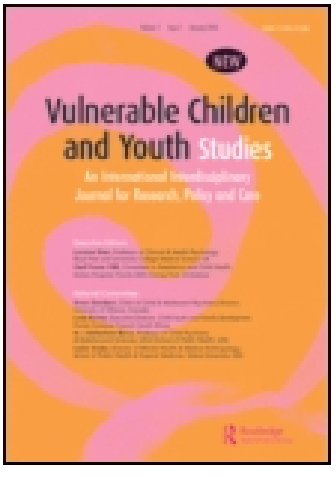

Vulnerable Children and Youth Studies: An International Interdisciplinary Journal for Research, Policy and Care
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/rvch20

Gender analysis of educational support programs for OVC in Uganda and Tanzania: are they helping girls in secondary school?

Mohamad Brooks[a], Malcolm Bryant[ab], Mary Shann[c], Paul Bukuluki[d], Denis Muhangi[d], Joe Lugalla[ef] & Gideon Kwesigabo[fg]

[a] Center for Global Health and Development, Boston University, Boston, MA 02118, USA

[b] Department of International Health, School of Public Health, Boston University, Boston, MA 02118, USA

[c] School of Education, Boston University, Boston, MA 02215, USA

[d] Department of Social Work and Social Administration, Makerere University, PO Box 7062, Kampala, Uganda

[e] Department of Anthropology, University of New Hampshire, Durham, NH 03824, USA

[f] Centre for Strategic Research and Development, PO Box 33335, Dar es Salaam, Tanzania

[g] School of Public Health and Social Sciences, Muhimbili University of Health and Allied Sciences, PO Box 65015, Dar es Salaam, Tanzania

Published online: 06 Nov 2013.

Vulnerable Children and Youth Studies, 2014
Vol. 9, No. 3, 206–219, http://dx.doi.org/10.1080/17450128.2013.855344

Gender analysis of educational support programs for OVC in Uganda and Tanzania: are they helping girls in secondary school?

Mohamad Brooks[a]*, Malcolm Bryant[a,b], Mary Shann[c], Paul Bukuluki[d], Denis Muhangi[d], Joe Lugalla[e,f] and Gideon Kwesigabo[f,g]

[a]*Center for Global Health and Development, Boston University, Boston, MA 02118, USA;* [b]*Department of International Health, School of Public Health, Boston University, Boston, MA 02118, USA;* [c]*School of Education, Boston University, Boston, MA 02215, USA;* [d]*Department of Social Work and Social Administration, Makerere University, PO Box 7062, Kampala, Uganda;* [e]*Department of Anthropology, University of New Hampshire, Durham, NH 03824, USA;* [f]*Centre for Strategic Research and Development, PO Box 33335, Dar es Salaam, Tanzania;* [g]*School of Public Health and Social Sciences, Muhimbili University of Health and Allied Sciences, PO Box 65015, Dar es Salaam, Tanzania*

(*Received 1 February 2013; accepted 9 October 2013*)

Gender plays an important role in education as most traditional societies give preference to boys over girls when it comes to educational opportunity. Increasing access to education for girls is important to the health and well-being of the individual, their future children, families, and communities. The objective of this paper is to understand the gender differences in educational outcomes for orphans and vulnerable children (OVC) attending secondary schools in Uganda and Tanzania. The study employed a four-year, retrospective record review utilizing both qualitative and quantitative methodologies. A total of 5738 student records were collected as part of the study. Students were grouped as "ever supported" OVC (receiving educational support from either a block grant or scholarship program during their secondary school education), "never supported OVC" (OVC students who did not receive any educational support), and "nonOVC students" (students identified by the school as neither orphaned nor vulnerable). Results of the study indicate that investment in secondary school education for OVC in Uganda and Tanzania can make a difference in educational outcomes, both for boys and girls. Although there was no gender difference in absenteeism or dropout rate among students those who received educational support, stark differences were found in secondary school Year IV national examination pass rates with girls significantly less likely to pass compared to boys. The disparity in secondary school learning achievement between male and female students is of concern and warrants further investigation.

Keywords: OVC; orphan; vulnerable children; education; gender; evaluation; Uganda; Tanzania

Introduction

A causal link has long been established between education for young girls and the important role it plays in a range of health outcomes – from improved maternal health indicators, reduced infant mortality, and fertility rates, to increased prevention against HIV and AIDS (Chou, Liu, Grossman, & Joyce, 2010; Gakidou, Cowling, Lozano, & Murray, 2010; Lynch, 2003). Increasing access to education and school attendance for females is

*Corresponding author. Email: mib@bu.edu

important not only to the health and well-being of the individual, but also to their future children, families, and communities (Gakidou et al., 2010; UNESCO, 2011).

Gender plays an important role in education since males have preference in educational opportunities in most traditional societies. Although recent trends have shown that gender gaps in access to education have narrowed, disparities continue to exist at higher levels of education (UNESCO, 2012). A confluence of factors can contribute to the educational disparity for girls and women, including the social demands to conform to traditional gender roles and the physical risks that may increase as girls grow into young women and face sexual harassment (UNESCO, 2012).

