An Evaluation

Effects of a Community-Focused Approach Supporting the Most Vulnerable Children: Evaluation of SAWAKA *Jali Watoto* Program in Kagera, Tanzania

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Acronyms

AIDS	acquired immune deficiency syndrome
ANOVA	analysis of variance
DSW	Tanzania Department of Social Welfare
HIV	human immunodeficiency virus
KDEF	Karagwe District Education Fund
MVC	most-vulnerable children
MVCC	most-vulnerable children committee
NGO	nongovernmental organization
OVC	orphans and vulnerable children
PLWHA	people living with HIV and AIDS
SAWAKA	*Zaidia Wazee Karagwe* (Help the Elderly in Karagwe)
SDQ	Strengths and Difficulties Questionnaire
TAPSE	Tanzania Promotion of Self Employment
USAID	U.S. Agency for International Development
VCT	voluntary counseling and treatment
WOMEDA	Women Emancipation and Development Agency

Introduction

In sub-Saharan Africa, an estimated 12 million children aged 17 and younger have lost one or both parents, mainly due to the HIV/AIDS epidemic.[1] Tanzania alone has an estimated 1.1 million most-vulnerable children (MVC), including orphans.[2] These children live with caregivers with limited ability to provide care and support due to chronic illness, age (i.e., child head of households or elderly caregivers), and others living with HIV/AIDS themselves. Children living in these situations have been exposed to various life risks, including inadequate care, support, and protection, extreme poverty, hunger, stigma and discrimination that affect their growth and development. In response, programs have been developed and implemented to ameliorate these challenges faced by orphans and other vulnerable children (OVC) and their families. However, there is little empirical evidence showing which program models or strategies are most effective in improving the well-being of children and those in their households.

In 2007-08, the MEASURE Evaluation project received support from the U.S. Agency for International Development (USAID) through the Tanzania field-mission to evaluate the *Jali Watoto* (Care for Children) project. *Jali Watoto* is a child- and community-centered program supported by Pact, an international nongovernmental organization (NGO), and implemented through local community-based organizations (CBOs), including SAWAKA (*Zaidia Wazee Karagwe*, which means "help the elderly in Karagwe"). The program provides support to MVC and their caregivers.[3] The main purpose of this evaluation is to assess the effectiveness of the *Jali Watoto* program model in improving the well-being of MVC and their caregivers in communities affected by HIV/AIDS. In addition, this paper outlines the programmatic implications of the findings for service providers and other stakeholders and makes recommendations regarding effective, replicable interventions.

This evaluation is in addition to four earlier evaluations of OVC care and support programs in Kenya and Tanzania.[4-7] Together, three OVC program evaluations conducted in Tanzania provide a wide range of useful information regarding which OVC program aspects are effective in improving child well-being.

Intervention Model

USAID funded Pact and *Jali Watoto* to support local organizations in various districts, to provide support and services to MVC across the country (see Figure 1). In 2006, Pact commenced the *Jali Watoto* program initiative in Karagwe district

Community-Based HIV/AIDS Prevention, Care, and Support Activities

The *Jali Watoto* program is designed to support community-based HIV/AIDS prevention, care, and support activities aimed at reducing HIV/AIDS-related stigma by informing, training, and educating people on anti-stigma strategies and messages. The activities aim to contribute to more supportive environments, including a more proactive and responsive community. The program's counseling and recreational activities are intended to improve the mental and social health of those affected by HIV/AIDS.

Direct Support to MVC and their Caregivers

For individual children, the *Jali Watoto* program aims to increase access to education and improve individual attendance and to reduce isolation, stigma, and discrimination at the community and household levels. In addition to providing educational support, the program also provides counseling, medical, and food support to OVC families.

Figure 1. ***Jali Watoto*** **(Care for Children) program intervention activities.**

through local CBOs with different complimentary specialties, including Karagwe District Education Fund (KDEF), a local NGO, to provide educational support; Women Emancepation and Development Agency (WOMEDA), a grassroots NGO based in Karagwe to provide legal support; and SAWAKA, which provides support to elderly caregivers. In Karagwe district, there are about 25,326 elderly persons (aged 65 years old or older) and approximately 19% of them are caring for 11,434 orphaned grandchildren.[2] The overall goals of the SAWAKA *Jali Watoto* program are to strengthen community-based responses to meet the psychosocial, emotional, and material needs of MVC and their elderly caregivers.[3] To accomplish these objectives, the SAWAKA program employs two key intervention approaches, community-focused and direct child-focused support. Other activities not evaluated include income generating activities and livelihood skills building for youth, and referrals for other complementary services.[3]

Methodology

Data presented in this report were collected in May and June, 2008, through survey interviews with children aged 7-15 years and with their primary caregivers. Before the survey, a mini-case study was conducted to provide detailed information regarding the program in terms of its intervention strategies and its overall approach to working with the community, the beneficiary selection process, services provided to beneficiaries, and other program activities. Methods for the case study included document review and in-depth interviews with program staff and with some community members.[3] In addition, initial efforts were made to ensure the participation and buy-in of key stakeholders supporting the program at national, regional, and community levels to identify their information needs and to help facilitate the data collection process. This was followed by the adaptation of the data collection tools used in four previous evaluations and translation/back translation to Kiswahili and Kihaya (local languages).

Study Setting

The study was conducted in Kagera region located in the northwestern corner of Tanzania. It is the remotest part of Tanzania, bordering Uganda, Rwanda, and Burundi. The region is mainly rural and its population largely dependent on subsistence farming. Kagera has the earliest and some of the highest prevlance of HIV and orphanhood in the country, partly due to the influx of refugees over the past two decades from Rwanda and Burundi. Administratively, Kagera is comprised of eight districts: Karagwe, Bukoba Rural, Misenyi, Bukoba Urban, Biharamulo, Chato, Ngara, and Muleba. This study took place in two districts, Karagwe (intervention site) and Bukoba Rural (comparison site).

Study Design

This study used a post-test only design with a comparison group to evaluate the effects of exposure to the *Jali Watoto* program interventions on child and caregiver outcomes. The intervention group was drawn from a list of children (aged 7 to15 years) who had been identified as "the most vulnerable" in Karagwe district and were enrolled with SAWAKA under the *Jali Watoto* project. The list was obtained from SAWAKA program staff and validated with community volunteers. The study focused on children aged 7-15 years to allow us to examine a wide range of outcomes, including educational and psychosocial outcomes, and because children within this age-range make the majority of those enrolled in the OVC program. A comparison group was drawn from a list of newly-identified MVC in nearby Bukoba Rural district. These children were scheduled to receive similar care and support services in the near future from another NGO, Tanzania Promotion of Self Employment (TAPSE). Children in both groups were identified by community members of the most-vulnerable children's committees (MVCCs), as being the most vulnerable in their respective communities.

Ethical Considerations

Before data collection, ethical approvals for the research protocol and data collection instruments were obtained from a Tulane University institutional review board in the United States and from the National Institute for Medical Research and the Commission for Science and Technology in Tanzania. Other ethical procedures, including protocols for consent, referrals, and confidentiality, were also put in place before data collection started. All potential respondents were verbally informed at the study's outset that their participation was voluntary and did not affect their eligibility to receive services from the program; and their verbal consent for participation was obtained. Caregivers provided verbal consent for themselves and their children. Assent was also acquired from children themselves, using child-friendly language to support their understanding. If consent was given, the interviewer signed the consent form for the participant. To maintain confidentiality, identifying information was removed prior to data entry and only unique numerical identifiers were used.

Data Collection

Four questionnaires were developed, field-tested, and administered to each OVC household to collect data on the household characteristics (roster and other socio-economic factors), caregiver demographics, child characteristics (aged 7-15 years), and child well-being from both the perspective of the child and that of the child's caregiver. From May through June, 2008, interviews were carried out with 771 OVC households (75.6% of those approached). A total of 948 OVC aged 7-15 years (78.8 % of those approached) and 766 of their caregivers were successfully interviewed. In some cases, more than one child per household was interviewed.

