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Determinants of quality of life among adolescent and young adult Ebola survivors in Democratic Republic of the Congo, quasi-experimental study

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ABSTRACT: Ebola virus disease has been widely researched in sub-Saharan Africa, but very few studies examining the determinants on quality of life among adolescents and young adults Ebola survivors in sub-Saharan and particularly in Democratic Republic of Congo. Objective was to determine the determinants of quality of life. A mixed method quasi experimental study design was employed which utilized both quantitative and qualitative methods. The study was conducted in Eastern Democratic Republic of Congo after the Ebola outbreak of 2018-2020. The target population was EVD adolescent and young adult survivors aged 10 to 24 years. A random sample of 46 survivors at the baseline and 45 at the endline were recruited for quantitative data, qualitative data was obtained from 14 in-depth interviews and 5 focus group discussions. Majority of the participants were female. In a multivariable regression analysis, social support (aOR=2.19; 95%CI=1.02-4.70; p=0.04) and confusion (aOR=0.26; 95%CI=0.11-0.61; p=0.001) were significant determinants affecting quality of life among adolescent and young adult Ebola survivors. In qualitative analysis, participants associated education, medical care, availability of food especially local foods and counselling with better quality of life. The quality of life of the adolescents and the young adults Ebola survivors is poor and social support and confusion were significantly associated.

KEYWORDS: *Adolescents, determinants, Ebola Virus Disease, quality of life, young adults Adolescent.*

I.INTRODUCTION

Ebola virus disease (EVD), formerly known as Ebola hemorrhagic fever, is an uncommon but severe and typically devastating ailment in humans [1]. The virus is transmitted through direct contact with an infected animal (bat or nonhuman primate) or a sick or deceased person infected with the Ebola virus and contaminated objects like needles [2]. As a result of EVD, the affected communities have experienced stigma, isolation, discrimination, ostracism and physical violence resulting to poor quality of life [3]. The stigma associated with Ebola, like that of any other sickness, has the potential to foster unfavorable perceptions about those who have been infected. While there have been tremendous efforts to control EVD infection, issues impacting on psychological/mental health of the survivors have received far less attention [3]. The World Health Organization has emphasized the psychological care of survivors in its publications and donors to organizations like the International Medical Corps are becoming more open to sponsoring mental-health initiatives [4].

According to Parpia, Ndeffo-Mbah [5], the Ebola pandemic also significantly disrupted healthcare services and caused setbacks in control and treatment of HIV, tuberculosis, measles and malaria in Guinea, Liberia and Sierra Leone. The outbreak had a profound effect on children as well. Children under the age of 15 accounted for over 20% of all EVD cases, and an estimated 30,000 children were left orphaned as a result of the pandemic. Routine vaccinations declined by 30% as previously allocated funds and resources for child vaccination programs were diverted to the Ebola response or postponed to avoid public gatherings, increasing the risk of vaccine-preventable infections for children [6]. Earlier epidemics in Uganda and the Democratic Republic of Congo, Ebola survivors face both short- and long-term physical as well as neurological consequences following their discharge from Ebola treatment centers which lowers their quality of life [7, 8].

Quality of life is the perceived status in regard to one's aspirations, expectations, and standards in the context of the culture in which one lives. Quality of life has become an important concept and aim in the disciplines of health and medicine, as evidenced by research and clinical practice in several areas [9]. Previously, medical and health research only focused primarily on biological outcomes rather than quality of life outcomes. Nevertheless, there has been a rise in the use of quality of life (QoL) evaluations during the past several decades [10]. Assessing quality of life (QoL) is critical to improving patient treatment, rehabilitation, and symptom reduction. A patient's self-reported quality of life (QoL) may lead to changes in therapy and care, or it may disclose that some therapies are ineffective [9]. This kind of information was used to help patients understand and prepare on ways of coping with diseases and their treatment.