Being orphaned or made vulnerable can also play a role in whether a child goes to school. Orphans and vulnerable children (OVC) may lose access to school for several reasons including poverty, need for domestic labor, need for income generation activities, stigmatization, and parental sickness or death. School enrollment inequities among all types of orphans have been documented throughout sub-Saharan Africa (Akwara et al., 2010; Bicego, Rutstein, & Johnson, 2003; Case & Ardington, 2006; Case, Paxson, & Ableidinger, 2004; Miller, Gruskin, Subramanian, Rajaraman, & Heymann, 2006; Monasch & Boerma, 2004; Nyamukapa & Gregson, 2005).

Studies have shown that interventions aimed at reducing the cost of attending school seem to result in improved participation levels – either through subsidies to attend schools (Angrist, Bettinger, Bloom, King, & Kremer, 2002; Angrist, Bettinger, & Kremer, 2006), reduced user fees (Barrera-Osorio, Linden, & Urquiola, 2007), scholarships (Kremer, Miguel, & Thornton, 2007), or direct cash incentives (Attanasio, Battistin, Fitzsimons, & Vera-Hernandez, 2005; Glewwe & Olinto, 2004; Paul Schultz, 2004; Schady & Araujo, 2006; Vermeersch & Kremer, 2005). Various interventions have been used by the development community to support the education of OVC, including scholarships and block grant programs.[1] A randomized study in Kenya from 1995 to 2000 showed statistically significant effects in reducing dropout rates and increasing passing rates by students in block grant programs (World Bank, 2001). Furthermore, a review of block grants in Kenya, Uganda, Tanzania, and Mozambique indicated that enrollment rates increased rapidly as children had greater access to education (Mushemeza, 2005). Disparities in enrollment rates between rural and urban, rich and poor, male and female decreased.

Although there is growing evidence that various support programs increase educational attainment for OVC (Adato & Bassett, 2009; Belachew et al., 2011; Bryant et al., 2012; Chatterji et al., 2010; Curley, Ssewamala, & Han, 2010; Robertson et al., 2013; Samson et al., 2004; Tembo & Freeland, 2008), there is limited and conflicting information on the differential impact of educational support on male and female students. Studies that have identified gender differences have shown mixed results, for example, increased school enrollment among girls receiving support in South Africa (Samson et al., 2004) but increased enrollment among boys in certain districts of Zambia (Tembo & Freeland, 2008). Other studies suggest that gender is not associated with any significant changes in educational outcomes but instead more closely related to socio-economic factors such as poverty and food insecurity (Belachew et al., 2011; Chatterji et al., 2010). This paper contributes to the limited evidence-base by evaluating the gender disparity of educational support programs for OVC in Ugandan and Tanzanian secondary schools. The study will build off the primary findings conducted by Boston University entitled, "Evaluating the Effectiveness of Educational Block Grants to Orphans and Vulnerable Children" (Bryant et al., 2011).

Methodology

The mixed methodology employed in this study is described in detail by Bryant et al. (2011). The quantitative component of the study entailed a retrospective record review of information gathered from secondary schools in Uganda and Tanzania from 2006 to 2009. Field surveys were designed to extract and collect the relevant numerical data from class attendance registers, student files, and published examination scores. Intervention schools were selected randomly from the list of secondary schools maintained by the selected NGOs providing various educational support programs. A brief description of the different NGOs and study areas are summarized in Table 1. Control schools were matched for geographic location, size, and grade level taught. Students in selected schools were classified as ever supported OVC, nonsupported OVC, and nonOVC. OVC were defined in each country by local standards that were based on PEPFAR definition.[2]

The qualitative component of the study was conducted in both intervention and control secondary schools and included focus groups discussions (FGDs) with OVC and key informant interviews (KIIs) with secondary school headmasters. FGDs were done in groups of 5–8 OVC students who were separated by gender. Informed consent (for headmasters and the caregivers of OVC selected for FGDs) and assent (for OVC) were obtained before participation in the qualitative interviews. Semi-structured interview guides were used to facilitate the FGDs and KIIs. All interviews were conducted in the local language and were recorded, transcribed, and lastly translated into English.

For the quantitative component of the study, data were entered into CSPro v4.0 (US Census Bureau, Washington, DC, USA) and analyses were performed using SAS v9.1 (SAS Institute Inc., Cary, NC, USA). Basic descriptive statistics were calculated on main variables of interest to describe key characteristic of the study sample. Primary outcomes of interest, disaggregated by gender, included student absenteeism, dropout rate, and national examination pass rate. Comparisons of means were conducted through one-way analysis of variance. Odds ratios (OR) and the corresponding 95% Confidence Intervals (CI) are presented. Statistically significant associations of $p < 0.05$ are highlighted accordingly in the different analyses. For the qualitative component of the study, interviews were analyzed using content analysis to identify key recurring themes associated with different educational support programs for male and female students. Qualitative analysis was conducted using Nvivo 9 (QSR International Research Pty Ltd., Doncaster, VIC, Australia).

Prior to study implementation, ethical approvals were obtained from the Boston University Institutional Review Board, the Ugandan Council of Science and Technology, and the Tanzanian National Institute for Medical Research. Data collectors underwent three days of didactic and interactive training for quantitative and qualitative methodology prior to data collection. Data collection took place from January to June 2011.

