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Interactive, Cumulative Effects of associated Factors for Higher Reactive Attachment Disorder (RAD) Symptoms among Children Affected by HIV/AIDS in Ghana

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Abstract

Background: HIV/AIDS orphans and vulnerable children (OVC) frequently face placement/residential changes, inconsistent caregivers, abuse, neglect, disruptions in their lives, and mental health issues. This can result in reactive attachment disorder (RAD), a disorder of emotional functioning in which the child is wary, watchful, and emotionally withdrawn. Despite its clinical significance, little is known about RAD in OVC. The following questions were addressed in this study: (1) whether RAD symptoms can occur in children with HIV/AIDS; (2) the relationship between RAD and other psychiatric symptoms; (3) possible contextual factors for high RAD symptoms; and (4) any interactive, cumulative effects between the contextual factors (both risks and protective) for higher RAD symptoms.

Method: In a cross-sectional survey, 191 OVC and 100 non-OVC caregivers completed questionnaires on mental health problems, including RAD and contextual variables.

Results: The findings showed that RAD is present in OVC and that RAD symptoms may be caused by both environmental and genetic factors. The study also discovered a high level of comorbidity between RAD and other disorders such as depression, conduct problems, and hyperactivity. Finally, OVC who experienced more neglect and psychological abuse were five times more likely to develop RAD symptoms.

Conclusion: The paper discusses the clinical implications of these findings for community service development for this vulnerable group, concluding that RAD was not uncommon among HIV/AIDS-affected children.

Keywords: Reactive attachment disorder; Mental health; Psychosocial problems; Ghana; Africa; HIV/AIDS; Orphans; Vulnerable children

Introduction

Previous research found that, when compared to other children, orphans and vulnerable children (OVC) were more likely to experience depression, low self-esteem, suicidal ideation, anxiety, conduct problems, and delinquency problems in the context of HIV/AIDS. The vast majority of OVC have also been maltreated/abused and/or neglected, have placement instability, and live in less socially supportive households. Maltreated and abused children have been observed to have difficulty expressing their feelings and appreciating the distress of others. However, no consideration has been given to the children's relationship problems. Reactive attachment disorder (RAD) is an APA and DSM-IV-TR psychiatric disorder that impairs one's ability to form connections with others or develop appropriate social relatedness. Because RAD is so similar to internalizing disorders, children with RAD exhibit watchful, wary, and emotionally withdrawn behaviours [1].

There are two types of RAD: inhibited RAD, which is characterized by frozen watchfulness, contradictory communication, extreme isolation, hypervigilance, and highly ambivalent responses, and disinhibited RAD, which is characterized by excessive/inappropriate social familiarity, diffuse attachment, or lack of discriminate attachment. Although little research has been conducted, RAD is thought to be associated with multiple placement experiences, institutional upbringing, or highly neglectful and abusive family rearing. Other researchers noted that RAD affects children living in harsh environments, such as orphanages in developing countries, where nutritional, physical, and emotional care are inadequate. Gilbert and colleagues discovered that child maltreatment increases the risk of psychological disorders such as RAD. Children with RAD are more likely to have multiple comorbidities with other disorders, such as hyperactivity, aggression, and attention deficit, as well as emotional issues such as depression and lack of empathy.

There is no data on the presence of RAD symptoms in children with HIV/AIDS or their co-existence with other psychiatric disorders. This vulnerable subset of society may be more vulnerable to RAD because maltreatment, inconsistent caregivers, multiple placement, and disruptions in their lives are more common than in the general population. The issues surrounding RAD may be useful in understanding psychiatric detrimental behaviours in these children. The study aimed to investigate: (1) whether RAD symptoms can occur in children with HIV/AIDS; (2) the association between RAD and other psychiatric symptoms; (3) possible contextual factors for higher RAD symptoms; and (4) any interactive, cumulative effects between the contextual factors (both risks and protective) for higher RAD symptoms.

Method

Research Design and Setting

The Research Unit of the Ghana Health Service and the University of

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Glasgow's institutional Research Ethics Review Boards both gave their permission for the study on ethical grounds. The specifics of the study's methodology, including its participants, locations, and sampling, have been previously discussed [2]. But in a nutshell, the current study was created and carried out as a cross-sectional survey that was based in the community and used questionnaires. The Lower Manya Krobo District of Ghana's rural and urban areas both participated in the study. In the current study, a kid between the ages of 10 and 17 who has lost at least one parent due to death is referred to as an orphan. OVC refers to a child who is 17 years old or younger who has either lost at least one parent or is living with parents who have HIV/AIDS, whereas AIDS-orphans are children who have lost at least one parent to the disease. Children left orphaned by AIDS are also referred to as AIDS-orphaned children.

