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Factors Associated with Elevated Scores of Depression among Children Affected by HIV-Related Loss: A Kenyan Study

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Abstract:

Kenyan children affected by HIV-related loss go through considerable levels of physical and psychosocial challenges. This study sought to establish the factors that are associated with elevated score of depression among children of between age 8 and 12 who had lost a parent to AIDS or were living with a sick relative. A cross-sectional survey involving 210 participants, comprising 110 boys and 100 girls with a mean age of 11 years from two non-institutionalized Children's organizations, Chosen Children of Promise (CCP) and Amka Health Project (AHP) both located in Kawangware, Nairobi County was conducted. Data was collected using Children Depression Inventory (CDI), and a Socio-Demographic Questionnaire (SDQ). The results revealed that death of biological parent, lack of food, shame and stigma are the predominant factors that are associated with elevated score of depression among the study participants. It was recommended that relevant stakeholders could consider engaging psychologists/therapists in identifying symptoms of mental health challenges in target children and providing appropriate and timely interventions to such children.

Keywords: Children depression inventory, parental bereavement, logistic regression, psychological disorders, shame, stigma

1. Introduction

Globally, millions of children are either partial or total orphans as a result of loss of one or both parents through Acquired Immunodeficiency Syndrome (AIDS). Such children are often faced by some psychological distress and mental health burdens (Sherr et al., 2018; Skeen et al., 2016, 2017). Among the burdens faced are mental disorders which include but not limited to depression, anxiety and posttraumatic stress disorder (PTSD), as well as psychosocial challenges like stigma, social withdrawal, lack of confidence, poor self-efficacy and poor self-esteem (Gentz et al., 2018; Vreeman et al., 2017; Walsh et al., 2017). Furthermore, the major experience in HIV-affected households such as the families from which the participants of this study came from have an adverse effect to the children (Collishaw et al., 2016; Gamarel et al., 2017; Woollett et al., 2017). For instance, such households have challenges of space leading to overcrowding, financial challenges due to unemployment, physical and emotional abuses and community violence that may consequently cause a probable intense long-term impact on the child's psychological well-being, thus compromising his or her future (Sherr, Hensels, Tomlinson, Skeen, & Macedo, 2018).

In Kenya, many of these children sacrifice their childhood parenting their siblings and taking care of their ailing and dying parents suffering from HIV-related illnesses (UNICEF, 2015). Additionally, the fact that HIV-related death is often labeled as 'bad death' due to its linkage with shameful sexual practice and immorality makes the affected children go through stigma and discrimination attributed to their parents' status and cause of death (Cluver, Gardner & Operario, 2007; Cluver & Gardner, 2007; Harms, Kizza, Sebunnya & Jack, 2009; Asanbe, Anne-Gloria Moleko, Visser, Thomas, Makwakwa, Waleska Salgado, & Tesnakis, 2016). This is an extra crisis for such children in that ordinarily loss of one or both parents for a child is a traumatic and hurtful event that often results into disrupted attachment, emotional insecurity, lack of food and shelter, dropping out of school, multiple losses, as well as inadequate protection among others (Haine, Ayers, Sandler & Wolchik, 2008; Zinyemba, 2020). The effect of the above multiple impact on the children results in psychological distress and a high possibility of unresolved grief leading to the development of pathologies such as depression and PTSD, among others (Lin, Fang, Chi, Chen & Heath, 2014). In this context, depression is known to develop in children going through HIV-related loss due to the stress associated with their separation from attachment figures, loss of a home, failure to continue with education, stigma, discrimination and guilt, with some imagining they are the cause of their parents' death (Asanbe et al., 2016; Betancourt, 2014). The above indications are congruent with those of Cluver and Gardner (2007) who stated that children of HIV-infected parents get tormented by the painful experience of observing their parents suffer prolonged pain which make these parents disabled before they finally succumb to death leaving their children as orphans. Similarly, Kinai (2008) discovered that approximately 80% of the children orphaned by AIDS continue to grieve their parents' death across time, even years later after the loss. He reported how such children go through prolonged anticipatory grief during their parents' prolonged period of sickness, a situation that typically results to depression.

