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Social support and school outcomes of adolescents orphaned and made vulnerable by HIV/AIDS living in South Western Uganda

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Abstract

The goal of this study is to examine the role of social support from multiple sources, including the extended family, caregivers, classmates, peers and teachers, in improving the school outcomes (grades and attendance) of children orphaned by AIDS in Uganda. Data for this study comes from a 4-year randomized control trial, called *Suubi-Maka* (Hope for families), conducted in the Southwestern part of Uganda from 2008 to 2012. Using multivariate regression modeling – controlling for several individual-level and school-level characteristics, we find that social support (perceived emotional and information support received from parents, classmates and teachers), caregiver's acceptance and warmth, and family cohesion have positive effects on children's school grades and attendance. This finding underscores the importance of strengthening relationships within the extended family and the school environment to serve as a net of strength that can influence not only family functioning but also vulnerable adolescents' educational trajectories.

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Keywords

Vulnerable youth educational outcome; children made vulnerable due to AIDS; social support; caregiver support; family cohesion; Uganda

Introduction

Globally, approximately 18 million children have been orphaned by AIDS (UNAIDS, 2004), of which 15.1 million live in Sub-Saharan Africa (UNAIDS, 2016). In Uganda alone, there are 2.7 million orphans and 1.2 million orphaned as a direct result of HIV/AIDS. The growing number of orphans coupled with living in poverty-impacted communities, has overwhelmed the extended family system that traditionally provided care and support for these children (Ssewamala & Ismayilova, 2008). Pertinent to the overall wellbeing of AIDS orphans within this extended kinship support network is the provision and access to educational opportunities (Hunter & Williamson, 2000). Orphans who are not supported by the extended kindship are less likely to enroll in school and more likely to fall behind or drop out of school (Deininger, Garcia, & Subbarao, 2003; Guo, Li, & Sherr, 2012).

Several mechanisms may explain the link between HIV/AIDS orphanhood and poor educational outcomes including enrollment and attendance (Operario, Cluver, Rees, MacPhail & Pettifor, 2008; Guo et al., 2012). One is related to reduction in family resources. HIV/AIDS does not only increase the financial burden on families to care for the sick but also reduces the family's ability to produce more resources. Without resources, school attendance and ultimately educational outcomes decline (Lloyd & Blanc, 1996; Orkin, Boyes, Cluver & Zhang, 2013). Lack of caregiver support has also been identified to be an important predictor of poor educational outcomes in orphans. For example, Smiley, Omoeva, and Benjamin (2012) examined school access and educational experiences of orphan youth. The results suggest that orphanhood itself is not a strong predictor of vulnerability in relation to educational participation (Ainsworth & Filmer, 2006; Campbell, Handa, Moroni, & Palermo, 2010; Case & Ardington, 2006). Rather, lack of caregiver support and poverty appear to be more strongly associated with educational challenges than orphanhood.

Social support defined as perceived emotional and information support received from caregiver, family members, peer groups, school and community (Bukowski, Hoza, & Boivin, 1994) has shown to be a protective factor for children against hopelessness and therefore enhances positive outcomes for children in school (Cluver, Fincham & Seedat, 2009, Cluver & Gardener, 2007). Specifically, social support (emotional and informational) may provide a buffer for shocks due to the negative effects of distress from the death of a family member and can help the child maintain adequate relationships with others while focusing and attaining improved academic outcomes (Cast & Burke, 2002; Cluver, Fincham, & Seedat, 2009). The study conducted by Karimli, Ssewamala, and Ismayilova (2012) for example, highlighted the importance of matrilineal and grandparental care for AIDS orphans. Other studies have also shown strong support for intervening with families to mitigate vulnerable youth risk-taking behavior (Donenberg, Paikoff, & Pequegnat, 2006; Ismayilova, Ssewamala, & Karimli, 2012; Pearson, Muller, & Frisco, 2006).