Measures

Strengths and Difficulties Questionnaire (SDQ) was used to assess mental health issues. The SDQ is a quick behavioural and emotional screening tool for children aged three to sixteen [3]. It has 25 items and 5 subscales, including emotional symptoms, conduct issues, hyperactivity/inattention, peer interaction issues, and prosocial behaviour. Children themselves, caretakers, or teachers can finish it. The SDQ was filled out by the caregivers in this study.

Relationship Problems Questionnaire (RPQ): The RPQ is a 10-item screening tool for RAD symptoms that parents and teachers can report (see also 15 and 21). The RPQ demonstrated strong internal consistency (Cronbach's alpha of.85) in a large general population twin sample, and component analysis revealed that 6 questions reflect inhibited RAD behaviours and 4 items describe disinhibited RAD behaviours.

Youth Perceived Socioeconomic Status: The MacArthur Subjective SES Ladder Scale was used to measure youth perceived SES. There were ten geographical rungs in the ladder. The young were asked to rank themselves in relation to other residents of the Manya Krobo Districts in terms of wealth, employment, and quality education.

The Rwandan Survey Scale was modified to include questions on stigma, discrimination, and social exclusion. The items' excellent consistency was determined by Cronbach's alpha, which was 0.76. By investigating both the child's and caregiver's perceptions and experiences of stigma and social exclusion, the score conveys a feeling of community stigma and discriminatory attitudes [4].

Child Abuse: To evaluate these variables, items from the Conflict Tactics Scale and the South African Demographic and Health Survey were used. Strauss created the Conflict Tactics Scale (CTS) in the beginning to quantify violent conflict resolution occurrences by gathering information on potential dyadic pairings of family members. Since then, it has been employed in more than 70,000 empirical investigations and has been carefully examined in more than 400 of them. In order to evaluate the child's exposure to and experiences with violence (direct and indirect), abuse, and mistreatment corporal punishment within the home, the present study used an adapted version of both parent-to-child and child-to-parent scales.

Child Labor: The Survey of Activities of Young People (SAYP), designed by the Statistics South Africa Services to gather information on children's involvement in work-related activities, was used to measure these variables. It served as a tool for measuring and separating ordinary child labour roles from more dangerous at-risk behaviours including skipping class to take care of domestic obligations or engaging in associated child labour activities like begging and selling.

The Multidimensional Scale Perceived Social Support (MSPSS) scale, which consists of 12 questions measuring perceived social support from family, friends, and significant others, was used to measure social support. The initial MSPSS internal reliability for support from significant others, family, and friends was, respectively,.91,.87, and.85 Cronbach's coefficient alpha. In the current study, support from family, friends, significant others, and total (full scale) support all had relatively high Cronbach's coefficient alpha values of.80,.86,.91, and.88, respectively.

Procedure

Prior to the current investigation, a pilot was conducted to validate the study instruments in a research environment. The four household types that were used in the main surveys were "AIDS orphaned households" (those that only contained AIDS orphans), "other orphans households" (those that contained orphans from causes other than AIDS), "HIV/AIDS-infected caregiver households" (those that contained a caregiver infected with HIV/AIDS), and "non-orphan households" (those without HIV/AIDS presence). First, participants were evaluated for suitability for the study. Then, caregivers gave their written assents and consents, respectively. Following their agreement or consent, each participant independently completed the survey forms that followed Thomas's directions [5]. The entire assessment inventory was finished in between 30 and 45 minutes. "Caregiver" was defined as the adult in the home who provided the child participant with the majority of their care; this adult need not be the child's biological parent. In this study, the terms parent and caregiver are used interchangeably. A verbal autopsy (VA) was utilized to determine if children lost one or both parents to AIDS because caregivers were frequently ignorant of or unwilling to report the parental cause of death and because it was challenging to get proper death certificates [6].

Results

Socio-demographic Characteristics of Participants

Approximately 58% of carers were only educated up to senior secondary level. While 13% of carers were jobless, the majority of them (62%) worked mostly in agriculture, transportation, commerce, or as artisans. 51% of the population was female, and 63% were of Krobos ethnicity. The household has 4.3 persons living there on average. 62% of all kids have relocated twice or more overall. 81.8 percent of the kids were actively enrolled in school. Children living with HIV/AIDS-infected parents had a larger percentage of homes with unemployed parents (38%) than AIDS orphans (9.5%), other orphans (9%), and non-orphaned children (7%). Table 1 provides an overview of the participants' sociodemographic data.

