

The Wellbeing of Young Adults as a Function of Parental Status in Rural Tanzania

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ABSTRACT

The East-African nation of Tanzania has one of the highest HIV/AIDS rates in the entire world, and thus, an alarmingly high number of orphaned children. The present study sought to determine if being an orphan during childhood, either single or double, is related to one's psychological wellbeing in young adulthood. Orphan status and psychological wellbeing information was gathered via surveys containing background information and standardized wellbeing scales. The oral survey was administered in person in Kiswahili, the national language of Tanzania. Sixty-three young adults, ages 18–25, in a small rural village community participated in the study. The results of the study found no significant association between orphan status in childhood and psychological wellbeing in young adulthood, leading to a discussion on how parental loss may be experienced in small, African, rural villages, under the framework of resilience. Conclusions were all speculative and further research is thus recommended.

KEY WORDS

Psychological; Wellbeing; Orphan; Parental Loss; HIV/AIDS; Tanzania; Sub-Saharan Africa

BACKGROUND INFORMATION

Tanzania is a nation of 49.25 million people,¹ located in Eastern African, just south of the equator. Unlike many other African countries, the national language, Kiswahili, is still widely spoken and most Tanzanians identify as “Tanzanian” first and foremost. This national unity has led to a history of peace, even with the 120 different ethnic groups that exist² and the varying religious beliefs, including Christianity (30%), Muslim (35%) and indigenous beliefs (35%).² The basic family structure in Tanzania is extended, especially in the urban areas. The pressures of development in the urban areas have led to an increasing regularity of nuclear family units.³

Compared to the United States' median age of 36.8 years,¹ the median age in Tanzania is 17.5 years.¹ The vast majority (44.34%) of Tanzania's population is between the ages of 0 and 14. The percent of the population between 15 and 24 is 19.59% and only 2.97% of the population is 65 years or older.¹ Much of this skewedness can be attributed to the poverty and disease that has stricken Tanzania since its inception. In 2011, it was estimated that 67.9% of the population was living below the poverty line and the CIA's World Factbook categorizes the degree of risk of infectious disease as very high.¹

In general, Sub-Saharan Africa has the highest HIV/AIDS rates across the entire globe. In Tanzania, specifically, it has been estimated that the prevalence of adults living with HIV/AIDS is 5.1%. In the Iringa region, the current region of interest, the percentage of 15-49 year olds who are HIV positive surpasses the national average at 9.1%.^{3, 4} Beyond the HIV/AIDS epidemic, data from the World Health Organization has indicated that maternal/perinatal conditions and TB/respiratory infections are the second and third leading causes of disability-adjusted life years lost in Tanzania (after HIV/AIDS).⁵ For developed nations, many of these deaths would be preventable. But, due to the rampant poverty and poor education in Tanzania, many Tanzanians are suffering from such life-threatening diseases.

The devastating rates of HIV/AIDS and other diseases, especially in some rural regions, have led to a disconcerting number of orphans. For the purpose of this study, an orphan is defined as an individual who has lost one or both biological parents before the age of 15. It is estimated that in Tanzania as a whole, 12% of all children are orphans.⁶ But, in the location of this research, the Mufindi region of Iringa, a HIV/AIDS prevalence of 14.8% has contributed

to an orphanhood rate of nearly 16%.⁷ Though it is not possible to know from this data whether orphanhood rates are due to HIV/AIDS, orphanhood has been most common in areas with high current or past prevalence of HIV/AIDS.

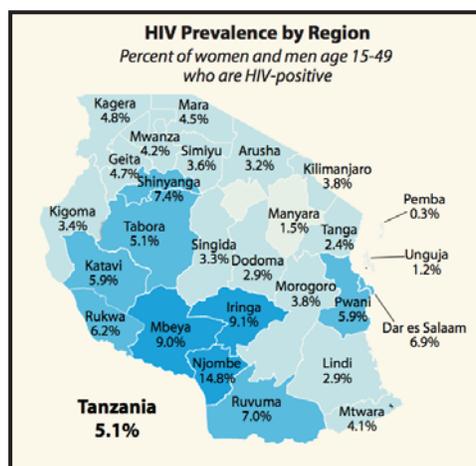


Figure 1. Map of Tanzania's HIV prevalence rates by region.⁴

It has been speculated that Mufindi has especially high rates due to a lack of access to HIV/AIDS testing, treatment and education, as a result of its geographic isolation.⁸ Additionally, due to its natural resources, such as timber and tea, Mufindi is a trade center for many people from larger cities.⁹ This constant flow of people in and out of Mufindi allows for the spread of HIV/AIDS from the cities into rural Mufindi.