Additionally, in sub-Saharan Africa, multiple cross-sectional studies have revealed the existence of emotional

distress among children going through HIV-related loss and in particular, with regard to symptoms of depression and PTSD (Atwine, Cantor-Graae & Bajunirwe, 2005; Bhargava, 2005; Cluver, Gardner & Operario, 2007; Nyamukapa et al., 2008; Toska, Laurenzi, Roberts, Cluver & Sherr, 2020). In another study, stigma was also found to be a major risk factor among this vulnerable population (Cluver, Gardner & Operario, 2008; Cluver & Orkin, 2009; Cluver, Orkin, Gardner & Boyes, 2012; Wang et al., 2012).

Similarly, findings from other studies conducted in South Africa noted that children orphaned by AIDS do experience stigmatization and discrimination associated with their parents' status and cause of death (Cluver, Gardner & Operario, 2007; Cluver & Gardner, 2007; Harms, Kizza, Sebunnya & Jack, 2009; Hong, 2011). According to Dlamini, Kohi, Uys, Phetlhu, Chirwa and Naidoo (2007) and Zinyemba, (2020), the presence of stigma and discrimination among these children can be reflected through verbal or physical abuse, abandonment, or isolation. Name-calling, separation of utensils and denial of access to important services like education and health care are also expressions of discrimination suffered by these children. In addition, within households, HIV-affected children experience discrimination when they are treated differently from the biological children of their subsequent care-giver. This is where they are sometimes allocated more house chores, given less food, and in case of a mistake they are punished more harshly (Daniel, 2005; Deacon & Stephney, 2007; Harrison, Sayward Li, Xiaoming, Zhang, Zhao, Junfeng, & Zhao, 2018). As a result, such children end up with negative thoughts regarding their situation and some of them tend to develop symptoms of low self-esteem and depression.

Against the background presented above, the current study, which is a cross-sectional survey, sought to establish whether similar factors as those depicted by previous studies are among the factors associated with depression symptoms experienced by the Kenyan children who have lost their loved ones to AIDS or are living with relatives suffering from HIV-related illnesses. The study was guided by one major research question: What factors are associated with elevated score of depression among Kenyan children who have lost their loved ones to AIDS or are living with relatives suffering from HIV-related illnesses?

2. Method

A cross-sectional research design was used for the study.

2.1. Participants

A sample size of 210 participants aged between 8 and 12 years was determined from a population of 583 children through a simple stratified and purposive sampling technique.

First, the entire population was grouped according to gender and then all children aged between 8 and 12 years were purposively selected to form the study group. The participants' mean age was 11 years of which 50.4% were boys and 49.6% were girls.

2.2. Instruments

The instruments for the study were the Children Depression Inventory (CDI) and the Socio-Demographic Questionnaire (SDQ).

2.3. Children Depression Inventory

Children Depression Inventory (CDI) was used to check on the levels of depression scores among the two independent participants, while the Socio-Demographic Questionnaire (SDQ) helped in determining the factors associated with the elevated scores of the depression. This is a 27-item scale that is self-rated and symptom-oriented in which clients rated them based on how they feel and think. Each item contained three (3) options from which participants must select one of the options whose scores range from 0-2. The selected options ultimately helped in assessing the level at which the individual participant was associated with depression.

Sample items comprising the CDI tool are:

- I am sad once in a while
- I am sad many times
- I am sad all the time
- Nothing will ever work out for me
- I am not sure if things will work out for me
- Things will work out for me okay.