Analysis

The objective of this program evaluation was to determine whether or not an intervention strategy (specifically, community targeted HIV prevention and OVC care activities by the *Jali Watoto* program) resulted in the expected outcomes for children and their caregivers. Therefore, we examined the outcomes among those subjects in the intervention district and among a similar group in the comparison district.

We examined 12 child and caregiver outcome variables in the following domains: psychosocial well-being of caregivers, three indicators; psychosocial well-being children, three indicators; child-caregiver relationship, one indicator; stigma and discrimination, one indicator; and child and caregiver's access to basic needs and rights, four indicators (two indicators involving the child's access to education and two indicators involving legal protection outcomes). Many of these outcomes were measured using scales, and a Cronbach's coefficient alpha of 0.60 or higher was considered acceptable for internal consistency.

Descriptive analyses were conducted to compare the unadjusted means and percentages among those exposed and unexposed to the interventions for each study outcome. The relationships between intervention variables and study outcome measures were assessed using one-way analysis of variance (ANOVA) and chi-square tests for continuous and categorical outcomes, respectively. If the relationship was statistically significant ($p<0.05$), further analyses were conducted to assess whether the differences persisted after controlling for other potentially confounding variables (multivariate analysis) using linear or logistic regression, as appropriate. The control variables for caregiver-level analyses were: age; marital status (married, widowed, or other); caregiver's reported chronic illness (for three or more months in past year); household poverty status (wealth assets index); ever attended school; and number of children living in the household (three or fewer, more than three). In the child-level analyses, we controlled for child characteristics including: age; gender; orphan status (non-orphan, maternal, paternal, or double); relationship to caregiver (mother, grandmother, or other); and number of different homes the child had lived in during the past year.

Study Strengths and Limitations

The key strength of this study design was that it yielded immediate data on program effects. In addition, the non-experimental study design, such as was applied here, is considered ethical as in no instance were services withheld from children or their caregivers, overcoming one of the ethical criticisms in program evaluations. This is because the study sample of children was comprised of those receiving services (the "intervention" group), and those who were slated to receive services in the near future in an adjacent community (the "comparison" group).

Nonetheless, the post-test study design is a major limitation. The absence of baseline data creates a challenge in drawing conclusions concerning changes in outcomes resulting from program exposure. The differences between those who were in the intervention group versus those in the comparison group cannot be definitively attributed to the program interventions. However, as children in the intervention group were roughly equivalent demographically to those in the comparison group (i.e. they were all MVC), we can make broad suggestions of trends. Other potentially confounding socioeconomic and demographic factors were adjusted for in the analyses. Also, this evaluation did not consider the effects of other programs that may have been operating in the intervention or comparison districts.

Results

Sample Descriptions

The SAWAKA program implementation started with MVC identification based on the national guidelines by the Department of Social Welfare in Tanzania. The selection was based on community-set vulnerability criteria that included orphanhood, food insecurity, poverty, inadequate housing, disability or chronic illness (child or caregiver), and abused children.

Table 1 presents the demographic and socioeconomic characteristics of the 766 caregivers interviewed in the two districts in Kagera region, Tanzania. Overall, the mean age of caregivers in the sample was 43.4 years, and the majority was female (86.7%). Nearly three of four caregivers had attended school (73.4%); 35.6% were married or living with someone as if married, while 36.4% were widowed. Only 12 percent of caregivers reported being sickly for (at least) three months of the past year, used as a proxy for an HIV-related illness. The average number of children living in the households was 3.3, and most caregivers (59.8%) reported caring for three or fewer children. Household wealth status was assessed using a wealth index derived from a composite measure on a household's ownership of selected assets including television, radio, bicycles, paraffin lamp, telephone, household living conditions including roof type, and water source and sanitation facilities.[8] The household living conditions considered were whether they had a better roof type (iron sheets or tiles), a latrine or toilet, electricity, used coal or paraffin for cooking, and if they got drinking water from either a public tap or protected well. Each item was given a score of 1 if "yes" and 0 if "no." The cumulative score for each household was divided into five quintiles (a low score signified fewer items owned and a higher score was indicative of richer households). Over half of all caregivers (56.6 %) were living in poor households (i.e. in the two lowest wealth quintiles with two or fewer assets); 23% were living in medium-wealth households; and 20.4% were relatively well-off (two highest quintiles). Of note, a high percentage of households in the comparison area were in the lowest wealth quintile (30.4%) compared to only 17.9% in the intervention area, and the difference was statistically significant ($p<0.05$).

In addition, household vulnerability related to food insecurity was assessed. Food insecurity was assessed using the Household Food Insecurity Access Scale, a nine-item scale designed to measure the prevalence and severity of household food insecurity that was developed by USAID's Food and Nutrition Technical Assistance project in 2006.[9] Results show that a majority of caregivers (86.3%) live in moderately to severely food insecure households.

Table 2 presents the demographic characteristics of the 895 children in the study sample. The sample contained roughly equal numbers of boys and girls. The mean age for the children was 11.6 years. Over half of the children (56.5%) were between the age of 12-15 years, and 43.5% were aged 7-11 years. Approximately 81% of these children had lost one or both parents: 9.5% were single maternal orphans; 50% were single paternal orphans; and 21.5% were double orphans. Over half of sampled children (61%) had their natural parents as their primary caregivers. Roughly, 13% of the children reported living in more than one home in the past year, used as an index of disruptions in the child's life. An analysis conducted to examine the relationship between orphan status and number of homes the child lived in the past year (not shown), revealed that double orphans were more likely to report living in more than one home, and single paternal orphans were least likely to report this (16.2% and 12.4%, respectively).

Program Intervention Exposure

The *Jali Watoto* program activities are mainly community-focused, to build capacity to support

Table 1. Description of Caregivers in the Sample

	Intervention Group (N=335) %	Comparison Group (N=431) %	Combined (N=766) %
Sex			
Male	11.6	14.6	13.3
Female	88.4	85.4	86.7
Age group (years)			
>30	12.5	11.6	12.0
30-49	63.9	58.0	60.6
50+	23.6	30.4	27.4
Mean age:			
Intervention = 42.6			
Comparison = 44.4			
Combined = 43.4			
Ever attended school			
Yes	71.7	75.2	73.4
No	28.3	24.8	26.6
Caregiver ill for 3 months in past year			
Yes	14.6	16.7	12.0
No	85.4	83.3	88.0
Caregiver marital status			
Married/living with someone	37.5	34.6	35.6
Widowed	44.7	51.4	36.4
Other	17.7	14.0	28.0
Number of children in household			
≤3	60.3	59.3	59.8
>3	39.7	40.7	40.2
Mean number per household:			
Intervention = 3.4			
Comparison = 3.3			
Combined = 3.3			
Household Wealth Status			
Poorest (0-1 asset)	17.9	30.4	24.9
Poor (2 assets)	29.3	31.3	31.7
Middle (3 assets)	23.9	22.4	23.0
Rich (4 assets)	14.0	7.7	9.7
Richest (5 or more assets)	14.9	8.2	10.7
Household food security status			
Food secure	9.0	5.8	7.2
Mildly food insecure	3.9	8.6	6.5
Moderately food insecure	43.6	44.8	44.3
Severely food insecure	43.6	40.8	42.0

MVC and directly supporting individuals to meet their immediate needs.[3] Respondents in the intervention and comparison groups were asked whether they had heard of the *Jali Watoto* program. Those in the intervention group (caregivers and children) were also asked whether they had ever attended any *Jali Watoto* community seminars/meetings addressing care and support of OVC or HIV prevention. Questions regarding receipt of direct support, including educational support and home-visits, as well as participation kid's club meetings, were also asked.

Table 2. Description of Children in the Sample

	Intervention Group (N=434) %	Comparison Group (N=461) %	Combined (N=895)* %
Sex			
Male	48.4	54.4	51.5
Female	51.6	45.6	48.5
Age group (years)			
7-11 (mid-childhood)	42.9	44.0	43.5
12-15 (adolescence/youth)	57.1	56.0	56.5
Mean age:			
Combined = 11.6			
Child's orphan status			
Non-orphan	24.9	13.7	19.1
Single maternal orphan	7.8	11.1	9.5
Single paternal orphan	50.5	49.5	49.9
Double orphan	16.8	25.8	21.5
Number of homes child has lived in			
One	86.9	87.0	86.9
Two or more	13.1	13.0	13.1
Primary caregiver's relationship to child			
Natural Parent	66.6	55.5	60.9
Grandparent	13.4	18.9	16.2
Other	20.0	25.6	22.9

* Total N excludes cases with missing data.