Since the HIV/AIDS endemic began in 1983, the disease has continued to spread and rates have continually increased. The increasing number of orphans in Tanzania and Sub-Saharan Africa as a whole has led to a heightened interest in the psychological wellbeing of orphans. While there is not one universally agreed upon definition for "psychological wellbeing," the current study will be working under an operational definition developed from previous literature in the field¹⁰ and an understanding of cultural values in Tanzania.¹¹ Psychological wellbeing is defined in this study as having a sense of agency over, and contentment with, one's thoughts, emotions and behaviors.

REVIEW OF THE LITERATURE

The continuous rise in the population of orphan children has resulted in a body of literature regarding orphan wellbeing. Much of the previous literature has focused on the mental health, social functioning and academic achievement among orphans, compared to non-orphans. In the current study, the psychological wellbeing of young adults is being examined based on their childhood orphan status. Based on the findings of previous orphan studies and studies related to the cognitive neuroscience related to the enduring effects of parental loss, the current study hypothesizes that one's psychological wellbeing in young adulthood is related to parental loss as a child.

In Sub-Saharan African, there is growing evidence that orphans, in general, suffer increased psychological distress. Paul Narh Doku, a psychologist at the University of Ghana, explains that, "HIV/AIDS will not only restrict psychological development but also contribute to psychological distress like depression, anxiety and low self-esteem, due to the shock that results from the parents' death."¹² Many field studies have supported this idea of orphan vulnerability, by comparing orphans to their non-orphan counterparts.

In one of the earlier studies conducted in 2002 in the capital of Tanzania, Dar Es Salaam, researchers used multiple questionnaires to examine the psychological conditions of orphans, compared to non-orphans of similar ages and geographic locations. An internalizing problem scale was used to assess pessimism, sense of failure, anxiety and other mental health problem areas. Orphans had significantly higher scores on the internalizing problem scale than non-

orphans, with high scores indicating more internalizing problems. Additionally, nearly triple the amount of orphans admitted that they had contemplated suicide within the past year, compared to non-orphan counterparts.¹³

In a similar Ugandan study, researchers used the Beck Youth Inventories of Emotional and Social Impairment to compare 123 children who had one or both parent pass away from HIV/AIDS and 110 children of similar age and gender who were living in households with two living parents. Their results showed that orphans were at greater risk for higher levels of anxiety, depression and anger. Additionally, orphans' responses to questions indicated potential depressive disorders significantly more frequently than non-orphans.¹⁴ Furthermore, a study in eastern Zimbabwe, yielded similar findings with a sample of 1469 children ages 0-18, with equal numbers of paternal, maternal and double orphans and non-orphans, compared on levels of psychological distress. In this 2008 study, data revealed that boys and girls experiencing all forms of orphanhood (paternal, maternal, double) had higher levels of psychological distress than their non-orphaned counterparts.¹⁵

In response to these findings being replicated around the globe, Western cognitive neuroscientists attempted to uncover potential neural explanations for psychological ramifications of parental loss. Though often times it is not advisable to use Western research in a cross-cultural context, the following studies are concerned with altered brain structures that all human beings share. Most cognitive neuroscientists agree that experiences, especially traumatic ones, during childhood and adolescence have a profound impact on adult functioning, due to actual neurological changes and restructuring.^{16,17} One study published in the journal of Biological Psychiatry found alterations in the hypothalamic-pituitary-adrenal (HPA) axis among adults who suffered from childhood parental loss. Changes to the HPA axis function can predispose adults to the development of psychiatric disorders, specifically major depression. These findings are consistent with the hypothesis that early parental loss induces enduring changes in one's neurological functions.¹⁸ Additionally, researchers at the University of Pittsburgh found that a parent's death more than quadruples the risk for depression in children, adolescents, and young adults, due to neural differences compared to a control group.¹⁹

There is overwhelming evidence that orphans experience more psychological disturbances than non-orphans during childhood, but do these variations in psychological wellbeing persist into young adulthood or are there protective factors working to mitigate these discrepancies? In the current study, the question under consideration is whether or not being orphaned (maternal, paternal or double) during childhood (between the ages 0 and 15) is associated with greater levels of distress and lower levels of psychological wellbeing in young adulthood. If the results are consistent with previous Sub-Saharan African and Western findings, orphans will earn lower scores on wellbeing scales compared to non-orphans, even in young adulthood (ages 18–25).