A total CDI score is calculated by adding all 27 item scores (0 to 2 per item) that vary between 0 (indicating absence of depression) and 54 (indicating presence of all depressive symptoms). Following Bang, Park & Kim (2015) who introduced the use of cut-off score to organize and interpret the trend of the findings in assessing students' performance on the CDI, we have decided to set the cut-off scores for interpreting our participants' performance in the CDI as follows: a score of 0-9 indicates absence of depression; a score of 10-29 indicates mild depression; a score of 30 - 41 reflects moderate depression, while a score of 42-54 reflects severe depression (Bang et al., 2015).

The validity and reliability of CDI tool has been extensively tested since 1960 and proved to be effective in assessing the severity of depressive symptoms considering its adequate-to excellent psychometric properties of $\alpha = .71-.94$ as established by Kovacs (1985) and Loar and Wolmer (1996). For instance, a study by Adewuya et al. (2007) in Nigeria revealed psychometric evidence that supported its use in an African setting.

2.4. Socio-Demographic Questionnaire (SDQ)

The SDQ comprising of 15 demographic questions explored the social characteristics of participants, and a list of 20 factors depicted by various previous studies as causing depression among similar populations was developed specifically for this study. Among the demographic characteristics included were age, gender, category and nature of loss among others, while some of the factors associated with depression included were lack of food, sibling separation, death of biological parent, shame and stigma. Participants were asked to pick those factors that negatively affect them. A bivariate analysis was first done to check on the level of significance and then a logistic regression analysis was done on those factors that registered statistical significance difference to check further on the magnitude of the association.

2.5. Procedure

The two instruments, CDI and SDQ, were administered between August and October 2020. The SDQ gathered information on the demographic characteristics of the participants and the factors associated with development of depression among the participants, while the CDI assisted in screening for depression. A pre-test was done on 5% of the total sample size in a similar setup before the actual data collection commenced. The training was given to research assistants concerning the objective and process of data collection. Considering the age of the participants, completion of the screening tool and filling of the socio-demographic questionnaire was conducted per class. Each class was guided by a trained research assistant who distributed the questionnaires, read aloud, explained each question, and gave the participants time to answer before moving on to the next question. This procedure was adopted to ensure the understanding of the questions and guide the participants through the process in an orderly manner to ensure efficient data collection.

2.6. Ethical Considerations

Ethical approval for the study was obtained from Daystar University Ethical and Research Committee (ERC) and the National Commission for Science, Technology and Innovation (NACOSTI). Consent was also sought from the management of the two study organizations. Both the study participants and their guardians were informed about the purpose of the study, their right to deny participation, anonymity, and confidentiality of the information. Participants being children, informed assent was obtained from the participants while consent was given by their guardians. To ensure maximum confidentiality, codes were used instead of participants' names in all data collection instruments and researcher's documents. The research assistants incorporated in the study also signed consent forms.

2.7. Data Analysis

Data was analyzed using the Statistical Package for the Social Sciences (SPSS 20.0). In particular, frequencies were used to establish the occurrences of depression and anxiety while Pearson's Chi-square test of independence was used to ascertain if any statistical association was observable in between the socio-demographic characteristics and the occurrence of depression. On this, a P-value of 0.05 was interpreted as statistically significant. Further, logistic regression analysis was done to determine the strength of association between the key socio-demographic factors and the occurrence of depression in the study population. The results were presented using tables.

3. Results

Data regarding the factors associated with development of depression among children affected by HIV-related loss was analyzed and presented in tables as indicated below.