Moreover, most of the current efforts that support AIDS orphaned children focus on the economic needs, neglecting the family support systems that directly impact children's outcomes including educational achievement. The current study therefore builds on existing literature and attempts to address the research gap by examining the role of social support (perceived emotional and information support received) from multiple sources (parents/guardians, classmates, peers and teachers), perceived support (psychological autonomy, acceptance and warmth) and family cohesion in improving school performance and attendance among orphaned adolescents.

Methods

Study sample

Data for this study was drawn from a 4-year (2008–2012) randomized controlled trial known as Suubi-Maka (Hope for families). Funded by National Institute of Mental Health (RMH081763A; PI: Fred Ssewamala) Suubi-Maka aimed at developing and examining a family economic empowerment intervention among poor families providing care and support to children made vulnerable due to AIDS. Detailed information about the design and implementation of the Suubi-Maka intervention is provided elsewhere (Karimli, Ssewamala, & Neilands, 2014). A total of 346 orphaned adolescents together with their caregivers were recruited to participate in the study. Adolescents were eligible to participate if they: (1) identified as children made vulnerable due to AIDS (having lost one or both parents to AIDS); (2) were in their last 2 years of primary schooling (equivalent to the 6th and 7th grades in the US education system); and (3) living within a family and not an institution – as children in institutions have different needs. Adolescents were selected from ten rural public primary schools in Rakai and Masaka District of Southwestern Uganda – two political districts heavily affected by HIV and AIDS. The schools were matched on several socioeconomic characteristics.

Data collection and measures

Data was collected using a 90-minute survey administered by trained Ugandan interviewers. All instruments were translated into Luganda (the local language spoken in the study area) and back translated into English to ensure accuracy. The Suubi-Maka study received IRB approval from Columbia University (IRB-AAAD2525) and the Uganda National Council for Science and Technology.

The primary outcomes for this analysis were adolescents' academic performance and school attendance. Academic performance was measured by grades from the Primary Leaving Examinations (PLE), a nationally standardized examination taken by all Ugandan students in primary seven. Official grades were obtained from the Uganda Ministry of Education and Sports at 12 months and 24 months for participants who were in grades 7 and 6 respectively. In the current study, 78.9% ($n = 273$) of participants completed their PLE, 21% ($n = 73$) did not (18 participants had dropped out of school and 55 participants were held back and did not complete PLE within the study period). Further analysis did not reveal any differences between participants who complete PLE and those who did not. The possible range for PLE

is 4–36 aggregates, with lower scores indicating better grades. Adolescents in the current study scored between 6 and 36 aggregates.

School attendance was measured using data collected during unannounced school roll calls each academic term (total = 6 terms), study staff went to the schools at least twice per academic term unannounced and recorded participants' attendance or absence. A total of 16 announced visits were made to each school over a two-year period. The average number of days present at school was 7 (range 0–16), and the average number of days absent from school without permission was 3 (range = 0–15).

Social support was measured using three indicators: (1) a measure of support from multiple sources including friends/peers, teachers adapted from the Friendship Qualities Scale (Bukowski et al., 1994); (2) perceived caregiver support; and (3) family cohesion as perceived by both the child and the caregiver; both adapted from the Family Environment Scale (Moos & Moos, 1994) and the Family Assessment Measure (Skinner, Steinhauer, & Santa-Barbara, 1983). Items measuring perceived caregiver support and family cohesion were the same for children and caregivers. All measures have been tested in previous studies (Karimli et al., 2012; Ssewamala, Han, & Neilands, 2009; Ssewamala, Neilands, Waldfogel, & Ismayilova, 2012). Specifically, social support from multiple sources was measured using 24-items (alpha = 0.76) assessing the impressions of the quality of children's friendships and relationships with their caregivers, classmates, closest friends and teachers on a 5-point scale (with 1 = 'never' and 5 = 'always'). Sample items include: 'Some kids have a guardian who don't really understand them.' 'Some kids do have a teacher who cares about them.' The theoretical range for this scale is 24–120, with higher scores indicating higher levels of social support from multiple sources.