Ebola in adolescents and young adults is a concern as they are the part of the economically active segment of the population and the effects of Ebola is therefore greater on these people and the family member. Majority of patients who suffered both communicable and non-communicable diseases, often report a decline in quality of life due to limited physical activities, inability to do their daily chores and activities resulting from pain, tiredness, emotional distress, depression and personal opinion of one's health as compared to their peers which affects their lifestyle [11]. A study conducted in Kenya found that most adolescents and young people who suffered a long-term sequel, where characterized by fatigue, unfavorable functionable state, cognitive impairment, depression and most of them were unemployed [11]. The impact of these ailments affects the adolescents and young adults physically, psychologically, socially, mentally and economically resulting in poor quality of life. Several studies have been conducted in Sub-Sahara Africa to assess the quality of life of different segments of the population, however there is no published literature available about the determinants of quality-of-life adolescents and young adult Ebola survivors. Therefore, this study seeks to find out the determinants of the quality of life of adolescents and young adult Ebola survivors.

II. METHODS

2.1 Study area, design, and population

The study used both qualitative and quantitative methodologies in a mixed-method, quasi-experimental study design. The study was conducted in two health zones; Beni and Katwa health zones of North-Kivu province in Eastern Democratic Republic of Congo. The two communities have the same culture and socio-economical activities. DRC has a population of 89.56 million. Study population was adolescents aged 10 to < 18 years and young adults aged 18 to 24 who are EVD survivors. A total of 92 adolescents and young adults were recruited in the quantitative method. In qualitative method, adolescent survivor's caregivers, young adult survivor's proxies and community health workers were also interviewed, five focus group discussion with adolescent and young adult survivors, adolescent and young adult key caregivers and community health works.

2.2 Study intervention

Over the course of a four-month period, adolescents and young adults, caregivers, and community health care providers received four training sessions. Sessions were typically held once a month. Adolescent and young adult Ebola survivor, caregiver and community health workers 'intervention was composed of a variety of approaches, including the provision of safe spaces, the development of life skills and social assets, their engagement in relationships with mentor who was assigned to each group of survivors, caregivers, and community health workers. The aim of training sessions was to help community health workers, adolescents, and young adults build social networks with peers, strengthen a positive mentee-mentor relationship, and gain confidence in addition to introducing caregivers and community health workers to caregivers and adolescent and young adult survivors. The discussion groups served as a platform to talk on how to keep caring for adolescent and young adult Ebola survivors, as well as to help empowerment, and well-being of the adolescent and young adult survivors. Adolescents and young adults in the intervention and control groups completed baseline and final surveys prior to and following the intervention.

2.3 Sampling

A simple random sampling method was used to collect quantitative data where at the baseline, 46 interviews were done for both the intervention and control groups and 45 interviews at the endline for both groups. This study measured the degree to which data collected through questionnaires accurately reflects a certain domain or the content of a particular notion [12]. In order to reduce bias and ensure the validity of the study's findings, the researcher used a random sample of study participants. For the qualitative data, a purposive sampling technique was used. The sample size for each exclusive group was determined using cluster proportional sampling method with 5 focus group discussions and 14 In-depth interviews.

2.4 Sample size and Data collection

We utilized [13] sample size estimation formula to calculate the necessary sample size.

$$n = \frac{(Z_{\frac{\alpha}{2}} + Z_{\beta})^2\{P_1(1-P_1) + P_2(1-P_2)\}}{(P_1 - P_2)^2} * D.E$$

Where:

n= minimum number of study participants in in both the intervention and the control groups.

P_1 is average proportion of outcome in the population (intervention) at baseline (0.50)

P_2 is average proportion of outcome in the population intervention at endline (0.80)

Zα is normal variate at 5% (1.96)

Zβ is the power at 80% (0.84)

P_1-P_2 is the Effect Size, the expected change due to the intervention (0.3)

D.E is the Design Effect. The effect of non-random sampling in the study design (1.5)

After correcting for a 30% non-response rate, 47 participants were placed in both the intervention and the control groups. Interviews with adolescent and young adult EVD survivors were conducted by qualified study assistants under the supervision of the principle investigator. Utilizing CommCare by Dimagi.Inc. lastest Version 2.52.1, the research assistants gathered quantitative data.