	No Depression	Depression	χ^2 statistics	p-value
Age				
8&9 years (N=61)	23 (37.7%)	38 (62.3%)	0.623	0.430
10, 11 & 12 years (N=149)	65 (43.6%)	84 (56.4%)		
Gender				
Boy (N=110)	50 (45.5%)	60 (54.5%)	1.196	0.274
Girl (N=100)	38 (38.0%)	62 (62.0%)		
Biological Parents Alive				
Yes (N=127)	65 (51.2%)	62 (48.8%)	11.358	0.001
No (N=83)	23 (27.7%)	60 (72.3%)		
Parents Died				
Mother (N=23)	5 (21.7%)	18 (78.3%)	1.179	0.555
Father (N=44)	12 (27.3%)	32 (72.7%)		
Both (N=16)	6 (37.5%)	10 (62.5%)		
Family Member Currently Sick				
Mother (N=42)	20 (47.6%)	22 (52.4%)	5.162	0.076
Father (N=17)	3 (17.6%)	14 (82.4%)		
Close Family Member (N=46)	15 (32.6%)	31 (67.4%)		
	No Depression	Depression	χ^2 statistics	p-value
Lack of Food				
No	82 (44.8%)	101 (55.2%)	4.930	0.026
Yes	6 (22.2%)	21 (77.8%)		

	No Depression	Depression	χ^2 statistics	p-value
Dropping from School				
No	80 (43.0%)	106 (57.0%)	0.818	0.366
Yes	8 (33.3%)	16 (66.7%)		
Inconsistent Caregivers				
No	81 (44.3%)	102 (55.7%)	3.250	0.071
Yes	7 (25.9%)	20 (74.1%)		
Siblings Separation				
No	67 (41.9%)	93 (58.1%)	0.000	0.988
Yes	21 (42.0%)	29 (58.0%)		
Relocation from Home				
No	74 (44.8%)	91 (55.2%)	2.741	0.098
Yes	14 (31.1%)	31 (68.9%)		
Multiple Losses				
No	58 (46.8%)	66 (53.2%)	2.949	0.086
Yes	30 (34.9%)	56 (65.1%)		
Fear of Losing Another Person				
No	37 (48.7%)	39 (51.3%)	2.249	0.134
Yes	51 (38.1%)	83 (61.9%)		
Fear of being Infected				
No	34 (43.6%)	44 (56.4%)	0.145	0.704
Yes	54 (40.9%)	78 (59.1%)		
Neglect and Abuse				
No	82 (42.1%)	113 (57.9%)	0.024	0.877
Yes	6 (40.0%)	9 (60.0%)		
Feeling Shame				
No	78 (45.9%)	92 (54.1%)	5.800	0.016
Yes	10 (25.0%)	30 (75.0%)		
Discrimination in Treatment/Care				
No	80 (43.0%)	106 (57.0%)	0.818	0.366
Yes	8 (33.3%)	16 (66.7%)		
Stigma				
No	79 (45.7%)	94 (54.3%)	5.702	0.017
Yes	9 (24.3%)	28 (75.7%)		
Changing Life Status				
No	55 (47.8%)	60 (52.2%)	3.661	0.056
Yes	33 (34.7%)	62 (65.3%)		
Lack of Good Care				
No	82 (44.1%)	104 (55.9%)	3.181	0.075
Yes	6 (25.0%)	18 (75.0%)		
Others Blaming You				
No	55 (44.0%)	70 (56.0%)	0.557	0.456
Yes	33 (38.8%)	52 (61.2%)		
Bullying				
No	61 (40.9%)	88 (59.1%)	0.196	0.658
Yes	27 (44.3%)	34 (55.7%)		

Table 1: Factors associated with depression among the study participants
P=0.05

From the Bivariate analysis highlighted in Table 1 above, the death of biological parent (s) (72.3%), lack of food (77.8%), shame (75.0%), and stigma (75.7%) were revealed as statistically significant factors that contribute to the development of depression among children affected by HIV-related loss. Furthermore, a logistic regression analysis was conducted to establish the extent of association between depression and key factors that were identified as contributing to the development of depression among the participants. The results are as indicated on Table 2 below.