DATA AND METHODOLOGY

Research setting

The data was collected in Igoda, a village within the Mufindi district of Tanzania over a two-week period in April 2015 (refer to the image below for a map of Mufindi's location). The village of Igoda has been blessed with a plethora of natural resources, including lumber and fertile soil to farm tea, beans, and other crops. Unfortunately though, Igoda has one of the highest HIV/AIDS rates in the entire world, with an estimated 35% of adults infected. In the village of Igoda, there is a non-governmental organization, Foxes' NGO, that helps to care for the rising number of orphans. At any given time, the NGO has the capacity to care for 50–60 children, leaving other orphans to live with family or community members in their home village.

Participants

In the present study, there were 63 participants. Participants were recruited through random sampling and purposeful location sampling. In three villages, Iyayi, Mwaya and Fyogo, randomization was employed approaching only every other house on alternating sides of the street. At Luhunga Secondary School, purposeful location sampling was used as all eligible students on the campus were asked to participate.

After having the participant listen to an oral consent script, read in Kiswahili, and provide oral consent, signatures from the primary researcher and research assistant verified participant consent. Consenting participants were then able

to proceed with the oral survey. With the exception of the participants at Luhunga Secondary School, all surveys took place within the participant’s homes. To ensure participant confidentiality and open, candid responses, we asked all other family members, with the exception of small children, to not be present as the survey was taking place.

Out of the 63 responses, 29 were orphans (46.8%), 33 were non-orphans (53.2%), and 1 respondent did not complete the survey. The participants were all between the ages of 18 and 25, with a mean age of 20.48 years old. Refer to Chart 1 for the full break down of ages. Out of the 63 participants whose data was analyzed, 34 people identified as female, 23 as male, and five participants did not respond.

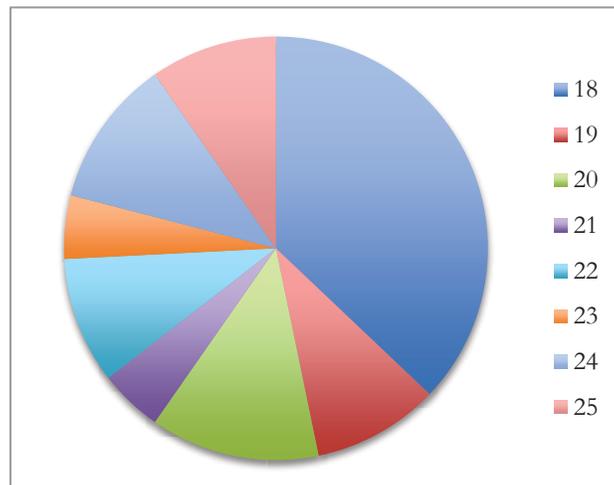


Chart 1. Age of participants.