2.5 Selection and training of the study team

Research assistants were recruited and trained for the purpose of data collection and ethics of research like obtaining research consents or assents and maintaining privacy and anonymity of the participants. They were trained on different aspects of qualitative research methods like conducting in-depth interviews and focus group discussions. Additionally, they were taken through an overview of quality of life to have a clear understanding of the research topic.

2.6 Data collection

Quantitative data was collected using CommCare by Dimagi.Inc. lastest Version 2.52.1, while qualitative data was collected using a key informant guide and focus group guide. Socio-demographic and medical factors variables were collected. Socio-demographic variables included; age (10-<18 and 18-24), sex, education level (None/Primary, Secondary, higher), marital status (married, unmarried), residence (rural, urban), religion (protestant, catholic, other) and socio-economic status. The variables for the medical factors was visual impairment, muscle pain, chest pain, fatigue, hearing loss, sleep problem, convulsions and diarrhea. Data was collected using interviewer administered pretested questionnaires of WHO quality of life Breef (WHOQOL-BREEF). A sum of 78 or higher indicated a high level of life quality [14]. The quality of life was measured and was classified into two categories of quality of life, poor and good. A Likert scale was used to measure the quality of life ranging from 1- not at all, 2- slight, 3- moderate, 4- very, 5- complete. Poor quality of life was the inability of a person to maintain a comfortable standard of life; poor physical and mental health, low education levels and inability to provide for his or her family. Good quality of life was a person's ability to provide for his or her family and maintain a comfortable standard of living, as well as good physical and mental health and ability to enjoy leisure time based on the four domains. In qualitative data collection, the in-depth interview guide captured the health related quality of life, health care and the impact of determinants on quality of life.

2.7 Data Analysis

To determine the quality of life of adolescents and young adult EVD survivors, descriptive analysis was used. The Pearson correlation coefficient was utilized to check whether the predictor variables are multicollinear. The regression analysis produced the crude odds ratio (COR), adjusted odds ratio (aOR), 95% confidence interval (CI), and p-value. Statistical significance was defined as a p-value 0.05. The final multivariate model contained variables that were significant in the bivariate analysis. The research used the assumption that each pair of outcomes had a proportional chance of being either bad or good quality of life.

2.8 Ethical consideration

Prior to data collection, a research permit from National Ethical Comity of Research in Democratic Republic of Congo and Great Lake University of Kisumu-Kenya, helped to alleviate mistrust and allowed the participants to reveal much of the information required for the study. Written informed adolescent assent and adult consent were provided. Since some of the data to be gathered is sensitive, the researcher has a moral obligation to handle the information with the utmost propriety. Throughout the study, participants' privacy and confidentiality were respected.

III. RESULTS

3.1 Quantitative findings

3.1.1. Socio-demographic determinants of the study participants.

As shown in table 1 and 2, there was no significant difference in sociodemographic determinants between intervention and control group at baseline and after the intervention. A majority of participants was 18-24 years old, female, and unemployed.