Perceived caregiver support scale measures social support on two dimensions: (1) acceptance and warmth – the extent to which the child perceives the caregiver as involved in their life; and (2) psychological autonomy – the extent to which the caregiver employs a non-coercive, democratic discipline and encourages the child to express individuality within the family. Participants were asked to rate the adults they live with, on each of the 18 items (range: 18–90, alpha = 0.76), on a 5-point scale (with 1 = 'never' and 5 = 'always'). Sample items include: 'Can you count on your current parent(s)/guardian(s) to help you out if you have a problem?'and 'When you get poor grades in school, do your current parent(s)/guardian(s) punish you?'. Summary scores were generated for both the total scale and subscales with higher scores indicating higher levels of perceived caregiver support.

Family cohesion was assessed using 6-items (alpha = 0.64) that measure the degree of commitment, help and support family members provide for one another. Participants were asked to rate how often each item occur in their family, on a 5-point scale (with 1 = 'never' and 5 = 'always'). Sample items include: 'Do your family members ask each other for help before asking non-family members?' and 'Do your family members feel close to each other?' Summary scores were generated with higher scores indicating higher levels of family cohesion.

Other control variables included in the models were: participants' age, gender, orphanhood status (single orphan versus double orphan), primary caregiver (surviving biological parent versus other caregiver), caregiver's age, total number of children in the household, household asset index and participating in the Suubi-Maka intervention coded as '1′ for treatment condition and '0′ for control condition.

Data analysis procedures

Data were analyzed using STATA (version 14). Descriptive analyses were conducted on participants' and household demographic characteristics and measures of social support. Multivariate regression analyses were conducted to examine the role of social support on school performance and attendance controlling for participants' demographic characteristics and the intervention. Specifically, in the regression model, multiple domains of social support variables measured at baseline were entered separately in the model for each of the three outcomes. All analyses accounted for clustering at the school level, using a cluster variable for school (STATA command: svyset School ID) created to indicate which school a participant went to.

Results

Sample characteristics are summarized in Table 1. The mean age was 13.4 years. Sixty-five percent (65%) of the sample were females. Most adolescents identified as single orphans (70%), meaning they had one surviving biological parent. Thirty-six percent (36%) of participants reported either a surviving biological parent or a grandparent as their primary caregiver. The mean age for caregivers was 45.7 years. Adolescents lived in households with about 7 people, with three children under the age of 18.

Specific items measuring social support are provided in Tables 2 and 3. Results from regression analysis examining the role of specific aspects of social support on participants' school performance and attendance are presented in Table 4. Overall, the associations between social support and child outcomes were somewhat different based on source of data (caregiver or child report). For child reported social support, after controlling for participants' demographic characteristics and the intervention, social support (perceived emotional and information support received from teachers ($B = -0.22$, 95% CI = −0.42, −0.02, $p \leq .05$) and classmates ($B = -0.24$, 95%CI = −0.38, −0.10, $p \leq .01$) was associated with better PLE grades (lower scores indicate better grades). Perceived caregiver support (acceptance and warmth) was inversely associated with PLE grades ($B = 0.09$, 95%CI = −0.21, 0.03, $p \leq .05$). Family cohesion ($B = 0.18$, 95%CI = 0.01,0.35, $p \leq .05$), and support from classmates ($B = 0.18$, 95%CI = 0.05, 0.30, $p \leq .01$) was associated with more days of attending school. In addition, support from caregivers ($B = -0.12$, 95%CI = −0.21, −0.02, $p \leq .05$), friends ($B = -0.10$, 95%CI = −0.15, −0.05, $p \leq .01$), and classmates ($B = -0.14$, 95%CI = −0.22, −0.06, $p \leq .01$) was associated with fewer number of days missed school.

For caregiver reported social support, perceived support (acceptance and warmth) was associated with better PLE grades ($B = -0.20$, 95%CI = −0.31, −0.10, $p \leq .001$), and reduced number of days missed school without permission ($B = -0.08$, 95%CI = −0.13, −0.02, $p \leq$.

05). The measure of psychological autonomy, whether perceived by the child or the caregiver was not statistically significantly associated with any of outcomes.