Caregivers' Exposure — Nearly all caregivers in the project intervention area were aware of the *Jali Watoto* project (88.1%, Table 3), compared to 6.1% in the comparison group (not shown). Among those who had heard of the program in the intervention area, only 46.9% had attended at least one meeting in the community that addressed MVC care or HIV prevention. Of the 157 caregivers who reported having attended a seminar, just over one-third had attended a seminar on HIV prevention (36.7%); 32.8% had attended a seminar care and support for OVC; approximately about 28% had attended a seminar on stigma; and approximately 28% had attended a seminar on voluntary counseling and treatment (VCT).

Children's Exposure — Of the 434 children in the program area, 73.2% reported that they were aware of *Jali Watoto* program compared to only 0.4% of those in the comparison area (Table 4). In addition, of those children who reported being aware of the program in their community (n=319), 79.9%, 90.3%, and 80.9% of them had received school supplies, beddings, and insecticide-treated bed nets from the program, respectively. Indeed, children in the project area were better-off materialistically than those in the comparison group, perhaps because they received some support from SAWAKA. For example, higher proportions of children in the comparison group reported lacking essential materials such as beddings (79%) and a bed net (89.4%), compared to those in the intervention group (17.5% and 29.7%, respectively).

Children's Exposure to Community-Focused Program Activities — The *Jali Watoto* program was designed to support community-based HIV/AIDS prevention, care, and support activities by training and educating youth and other people in the community about these topics and other related issues, such as stigma and discrimination.

Table 3. Percentages of Caregivers in the Intervention Area Exposed to *Jali Watoto* Intervention Activities (N=434)

Intervention	Percent
Caregiver was aware of the SAWAKA project (n=335)	88.1
Caregiver attended at least one community seminar meeting that discussed OVC issues or HIV prevention topics (n =157)	46.9
Type of training/seminar for those who attended meeting (n=157)	
HIV prevention	36.7
Care & support for OVC	32.8
Stigma against PLWHA	28.4
VCT for HIV/AIDS	28.1
Income-generating Activities (IGA)	13.7
Child rights	12.2

Table 4. Percentages of Children Exposed to *Jali Watoto* Intervention, by Group

	Intervention Group %	Comparison Group %
Ever heard of *Jali Watoto* (Intervention n = 434, comparison n = 461)	73.2	0.4
Services provided directly to child — child received:		
School supplies	79.9	NA
Bedding (blanket/sheets)	90.3	NA
Insecticide-treated bed nets (Intervention n = 319)	80.9	NA
Child's material well-being status (possessions) — child lacked:		
Blanket	17.5	79.0
Pair of shoes	64.1	81.1
Two sets of clothes	37.1	39.3
Mattress	77.4	86.8
Bed net (Intervention n = 434, comparison n = 461)	29.7	89.4

Note: NA = not applicable

In addition, home visiting and kids' clubs are popular program intervention strategies employed by several organizations supporting MVC in Tanzania, including The Salvation Army and Allamano programs.[4,6] We analyzed the prevalence of these activities among the children in the *Jali Watoto* program area.

Approximately 26% of children in the intervention area had ever attended at least one training seminar in the community that discussed OVC care or HIV prevention (Table 5). Of the 111 children who attended a seminar, a higher percentage attended one regarding stigma against OVC (21.7%), followed by child rights (11.8%). Of those children whose caregivers had heard of Jali Watoto, only 21.7% of them had their homes visited by a volunteer (n=94). In addition, only about a fifth of the children in the intervention area (n=90) had heard about a kids' club. Among those children who had heard of these, only half reported having attended a kids' club meeting (52.2%). Only a small percentage of the children in the sample had received a home visit or had attended a kids' club. Because of the small numbers of children in the intervention area attended kid's club meeting or received a volunteer home visit, very limited analysis was conducted looking at the effects of these components on children's well-being.

Table 5. Percentages of Children Exposed to Specific Intervention Components in the Intervention Area (N = 434)

	n	Percent
Children who attended at least one community seminar that discussed OVC care and HIV prevention	111	25.6
Type of training/seminar for those who attended meeting:		
• *stigma against OVC*		21.7
• *rights of Children*		11.8
• *HIV-prevention topic*		8.5
• *stigma against PLWHA*		5.5
• *psychosocial and counseling*		4.8
Children whose caregiver reported having received a visit from a *Jali Watoto* volunteer	94	21.7
Children who reported having heard about a kids' club meeting in the community or school	90	20.8
Children who reported having attended Kids' Club meeting in the community or school	48	52.2

Effects of Program Interventions on Caregiver Outcomes

Effects on Caregivers' Psychosocial Well-being — In order to assess the program effects on caregivers' psychosocial well-being, four measures were used: positive, negative, marginalized feelings, and perceived community stigma.

Positive and negative feelings were captured by two sub-scales extracted from the Psychological Domain of the World Health Organization's (WHO) Quality of Life instrument to measure caregivers' psychological health.[10] Each subscale contains four items inquiring about how satisfied the respondent is with certain aspects of his or her life. The *positive feelings' subscale* (alpha=0.76) assessed caregivers' feelings through responses to how much they enjoy life, how much they experience positive feelings in their life, how positive they feel about the future, and whether they generally feel content. Caregivers' *negative feelings* were assessed through responses to the extent to which any feelings of sadness or depression interfere with their everyday functioning, how much do feelings of depression bother them, how worried they feel, and how often they have negative feelings such as despair, anxiety, or depression (alpha=0.84). Items in both subscales were scored 1 to 5, where higher scores were indicative of better emotional well-being (negative subscale items were reverse-coded). A mean score was calculated for each subscale; 2.40 for the positive feelings scale (SD=0.64), and 2.88 for the negative feelings scale (SD=0.86). Results show that caregivers in the intervention group had better emotional health (more positive feelings). Intervention group respondents scored 2.45, compared to comparison group respondents who scored 2.36 ($p < 0.05$). However, this relationship was not statistically significant after controlling for other confounding factors. A similar trend was observed using the negative subscale (2.92 versus 2.85), however, this difference was not statistically significant (Figure 2).

The *marginalization feelings*[11] scale (alpha=0.72) is comprised of five items assessing perceptions and feelings of being marginalized including whether they feel that people speak badly about them or their family, make fun of their situation, and would rather hurt them than help them; whether they feel isolated from others in the community; and whether they feel no one cares about them. Items were scored 1 to 4, where higher scores indicate stronger feelings of marginalization. The mean score was 2.15 (SD=0.61). Those in the intervention group had a mean score of 2.19 compared to those in the comparison group (mean score 2.12) (Figure 1). However, the differences were not statistically significant.

