Kuchota Maji: Educational Effects and Community Perceptions

of Girls' Workload in Rural Tanzania

International development discourse has in recent years turned its attention to marginalized populations and the means to alter their life experiences. The introduction and broad adoption within development circles of the Millennium Development Goals as well as the Education for All Initiative has further institutionalized a strong focus on various groups that may not be experiencing the human rights guaranteed to them through the Universal Declaration of Human Rights (United Nations, 1948). Girls in Sub-Saharan Africa constitute one particular group that has often been denied the opportunity to develop to potential. Although the possible causes of girls' marginalization vary, one conceptualized cause that has in recent years come to the fore is the inability of girls to fully engage in educational opportunities due to the workload they are forced to complete on a daily basis (Levison & Moe, 1998).

This research aims to explore how the quotidian work experiences of girls in Tanzania affect their abilities to achieve academically in primary school. Sponsored and conducted by CARE International, this study utilized primarily quantitative methods to investigate the research questions, which were developed through an endogenous collaborative approach involving Tanzanian and American stakeholders from various organizations and ongoing reviews of relevant literature on work and schooling in Africa. The stakeholders generated the following research questions: (1) What are the predictors of increased workload for girls in Tanzania? (2) What parental perceptions exist regarding girls' and boys' work? (3) What proportion of children's days are spent engaged in work in comparison with other activities, such as studying and playing? and (4) How do the work experiences of boys compare with those of girls and what effects do these have on their educational outcomes?

An analysis of girls' workload has immense potential to highlight ways in which international organizations and non-governmental organizations (NGOs) can plan and implement interventions aimed at improving the educational experiences and potentials of girls. This study also has the potential to suggest powerful methods for engaging communities in ideological discussions about appropriate types and durations of work for girls and how their engagement with various forms of work may inhibit their development. In order to address these issues, it is first necessary to establish the definitions that will be used throughout the paper as well as examine previous literature on workload and schooling.

Work and Schooling

A variety of terms are used to describe the range of work activities completed by children. While there is certainly some overlap between these terms, it is necessary to distinguish between them and specify the operational definition of 'workload' that will be used throughout this article. 'Child labor' is a term that typically refers to work which deprives children of their childhood and/or is considered harmful to their physical and mental development. In 1999 the International Labor Organization (ILO) put forward Convention 182, which called for the immediate elimination of the worst forms of child labor, including "work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children" (Article 3). While this was not the first attempt by the ILO to address child labor (Dennis, 1999), it has proven to be one of the most influential, with 173 countries ratifying the convention since its inception. Legislation on child labor, however, is not adequate in reducing its deleterious effects, as local institutions and organizations must also examine the contextual conditions that make child labor difficult to eradicate.

Brief Review of Literature: Child Labor

Tracking children's labor and impacts of such labor is a challenging task. Generally, wage-based labor is easier to track around the world because of requirements in a number of countries to report on their labor force. Furthermore, girls engaged in wage-earning may be more visible to researchers (e.g., factory workers, petty salespeople, or other professions) than children who work in their own domestic environments.

However, work at home is more difficult to track and measure. A recent study by Woldehanna, Jones, and Teferre (2008) noted that the level of work that children perform at home may vary widely, and is the result of a variety of factors including the labor supply in the house, family income, household assets, access to public services, cultural norms and qualities of the child. Unpaid household labor may be divided evenly among the sexes in the home, or may be discrepant (ILO, 2010). The ILO noted that in some Asian countries (e.g., Mongolia and Cambodia) approximately 70% of children aged 5-14 are engaged in unpaid home-based labor. This labor is split evenly between girls and boys.

On the other hand, African countries such as Senegal and Mali also have girls' domestic workload rates of approximately 70% in the 5-14 age range, but rates are below 50% for boys of the same age (ILO, 2010). The ILO could not produce explanatory data on the differences in time spent doing work, but gendered tasks (e.g., girls fetch water and boys tend cattle) may partially explain why rates differ in Senegal and Mali.

Such gendered tasks may also explain the variance in the ability to both work and participate in secondary activities within the timeframe of the task. For example, a study from Malawi found that typical boys' work (watching cattle) provided boys freedom to study while engaged in household labor. Conversely, when girls cooked or cleaned, there was little

opportunity for them to simultaneously study (Rose & Tembon, 1999). In the case of Tanzania, girls may disproportionately be expected to perform the time and labor-intensive task of care for persons who are in the dying stages of HIV/AIDS and cannot afford to go to hospitals (Ngalula et al., 2002). Other scholars (Blunch et al., 2005) who reviewed previous ILO and other World Bank studies concluded that unpaid household labor is a major source of under-documented time commitment for girls.

The invisible nature of some forms of child labor contributes to its continued presence despite international resolutions. The term 'domestic work' is frequently used in reference to work that is completed for a third party, usually in their home; thus, the labor is on a small scale and invisible to monitoring groups. In the case of northern Tanzania, domestic workers are typically female and required to work long hours for wealthier families (Evans, 2002). Boys, on the other hand, may participate in paid labor through businesses or agricultural industries, which are more visible to the public.