Table 1: Sociodemographic determinants, part 1

Variables	Intervention				Control			
	Baseline (n=46)		Endline (n=45)		Baseline (n=46)		Endline (n=45)	
	n	%	n	%	n	%	n	%
Age								
10 - < 13	11	23.91	11	23.91	4	8.70	4	8.89
13 - < 18	5	10.87	5	10.87	10	21.74	9	20.00
18 - 24	30	65.22	29	64.45	32	69.57	32	71.11
Sex								
Female	28	60.87	27	60.00	27	58.70	26	57.78
Male	18	39.13	18	40.00	19	41.30	19	42.22
Marital status								
Married	7	15.22	12	26.67	8	17.39	4	8.89
Single	39	84.78	33	73.33	38	82.61	41	91.11
Residence								
Rural	14	30.43	0	0.00	14	30.43	15	33.33
Town	32	69.57	45	100.00	32	69.57	30	66.67
Occupation								
Unemployed	33	71.74	38	84.44	35	76.09	31	68.89
Employed	13	28.26	7	15.56	11	23.91	14	31.11
Education								
Primary-none	28	60.87	12	26.67	34	73.91	30	66.67
Secondary or higher	18	39.13	33	73.33	12	26.09	15	33.33

Table 2: Sociodemographic determinants, part 2

Variables	Intervention				Control			
	Baseline (n=46)		Endline (n=45)		Baseline (n=46)		Endline (n=45)	
	n	%	N	%	n	%	n	%
Religion								
Protestant	19	41.30	21	46.67	16	34.78	11	24.44
Catholic	21	45.65	21	46.67	18	39.13	25	55.56
Other	6	13.04	3	6.66	12	26.09	9	20.00
Shelter								
Yes	42	91.30	23	51.11	37	80.43	43	95.56
No	4	8.70	22	48.89	9	19.57	2	4.44
Stay with								
Parent	18	39.13	30	66.67	21	45.65	26	57.78
Other family	28	60.87	15	33.33	25	54.35	19	42.22
Parents alive								

Yes	13	28.26	9	20.00	10	21.74	7	15.56
No	15	32.61	6	13.33	15	32.61	12	26.67
Household head								
Yes	8	17.39	22	48.89	8	17.39	18	40.00
No	38	82.61	23	51.11	38	82.61	27	60.00
Household number								
0-3	1	2.17	5	11.11	6	13.04	1	2.22
4-7	26	56.52	15	33.33	17	36.96	33	73.33
>7	19	41.30	25	55.56	23	50.00	11	24.44
Monthly allowance								
<20000 (Congolese franc)	32	69.57	37	82.22	30	65.22	22	48.89
≥20000 Congolese franc	14	30.43	8	17.78	16	34.78	23	51.11

3.1.2. Medical determinants of the study participants (Table 3)

As shown in Table 3, no significant difference was reported in the medical condition of intervention and control group, the control group reported fatigue more frequently.

Table 3: Medical determinants

Variables	Intervention				Control			
	Baseline (n=46)		Endline (n=45)		Baseline (n=46)		Endline (n=45)	
	N	%	n	%	n	%	n	%
Vision Impairment								
Yes	10	21.74	16	35.56	8	17.39	17	37.78
No	36	78.26	29	64.44	38	82.61	28	62.22
Muscle pain								
Yes	10	21.74	12	26.67	8	17.39	22	48.89
No	36	78.26	33	73.33	38	82.61	23	51.11
Chest Pain								
Yes	1	2.17	12	26.67	3	6.52	3	6.67
No	45	97.83	33	73.33	43	93.48	42	93.33
Fatigue								
Yes	12	26.09	20	44.44	12	26.09	35	77.78
No	34	73.91	25	55.56	34	73.91	10	22.22
Hearing loss								
Yes	2	4.35	4	8.89	2	4.35	7	15.56
No	44	95.65	41	91.11	44	95.65	38	84.44
Sleep problem								
Yes	7	15.22	11	24.44	6	13.04	12	26.67
No	39	84.78	34	75.56	40	86.96	33	73.33
Convulsions								
Yes	0	0.00	2	4.44	3	6.52	6	13.33
No	46	100.00	43	95.56	43	93.48	39	86.67
Diarrhea								
Yes	2	4.35	7	15.56	2	4.35	12	26.67
No	44	95.65	38	84.44	44	95.65	33	73.33

3.1.3. Quality of life

Table 4 shows that more than half of the participants reported good quality of life. There was a positive change of 21.35% in the quality of life in the intervention group and 8.26% change in the control group. The difference in difference was 13.09%.