Results

Sample characteristics

A total of 5738 student records were reviewed as a part of the study, 1930 in Tanzania and 3808 in Uganda. A higher percentage of student records were available in the latter part of the four-year period. As indicated in Table 2, 1275 (22.2%) students were grouped as “ever supported” OVC, 2252 (39.3%) were “never supported OVC”, while 2209 (38.5%) were nonOVC students. Gender characteristics of the students were virtually identical in both countries with 52.5% male in Tanzania and 52.6% male in Uganda. Students at every grade

Table 1. NGO characteristic.

NGO	Country	Districts	Description
Integrated Community Based Initiatives (ICOBI)	Uganda	Mbarara, Ibanda	At the start of the academic year, a lump sum was paid to the school for every OVC being sponsored by ICOBI at a cost of 200,000 UGX (approximately 100 USD) per student. Every child for whom the lump sum was paid was guaranteed secondary school education for the entire year and no additional charges were to be made to the child. The school dispensed the money through its normal financial and procurement systems, providing reports to ICOBI. Of the block grant money, 60% was restricted to being used for the purchase of direct support to students (such as textbooks) for infrastructure or institutional support. It was for the school to determine what these funds are spent on – examples have included solar panels, computers, rehabilitation of classrooms lavatories, school desks and furniture, generators for lighting, and rain water collectors. Schools could use up to 40% of the funds on any activity they deemed appropriate, such as creating orphan clubs, feeding students, or topping up teacher salaries. Additional, individual support was provided to children by ICOBI through the purchase of school uniforms, pens, math sets, notepads, and sanitary pads for girls.
Association of Volunteers in International Services (AVSI)	Uganda	Mpigi, Mukuno, Kampala, Luwero, Masaka	Individual parishes identified OVC in need of secondary school educational support. The parish recommended the children to the local faith-based school. The faith-based school conducted assessments of the children and their families to determine their educational needs. The school put together a budget for each child which included tuition fees, exam fees, psychosocial support; school uniforms, books, notebooks, and other personal needs; capital needs of the school; transportation needs; capacity building needs of the school to address OVC; and, community sensitization. Where students were not attending a faith-based school, AVSI paid fees to the government school that the student was attending. The faith-based school acted as the implementing agent, procuring and providing all services to the OVC.

(*Continued*)

Table 1. (Continued).

NGO	Country	Districts	Description
Africare	Uganda	Ntungamo, Isingiro	Individual OVC have a percentage (30% in Uganda, 100% in Tanzania) of their overall school fees paid for by Africare, leaving the caregivers responsible for funding the balance.
	Tanzania	Dodoma	The school makes a commitment to admit and retain the selected OVC from Years I–IV. In Uganda this was a four-year commitment, while in Tanzania it was negotiated as two two-year commitments. Africare makes the total amount of money available to the schools to improve school functioning as block grants, but limits the scope of what the school can choose to do with the funds to physical renovations, the purchase of equipment, desks, chairs, curriculum materials, and other capital investments. Operating costs or salary top-ups are not allowed. The schools determine their prioritized needs from a menu of choices offered by Africare. After selection of priorities, Africare procures services or materials to respond to the needs. This may vary from procurement of generators, solar panels, books, laboratory materials, or services to renovation or construction of classrooms, lavatories, etc. Individual assistance is provided to specific OVC for uniforms, pens, and other materials (such as sanitary pads for girls). In-school support is provided to OVC through anti-AIDS youth groups called COPE Clubs. Additional educational support is provided to OVC through the purchase of school uniforms, pens, notebooks, school materials, and sanitary pads for girls.
Catholic Relief Service (CRS)	Tanzania	Tanga, Muheza	Individual OVC in need of educational support were identified by faith-based organizations (FBO). Funding was provided from CRS to the FBO based on the assessment. Funding was provided directly to the family to pay for school fees and examination fees. CRS (through the FBO) provided school uniforms, books, pens, notepads, and other basic requirements. One teacher in each school was trained in psychosocial support for OVC.

level in Tanzania were a year older than their counterparts in Uganda. That reflects the difference in school enrollment age in the two countries. The majority of children in Uganda begin primary school at 6 years of age, whereas in Tanzania they begin primary school at 7 years of age. The sampling framework requirements, targeting approximately 250 supported students for each NGO providing educational support in each country, were met.

Student absenteeism

Absenteeism rates are presented as the total number of days a student was absent compared to the total number of days in the academic year. These data were collected from individual class registers in which attendance was noted on a daily basis. Mean absenteeism rate was calculated by averaging student absenteeism rate among the different groups. The results show a significant overall difference among groups ($p < 0.01$), with ever supported OVC (5.1%) having better attendance rates than never supported OVC (6.4%). Also, never supported OVC (6.4%) had worse attendance rates than nonOVC (5.5%). Table 3 shows the breakdown of absenteeism by gender. Overall, female students had slightly lower absenteeism rates compared to male students throughout the different groups, although there was no statistical significance between genders.

Table 2. Study sample characteristics.