Caregivers' Perceptions of Stigma — Caregivers' perceptions of stigma within the community

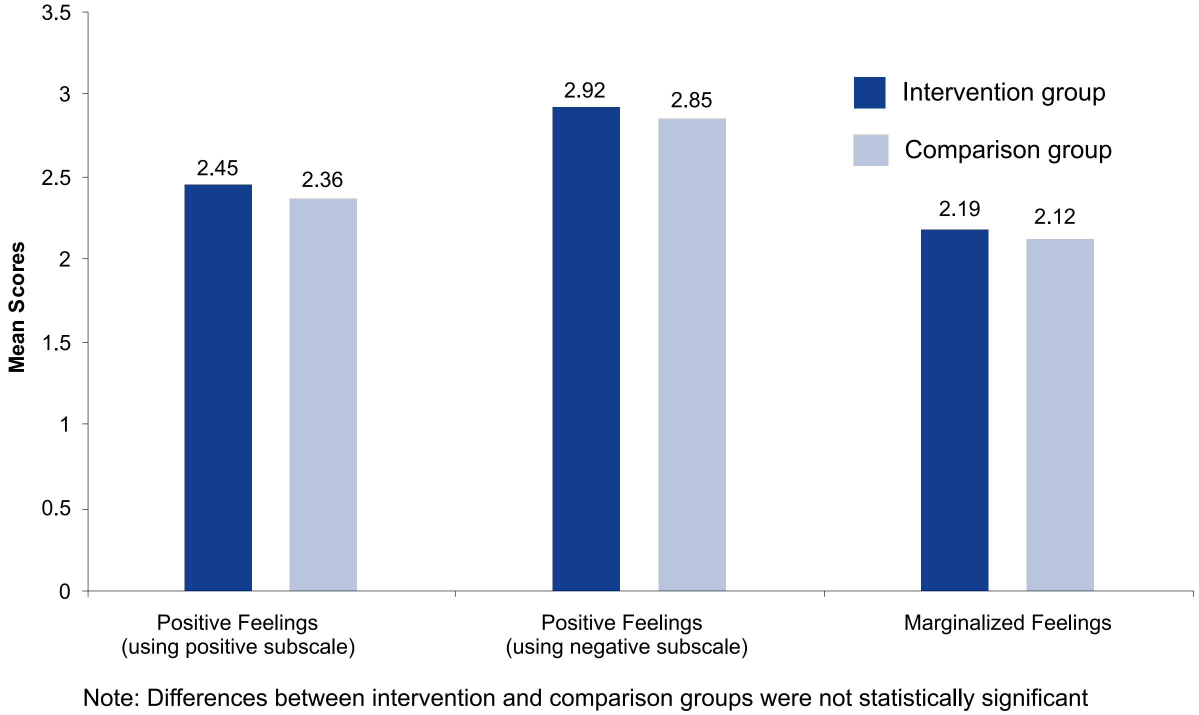

Figure 2. **Effects of *Jali Watoto* program interventions on caregivers' emotional health.**

were assessed using a new three-item scale[12] of whether they feel that the community rejects orphans, whether they feel that the community rejects families affected by HIV/AIDS, and whether they feel that people are jealous of the services given to orphans and families affected by HIV and AIDS. Possible scores ranged from 1 to 4, with higher scores indicating more perceived community stigma and discrimination towards OVC and other HIV-affected people. However, the Cronbach's Alpha (0.52) was below our acceptable minimum of 0.60; consequently, we examined caregivers' responses to each individual item. Results show that there were no significant differences between those in the intervention and those in the comparison group on caregivers' responses to two items: whether they feel that the community rejects orphans; and whether they feel that the community rejects HIV-affected families. The analysis revealed, however, that caregivers perceive that people in the community are jealous of the services orphans and their families receive. Caregivers in the intervention site reported higher perceived jealousy than those in the comparison group (mean scores 2.85 and 2.59, respectively; $p<0.001$, Figure 3). This relationship persisted even after controlling for other confounders ($p=0.005$).

Effects on Family Functioning and Community Support — Family functioning was assessed using the 12 items of the general family functioning scale (alpha 0.89) of the McMaster Family Assessment Device.[13] The caregivers rank their level of agreement with statements about their family dynamics. The statements include such items as: in times of crisis, you can turn to each other for support; there are lots of bad feelings in the family; and you feel accepted for what you are. Scores range from 1 to 4, with higher scores indicating poor family functioning. The overall mean score was 1.80 (SD=0.51). The analysis revealed that caregivers in the intervention area had poorer family functioning relative to those in the comparison area (mean scores were 1.88 versus 1.73, respectively; $p<0.001$). These

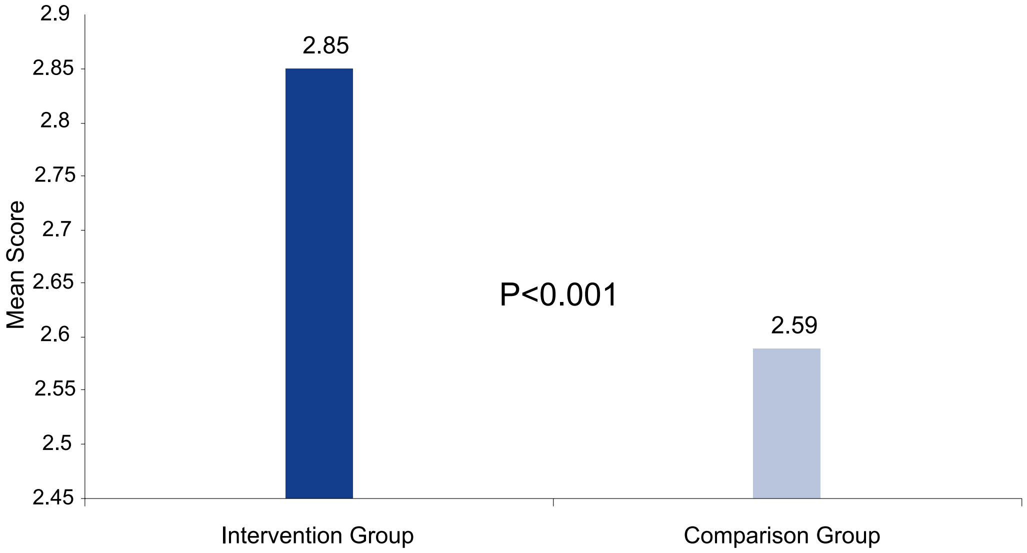

Figure 3. **Caregivers' perceived community jealousy toward OVC and HIV-affected famlies.**

effects persisted even after controlling for other background variables (p<0.001) (Figure 4).

Community In-kind Support — In-kind community support for vulnerable households was assessed through the caregivers' responses to two questions:

> *In the past six months, did your household receive help from friends, relatives, or neighbors?*
>
> *Who is primarily responsible for caring for OVC or HIV-affected families in this community?*

Caregivers in the intervention group were more likely to report that their households had received help from neighbors (32.9%, verses 23.2%, p=0.002). Controlling for other factors, those in the intervention area continued to be roughly 1.5 times as likely to report receiving help from the community than those in the comparison area (p<0.05). When asked who was responsible for caring for OVC and HIV-affected families, those in the intervention area were more likely to name government or NGOs (33.6% verses 22.2%). Even after controlling for confounding factors, those in the intervention group were 1.7 times as likely to say NGOs or government are responsible for caring and supporting OVC and HIV-affected families compared to those in the comparison community (p=0.002) (Figure 5).

Caregiver Feelings towards the Child — The feelings of caregivers towards their children were assessed using caregivers' responses to four questions: if the child is much harder to take care of than most children; if the child does things that bother them a lot; if child takes up more of their time than expected; and if they feel angry with child (alpha=0.78).[14] Each caregiver responded to these questions separately for each child under his or her care. The items were scored 1 to 4, where higher mean scores represent better feelings of caregivers towards the children in their care. The analysis showed no statistically significant differences between caregivers of children who were in intervention area and those in the comparison area.

We assessed caregivers' HIV-prevention behavior through their response to whether they had ever been tested for HIV/AIDS. Approximately equal percentages of caregivers in the intervention and comparison groups reported being previously tested for HIV (34.3% verses 35.7%, not significant).