Table 4: Quality of life of adolescent/young adults Ebola survivors

Quality of life	Intervention					Control					
	Baseline(n=46)		Endline (n=45)		Diff %	Baseline (n=46)		Endline(n=45)		Diff %	DID %
	n	%	n	%		n	%	n	%		
Poor	18	39.13	8	17.78		13	28.26	9	20.0		
Good	28	60.87	37	82.22	**21.35**	33	71.74	36	80.0	**8.26**	**13.09**

3.1.4. Bivariate analysis of socio-demographic determinants and quality of life.

As shown in tables 5 and 6, in the bivariate analysis most socio-demographic determinants were unrelated to the success of intervention on the quality of life in EVD survivors. Only being catholic was associated with quality of life after the intervention.

Table 5: Socio-demographic determinants, bivariate analysis, part 1

	Intervention			Control		
Variables	**Unadjusted O.R**	**95%C.I**	***p*-value**	**Unadjusted O.R**	**95% C.I**	***p*-value**
Age						
10 - < 13	Ref					
13 - < 18	0.91	0.18 - 4.50	0.91	3.11	0.52 - 18.38	0.21
18 - 24	1.23	0.37 - 4.06	0.73	2.18	0.54 - 8.75	0.27
Gender						
Female	Ref			Ref		
Male	1.7	0.64 - 4.48	0.28	2.31	0.81 - 6.60	0.12
Marital status						
Married	Ref			Ref		
Single	0.24	0.05 - 1.10	0.07	0.25	0.03 - 2.06	0.20
Residence						
Rural	Ref			Ref		
Town	2.14	0.66 - 6.92	0.21	1.00	0.36 - 2.79	1.00
Occupation						
Unemployed	Ref			Ref		
Employed	1.8	0.54 - 6.00	0.34	1.39	0.45 - 4.27	0.57
Education						
Primary-none	Ref			Ref		
Secondary or higher	1.75	0.70 - 4.38	0.23	1.17	0.40 - 3.40	0.78

Table 6: Socio-demographic determinants, bivariate analysis, part 2

	Intervention			Control		
Variables	**Unadjusted Odds Ratio**	**95% C.I**	***p*-value**	**Unadjusted O.R**	**95% C.I**	***p* -value**
Religion						
Protestant	Ref			Ref		
Catholic	0.34	0.12 - 0.96	**0.04**	0.90	0.30 - 2.69	0.86
Other	0.42	0.08 - 2.12	0.3	2.10	0.47 - 9.36	0.33
Shelter						
Yes	1.5	0.56 - 3.98	0.42	1.97	0.52 - 7.49	0.32
No	Ref			Ref		
Stay with						
Parent	Ref			Ref		
Other family	0.69	0.28 - 1.72	0.43	0.72	0.28 - 1.89	0.51
Household head						
Yes	1.48	0.54 - 4.06	0.44	1.09	0.37 - 3.18	0.88
No				Ref		
Household number						
0-3	Ref			Ref		
4-7	1.21	0.19 - 7.5	0.84	0.53	0.06 - 4.83	0.57
>7	1.33	0.21 - 8.25	0.76	0.46	0.05 - 4.39	0.50
Monthly allowance						
<20000 (Congolese franc)	Ref			Ref		
≥20000 Congolese franc	1.09	0.37 - 3.18	0.88	2.37	0.83 - 6.79	0.11

3.1.5. Bivariate analysis of medical determinants on quality of life

The bivariate analysis of the medical determinants revealed no difference in quality of life between intervention and control groups. (table 7)