	Tanzania (n = 1930)	Uganda (n = 3808)
Mean student's age (years)		
Year I student (Std Dev)	15.8 (1.4)	14.5 (2.0)
Year II student (Std Dev)	16.8 (1.4)	15.6 (1.9)
Year III student (Std Dev)	17.6 (1.4)	16.6 (1.9)
Year IV student (Std Dev)	18.3 (1.2)	17.5 (1.9)
Gender		
Male (%)	1013 (52.5%)	2003 (52.6%)
Female (%)	917 (47.5%)	1805 (47.4%)
Student status		
OVC ever supported (%)	498 (25.8%)	777 (20.4%)
OVC never supported (%)	721 (37.4%)	1531 (40.2%)
NonOVC (%)	711 (36.8%)	1500 (39.4%)
Student NGO support		
Africare – block grant (%)	243 (12.6%)	256 (6.7%)
ICOBI – block grant (%)	–	257 (6.7%)
AVSI – scholarship (%)	–	264 (6.9%)
CRS – scholarship (%)	255 (13.2%)	–
None (%)	1432 (74.2%)	3031 (79.6%)

Table 3. Mean absenteeism by gender in Uganda and Tanzania.

	Male (%)	Female (%)	p-Value
NonOVC (n = 1809)	5.7	5.3	$p = 0.34$
OVC never-supported (n = 1871)	6.8	6.0	$p = 0.05$
OVC ever-supported (n = 895)	5.4	4.7	$p = 0.09$

Student dropout

As presented in Table 4, dropout rate was calculated for each group. Comparing the impact of educational support, we saw that ever supported OVC had a dropout rate that was comparable to nonOVC students – OR 1.31 (95% CI 1.00–1.72). Conversely, never supported OVC students were almost twice as likely to drop out when compared to nonOVC students – OR 1.81 (95% CI 1.44–2.26). Dropout rates disaggregated by gender showed similar results within the different student groups. Male never supported OVC were significantly more likely to drop out of school compared to male nonOVC students (OR = 1.73; 95% CI 1.28–2.36) and female never supported OVC were significantly more likely to drop out of school compared to female nonOVC students (OR = 1.89; 95% CI 1.36–2.62). There was no statistically significant difference for dropout rates between males and female students in all the student groups.

National examination scores

Tanzania offers two nationally scored secondary examinations for all students. The first is at the end of Year II, the second at the end of Year IV. Uganda offers only one nationally scored secondary exam at the end of Year IV. Because these exams are externally marked by the Ministry of Education, it is possible to compare student performance among schools within a country, as there should be no variation in the quality of the grading. Pass rates, based on national grading criteria, were calculated for each student who took

Table 4. Dropout rate by student status in Uganda and Tanzania.

	Proportion that dropout (%)	Odds ratio (95% CI)
Overall		
NonOVC [Ref.]	130/2184 (6.0%)	1.00
OVC never-supported	229/2231 (10.3%)	1.81 (1.44–2.26)*
OVC ever-supported	97/1264 (7.7%)	1.31 (1.00–1.72)
Gender		
Male		
NonOVC [Ref.]	71/1194 (6.0%)	1.00
OVC never-supported	116/1174 (9.9%)	1.73 (1.28–2.36)*
OVC ever-supported	44/615 (7.2%)	1.22 (0.83–1.80)
Female		
NonOVC [Ref.]	59/990 (6.0%)	1.00
OVC never-supported	113/1057 (10.7%)	1.89 (1.36–2.62)*
OVC ever-supported	53/649 (8.2%)	1.40 (0.95–2.06)
Student status		
NonOVC		
Male [Ref.]	71/1194 (6.0%)	1.00
Female	59/990 (6.0%)	1.00 (0.70–1.43)
OVC never-supported		
Male [Ref.]	116/1174 (9.9%)	1.00
Female	113/1057 (10.7%)	1.09 (0.83–1.44)
OVC ever-supported		
Male [Ref.]	44/615 (7.2%)	1.00
Female	53/649 (8.2%)	1.15 (0.75–1.75)

Note: *Significantly different at $p < 0.05$

Table 5. Year IV national examination pass rate by gender in Uganda and Tanzania.

	Proportion that pass (%)	Odds ratio (95% CI)
Overall		
NonOVC [Ref.]	473/771 (61.3%)	1.00
OVC never-supported	322/561 (57.4%)	0.85 (0.68–1.06)
OVC ever-supported	261/422 (61.8%)	1.02 (0.80–1.30)
Gender		
Male		
NonOVC [Ref.]	298/458 (65.1%)	1.00
OVC never-supported	194/304 (63.8%)	0.95 (0.70–1.28)
OVC ever-supported	156/213 (73.2%)	1.47 (1.03–2.10)*
Female		
NonOVC [Ref.]	175/313 (55.9%)	1.00
OVC never-supported	127/256 (49.6%)	0.78 (0.56–1.08)
OVC ever-supported	106/210 (50.5%)	0.80 (0.57–1.14)
Student status		
NonOVC		
Male [Ref.]	298/458 (65.1%)	1.00
Female	175/313 (55.9%)	0.68 (0.51–0.91)*
OVC never supported		
Male [Ref.]	194/304 (63.8%)	1.00
Female	127/256 (49.6%)	0.56 (0.40–0.78)*
OVC ever supported		
Male [Ref.]	156/213 (73.2%)	1.00
Female	106/210 (50.5%)	0.37 (0.25–0.56)*

