survivors continue to experience stigma in all its forms. It emerges from this analysis that 49% of the cured declared that they had been rejected by their community, the consequence of which was a change of place of residence. While seeking care at health facilities when they have a health problem, 8% of participants said they were rejected by health workers, 7% also said that the status of Ebola recoveries was disclosed by health workers and that a proportion of (3%) mentioned the refusal of care by the health worker because of their cured status. Our results are different from those found by a study carried out within the framework

of the post Ebogui program (to relive after Ebola) which, in their result showed that the forms of stigmatization mainly include: avoidance, rejection, refusal of reintegration into the workplace and disease denial [16]. Our results differ from those of a survey of survivors of the 1995 Ebola outbreak in Kikwit, Democratic Republic of Congo which concluded that survivors were abandoned by family or friends more often than they were, expected after discharge from hospital [13].

In univariate analysis, it appears that there is no link between sex ($p = 0.227$), age ($p = 0.976$) and level of education ($p = 0.330$) with regard to the occurrence of stigmatization of survivors. The multivariate analysis of our results also shows that there is a link between the level of education ($p = 0.028$) and the stigmatization of Ebola survivors, while gender ($p = 0.943$) and age ($p = 0.243$) are unrelated to the occurrence of stigma in survivors.

5. Conclusion

This cross-sectional study of Ebola survivors in the special zone of Conakry made it possible to determine the outcome, frequency and forms of stigmatization of Ebola survivors in the Conakry zone, four years after the epidemic in Guinea. It would be relevant, to facilitate future studies, to integrate the surveillance of Ebola survivors at the level of all operational structures and to ensure the exhaustiveness of the collection and storage of disease surveillance data.

References

- [1] Kerber R, Lorenz E, Duraffour S, Sissoko D, Rudolf M, Jaeger A, et al. Laboratory findings, compassionate use of favipiravir, and outcome in patients with Ebola virus disease, Guinea, 2015 - a retrospective observational study. *J Infect Dis.* 21 févr 2019;
- [2] Varkey JB, Shantha JG, Crozier I, Kraft CS, Lyon GM, Mehta AK, et al. Persistence of Ebola Virus in Ocular Fluid during Convalescence. *N Engl J Med.* 18 juin 2015; 372 (25): 2423-7.
- [3] Abbate JL, Murall CL, Richner H, Althaus CL. Potential Impact of Sexual Transmission on Ebola Virus Epidemiology: Sierra Leone as a Case Study. *PLoS Negl Trop Dis.* 2016; 10 (5): e0004676.
- [4] Thorson A, Formenty P, Lofthouse C, Broutet N. Systematic review of the literature on viral persistence and sexual transmission from recovered Ebola survivors: evidence and recommendations. *BMJ Open.* 7 janv 2016; 6 (1): e008859.
- [5] Vernet M-A, Reynard S, Fizet A, Schaeffer J, Pannetier D, Guedj J, et al. Clinical, virological, and biological parameters associated with outcomes of Ebola virus infection in Macenta, Guinea. *JCI Insight.* 23 2017; 2 (6): e88864.
- [6] Jalloh MF, Bunnell R, Robinson S, Jalloh MB, Barry AM, Corker J, et al. Assessments of Ebola knowledge, attitudes and practices in Forécariah, Guinea and Kambia, Sierra Leone, July-August 2015. *Philos Trans R Soc Lond B Biol Sci.* 26 mai 2017; 372 (1721).
- [7] Kerber R, Krumkamp R, Diallo B, Jaeger A, Rudolf M, Lanini S, et al. Analysis of Diagnostic Findings From the European Mobile Laboratory in Guéckédou, Guinea, March 2014 Through March 2015. *J Infect Dis.* 15 2016; 214 (suppl 3): S250-7.
- [8] Kibadi K, Mupapa K, Kuvula K, Massamba M, Ndaberey D, Muyembe-Tamfum JJ, et al. Late ophthalmologic manifestations in survivors of the 1995 Ebola virus epidemic in Kikwit, Democratic Republic of the Congo. *J Infect Dis.* févr 1999; 179 Suppl 1: S13-14.
- [9] Molecular Evidence of Sexual Transmission of Ebola Virus. - PubMed - NCBI [Internet]. [cité 16 juill 2019]. Disponible sur: <https://www.ncbi.nlm.nih.gov/pubmed/26465384?dopt=Abstract>
- [10] Dowell SF, Mukunu R, Ksiazek TG, Khan AS, Rollin PE, Peters CJ. Transmission of Ebola hemorrhagic fever: a study of risk factors in family members, Kikwit, Democratic Republic of the Congo, 1995. *Commission de Lutte contre les Epidémies à Kikwit. J Infect Dis.* févr 1999; 179 Suppl 1: S87-91.
- [11] Nkangu MN, Olatunde OA, Yaya S. The perspective of gender on the Ebola virus using a risk management and population health framework: a scoping review. *Infect Dis Poverty.* 11 oct 2017; 6 (1): 135.
- [12] Epstein L, Wong KK, Kallen AJ, Uyeki TM. Post-Ebola Signs and Symptoms in U.S. Survivors. *N Engl J Med.* 17 déc 2015; 373 (25): 2484-6.
- [13] De Roo A, Ado B, Rose B, Guimard Y, Fonck K, Colebunders R. Survey among survivors of the 1995 Ebola epidemic in Kikwit, Democratic Republic of Congo: their feelings and experiences. *Trop Med Int Health TM IH.* nov 1998; 3 (11): 883-5.
- [14] Lindblade KA, Nyenswah T, Keita S, Diallo B, Kateh F, Amoah A, et al. Secondary Infections with Ebola Virus in Rural Communities, Liberia and Guinea, 2014-2015. *Emerg Infect Dis.* 2016; 22 (9): 1653-5.
- [15] Mohammed A, Sheikh TL, Gidado S, Poggensee G, Nguku P, Olayinka A, et al. An evaluation of psychological distress and social support of survivors and contacts of Ebola virus disease infection and their relatives in Lagos, Nigeria: a cross sectional study--2014. *BMC Public Health.* 27 août 2015; 15: 824.
- [16] S S, A D, B T. [Ebola in Guinea: experience of stigma among health professional survivors]. *Bulletin de la Societe de pathologie exotique (1990) [Internet].* oct 2016 [cité 25 mars 2021]; 109 (4). Disponible sur: <https://pubmed.ncbi.nlm.nih.gov/27456158/>