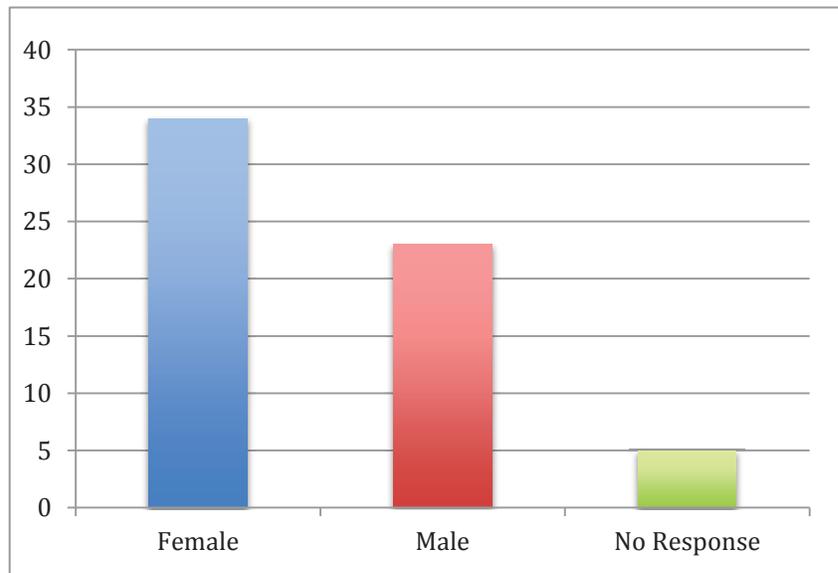


Chart 2. Sex of participants.

Information regarding the parental status of the participant can be found in **Table 1**. Paternal orphans refer to those individuals who lost their father between the ages of 0 and 15 (before or during primary school). Maternal orphans refer to those individuals who lost their mother between the ages of 0 and 15 (before or during primary school). Double orphans refer to those individuals who lost their mother and father between the ages of 0 and 15 (before or during primary school). Compared to the national average predictions in 2010 of the Iringa region, 6% paternal, 4% maternal, 1.6% double, the findings in the present study are alarming.²⁰ The current results are from the total sample of 63 participants, in order to show the distribution of non-orphans to orphans among the random sample.

This data shows an orphan rate tripling the Iringa region average in nearly every category. As previously stated, the Mufindi region has a higher rate of orphans, compared to the Iringa region as a whole. However, compared to even statistics from Mufindi (16% orphan rate),⁷ the rates in our study are alarmingly high. Mufindi is comprised of many different villages, but data collection only took place in Iyayi, Mwaya and Fyogo. In 2007, an NGO to address the orphan problem in Mufindi was built closest to the villages where data was collected.¹⁵ It can be posited that this NGO was built in proximity to the most vulnerable villages. Therefore, the villages that data was collected from might be the most vulnerable among the Mufindi villages.

Orphan Status	# Of Participants	Percent of Total	2010 National Estimates of Iringa region ²⁰
Paternal	12	19.05%	6%
Maternal	10	15.87%	4%
Double	7	11.11%	1.6%
Total orphans	29	46.8%	11.6%

Table 1. Orphanhood status of participants.

Materials

The original survey was written and compiled in English, then translated into Kiswahili, the national language of Tanzania. After the initial translation, my trained research assistant, born and raised in Mufindi, back translated the survey and made suggestions based on cultural appropriateness that were used to finalize the survey. The survey included 39 multiple-choice questions. The questions consisted of a brief demographics questionnaire (gender and age), two standardized well-being scales: General Well Being Schedule (GWBS) and Mental Health Continuum-Short Form (MHC-SF), and a short set of questions related to childhood/parental status. The final set of childhood/parental status questions contained questions pertaining to living situation during childhood (i.e. lived with mother and father, lived in orphanage), the current status of both mother and father, and the approximate age of passing of their parent(s), if appropriate.

The MHC-SF has been used in hundreds of different studies and has been employed on the African continent, in a rural South African study. The short form of the MHC has shown outstanding internal consistency (>.80) and discriminant validity in adolescents and adults in the United States, the Netherlands, and South Africa.²¹⁻²³ Specifically, in a South African study, the MHC-SF was translated into Setswana, an African language, to test for reliability and validity. The internal reliability of the MHC-SF was .74 and it correlated most strongly with measures of subjective wellbeing, which is most appropriate for the current study's needs.²² Furthermore, the GWBS, a scale that has been translated and culturally adopted in over 35 languages, was also translated into Setswana and used in a validation study in rural and urban South Africa. The scale yielded a high, reliable Cronbach alpha of .89 and showed evidence of construct validity.²⁴

The questions from the GWBS pertained to the participants' moods/emotions (i.e. exhausted, anxious, pleased, in control, discouraged) and how often they were experiencing them, over the past month, ranging from all the time to none of the time. Similarly, the MHC-SF asked questions in the format "during the past month, how often did you feel...?" However, the MHC-SF placed a greater emphasis on the social part of psychological wellbeing, asking more questions about belonging to a community and views of society.