Association between socio-demographic factors, contextual factors and RAD

Bivariate Pearson correlations show that higher RAD scores were associated with older age (r =.278, p =.001), frequent changes in residence or instability in employment (r =.310, p = .001), higher scores on domestic violence (r =.226, p =.001), child abuse (r =.287, p =.001), and child labour (r =.230, p =.001), AIDS-related stigma (r = Similar to this, weaker social support, smaller households, and lower socioeconomic position were all linked to higher RAD scores (r = -.316, p =.001, r = -.174, p =.001, and r = -.291, p =.001). Children who aren't in school right now reported having higher RAD than those who are (t = 2.986, p = .01). Age at first bereavement, gender, and type of orphanhood did not significantly correlate with RAD.

Association between RAD and other psychiatric symptoms

Children with high RAD scores were also more likely to have high

SDQ scores and all of its subscales. The SDQ emotional issues subscale had a Pearson correlation of .351 (p = .001), the conduct problems subscale of.209 (p = .001), the peer relations subscale of.279 (p = .001), the hyperactivity subscale of.172 (p = .001), and the prosocial subscale of the SDQ had a correlation of.014 (p = n. s.).

Mediating effects of contextual variables on associations between OVC and RAD

On the basis of the caregivers' reports, linear regression analyses showed that living with an HIV/AIDS-infected caregiver, orphanhood due to AIDS, and orphanhood due to other causes were all individually, independently associated with higher RAD symptoms in the models that considered relevant sociodemographic factors. After adjusting separately for contextual factors like SES (Model 3), stigma (Model 4), social support (Model 5), child abuse (Model 6) and child labour (Model 6), the independent significant associations between orphanhood due to AIDS, orphanhood due to other causes, and RAD remained significant but weakened (partial mediation) (model 7). However, in the models that considered both sociodemographic variables and all contextual variables, these relationships with increased RAD symptoms were completely removed (full mediation) (model 8). Both the model that corrected for combined contextual effects and the model that controlled independently for contextual factors totally abolished the link between living with HIV/AIDS-infected caregivers and RAD (full mediation) for models 3 through 7.

Interaction effects between identified contextual variables (risk and protective factors) for RAD

Three two-way interaction effects regarding scoring above the mean for potential RAD were discovered during a pattern-seeking and interaction effects exploration utilizing log-linear analyses. First, the interaction effect demonstrated a link between stigma and the chance of developing RAD symptoms. While only 32% of kids who reported less stigma had RAD symptoms, more than half (56%) of kids who reported more stigma had it (2 = 15.302, p = .001). Youngsters who had HIV/AIDS-infected parents, orphans due to AIDS, other orphans, and non-orphaned children were stigmatized to varying degrees (2 = 58.766, p = .001). Second, there was a two-way interaction between child labour and RAD symptoms, with 51% of child labourers having RAD symptoms compared to 45% of non-child labourers. Comparing OVC to comparison kids, there are noticeably more child labourers (2 = 51.846, p = .001). The final two-way interaction effect revealed that OVC status was associated with RAD symptoms (RAD symptoms were present in 64%, 65%, 61%, and 16% of children with HIV/AIDS-infected parents, orphans from AIDS, other orphans, and non-orphaned children, respectively; 2 = 59.268, p = .001).

Two three-way interaction effects related to the likelihood of RAD symptoms were also found by log-linear analysis. First, there was a relationship (2 = 9.106, p = .01) between neglect, psychological abuse, and RAD symptoms. According to the interaction, children who experienced less psychological abuse and neglect are among the group who are least likely to experience RAD symptoms (27%). The chance of showing RAD signs increased more than two-fold to 67% when kids encounter more psychological abuse and neglect. Second, the likelihood of RAD symptoms, OVC, and neglect all interacted. The non-orphans who experienced less neglect have the lowest risk of having RAD symptoms (14.9%). The group most likely to experience RAD symptoms is children whose parents are HIV/AIDS-positive and frequently ignored (81.5%). The likelihood of RAD symptoms was shockingly, significantly high for both other orphans and children orphaned by AIDS (about 56%) even with low neglect, and it escalated to 69.3% and 73.3% for each group with frequent neglect.

Discussion

The findings support earlier research showing that children with HIV/AIDS are much more likely to experience mental health issues than children from unaffected, intact homes [7]. Over 65% of the OVC sample had symptom scores that indicated they may have a mental health issue, and they were far more likely to exhibit conduct disorder, hyperactivity, emotional disorders (depression and anxiety), and peer relationship issues.