Note: *Significantly different at $p < 0.05$

the Year IV national exams in both Uganda and Tanzania (Table 5). Looking at the impact of educational support, we saw no significant difference in the proportion of students who passed the Year IV national examinations. The pass rates for never supported OVC were lower than nonOVC students (OR = 0.85; 95% CI 0.68–1.06); however, statistical significance was not reached. Disaggregating pass rate by gender, male OVC ever-supported students were more likely to pass their national exams compared to nonOVC male students. No significance was seen within the different groups among female students. Comparing male and female students within the different groups, the results consistently show that female students were less likely to pass their Year IV national exams, even among female OVC who had received educational support.

Qualitative results

A total of 129 OVC attending secondary schools in Uganda and Tanzania were interviewed in 20 gender-separated FGDs. Half (49.6%) of the students interviewed were female. As shown in Table 6, students in Tanzania and Uganda listed different problems faced by OVC; however, issues such as discrimination and stigma (54.3%), lack of educational materials (19.4%), and shortages in food (16.3%) were commonly raised.

About half of respondents in both countries thought that OVC performed equally or better than nonOVCs. A female OVC student replied: "You cannot perform equally with someone who has parents who meet all school requirements. They can pay tuition fees, which is difficult for us, so we cannot be equal academically." Another female student explained: "We do have a lot of psychological problems so the attendance is not so

Table 6. Key points and highlighted quotes from OVC focus goup discussion.

Perceptions of being an OVC
Tanzania
"I personally feel good when I am recognized as an orphan because there are people who heartedly support orphans" – *Chinangali Female OVC*
"When someone calls me an orphan, I feel weakened and disheartened" – *Tanga Male OVC*
Uganda
"This is something that is just natural, we just accept what happened and what we are right now" – *Nyakayojo Male OVC*
"Whenever you get a challenge you feel like… if I had my parents I would not have seen this" – *Birere Female OVC*
Top 3 problems faced by OVC
Tanzania
Stigma, discrimination & differential treatment by caregivers (n = 30)
Lack of educational expenses & materials (n = 15)
Lack of food (n = 8)
Uganda
Stigma, discrimination & differential treatment by caregivers (n = 40)
Lack of food (n = 13)
Lack of educational expenses & materials (n = 10)
Perception of academic performance compared to nonOVC students
Tanzania
"I can say the performance is balanced because we are getting the same marks with those regular students" – *Female OVC*
"There is a difference… so many nonOVC don't bother studying hard because they know they have parents to depend on" – *Male OVC*
"The performance of OVCs is weaker than nonOVCs…" – *Female OVC*
Uganda
"We are disciplined thus we perform better" – *Female OVC*
"NonOVC do not care about their studies because their parents do have money but for OVC they do concentrate a lot on their studies" – *Male OVC*
"We do have a lot of psychological problems so the attendance is not so regular, therefore the nonOVC perform better" – *Female OVC*

regular, therefore the nonOVC perform better." However, there were also statements in support of equal academic performance. "I can say the performance is balanced because we are getting the same marks with those regular students," a female student observed. Some OVC students believed that the academic performance of OVC was better than their nonOVC counterparts. "We are disciplined, thus we perform better," a female OVC student explained.

When perception on academic performance was disaggregated by gender, male OVC students (56.9%) were almost twice as likely to state that OVC students performed equally or better than their nonOVC counterparts compared to female OVC students (29.7%). Male OVC students seem to show more optimism, resilience, and positive outlook in academic performance compared to female OVC students.

Semi-structured interviews with 89 headmasters in Uganda and Tanzania showed that almost two-thirds of headmasters (61%) viewed the lack of electricity and water as one of the main issues faced by schools. Teen pregnancy (35%) and not having enough teachers (15%) were also raised as issues commonly faced by schools.

Discussion

In general, supported OVC students in secondary school performed as well as their nonOVC peers, while nonsupported OVC did not.

Gender analysis indicates that there is no statistically significant difference in absenteeism rate between male and female students in Uganda and Tanzania. This result is consistent with quantitative studies in India (Ananthakrishnan & Nalini, 2002), Nepal (Oster & Thornton, 2011), and Ethiopia (Belachew et al., 2011) that saw no gender difference in absenteeism rate. There is a great deal of discussion in both the popular and the scientific literature about the effect of menstruation on girls' ability to maintain school attendance and perform adequately in school. The argument is made that the lack of sanitary napkins prevents girls from attending school during menstruation, and that even when sanitary napkins are available, lack of privacy and adequate sanitation makes it difficult for girls to change napkins. All the NGOs in this study provide sanitary napkins to OVC girls they are supporting as a part of their program. Our results are therefore somewhat surprising in the fact that for every group – ever-supported OVC, never-supported OVC, and nonOVC – girls have a lower rate of absenteeism than boys. If menstruation were a significant cause of absenteeism we would have expected to see the opposite. In fact, menstruation appears to be less of an issue for girls than previously thought. Our results are similar to the findings of a randomized study in Nepal that showed that menstruation has a very small impact on school attendance with girls missing a total of 0.4 days in a 180-day school year (Oster & Thornton, 2011). Furthermore, girls who received sanitary products were no less likely to miss school during their period. These findings have important ramifications for the development agencies that have invested considerable resources in implementing programs that provide sanitary products to women. This is not to suggest that provision of sanitary napkins, good hygiene, and privacy are not important human rights for all young women, simply that our observations would reinforce the fact that menstruation is not a significant contributor to absenteeism.