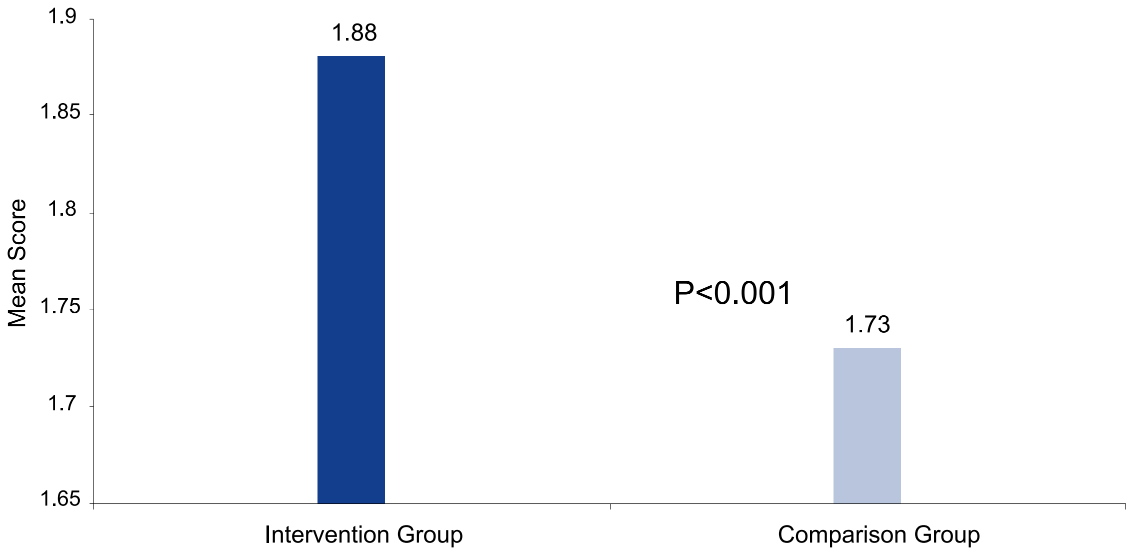

Figure 4. **Caregivers' assessment of family functioning, by group.**

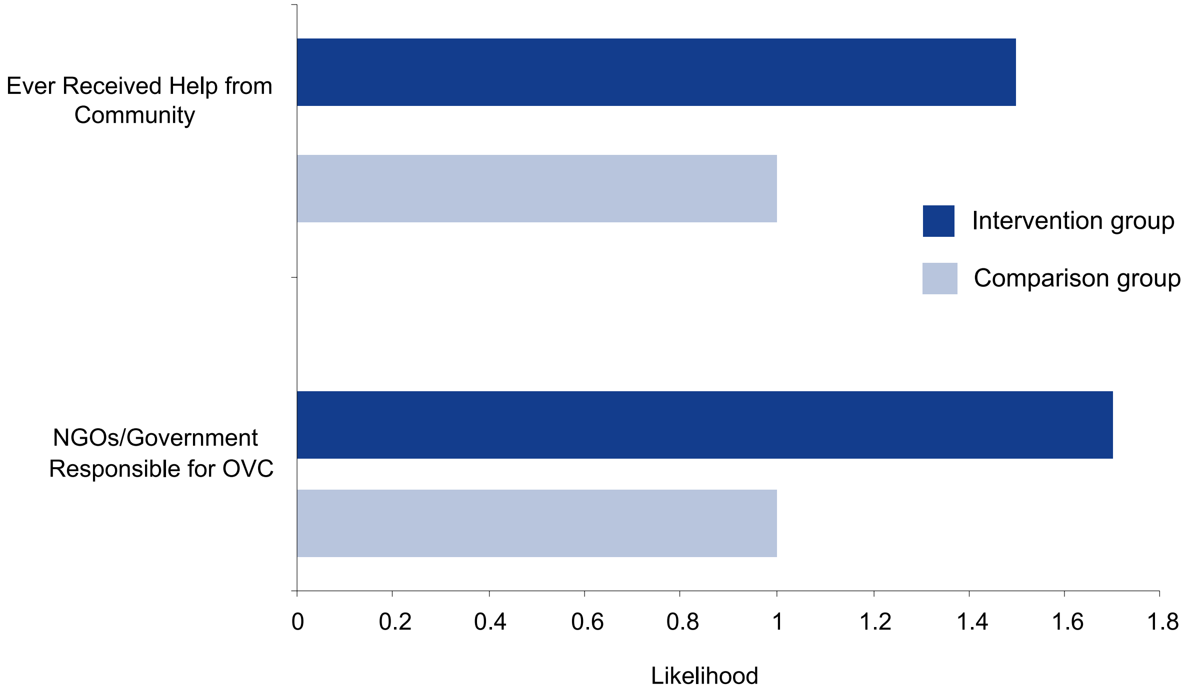

Figure 5. **Likelihood of a household receiving in-kind support from the community and likelihood of the household expecting NGO support.**

Effects of Program Interventions on Child Outcomes

We assessed children's HIV-prevention knowledge through their responses to two questions:

Have you ever heard of HIV/AIDS?

How can HIV infection be prevented?

Respondents were probed to list all the prevention methods they knew.

The correct responses covered three HIV prevention-related topics: transmission, prevention, and risky behaviors. Any correct response, such as having one sex partner, avoiding sex workers, using a condom, or abstaining from sex was scored as 1. The responsdents were grouped into three categories: those who have never heard of HIV/AIDS; those who have ever heard of HIV/AIDS but did not know how HIV can be prevented; and those who had heard of HIV and knew at least one correct prevention method. A higher percentage of children in the intervention area had heard about HIV/AIDS compared to those in the comparison area (72.9% verses about 63%, p < 0.01, Figure 6). In both the intervention and comparison groups, among those who had heard of HIV/AIDS, many children could identify at least one HIV prevention method (41.9% and 37.4% for the intervention and comparison groups, respectively). Further analysis revealed that, after adjusting for other background factors, those in the intervention area were 1.7 times more likely to know about HIV/AIDS than those in the comparison area (p<0.01).

Legal Protection — Legal protection outcomes were assessed using the following indicator: whether the child has a birth certificate (national identification document) and whether the caregiver has designated an alternate caregiver for the child in case anything happens to her orhim. Figure 7 shows that a lower proportion of children in the intervention group (64.9 %) had a birth certificate compared to 73.6% of those in comparison area. Similarly, only 18% of children in the intervention area had alternative caregivers assigned to them compared to 25.2% of those in the non-intervention group. Both relationships were statistically significant even after controlling for confounders (p<0.05). Effects on the psychosocial well-being of children

Psychosocial Well-being — Child's psychosocial well-being was assessed using four multidimensional measures: two measures of

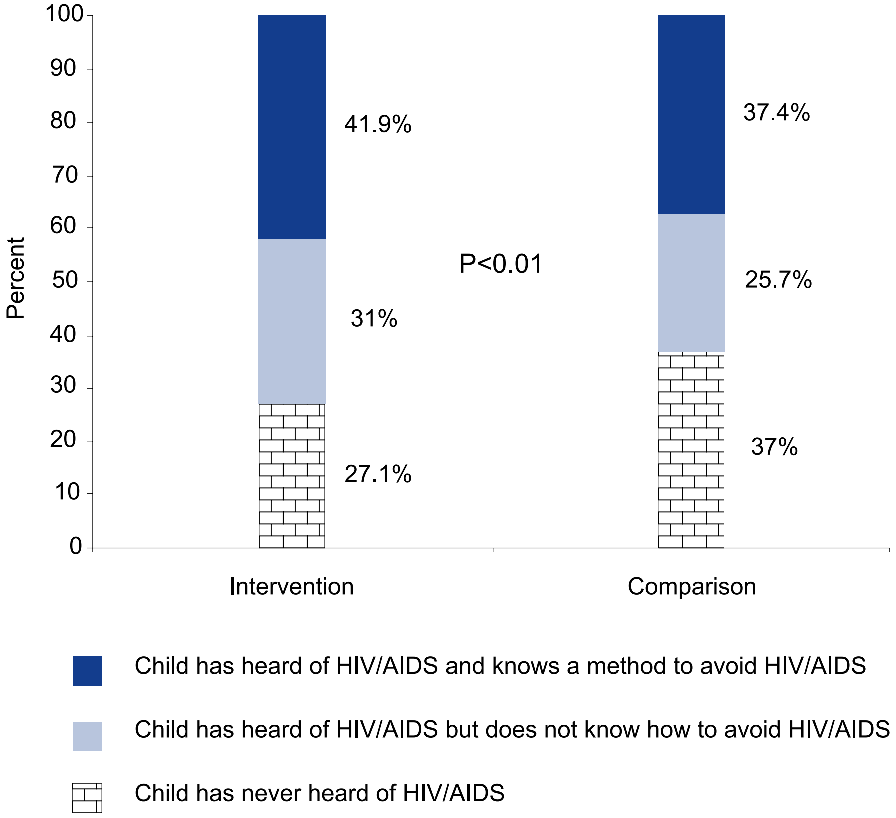

Figure 6. **Children's knowledge about HIV and AIDS, by group.**

child's behavior from the Strengths and Difficulties Questionnaire (SDQ)[15] reported by the caregiver (pro-social behavior subscale and the 20-item total difficulties aggregate scale of four subscales measuring child's emotional, conduct, and peer relationship problems, and hyperactivity/inattention); and two widely used subscales from the Self-Esteem Questionnaire,[16,17] reported by child (family-related and global self-worth/self-esteem).