Regarding the study's primary objective, the findings revealed that the OVC sample had significantly higher RAD symptom scores than children from unaffected, intact households. This study is the first to show that RAD symptoms are more severe in children with HIV/AIDS. Although RAD is regarded as a singular, unusual relationship problem in the general population, it appears that RAD is a common condition among kids with HIV/AIDS. The majority of cases of RAD in institutionalised children raise the possibility that these children (OVC) may be living in unfavourable settings akin to orphanages or may even be being mistreated. The prevalence rate for RAD in OVC is two to three times greater than that in other clinical and community samples from vulnerable populations worldwide [8], emphasising the concerning nature of the current finding for OVCs in Ghana. As there is no known empirical and evidence-based treatment for RAD, the high frequency of RAD presents clinical and therapeutic issues for the caregivers of these children. The few treatments that are currently available are largely experimental and highly debatable.

Regarding the second goal, we have demonstrated that RAD symptoms were strongly correlated with increased conduct issues, emotional issues, hyperactivity, and peer relationship issues in the sample of children affected by HIV/AIDS. It has repeatedly been demonstrated that children with RAD have a variety of comorbid conditions, some of which had gone undiagnosed by services in the past. Investigating potential contextual, associated reasons for RAD symptoms was the third goal. According to the results of the current study, among OVC, higher RAD symptoms were linked to older age, frequent moves or other forms of instability, domestic abuse, child labour, and stigma related to AIDS, as well as the number of siblings or other children living in the household, a lack of social support, a smaller household size, a lower socioeconomic status, and not currently attending school [9]. This data suggests that RAD symptoms may be caused by both environmental factors and heredity, much as has been demonstrated in prior research.

The findings also showed the interaction and cumulative impacts of identified risks and protective factors for RAD symptoms, which was the fourth purpose. The findings showed that stigma, psychological abuse, neglect, and orphanhood status all had significant interaction effects on the severity of RAD symptoms in OVC. The risk of RAD symptoms increased from 26.6% to 67.3% when greater psychological abuse and neglect were experienced. Similar to neglect, living with HIV/AIDS-positive parents five times increased the probability of developing RAD symptoms. For kids who were orphaned by AIDS and those who were orphaned for other reasons, neglect tripled the likelihood of RAD symptoms. The ICD-10 & DSM-IV mental classification systems and the research consistently suggest that RAD is linked to maltreatment. These results suggest that OVC with HIV/AIDS are more susceptible to RAD symptoms than non-orphans. Particularly, children whose parents have HIV/AIDS and who frequently experience psychological abuse and neglect are most at risk for RAD symptoms. This result suggests that RAD symptoms may be more closely associated with

abuse and neglect than orphanage itself.

The findings of this study show that children with HIV/AIDS have reactive attachment issues. This study also highlights the high incidence of co-morbidity with other diseases, such as conduct issues and depression. This has effects on how to evaluate, help, and educate this group of kids when they show signs of difficulty. According to Pritchett et al. [10], one of the key clinical consequences of the findings for service delivery is that elements of the RAD presentation such indiscriminate friendliness may be disregarded in a kid who presents from children impacted by HIV/AIDS. Given the dearth of knowledge on RAD symptoms in these kids, this could have an impact on determining the child's need for the most effective intervention possible.

The findings highlight the need of getting in touch with OVC caregivers in light of the possibility that children with RAD may later experience issues with peer relationships and disruptive behavioural problems. As these kids could be resistant to receiving it, caregivers of OVC with RAD signs may face a unique challenge in giving the necessary warm and caring care. Teachers may have a difficult time identifying OVC who have RAD symptoms and hence may not be categorised as a "at risk" category since they may not be immediately identifiable. To improve their ability to provide respectful care, these caregivers and educators must have enough training and resources. Teachers should focus on helping OVC feel included in their classes and the larger school community. For individuals who have been neglected or abused, inclusion is even more crucial. Creating community interventions that address both specific risk factors for HIV/AIDS (such as stigma) and contextual risk factors (such as socioeconomic conditions, educational support systems, family/community support networks, reducing child labour, and child abuse) within which children with HIV/AIDS find themselves is also urgently needed. These approaches, it is hypothesised, will successfully reduce these risk factors and improve children's mental health.

Conclusion

This is the first study to show that children in the HIV/AIDS-affected population are more likely to experience psychiatric illnesses, such as RAD, and that OVC who experience more neglect and psychological abuse are five times more likely to experience RAD symptoms. This is intriguing because the majority of earlier studies on RAD used institutionalised samples. Future studies should look at whether RAD symptoms occur before and are a risk factor for other mental health issues, or whether RAD and other mental health issues are frequently present in children living with HIV/AIDS.

Competing interests

The authors declare that they have no conflicts of interest.

Authors' contributions

PND designed, conducted and drafted the study under the supervision of HM. Both PND and HM read, edited and approved the manuscript for submission.

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