Although unpaid work completed within a child's own home could also be considered 'domestic', there is a distinct difference between work completed for wages and unpaid work completed at home, as the pecuniary factors of paid work introduce additional forces into the opportunity cost consideration of families. These distinctions between unpaid working and working for wages will be made clear throughout this paper as we investigate the workload of girls or boys - both inside and outside of their own family unit/household.

Operationalization of "Work" in Local Contexts

One additional issue that complicates the systematic investigation of workload is the varying conceptions of the word 'work'. For example, due to differing sociocultural contexts, fetching water might be viewed as work by some communities and not by others. Furthermore,

some parents may believe that workload performed by children serve as socializing acts that contribute to their personal development and prepare them for active roles within the community. For example, a girl's ability to prepare meals for family members and take care of children may be considered vital skills for her future, as these could contribute to her marriage value. Therefore, watching and taking care of a younger sibling may not be conceptualized as work. Indeed, perceptions of work are contextually bound. At the very least, within the rural context of Tanzania, work is assigned to children because there are often few other options (paid labor is often out of the reach of most families and labor-saving devices are not prevalent). Therefore, the conceptual line between "work" and "what is needed for daily survival" is often not drawn by families.

While the discourse related to child labor is derived from international developments in the areas of worker's rights as well as the expansion of mass education—which views the rightful place of the child within the school setting and not a factory—the discourse on girls' workload is also grounded in feminist ideologies. The examination of girls' workload from a critical gender perspective has illuminated disparities in opportunity for girls by examining the links between household work and opportunities for schooling, recreation, and socialization (Komapaore & McSweeney, 2007).

Girls' Workload in Tanzania

In spite of its vast natural resources and progressive social policies, Tanzania is one of the poorest countries in the world. About 40% of the population lives below the national poverty line (United Republic of Tanzania, 2006). Some of the households depend on child labor for their livelihoods which often affects the children's access to education and other basic rights (United Republic of Tanzania, 2001).

The current population of Tanzania is approximately 42 million, with a growth rate of 2.9%. Tanzania's population is characterized as having a youthful age structure, with over 78% of the total population under the age of 35, and 77% living in rural areas. Per capita income is $410, with an average life expectancy of 52 years. Agriculture employs over 80% of the workforce and accounts for 45.3% of the country's GDP, 75% of rural household incomes, and 50% of all exports.

The Tanzanian society and culture are shaped by the variable topography and ecology, with pockets of extreme isolation and inaccessibility. There are numerous tribes and local dialects, but *Kiswahili* is the most widely spoken language throughout the country. The northwestern part of the country is dominated by *Sukuma* tribe occupying Tabora, Shinyanga and Mwanza regions. While poverty and underdevelopment are realities of life for many Tanzanians, women and children may be particularly disadvantaged.

Customs and traditions associated with the patriarchal system have lead to male bias in decision-making, access to information, ownership of assets and allocation of resources at family, household and community level. Customarily determined gender roles place the responsibility for domestic chores and care giving on women and girls. Performing these roles severely limits women's ability to engage in productive, self development and civic activities. Gender based violence is also reported to be on the increase, a situation influenced by cultural behavior codes that require women to be obedient, respectful and submissive to men as an expression of feminine virtue, while men are expected to be assertive and aggressive as a sign of true masculinity (CARE Tanzania, 2010). The situation of girls in Shinyanga region, the geographical focus of this study, mirrors that of the broader society. According to stakeholders associated with CARE, *Sukuma* culture places a higher priority on boys than girls in many areas,

including social institutions like education. Girls are expected to support their mothers with household chores and care giving. As a result, school going girls may have less time for study compared to their male counterparts. Girls are more likely to be withdrawn from school in cases of poverty or other crises in the family and may also drop out due to pregnancy and/or early marriage[1]. Poor family economic conditions may also influence girls to migrate to cities as domestic workers, engage in risky behavior such as prostitution making them susceptible to abuse and contracting sexually transmitted diseases, including HIV & AIDS (CARE Tanzania, 2007).

Overview of Study

As noted above, this study was designed to better understand the phenomenon of work and its impact on schooling. A gendered approach to the research was taken, specifically examining differences in boys and girls. The design of the study was collaboratively constructed between representatives from the authors' organizations. During a study workshop, Tanzanian stakeholders expressed a desire to better quantify (1) the predictors of increased workload; (2) parental perceptions regarding girls' and boys' work; (3) the proportion of each day spent at work in comparison to other activities; and (4) gender-disaggregated impacts of work on schooling. Sampling, instrumentation, and analysis methods were designed to answer these questions – which were deemed most useful to CARE for developing programming in the three regions involved in the study.

Sample

[1] The Marriage Act of 1971 sets the minimum age of marriage for girls at 15. However, parents' fear of daughters getting pregnant out of wedlock and the desire for bride price leads to some girls being forced to marry before age 15.