Our findings showed no difference in dropout rates between boys and girls among the different student groups in our study. Our findings go against the popular belief that girls are more likely to drop out of school, usually as a result of pregnancy or marriage. This myth has also been challenged with findings from studies that analyze Demographic and Health Survey (DHS) data sets from developing countries. An analysis of sub-Saharan countries showed that "Schoolgirl pregnancy" typically accounts for a small proportion (5–10%) of girls' departures from schools (Lloyd & Mensch, 2008). In a different study, meta-analysis of DHS data from 38 developing countries indicates that girls were actually less likely to dropout compared to boys (Grant & Behrman, 2010). The reduction in rates of early marriage and childbearing in most sub-Saharan countries most likely has resulted in the decline of pregnancy or marriage dropouts.

Study findings show that girls in every group were less likely to pass the Year IV secondary school national examination compared to boys, even though there were no significant differences in absenteeism and dropout rates between genders. Recent evidence from the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) study showed gender differences in learning achievement at the end of primary school were found among the 14 sub-Saharan countries (UNESCO, 2012). Overall, girls tend to have an advantage in reading achievement while boys held an advantage in mathematics. In Tanzania and Uganda, results of the standardized SACMEQ exams in 2007 showed that boys scored higher in both reading and mathematics compared to girls. It appears that the gap in learning achievement at the end of primary school

persists into secondary education in Uganda and Tanzania, which might explain the Year IV examination pass rate difference between boys and girls.

Results of our study show that physical presence at school does not necessarily guarantee academic success. Regardless of whether or not students had external support to pay for fees and attend school, all girls underperformed in the Year IV national exams compared to boys. This suggests that learning achievement in this setting is no longer an issue of lack of financial support, but rather other contextual factors. Possible explanations for the gender difference in learning achievement include school environment (sex of teacher, difference in teacher mentorship between boys and girls), household dynamics (gender of household head, socioeconomic status), community factors (social demands on gender roles, socio-cultural expectations for girls to underperform academically), and child-level determinants (individual perception on the importance of education (Goodsmith, 2004; UNESCO, 2011).

The qualitative results of our study provide some indication of these external factors. Our findings indicate that male students seem to show more optimism and positive outlook in academic performance compared to female OVC students. This lack of optimism among female students could partially explain why girls are not performing well as boys in the Year IV national examinations. Furthermore, headmaster interviews identified teen pregnancy as a common school issue, even though there was no statistical difference in overall dropout rates between boys and girls. When queried about how educational support programs could be improved, a small number of headmasters suggested that support should be targeted to students that are most likely to succeed, instead of "girls who get pregnant and leave school". This viewpoint suggests possible gender biases in teaching and student mentorship that may affect the learning achievement of girls.

Limitations

Several limitations from this study are important to note. The availability of student records turned out to be a major challenge, especially in relation to attendance, performance, and dropout information. In 2006, only 16% of student records were available, compared to 75% in 2009. Incomplete student records are a result of poor record keeping systems and policies of the school, and the fact that teachers, headmasters, and administrators often kept student records at their homes instead of keeping them at the school. The high number of missing student files from schools, especially in the earlier years of the four-year timeframe, made it difficult to conduct longitudinal analysis. As a result, analyses were conducted for the entire four-year timeframe as opposed to year-to-year analysis. Selection bias is another possible limitation as a result of these missing files. Unfortunately, we do not have a way of proving whether students whose records were available and reviewed differed in any way from those whose records were not found.

Furthermore, many contextual factors which would help to explain issues raised in this study cannot be answered because funding was not sufficient to conduct a household survey of supported OVC to understand their social, economic, parental, living, and other conditions. This lack of information does not affect the relevance or quality of the data collected at schools or in focus groups, but it does limit the ability to interpret some of the study findings.

In addition, the study was also conducted in Uganda and Tanzania, countries with similar but different educational systems. In 2007, Uganda introduced Universal Secondary Education (USE), eliminating tuition fees for secondary school. In contrast, fees for secondary education are still charged in Tanzania. However, secondary education in Uganda is not free, and fees in Tanzania are not limited to the official government fees.

The reality is that, in both countries the cost of actually attending secondary school is approximately the same. The actual fees charged are not standardized and may differ from school to school, and even from year to year in the same school. We, therefore, do not believe that USE in Uganda presents a problem in making country-to-country comparisons.

Conclusion

Both male and female OVC benefit from the investments in secondary school education. This is important to take into account as the majority of current educational support is directed toward primary school education. No difference was found in absenteeism and dropout rate between male and female students that received educational support; however, girls were significantly less likely to pass the national examination in the latter years of secondary school compared to boys. The gender difference in learning achievement in secondary school is of concern and warrants further investigation.