Discussion

This study examined the role of social support from multiple sources, perceived caregiver support, and family cohesion in improving school outcomes of AIDS orphans participating in a family-based economic empowerment intervention in Uganda. The results show that for child reported social support, support from caregivers, teachers and classmates was associated with better PLE grades and fewer number of days missed school. This finding is consistent with previous empirical work showing that adolescents who perceive their caregivers, peers and/or teachers as supportive perform better in school than those who do not perceive their socializers as supportive (e.g. Ahmed, Minnaert, van der Werf, & Kuyper, 2010; Levitt, Guacci-Franco, & Levitt, 1994; Rosenfeld, Richman, & Bowen, 2000). Additionally, AIDS orphans who perceive warmth and acceptance from their caregivers performed better in PLE. It is possible that such caregivers are more involved and interact with their children, help them with school work and homework, and encourage them to do their best.

Similarly, for caregiver reported social support, acceptance and warmth was associated with better PLE grades and reduced number of days missed school without permission. This finding corresponds with Rozana (2009) study result which indicated that the death of a mother increases an orphaned child's inability to read words or sentence by round 27%. Therefore, the warmth and acceptance caregivers provide to AIDS orphans may contribute to the development of positive self-identity, and consequently, more concentration in school (Ahmed et al., 2010). This may make the orphaned children to perform better academically.

Family cohesion and support from classmates was found to be associated with more days present at school. The possible explanation for these finding is that extended family members are able to take on additional household responsibilities that would otherwise be given to the child, allowing the child to attend school given that orphaned children are more likely to report a decline in school attendance and grades due to household responsibilities (Nabunya & Ssewamala, 2014). On the hand, support from classmate may be a source of motivation for attending school.

Caregiver autonomy was not associated with any of the school outcomes. Mixed findings have been reported on the relationship between parental autonomy and academic achievement. Specifically, whereas some studies have documented positive benefits of parental autonomy on academic achievement, as it provides access to motivational resources which can enhance positive engagement in school (Pomerantz, Moorman, & Litwack, 2007), other studies did not reveal any significant findings (Bronstein, Ginsburg, & Herrera, 2005). Therefore, this relationship remains uncertain.

Limitations of the study

We note the following limitations for this study. It appears that child report (e.g. caregiver support) is a more consistent predictor than caregiver report. It might be important to include

child perspectives of support in study impact of orphanhood on children. Another limitation is social desirability bias due to self-report whereby the respondents' reports may have been intentionally distorted (under reported or over reported) in socially desirable directions. However, assuring respondents that there is no right or wrong answer, only honest and accurate reports are expected and reminding respondents that their responses are collected under anonymous conditions may increase their motivation to answer thoughtfully and precisely which can help minimize this threat (Bradburn, Sudman, Blair, & Stocking, 1978). Also, the findings are limited to children made vulnerable due to AIDS residing with at least one adult caregiver and attending school in a rural community. As such, the results cannot be generalized to include out-of-school orphaned adolescents, orphans from child-headed households or orphaned children in urban neighborhoods which may have different family relationship patterns.

Implications

First, the current study contributes to scientific knowledge by examining the influence of multiple forms of social support on vulnerable children's educational outcomes. Findings suggest that supportive social relationships with significant others may provide AIDS orphans the advice and help they need to deal with academic responsibilities which can enhance their school performance and encourage attendance. Further, warmth and acceptance provided by significant relations may buffer the negative effects of orphanhood, including stress at home or in school and consequently promote their school performance and attendance.

Second, the study has important implications for programming, especially in Sub-Saharan Africa characterized by developing countries where in most cases extended families provide care and support to AIDS-orphaned children. Our findings underscore the importance of strengthening extended families to serve as a net of strength that can influence not only family functioning but also vulnerable adolescents' educational trajectories. An example of intervention for strengthening families is the adapted family strengthening concepts found in the evidence-based practice, 4Rs & 2Ss, a multiple family group model for strengthening families (see Gopalan & Franco, 2009; Gopalan et al., 2014). The 4Rs & 2Ss for strengthening families was designed in collaboration with urban parents to strengthen specific aspects of parenting skills and family relationship processes (child management skills, family communication, within family support and parent/child interaction). Sessions also have been designed to target factors (e.g. parental stress, use of emotional and parenting support) which potentially affect youth outcomes. As such, caregivers can meet the responsibility and demands of caring for and supporting these children which subsequently may enhance their school outcomes. Further research may investigate the relationship between specific components of social support and educational outcomes over time.