The child's total difficulty behavior was assessed using caregiver's responses to 20 question items (alpha=0.61) on four areas: emotional symptoms (i.e., child seems worried, child seems unhappy), peer relationship problems (i.e., child would rather be alone than with other children his or her own age), hyperactivity/inattention (i.e., child is restless, overactive, or cannot stay still for long), and conduct problems (i.e., child lies or cheats). Each individual item had a score range from 0 to 2, and the cumulative score may range from 0 to 40, with higher scores indicative of abnormal behavior.

Pro-social behavior was assessed using the positive SDQ five-item subscale (alpha=0.66), which includes questions on whether the child is considerate of other people's feelings; shares toys, pencils, and food with other children; tries to help if someone is hurt, upset, or sick; is kind to other children; and offers to help adults or children. Each item was also scored from 0 to 2 with a possible cumulative score ranging from 0 to 10, where higher scores indicate more cooperative and desirable behavior.

Results (Figure 8) show that children in the intervention group had significantly more behavioral problems (total difficulties score of 8.2) compared to those in the comparison group (a score of 7.7). This relationship persisted even after controlling for other background characteristics ($p<0.05$). Nonetheless, when comparing the two groups using the pro-social measure, the differences between them were not statistically significant.

Self-esteem — The global self-esteem subscale measures a child's attitudes towards self and has eight items (alpha=0.67): whether the child is happy with the way they can do most things; whether the child sometimes thinks he or she is a failure; whether the child is happy with herself or himself; whether he or she are the kind of person the child wants to be; whether the child often feels ashamed; whether the child likes being just the way he or she is; whether the child is as good a person as he or she wants to be; and whether the child wishes he or she had more to be proud of. Each item was scored on a four-point scale with possible cumulative score ranging from 8 to 32, where a higher score indicates better self-esteem. The mean was 19.92 (SD=4.03). Figure 9 shows that those in the intervention group had slightly better self-esteem compared to those in the

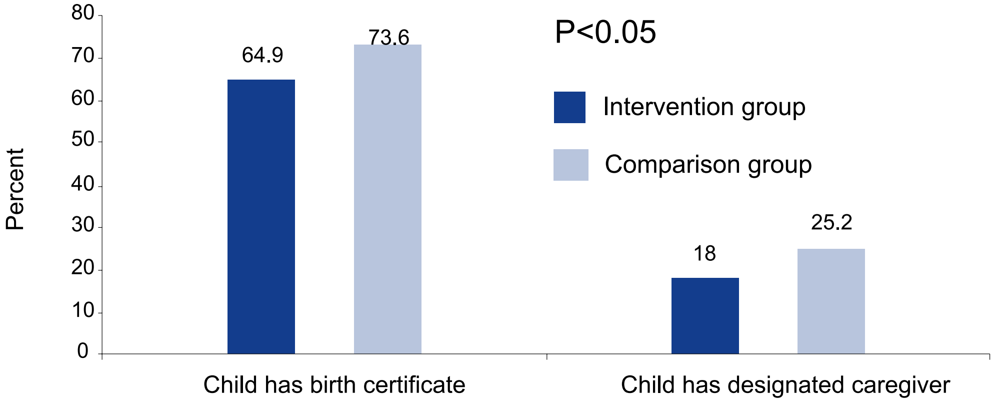

Figure 7. **Percent of children with birth certificates and those with designated caregivers.**

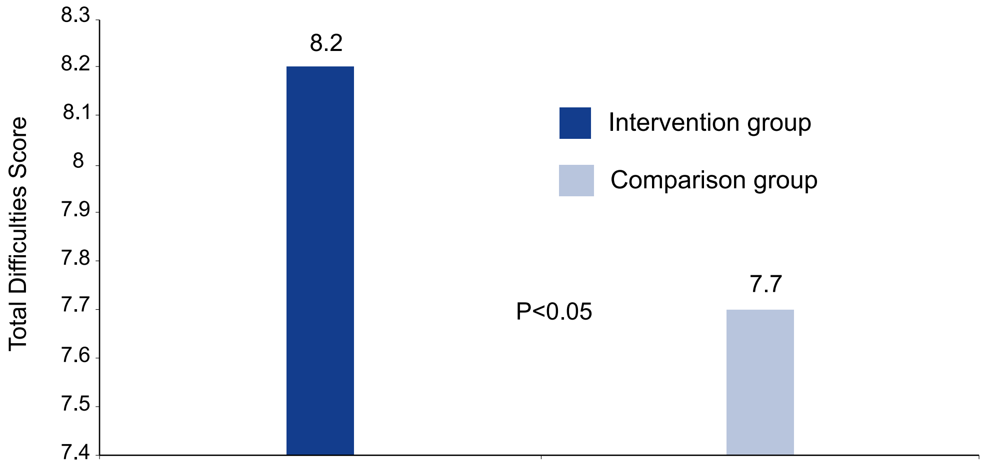

Figure 8. **Total difficult child behavior, by group.**

comparison area (score 20.1 versus 19.7). This difference was consistent with a trend toward statistical significance after controlling for other confounding variables (p=0.09).

The family-related self-esteem subscale assesses a child's perception regarding his or her family's favorable or unfavorable attitudes toward the child. It has the following items (alpha=0.84): whether the child is happy about how much his or her family likes the child; if the child feels he or she is too much trouble to their family; if the child feels he or she gets into too much trouble at home; if he or she feels okay about how important the child is to the family; if the child feels he or she gets along as well as the child would like with the rest of the family; if he or she feels the family pays enough attention to the child; how often the child plays alone because he or she feels no one wants to play with the child; and how often the child feels other children pick on them. The mean was 20.0 (SD=3.32). The analysis also showed no significant effect of the program on the child's family-related self-esteem scores.

Support Network — We assessed children's support network using three measures: adult support, social isolation, and child's perceived

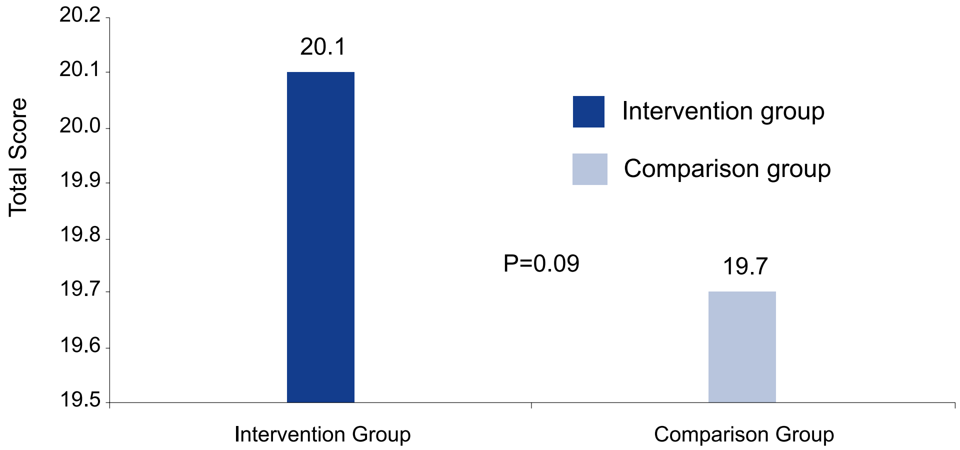

Figure 9. **Children's global self-esteem score, by group.**

negative community attitudes regarding OVC and HIV-affected families. Adult support was assessed using a four-item, 4-point scale (alpha=0.77) with a possible mean score range of 1 to 4, where higher scores indicate more adult support. The items included were whether the child has an adult in his or her life that the child trusts to offer the child advice; whether they have an adult who would go with them to authorities; whether the child has an adult in his or her life that comforts the child; and whether the child has an adult in the child's life that he or she can always depend upon. The overall mean score was 3.35 (SD=0.55). However, being in the intervention group had no significant effect on children's perception of adult support.