Procedure

The Kiswahili surveys were administered orally, and responses were recorded by hand, using number and letter codes. Each participant's responses were recorded on separate pieces of paper to ensure the confidentiality of all participants. Participants were given unlimited time to complete the survey. However, the majority of our participants completed the survey in 25-30 minutes.

Ethical Considerations

Before the research began, the University of Iringa provided a signed and stamped document from the Deputy Vice Chancellor for Resources Management, allowing the research team to associate themselves with the university throughout the field work. Additionally, upon arrival in Mufindi, verbal consent was obtained from the village leader of each of the four villages that research was conducted in. Furthermore, the researcher sought further ethical approval from the Cornell University IRB, ultimately obtaining an exemption to review. An exemption to review is granted to researchers whose research involves surveys that are recorded in a way in which individuals (adults above the age of 18) cannot be identified. This exemption allowed the researcher to proceed with their research, upholding the ethical standards of the IRB but without review and oversight by the IRB. The Cornell University IRB exemption to review was received prior to all data collection.

Additionally, informed oral consent was obtained from each participant, recorded only by the researcher and research assistant to ensure no identifying information (signatures) was recorded. Due to the nature of the questions, psychological counseling services were made available to each participant. The available services included a Tanzanian licensed therapist and transportation to and from, paid for by the researcher's study abroad program (CIEE Iringa). The participants were notified of this offer at the beginning and end of the survey. None of the participants expressed a desire to obtain the offered psychological services. To show appreciation for their participation, each young adult was given 1,000 Tanzania shillings (\$0.60). This amount was calculated based on the fact that the minimum wage for a day of employment in Tanzania is 6,000 shillings and the survey took roughly one half hour to complete.

RESULTS

In the initial hypothesis, it was predicted that the experimental group, those who had been orphaned before the age of 15, would have lower GWBS and MHC scores overall than the control group of non-orphans. Statistical analyses were carried out using Data Desk 7.0.1 Student (Ithaca, NY 2014) and R/R Studio (Boston, MA 2015).

First, analyses were performed on overall MHC-SF scores, after grouping the participants by their orphan status. The highest score one can receive on the MHC-SF is a 70, indicating exemplary wellbeing in three categories (emotional, social and psychological wellbeing). For the sample of orphans ($n=29$), the overall MHC scores had a mean of 47.79 ($SD=9.04$) and a range of 29. For the sample of non-orphans ($n=33$), the overall MHC scores had a mean of 48.515 ($SD=9.16$) and a range of 30. A Welch's two-sample t-test was then used to determine whether the mean scores of the experimental group (orphans) and control group (non-orphans) were significantly different, as the original hypothesis predicted. This test was chosen specifically as it is not sensitive to the different sample sizes between the two groups. This test yielded a statistically non-significant p-value of 0.62, thus we failed to reject the null hypothesis at $\alpha = .05$ ($t(56.93) = .50$). A post-hoc analysis indicated a very small effect size ($\eta^2 = .004$).

The highest possible score for the GWBS scale is 110, indicating the highest level of overall wellbeing. From the sample of orphans ($n=29$), the overall GWBS scores had a mean of 66.21 ($SD=11.47$) and a range of 50. For the non-orphan sample ($n=33$), the overall GWBS scores had a mean of 71.576 ($SD=17.439$) and a range of 69. For the GWBS scores, another Welch's two-sample t-test was conducted, yielding a p-value of .15, thus we failed to reject the null hypothesis at $\alpha = .05$ ($t(55.81) = 1.45$). A post-hoc analysis indicated a relatively small effect size ($\eta^2 = .036$).

DISCUSSION

This study's results conclude that there is no statistically significant association between orphan status in childhood and psychological wellbeing in young adulthood. In both of the Welch's two-sample t-tests, for MHC scores and GWBS scores, the p-values were too large (greater than .05) to be statistically significant, and therefore no associations could be justified. The initial hypothesis predicted that there would be an association between childhood orphan status and psychological wellbeing scores: children who had suffered parental loss would have lower scores on wellbeing scales in young adulthood.