Conclusion

Study findings suggest that, in addition to socioeconomic support from families and/or communities that AIDS orphans may currently receive, future public policies and programs

should make efforts to strengthen existing networks of caregivers to help improve the academic outcomes of children made vulnerable due to AIDS.

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Table 1

Baseline characteristics of the sample ($N = 346$).

Variable	*n* (%)
Participant's characteristics	
Age (Range 10–17) (Mean, SE)	13.38(.12)
Gender	
Female	225(65)
Male	121(35)
Orphanhood status	
Single orphan (One parent deceased)	242(70)
Double orphan (Both parents deceased)	104(30)
Caregiver Characteristics	
Primary caregiver	
Biological parent	123(35.6)
Grandparents	98(28.3)
Other relative (aunt, uncle, siblings, etc.)	125(36.1)
Caregiver's age (Range: 18–87) (Mean, SE)	45.69(1.38)
Household Characteristics	
No. of people in the HH (Range: 1–12) (Mean, SE	6.46(.11)
No. of children in the HH (Range: 1–9) (Mean, SE)	3.31(.11)
Household asset index (Range: 0–6) (Mean, SE)	3.61(.11)

Table 2

Itemized description of social support from multiple sources: (N = 346).

Social support from multiple sources	Mean (SE)
Parent/guardian	
Some kids have parents/guardians who don't really understand them.	2.25(.07)
Some kids have parents who don't seem to want to hear about their children's problems.	2.22(.07)
Some kids have parents who care about their feelings.	4.24(.06)
Some kids have parents who treat their children like a person who really matters.	4.42(.05)
Some kids have parents who like them the way they are.	4.24(.06)
Some kids have parents who don't act like what their children do is important.	2.36(.070
Teacher	
Some kids have a teacher who helps them if they are upset and have a problem.	3.99(.06)
Some kids don't have a teacher who helps them to do their very best.	2.42(.07)
Some kids do have a teacher who cares about them.	4.19(.06)
Some kids don't have a teacher who is fair to them.	2.32(.070
Some kids don't have a teacher who cares if they feel bad.	2.37(.07)
Some kids have a teacher who treats them like a person.	4.23(.05)
Friend	
Some kids have a close friend who they can tell problems to.	3.88(.06)
Some kids have a close friend who really understands them.	3.91(.06)
Some kids have a close friend who they can talk to about things that bother them.	3.83(.060
Some kids don't have a close friend who they like to spend time with.	2.51(.070
Some kids don't have a close friend who really listens to what they say.	2.64(.07)
Some kids don't have a close friend who cares about their feelings.	2.6(.08)
Classmate	
Some kids have classmates who like them the way they are.	3.66(.07)
Some kids have classmates that they can become friends with.	3.99(.06)
Some kids have classmates who sometimes make fun of them.	2.64(.07)
Some kids have classmates who pay attention to what they say.	4.04(.06)
Some kids don't get asked to play games with classmates very often.	2.49(.07)
Some kids often spend recess being alone.	2.46(.07)

Table 3

Itemized description of perceived caregiver support and family cohesion: Mean (SE).