	OR	95% CI	p-value
Biological parents alive			
Yes (N=127)	Reference		0.001
No (N=83)	2.735	1.511 – 4.950	
Lack of food			
No	Reference		0.032
Yes	0.352	0.136 – 0.913	
Feeling shame			
No	Reference		0.018
Yes	0.393	0.181 – 0.855	
Stigma			
No	Reference		0.020
Yes	2.615	1.165 – 5.868	

Table 2: Association between Depression and Factors Associated with Depression among Children Affected by HIV-Related Loss
P=0.005

The above analysis reveals that HIV-affected children whose biological parents were dead were about 2.7 times more likely to develop depression compared with children whose biological parents were alive. This was statistically significant ($p=0.001$). Accordingly, participants who perceived themselves as lacking enough food were 0.35 times likely to exhibit symptoms of depression compared to those who had food. This implied a statistically significant difference ($p=0.032$). Furthermore, participants who perceived themselves as experiencing shame were 0.39 times more likely to develop depression while those who regarded themselves as being stigmatized recorded a probability of 2.6. These findings were both statistically significant as indicated by a p-value of 0.018 and 0.020, respectively.

4. Discussion

These results clearly demonstrate that in response to the primary research question explored in this study, the key factors associated with elevated score of depression among children affected by HIV-related loss are among others death of biological parents, lack of food, shame and stigma as discussed below.

4.1. Death of Biological Parents

In relation to this factor, the children who had lost their biological parents reported a prevalence of 72.3% while those who had lost a mother exhibited higher depressive symptoms of 78.3% compared to those who had lost their fathers at 72.7%. However, the difference was not statistically significant ($p=0.555$). Notably, the depression levels for children who had been born at the time of the parent's death were higher at 87.5% compared to those who had not been born at 76.9%.

The above findings were consistent with those by Lin et al. (2014); Cluver and Gardner, (2007); Nyamukapa et al. (2008); Robson and Sylvester (2007); Ong et al. (2015); Sengendo and Naomi (1997); Atwine, et al. (2005); Fawzy and Fouad (2010); and Gamarel, Kuo, Boyes, & Cluver (2017). In line with the findings of the current study, all of the above cited studies agree that loss of one or both parents for a child, result in disrupted attachment (Bowlby, 1999), emotional insecurity, multiple losses, withdrawal, as well as inadequate protection, and that such experiences expose the affected child into a risk of psychological distress and a high possibility of unresolved grief that consequently result into development of disorders like depression among others. This is in contradistinction to the report by Onuoha and Munakata (2010) who found that AIDS-orphaned children, who experienced a natural mentoring relationship are likely to show lower distress levels and mental health factors. This therefore, explains how critical the presence of a supportive care figure is for the psychological health of an orphan, which appears to be lacking among majority of the current study population. These findings make a lot of sense when seen against report of the study by Asanbe, et. al (2016) which showed that supportive care is essential for promotion of the psychological health of younger children in South Africa who lost their parents due to HIV/AIDS.

Apart from the factor of parental loss in general, the current study found maternal loss specifically to be a major predictor of depression in the lives of the participants. However, the difference in prevalence of depression between maternal and paternal loss was not statistically significant, implying that both losses had similar impact on the psychological wellbeing of the participants. Quite consistent with this study are those by Ruiz-Casares, Thombs and Rousseau (2009) from Namibia and those by Atwine et al. (2005) from Uganda, who found that both maternal and paternal orphans have similar levels of depression.

Additionally, as revealed during the International HIV and AIDS Alliance (2001), depression in children affected by HIV-related loss is likely to set in when parents fail to communicate to them about their HIV status, an experience that makes them feel confused and worried as they observe their parent's health deteriorate each day and yet they were availed with no specific reason to account for this anomaly. Similarly, it has been established that children get depressed as they terribly miss their deceased parents' physical presence as well as the love, care and protection that they offered while they lived. This finding is line with the conclusions from related studies such as those by Atwine, et al (2005), and Mokgatle, et al (2018) on the negative psychological effects on children that arise from parental loss. It can therefore be speculated that depression in this case sets in when on various occasions bereaved children lack someone to communicate

the above aspects of life and to help them go through their grief, leaving them in a state of helplessness (Gentz, et al., 2018; Gamarel, et al (2017).