Funding

The study was supported by the USAID Project SEARCH, Orphans and Vulnerable Children Comprehensive Action Research (OVC-CARE) Task Order, funded by the US Agency for International Development (USAID) under [Contract No. GHH-I-00-07-00023-00], beginning August 1, 2008. OVC-CARE Task Order is implemented by Boston University. The content of this article does not necessarily reflect the views, analysis, or policies of USAID.

Notes

1. Scholarships are individual payments made to, or on behalf of, a child to pay for part or all of his/her education. Block grants are fixed-sum grants to local or regional educational systems or institutions that give the recipient organization broad flexibility to design and implement designated programs. Scholarships are usually given to the family or a trustee on behalf of the child, to pay for school fees. Block grants are paid in advance to the school and have the attraction of a lump sum of money to leverage admission to school for less than the regular admission fee.
2. (A) Orphan: A child, 0–17 years old, who has lost one or both parents. (B) Vulnerable child: vulnerable because of any or all of the following factors: HIV-positive; lives without adequate adult support (e.g., in a household with chronically ill parents, a household that has experienced a recent death from chronic illness, a household headed by a grandparent, and/or a household headed by a child); lives outside of family care (e.g., in residential care or on the streets); or is marginalized, stigmatized, or discriminated against; suffers with a physical or mental disability; is identified as vulnerable by the local Child Care Committee, OVC committee, or other community group.

References

Adato, M., & Bassett, L. (2009). Social protection to support vulnerable children and families: The potential of cash transfers to protect education, health and nutrition. *AIDS Care*, *21*(suppl. 1), 60–75. doi:10.1080/09540120903112351

Akwara, P.A., Noubary, B., Lim Ah Ken, P., Johnson, K., Yates, R., Winfrey, W., … Luo, C. (2010). Who is the vulnerable child? Using survey data to identify children at risk in the era of HIV and AIDS. *AIDS Care*, *22*(9), 1066–1085. doi:10.1080/09540121.2010.498878

Ananthakrishnan, S., & Nalini, P. (2002). School absenteeism in a rural area in Tamil Nadu. *Indian Pediatrics*, *39*(9), 847–850.

Angrist, J., Bettinger, E., Bloom, E., King, E., & Kremer, M. (2002). Vouchers for private schooling in Colombia: Evidence from a randomized natural experiment. *American Economic Review*, *92*(5), 1535–1558. doi:10.1257/000282802762024629

Angrist, J., Bettinger, E., & Kremer, M. (2006). Long-term educational consequences of secondary school vouchers: Evidence from administrative records in Colombia. *American Economic Review*, *96*(3), 847–862. doi:10.1257/aer.96.3.847

Attanasio, O., Battistin, E., Fitzsimons, E., & Vera-Hernandez, M. (2005, January). *How effective are conditional cash transfers? Evidence from Colombia: Report*. Retrieved from http://www.ifs.org.uk/publications/3214

Barrera-Osorio, F., Linden, L., & Urquiola, M. (2007). *The effects of user fee reductions on enrollment: Evidence from a Quasi-experiment*. Manhattan, NY: Columbia University Department of Economics.

Belachew, T., Hadley, C., Lindstrom, D., Gebremariam, A., Lachat, C., & Kolsteren, P. (2011). Food insecurity, school absenteeism and educational attainment of adolescents in Jimma Zone Southwest Ethiopia: A longitudinal study. *Nutrition Journal*, *10*(1), 29. doi:10.1186/1475-2891-10-29

Bicego, G., Rutstein, S., & Johnson, K. (2003). Dimensions of the emerging orphan crisis in sub-Saharan Africa. *Social Science and Medicine (1982)*, *56*(6), 1235–1247.

Bryant, M., Beard, J., Sabin, L., Brooks, M.I., Scott, N., Larson, … Simon, J. (2012). PEPFAR's support for orphans and vulnerable children: Some beneficial effects, but too little data, and programs spread thin. *Health Affairs*, *31*(7), 1508–1518. doi:10.1377/hlthaff.2012.0230

Bryant, M., Shann, M., Brooks, M., Bukuluki, P., Muhangi, D., Lugalla, J., & Kwesigabo, G. (2011). *Evaluating the effectiveness of educational block grants to orphans and vulnerable children*. Boston, MA: BU Center for Global Health & Development.

Case, A., & Ardington, C. (2006). The impact of parental death on school outcomes: Longitudinal evidence from South Africa. *Demography*, *43*(3), 401–420.

Case, A., Paxson, C., & Ableidinger, J. (2004). Orphans in Africa: Parental death, poverty, and school enrollment. *Demography*, *41*(3), 483–508.