Though not in line with the original hypothesis, the lack of an association between orphan status and psychological wellbeing in young adulthood is an intriguing finding in itself. The data is suggestive of the idea that there may be something serving as a protective factor that allows young adults who were orphaned to be comparable, in terms of

psychological wellbeing, to their non-orphan counterparts. Among psychologists, it is widely accepted that losing a parent, or both parents, increases the likelihood for that individual to develop psychopathological symptoms in the future.^{18, 19}

Despite these findings, however, a smaller body of related research has explored another theoretical framework contrasting vulnerability: resilience and protective factors. Some of this research has applied the framework to orphans and the HIV/AIDS epidemic. One study, in Arusha, Tanzania found that “children and young people’s relationships with siblings and other surviving members of the household are an important source of emotional support, which may represent a protective factor in mitigating individuals’ vulnerability.”²⁵ This study was conducted in a rural setting, similar to Mufindi. Within the villages of Mufindi, family lines are blurred and the unity among all community members is unique to this part of the world. It is very common for adults to care for all of the children in their village as if they were their own. This extended support system, along with attachments formed outside of one’s biological family could be serving as protective factors.

In support of this insinuation, according to the survey results, during the past month, 41 out of 58 (70.7%) participants felt almost every day or every day that they belonged in a community, like a social group or neighborhood and 48 out of 58 participants (82.8%) felt almost every day or every day that they had warm and trusting relationships with others. There is much value in having solid relationships and feeling supported, as many studies have found strong associations between having supportive social relationships and adolescent resilience following a loss.^{26, 27} Further research is necessary to validate these speculations from the current study.

LIMITATIONS

The present study had three main limitations. First, this study employed the General Well Being Schedule and the Mental Health Continuum-Short Form for psychological measurements. Though the researchers chose these scales thoughtfully, they did come with limitations. Due to the fact that both of these measurements have been used and validated in other African contexts, it was decided that it would not be unreasonable to use them in the current study. Other scales that had only been validated in Western countries were not considered. Additionally, the translator of the GWBS and MHC scales from English to Kiswahili is an esteemed linguist, speaking both fluent English and Kiswahili. Therefore, even the idioms and figures of speech found in the GWBS and MHC were properly treated. However, due to the many variations between African nations, especially between those more and less developed, it would be advisable to create and validate a Kiswahili psychological wellbeing scale specifically for rural locations in Tanzania, or East Africa in general.

Second, the small sample size ($n = 58$) limited the ability to generalize the findings to the population of all Tanzanian young adults, or even of all young adults in the Iringa region. The fact that the surveys had to be administered orally, taking around half an hour each, hindered our ability to get a larger sample size. Though our data cannot be generalized to a regional population, the villages sampled had small populations that may allow for the sample size of 58 to be indicative of the larger population of young adults in Iyayi, Mwaya, Fyogo, and Luhunga.

Third, the study did not employ a longitudinal design and as a result, causal inference between parental loss and psychological wellbeing could not be drawn. Gathering data about psychological symptoms at different time-points would be necessary in order to understand any potential causal relationships.

FUTURE RESEARCH

There are many areas in which future research would be helpful in evaluating the current study’s results. To begin, creating a specific measure to address wellbeing in the context of rural Tanzania and validating it would allow the researchers to be certain of the cultural appropriateness of the measure used. In order to create this scale, qualitative methods, including in-depth interviews and focus groups, and a proper field-testing would be useful.

Furthermore, a larger sample size, potentially from more villages within Mufindi, would be necessary in order to be able to analyze the demographics (age, sex) and differences in family structures (paternal, maternal, double orphans).

This study's initial intent was to perform analyses using these variables, but due to the distribution of the results received, significant analyses were not powerful enough.

To conclude, it would be interesting to further this field of research by inquiring about the circumstances of parental death of the young adults. Potential variations in the trauma involved and HIV/AIDS status of the parents and participants could all be factors explored in future research. This is a field of research that could have great policy implications and should certainly be investigated further.

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PRESS SUMMARY

The HIV/AIDS epidemic in Sub-Saharan Africa has raised serious concerns about the wellbeing of orphaned children. The current study sought to understand the lasting psychological effects in young adulthood of parental loss during childhood. Using data from a small, rural village in Tanzania, the effects of orphanhood in a non-Western setting were trying to be better understood. The results indicate that supportive, close-knit communities may serve as a protective factor for children who have experienced parental loss.