Table 7: Medical determinants associated with Quality of life

	Intervention			Control		
Variables	**Unadjusted OR**	**95% C.I**	***P*-value**	**Unadjusted O.R**	**95% C.I**	***p* -value**
Vision Impairment						
Yes	0.86	0.32 - 2.33	0.77	0.44	0.16 - 1.21	0.11
No	Ref			Ref		
Muscle pain						
Yes	0.62	0.22 - 1.72	0.36	0.49	0.18 - 1.31	0.16
No	Ref			Ref		
Chest Pain						
Yes	0.88	0.25 - 3.17	0.85	0.29	0.05 - 1.54	0.15
No	Ref			Ref		
Fatigue						
Yes	0.82	0.32 - 2.11	0.68	0.86	0.33 - 2.25	0.76
No	Ref			Ref		
Hearing loss						

Yes	0.79	0.14 - 4.58	0.79	0.6	0.14 - 2.64	0.5
No	Ref			Ref		
Sleep problem						
Yes	0.55	1.89 - 1.64	0.28	1.76	0.46 - 6.75	0.41
No	Ref					
Convulsions						
Yes	(omitted)			0.35	0.09 - 1.45	0.15
No						
Diarrhea						
Yes	0.46	0.11 - 1.86	0.28	1.2	0.30 - 4.76	0.79
No	Ref					

3.1.6. Multivariable logistic regression analysis

As shown in table 8, the multivariable logistic regression analysis revealed that social support and confusion were factors affecting quality of life among adolescent and young adult survivors of Ebola.

Table 8: Multivariable logistic regression analysis of factors associated with Quality of life

	Good Quality of life		
Variables	**aOR**	**95% C.I**	***p*-value**
Religion			
Protestant	Ref		
Catholic	0.52	0.24 - 1.15	0.11
Other	1.05	0.34 - 3.26	0.93
Social support			
Yes	**2.19**	1.02 - 4.70	**0.04**
No	Ref		
Confusion			
Yes	**0.26**	0.11 - 0.61	**0.001**
No	Ref		
Anxiety attacks			
Yes	1.02	0.43 - 2.41	0.96
No	Ref		

3.2 Qualitative findings

4.11.1 Sociodemographic determinants associated with quality of life

The majority of the households from which Ebola survivors came faced numerous difficulties both during and after the outbreak. Participants describe receiving extremely severe treatment from their very close relatives as a result of having survived Ebola. For instance, a participant reported that his parents would lock him up in the toilet. Other participants were considered as bad omen in their families and faced segregation from the family members. This led to family situation and relations deteriorating resulting in poor quality life.

"My parents punish me by locking me inside the toilet until I calm down." [**Adolescent (10- 18), FGD]**

"Discrimination of some survivors and their families." **(Proxies young adult, FGD)**

"Survivors are considered bad luck in their families." **(Community Health Workers, FGD)**

The participants experienced a lot of stigmatization especially from family members and public places such as schools, churches and market places since they were unable to share the same items with them out of concern of getting infected. Other survivors were rejected by their close family members, other relatives even pushed for divorce even after being treated and recovered.

"People are afraid of us (Stigmatization) at school, market and church, neighbor and family members; they refuse to touch the objects we have touched" **(Adolescent (10- 18) FGD).**

"I and my child were cured of the Ebola virus disease while my neighbors spoke to us unbearable and nasty words". **(IDI 1).**

"Even though I am responsible for my family, however, my in-laws are making are forcing me to divorce my husband because I am an Ebola Virus Disease survivor and I am older than my husband." **(IDI 2).**

"My husband died of Ebola, I'm a survivor widow and neighbors call me a wizard because of this I have high blood pressure". **(IDI 2).**

"My children's father left a long time ago. My husband has abandoned me and I don't have sex with him anymore because he tells me that I am a wizard and the virus is still in my body. Where he is, he lives with another woman so I have many worries in my mind." **(IDI 2).**

Some participants described receiving extreme severe treatments from their very close relatives, for example, one participant reported being locked up in the toilet while others reported being considered as bad luck in their families, which deteriorated their relationships with their families resulting in poor quality of life.