Children's feelings of social isolation were measured by five items (alpha=0.81) derived from the KIDSCREEN social acceptance subscale (bullying), which evaluates children's feelings of social isolation.[18] The items include how often the child plays alone because he or she feels that no one wants to play with the child; how often he or she reports other kids picking on the child; if the child has been afraid of other girls or boys in the past four weeks; if other girls and boys made fun of him or her; and if other girls or boys bullied him or her in the past four weeks. A foud-point scale was used to rate each item, with a mean score derived and a higher score indicating more social isolation. Children who were in the intervention group had a relatively higher mean score (1.72) compared to those children who were in the comparison group (mean score = 1.69). The differences were not statistically significant.

Children's perceived community stigma was assessed using the new three-item scale (alpha-0.52) described earlier. The possible scores ranged from 1 to 4 with higher scores indicating more perceived community stigma and discrimination towards OVC and people living with HIV and AIDS (PLWHA). However, the Cronbach's Alpha (0.52) was not acceptable; and, as a result, further analysis was conducted to find out if any of the three items was associated with interventions. Results show children in the intervention group were more likely to perceive that others were jealous of the services provided to OVC and PLWHA, (means scores 2.79 versus 2.59, p=0.002, for the intervention and comparison groups, respectively, as shown in Figure 10). Controlling for other confounders, the negative effects persisted. However, there was no association between the groups and the other two items (community rejects PLWHA and community rejects OVC).

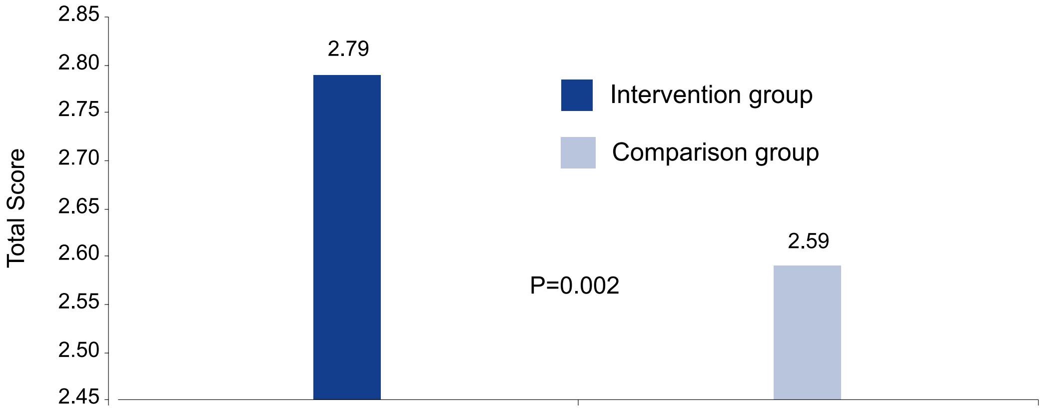

Figure 10. **Children's perceived community jealousy towards OVC and PLWHA, by group.**

Effects of Having the Basic School Materials and Supplies on Child Outcomes

This analysis examined program effects on educational and psychosocial outcomes.

Educational Outcomes — Children's access to education was assessed using two outcome indicators: child is still attending school; and child is regularly attending school. Regular school attendance was measured by caregivers' responses to the number of days the children under their care had missed school in the week preceding the survey. If the survey was conducted during school holidays, caregivers were asked about the number of days the children under their care missed school in the week before holidays started. Possible responses for the number of days missed ranged from 0 to 5. Almost all children in the samples of both intervention and comparison groups were still attending school (96.6% versus 97.5%, respectively). However, approximately 18% of them had missed at least one day of school in the week preceding the survey or holidays for both groups. Possession of basic school materials and supplies was not related to study group or regular school attendance.

Psychosocial Outcomes — Effects of possessing the basic school materials on children's self-esteem were assessed. Possession of school materials was related to better self-esteem scores (Figure 11). Self-esteem (measured by the global self-esteem subscale-self-worth) was positively and significantly related to possession of basic school materials. Those in the intervention group had a significantly higher mean number of basic school items and consistently better self-esteem scores compared to those in the comparison group. This suggests that this intervention component boosted children's self-worth. This relationship remained significant even after controlling for confounders ($p<0.001$).

Effects on other psychosocial outcomes were also examined including children's perceptions of negative community attitudes towards OVC and PLWHA, and adult support. However, the relationships between having the necessary school materials and perceived negative attitudes towards PLWHA and OVC in the community or adult support were not statistically significant. Nonetheless, possession of basic school materials was significantly associated with fewer child

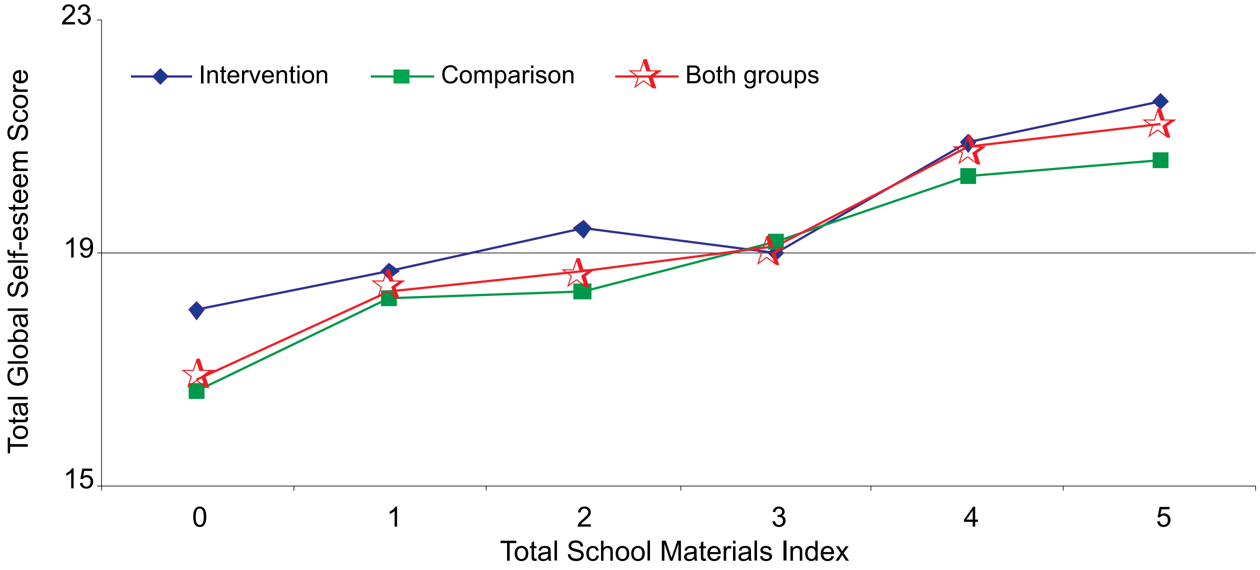

Figure 11. Program effects on the relationship between possession of basic school materials and child's global self-esteem.

behavioral problems (assessed using the total difficulties scale, as described previously). This relationship persisted even after controlling for other confounding variables ($p<0.05$), as shown in Figure 12.