Chatterji, M., Hutchinson, P., Buek, K., Murray, N., Mulenga, Y., & Ventimiglia, T. (2010). Evaluating the impact of community-based interventions on schooling outcomes among orphans and vulnerable children in Lusaka, Zambia. *Vulnerable Children and Youth Studies*, *5*(2), 130–141. doi:10.1080/17450121003615351

Chou, S.-Y., Liu, J.-T., Grossman, M., & Joyce, T. (2010). Parental education and child health: Evidence from a natural experiment in Taiwan. *American Economic Journal: Applied Economics*, *2*(1), 33–61. doi:10.1257/app.2.1.33

Curley, J., Ssewamala, F., & Han, C.-K. (2010). Assets and educational outcomes: Child development accounts (CDAs) for orphaned children in Uganda. *Children and Youth Services Review*, *32*(11), 1585–1590. doi:10.1016/j.childyouth.2009.07.016

Gakidou, E., Cowling, K., Lozano, R., & Murray, C.J.L. (2010). Increased educational attainment and its effect on child mortality in 175 countries between 1970 and 2009: A systematic analysis. *Lancet*, *376*(9745), 959–974. doi:10.1016/S0140-6736(10)61257-3

Glewwe, P., & Olinto, P. (2004). *Evaluating the impact of conditional cash transfers on schooling: An experimental analysis of Honduras PRAF Program*. Final Report to USAID. Washington, DC: International Food Policy Research Institute.

Goodsmith, L. (2004). *The role of education in the protection, care and support of orphans and vulnerable children living in a world with HIV and AIDS*. Inter Agency Task Team on Education. Geneva: UNAIDS.

Grant, M.J., & Behrman, J.R. (2010). Gender gaps in educational attainment in less developed countries. *Population and Development Review*, *36*(1), 71–89. doi:10.1111/j.1728-4457.2010.00318.x

Kremer, M., Miguel, E., & Thornton, R. (2007). *Incentive to learn*. Berkeley: University of California, Berkeley, Department of Economics.

Lloyd, C.B., & Mensch, B.S. (2008). Marriage and childbirth as factors in dropping out from school: An analysis of DHS data from sub-Saharan Africa. *Population Studies*, *62*(1), 1–13. doi:10.1080/00324720701810840

Lynch, S.M. (2003). Cohort and life-course patterns in the relationship between education and health: A hierarchical approach. *Demography*, *40*(2), 309–331. doi:10.1353/dem.2003.0016

Miller, C.M., Gruskin, S., Subramanian, S.V., Rajaraman, D., & Heymann, S.J. (2006). Orphan care in Botswana's working households: Growing responsibilities in the absence of adequate support. *American Journal of Public Health*, *96*(8), 1429–1435. doi:10.2105/AJPH.2005.072280

Monasch, R., & Boerma, J.T. (2004). Orphanhood and childcare patterns in sub-Saharan Africa: An analysis of national surveys from 40 countries. *AIDS (London, England)*, *18*(Suppl. 2), S55–65.

Mushemeza, E. (2005). *Direct support to schools through the block grant mechanism: Lessons from the Ugandan experience*. Paris: Council for the Development of Social Science Research in Africa (CODESRIA) and Association for the Development of Education in Africa (ADEA).

Nyamukapa, C., & Gregson, S. (2005). Extended family's and women's roles in safeguarding orphans' education in AIDS-afflicted rural Zimbabwe. *Social Science and Medicine (1982)*, *60*(10), 2155–2167. doi:10.1016/j.socscimed.2004.10.005

Oster, E., & Thornton, R. (2011). Menstruation, sanitary products, and school attendance: Evidence from a randomized evaluation. *American Economic Journal: Applied Economics*, *3*(1), 91–100. doi:10.1257/app.3.1.91

Paul Schultz, T. (2004). School subsidies for the poor: Evaluating the Mexican progress poverty program. *Journal of Development Economics*, *74*(1), 199–250. doi:10.1016/j.jdeveco.2003.12.009

Robertson, L., Mushati, P., Eaton, J.W., Dumba, L., Mavise, G., Makoni, J., … Gregson, C.S. (2013). Effects of unconditional and conditional cash transfers on child health and development in Zimbabwe: A cluster-randomised trial. *The Lancet*, *381*(9874), 1283–1292. doi:10.1016/S0140–6736(12)62168–0

Samson, M., Lee, U., Ndlebe, A., MacQuene, K., van Niekerk, I., Gandhi, V., … Abrahams, C. (2004). *Final report: The social and economic impact of South Africa's social security system (Research Paper #37)*. Cape Town: Economic Policy Research Institute.

Schady, N., & Araujo, M. (2006). *Cash transfers, conditions, school enrollment, and child work: Evidence from a randomized experiment in ecuador* (Policy Research Working Paper No. 3930). Washington, DC: World Bank.

Tembo, G., & Freeland, N. (2008). *Impact of social cash transfers on investment, welfare and education outcomes: A retrospective study of the social cash transfer schemes in Chipata, Kalomo and Kazungula Districts of Zambia*, Draft report to the Ministry of Community Development and Social Services (MCDSS). Lusaka: MCDSS.

UNESCO. (2011). *Gender equality in education: Looking beyond parity* (Outcome Report). Paris: Author.

UNESCO. (2012). World atlas of gender equality in education. Paris: Author.

Vermeersch, C., & Kremer, M. (2005). *School meals. Educational achievement, and school competition: Evidence from a randomized evaluation* (Policy Research Working Paper No. 3523). Washington, DC: World Bank.

World Bank. (2001). *Improving primary education in Kenya*. Retrieved from http://go.worldbank.org/DYRV94L9E0