Perceived caregiver support items	Perceived by the child (*N* = 346)	Perceived by the caregiver (*N* = 346)
Acceptance and Warmth		
Can you count on your current parent(s)/guardian to help you out, if you have some kind of a problem?	4.36(.05)	4.28(.05)
Do your current parent(s)/guardian(s) say that you shouldn't argue with adults?	3.9(.07)	4.32(.05)
Do your current parent(s)/guardian(s) keep pushing you to do your best in whatever you do?	4.45(.04)	4.6(.04)
Do your current parent(s)/guardian(s) keep pushing you to think independently?	3.29(.08)	3.31(.08)
Do your current parent(s)/guardian(s) show interest in your schoolwork?	4.29(.05)	4.29(.05)
When your current parent(s)/guardian(s) wants you to do something, do they explain why?	4.22(.05)	4.21(.06)
When you get poor marks in school, do your current parent(s)/guardian(s)encourage you to try harder?	4.48(.05)	4.51(.04)
Do your current parent(s)/guardian(s) let you make your own plans for things you want to do?	2.69(.05)	2.9(.08)
Do your current parent(s)/guardian(s) know who your friends are?	3.52(.08)	2.99(.04)
Do your current parent(s)/guardian(s) spend time just talking with you?	4.09(.06)	3.66(.07)
Do your current parent(s)/guardian(s) do things for fun together?	3.32(.08)	3.71(.07)
Psychological Autonomy		
Do your current parent(s)/guardian(s) say that you should give in on argument rather than make people angry?	3.82(.07)	4.07(.06)
When you get a poor grade in school, do your current parent(s)/guardian(s) punish you?	3.52(.08)	3.34(.08)
Do your current parent(s)/guardian(s) tell you that their ideas are correct and that you should not questions them?	2.98(.08)	3.25(.08)
Whenever you argue with your current parent(s)/guardian(s), do they say things like You will know better when you grow up'?	3.13(.08)	3.43(.08)
Do your current parent(s)/guardian(s) act cold and unfriendly if you do something they don't like?	3.55(.08)	2.72(.08)
When you get poor marks in school, do your current parent(s)/guardian(s) make you feel guilty?		3.71(.07)
Do your current parent(s)/guardian(s) stop you from doing things with them when you do something they do not like?	3.99(.06)	2.29(.07)
Family Cohesion		
Do your family members ask each other for help before asking non-family members?	3.98(.06)	4.21(.06)
Do your family members like to spend free time with each other?	3.86(.07)	4.28(.05)
Do your family members feel close to each other?	4.1(.06)	4.38(.05)
Are you available when others in the family want to talk to you?	3.91(.07)	4.51(.04)
Do you listen to what other family members have to say, even when you disagree?	4.16(.06)	4.36(.05)
We do things together as a family.	4.31(.05)	4.29(.05)

Table 4

Regression analyses on school performance and school attendance (*B*, 95% Confidence Intervals).

Social support variable	School performance (*N* = 273)	School attendance (*N* = 346)	School absence (*N* = 342)
Perceived by the child			
Psychological autonomy	−0.06(−0.16, 0.18)	−0.04(−0.15, 0.08)	−0.03(−0.11, 0.05)
Acceptance and warmth	0.09(−0.00, 0.19) *	0.07(−0.05, 0.18)	−0.01(−0.06, 0.04)
Family cohesion	−0.09(−0.21, 0.03)	0.18(0.01, 0.35) *	−0.06(−0.13, 0.01)
Support from multiple sources			
Parent/guardian	−0.17(−0.41, 0.07)	0.05(−0.06, 0.15)	−0.12(−0.21, −0.02) *
Teacher	−0.22(−0.42, −0.02) *	0.07(−0.03, 0.18)	−0.07(−0.17, 0.02)
Friend	−0.24(−0.38, −0.10) **	0.15(−0.01, 0.32)	−0.10(−0.15, −0.05) **
Classmate	−0.20(−0.48, 0.08)	0.18(0.05, 0.30) **	−0.14(−0.22, −0.06) **
Perceived by the caregiver			
Psychological autonomy	0.01(−0.18, 0.20)	−0.10(−0.28, 0.08)	0.05(−0.01, 0.12)
Acceptance and warmth	−0.20(−0.31, −0.10) ***	0.04(−0.05, 0.14)	−0.08(−0.13, −0.02) *
Family cohesion	−0.14(−0.40, 0.13)	0.06(−0.16, 0.27)	−0.04(−0.14, 0.07)

All models control for participants' age, gender, orphanhood status, primary caregiver, household composition, household wealth and the intervention.

*** p ≤ .001,

** *p* ≤ .01,

* *p* ≤ .05.