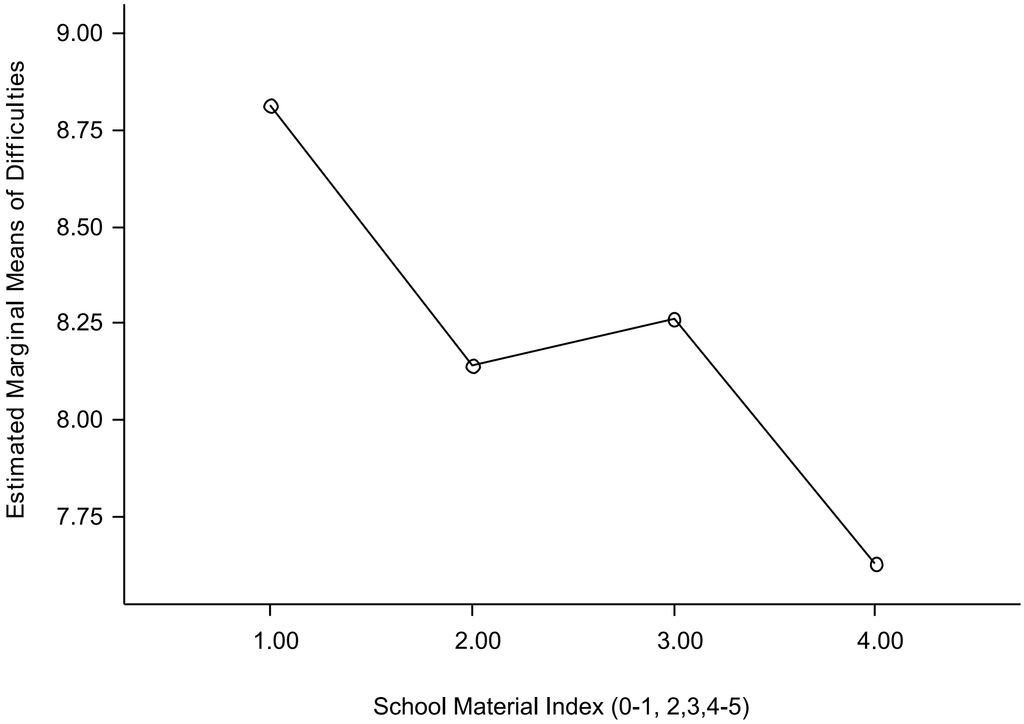

Figure 12. Estimated marginal means of total difficulties score by school matrix index.

Discussion and Conclusion

This study was an attempt to verify if the *Jali Watoto* program interventions had a significant effect on the well-being of MVCs and their caregivers. Exposure to interventions is expected to affect individual outcomes, community attitudes, knowledge, and behaviors in a positive way, and ultimately benefit HIV-affected families, including OVC and their caregivers.

Findings show that the program had mixed effects on MVC and caregivers' in terms of their psychosocial well-being, support networks, perceptions of community stigma, among other outcomes. Although the differences in scores between the intervention and comparison groups for some indicators were not statistically significant, most analyses indicated positive trends of the intervention. However, there were also a number of unexpected and negative effects especially in regard to stigma.

Foremost, the results of this evaluation confirm that community-level intervention activities were effective in improving caregivers' and children's positive feeling about themselves. Caregivers who were in the intervention group had more positive feelings about life than those in the comparison group. Similarly children in the intervention group had better global self-esteem (self-worth) compared to their counterparts in the comparison area. Perhaps, this could be because the HIV-affected families start feeling that they matter and society recognizes their situations and therefore supports them. In addition, children in the intervention area had increased HIV prevention knowledge than those in the comparison group. Community-based care and support activities in the intervention area is likely to account for the higher number of caregivers reporting that their households had ever received support from neighbors and relatives, than in the comparison area.

In addition, results show positive effects of direct educational support on child outcomes. For individual children, supporting their immediate needs for education, health care, counseling, and food are important for their psychosocial well-being. The Jali Wakoto school support intervention includes provision of school supplies, uniforms, and payment of school fees. Possession of the necessary school materials was significantly associated with improved global self-esteem (judgment of self-worthiness) and reduced behavioral problems. This may suggest that perhaps, possession of school material is a coping strategy to mitigate the anxiety that exists among MVCs and helps them believe that they are significant and worthy.

Nonetheless, community-focused activities seem to have had negative effects on OVC and caregivers receiving support (intervention group). Although, Jali Watoto was designed to help reduce social isolation, stigma and discrimination at the community, household, and individual levels, the findings of this evaluation indicate that the program had some negative effects on program beneficiaries. For example, compared to caregivers in the comparison group, those who were in the intervention group reported poorer family functioning, more negative community attitudes towards HIV-affected families, and more jealousy from the community regarding the services given to OVC and PLWHA. Similar results were observed among children. Those in the intervention group had more behavioral problems and felt that there were more community jealous and resentments and stigmatization of beneficiaries receiving services. Overall, these findings were surprising and may be indicative of the unintended effects of a program that focuses on community-level activities without additional targeted counseling and other customized support to individual OVC and caregivers. In support of this hypothesis, the analysis revealed that when children had adequate basic school materials (i.e., mostly received from program), they had significantly fewer behavioral problems than those with less (i.e., unmet need). In addition, only a small proportion of OVC and caregivers in the intervention group were exposed to individual-level psychosocial support activities, such as a volunteer home-visit and/or counseling signifying limited targeted support.

Further, those in the intervention group had increased reliance on NGO or government for support instead of their neighbors reported by caregivers. This result was interesting and perhaps indicative of the misconception among program beneficiaries about the role of NGOs and other outside support to targeted children and their families in the community. Also, access to legal protection services including having a birth certificate and a designated caregiver were better among children in the comparison group than those in the intervention group. These findings are also unexpected, and there was no reasonable explanation except that it maybe because children in Bukoba rural district are near the regional headquarter (Bukoba town) and could easily get access to legal and other services than those in the remote areas of Karagwe district. Possession of a birth certificate is the first step to legal recognition of children's identity in a country that also entitles them to be protected by national law. Lack of such a document excludes children from legal protection and benefiting from social services and development schemes; and, therefore, needs more emphasis in programs interventions.

Programmatic Implications

Community-based HIV-prevention activities increase HIV knowledge among children.

Exposure to Jali Watoto interventions was significantly associated with increased HIV knowledge among OVC. Thus, programs aimed at HIV prevention should find ways to increase coverage and intensity of educational seminars to ensure that children have the right information about HIV. HIV prevention activities had limited effect on HIV prevention behavior among caregivers (HIV-testing). It is recommended that HIV prevention activities promote and support VCT among adults by intensifying seminars.

Innovative ways to address perceived negative attitudes from community towards program beneficiaries is urgently needed.

Jali Watoto was designed to increase community support to vulnerable families and reduce stigma towards OVC and other HIV-affected people. However, the program did not reduce stigma or perceptions of jealousy in the community. A similar study conducted in Iringa among Allamano program beneficiaries also revealed comparable results3. This suggests that better approaches of addressing stigma are urgently needed. We suggest adding counseling interventions for families receiving program support.

Emphasis on community-driven support to OVC is required

The community was the least frequently reported source of support for OVC and PLWHA because many program participants saw it as a responsibility of government and NGOs. Programs should therefore step-up their efforts in engaging and build their capacity to support MVC in a more sustainable way. Community support to MVC should be stressed and seek community buy-in before providing any external support (NGO or government). We recommend empowering communities and working alongside them to care for MVC and other vulnerable families. This approach will not only encourage community members to do more but will also help them understand that external support is a boost to their efforts.

Need for more family-focused psychosocial support activities.

Children in the intervention group had better global self-esteem scores than those in the comparison group. However, caregivers in the intervention group reported similar psycho-social well-being than those in the intervention group. We recommend that programs strengthen their psychosocial support services for caregivers and their children. Perhaps through training and encouraging community volunteers to visit households and providing psychosocial services to both OVC and their caregivers. The current home visiting intervention of the Jali Wakoto program should be intensified to address the unmet psychosocial needs of OVC and their families.

Possession of basic school materials has positive effects on child psychosocial well-being.

This study showed that possession of the necessary school materials such as a book, pencil/pen, and uniform was related to better self-esteem among school-age children and less behavioral problems. As part of the overall care and support strategy for OVC, programs should include a basic school materials provision component for school-age children.

Rights of children seminars should emphasize on legal protection services

This study provides evidence that fewer children in the intervention district had a birth certificate and a designated caregiver. We suggest that seminars on child rights curricula should be reviewed and revised to highlight the importance of legal protecting children. Programs should also ensure that these legal protection services are accessible, especially birth registration.

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