*"My parents punish me by locking me inside the toilet until I calm down" (***Adolescent (10-18) FGD).**

"Discrimination of some survivors and their families" **(Proxies young adult FGD).**

"Survivors are considered bad luck in their families" **(Community Health Workers FGD).**

4.11.2 Medical determinants associated with quality of life

Participants reported having developed adverse health conditions as a result of the stigma, for instance, one participant reported having developed hypertension. In addition, another participant mentioned that they were unable to participate in sports with their friends after they survived the Ebola virus.

"For me adolescents at school abuse me. They say that I still have the Ebola virus and I can infect everyone. They tell me that I can't be married and they can't play with me because they don't want to be infected by the virus. This makes me feel bad and I cry". **(Young adult 18-24 FGD).**

"For me, I can't play sports yet I like football". **(Adolescent (10- 18) FGD).**

Some participants reported that they experienced discrimination when accessing health care at the health zones therefore, most of them stopped accessing the health services while others had financial constraints and were unable to access healthcare which led to poor quality of life.

"Survivors are always discriminated against in the Health Zones" **(Caregiver adolescent 10- 18 FGD).**

"They lack money for transportation to go to the health center when they get sick" **(Caregiver adolescent 10- 18 FGD).**

Adolescent and young Ebola survivors experienced include forgetfulness, meanness, behavior change, lack of love, and lack of psychological support which resulted in poor quality of life. In addition, EBV survivors highlighted that there was need for counseling sessions and constant religious teachings due to the suicidal thoughts that the survivors had developed.

"Adolescents have suicidal thoughts and behavior (it's necessary to teach them the word of God)." **[Caregiver adolescent (10- 18), FGD]**

IV. DISCUSSION

The findings of this study established that provision of education, medical care and food had a significant influence on the quality of life of adolescents and young adult survivors. Participants who were highly educated had good quality of life compared to those who had no education or had primary level, despite being insignificant in quantitative analysis. These findings were similar to a study done in Sierra Leone which also established that people who had no formal education reported a decrease in the quality of life than people who had tertiary education [1]**.** Despite religion being insignificant in the quantitative analysis, religious teachings were pointed out during the focus group discussion to reduce suicidal thoughts among adolescents. In addition, from the qualitative findings, the participants reported having general body weakness which made them dependent on caregivers for physical support and they also suffered from both social and psychological problems. However, convulsions, anxiety attack and sexual activity was not significant in this study but other studies found these determinants to be among the health conditions that have detrimental effects on the quality of life of the EVD survivors and also those around them which leads to a low quality life. According to a study conducted in Uganda by Clark, Kibuuka [7] during the Ebola outbreak, EVD survivors experienced several medical issues as a result of the disease's impact on their lives. This study also established that these participant's ability to generate revenue was very little that they were more reliant on others in their families or community for assistance which shows a low quality of life. Similarly, from the findings in the IDIs, most participants appealed for financial help to assist them meet their daily needs. In terms of the sexual activity, some male survivors may still carry the Ebola virus in their semen and they can pass it to their mates if they engage in sexual relations. A study conducted by Venables [15] in Liberia showed that men were more stigmatized and discriminated than women because of this fact. This shows how sexual activity contributes majorly to poor life quality. However, in our study, more women were stigmatized and discriminated by the family members and the husband which resulted in high levels of separation and divorce. Social support and confusion were determinants significantly associated with quality of life.

V. CONCLUSION AND RECOMMENDATIONS

The study has established that socio-demographic and medical determinants play a key role in determining the quality of life of the adolescents of Ebola survivors, however, community support is a determinant which adds value to the life quality beyond focusing on medical care in the health facilities. Provision of education, medical care and food had a positive impact on the quality of life whereas convulsions, anxiety attack, inability to generate revenue, general body weakness and sexual activity had a negative impact on the quality of life.

VI. ACKNOWLEDGMENTS

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