4.2. Lack of Food

This was the second notable prominent factor associated with the development of depression among the study participants with a high percentage of the participants with depression reporting that they lacked enough food. The fact that food is a key basic need for survival, lack of it would be quite detrimental to someone's physical and psychological wellbeing. A number of previous studies are in keeping with the above finding. Among them is a study by Haines, Ayers, Sandler and Wolchik (2008) and another one by Mokgatle and Madiba (2015) who established that children affected by HIV and AIDS experience a great challenge in regard to food, shelter and education.

Similarly, Betancourt (2014) found food, shelter and dropping from school as factors that facilitate development of depression among AIDS bereaved children though the issues of shelter and school attendance did not appear to be a challenge for the present study participants. The same trend has also been reported by Gentz, et al (2018). Despite the fact that the current study participants were provided with meals during the day in their respective sponsoring organizations, it is evident from the findings that there are those among them who are suffering intensively from lack of food. This is line with the report by Gent, et al (2018) which shows that in Namibia, an additional distress that presents a burden to children orphaned by AIDS is the poverty of their homes both before and after their loss. This is expected given that majority of them live in the slum where majority of the residents are jobless relying on casual jobs that are inconsistency and poorly rewarded.

4.3. The Problem of Shame and Stigma

The current study findings also revealed the factors of shame and stigma as significantly contributing to the development of depression among the study population. As mentioned above, participants who perceived themselves as experiencing shame recorded a higher likelihood of developing depression than those who reported themselves as experiencing stigma, findings which appear to concur with existing literature. For instance, a study conducted in Zimbabwe by Nyamukapa et al. (2010), found children affected by HIV to go through stigma due to the nature of the parental death as HIV is mostly known to be sexually transmitted and therefore shameful. Similarly researches by Gamarel et al (2017), Cluver, Orkin, Gardner, & Boyes (2012), have recorded a similar trend and other researchers have labeled HIV-related death as 'bad death' due to its linkage with shameful sex and immorality (Cluver, Gardner & Operario, 2007; Harms, Kizza, Sebunnya & Jack, 2009; Asanbe et al., 2016).

These challenges were found to greatly contribute to the experience of shame and stigma among children as they reflect on the status and reason of their parent's death or sickness, consequently resulting into depression. The fact that the participants of the current study were all beneficiaries of two organizations dealing with HIV-related cases explains why shame and stigma were reported as major challenges that resulted into significantly high levels of depressive symptoms. Accordingly, going by the findings of the current study, it can be concluded that stigma and shame have strong association with the problem of depression (Dlamini, et al., 2007; Gamarel, et al., 2017; Cluver, et al., 2012; Cluver & Gardner, 2007; & Cluver, Gardner & Operario, 2007). In a nutshell, the relevance of this study lies in the insights it has brought to bear on the factors associated with depression among children affected by HIV-related loss. The effects of HIV-related parental illness and death cannot be over emphasized. Depression in this study is significantly associated with death of biological parent(s), lack of enough food, stigma and shame. The fact that majority of the participants are wholly dependent on the mercy of the sponsoring organizations can explain the level of need that arises from HIV-related loss. In fact, majority of the participants came to live with their relatives in Nairobi, all the way from their rural homes purposely to get support from the two organizations, CCP and AHP.

5. Conclusion

This study contributes to knowledge of some factors associated with elevated depression among children orphaned by HIV/AIDS. The findings of the study corroborate and extend the results of previous research in this area by contributing further East African information on the challenges faced by children orphaned by AIDS. The findings of the study also suggest that besides giving children affected by HIV-related loss appropriate interventions, their guardians and subsequent caregivers need some psychoeducation on how to deal with them. In particular, the study suggests that a child-friendly environment managed by a supportive care figure with the capacity to provide appropriate therapeutic activities are needed to enable HIV-affected and orphaned children to deal appropriately with the complicated psychosocial challenges emanating from their loss.

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