In order to determine the impacts of workload, two populations were sampled for this study: 1) children between the ages of 9-17; and 2) parents. The rationale for the sampling was twofold. First, we believed that children could best report on their own experiences with work, but that children under 9 may not be able to fully grasp some of the items in the research instruments. Therefore, the sample included Standards IV-VII in school (which typically captures the ages of 9 through adolescence) and children 0-17 in village surveys. We also included parents in the study in order to better understand their perceptions and organization of their children's work.

The sample was derived from three districts of different regions in Tanzania: Kigoma (Kasulu district), Morogoro (Mvomero district), and Shinyanga (Kahama district). These specific districts were purposively chosen because these are the areas where Care, International has offices and interventions. In Kahama, two wards were purposively selected for the study, Lunguya ward, where CARE has programming, and Ngogwa ward, where CARE does not have programming. Ngogwa ward was included in order to ensure that a control group was examined in the study. Villages were randomly selected from within the ward from an alphabetized list of villages, and the sole school in each village was involved in the study. Students at these schools completed work journals that chronicled their activities for the previous day.

Three research instruments are described in the "Instruments" section below. One of these instruments was a school journal activity. The journal activity had a large sample of 1543 students in Standards IV-VII. Among this sample, 751 of the participants were boys and 840 were girls (2 unknown). Participants were students in eight different schools from eight different villages. The vast majority of students surveyed (95%) were from Kahama district.

Within the randomly selected villages from Kahama and Mvomero districts, all households were identified that included children of 0-17 years old. Based on the number of households meeting this criterion, a randomized list of households was generated and a stratified sample was drawn in order to include a proportionate number of households from each ward for the household survey, which will be described in the following section.

Table 1

Household Child Survey Sample

Ward	*Male*	*Female*	*Total*
Ngogwa	44	30	74
Lunguya	44	52	96
TOTAL	88	82	170

Table 2

Household Parent Survey Sample

Ward	*Male*	*Female*	*Total*
Ngogwa	28	31	59
Lunguya	39	41	80
TOTAL	67	72	136

Instruments

Three research instruments were used in this study. As noted above, these instruments were developed in a joint workshop between authors' organizations. The workshop identified predictors for increased workload and developed items for predictors first in English, followed by subsequent translation of items into *Kiswahili*

First, boys and girls in standards IV-VIII at the schools under study completed a work journal every morning at school for 15 days. The instrument was a grid with a time sheet wherein they self-reported their activities for the previous day. As such, there was no data collected regarding the amount and types of work completed by the students on Friday and Saturday. The student sample that completed the journals was sizable (n=1543), which included a small subset of girls (n=100) enrolled in the non-formal complimentary basic education in Tanzania (COBET).

The journal instrument contained two sections, one relating to demographic questions and the other specifically pertaining to workload. A variety of questions included in the demographic section addressed potential predictors of workload. For example, questions related to the number of children in the household, the birth order of the child, the distance to a water source, and others. The other section contained a time chart wherein students would log their activities from the previous day. Figure 1 contains an excerpt from this portion of the journal, which was conducted in Kiswahili but included here in English.

The survey was conceptualized as a way of taking snapshots of student activities throughout the day. The validity of the instrument was supported by the predictable nature of life in the Shinyanga region. For example, local informants confirmed that sunrise time (approximately 6:45) was consistent due to the equatorial latitude of Tanzania. School start and

finish times, as well as sunset times were also consistent. These anchors helped students to conceptualize time of day, even if they did not have clocks at home. Although access to time instruments varied, students were all expected to arrive at school on time, which is where the journal activity was implemented.

Figure 1: Excerpt of Journal Instrument

Directions: Place a tick in each box if you did that activity (example, if you played and ate between 5-6pm, place a tick in both the "Play" and "Eat" box. The activities you tick on this page should reflect the things you did yesterday.

TIME	WORK AT HOME (FIELD OR HOUSE)	PLAY	EATING	SCHOOL-RELATED ACTIVITIES	PRIVATE STUDY AT HOME	WORK FOR WAGES	SLEEP
4:00-5:00AM							
5:00-6:00AM							
6:00-7:00AM							
7:00-8:00AM							

The second instrument used in this study was a household survey of children. The children selected for the household survey were a subset of those who completed the school-based work journals. This instrument included a variety of questions that aimed to investigate potential predictors of workload as well as the types of work in which students were engaging at various points of the day. One innovative approach used in this survey was a 'bean counting' activity. Students were asked to select a card for each activity they do throughout the day. Each card had a gender-neutral symbol (such as a spoon for washing utensils) as well as a description of the activity in Kiswahili, which ranged from "fetching water" to "washing utensils" to "looking after cows" and others. After selecting the cards, students were allocated 10 beans and

told to place the most beans on the card representing the activity that occupies the most time during the child's day. The children were not expected to place beans in all categories.

Finally, the parents of each household completed a survey. This instrument was used to explore parents' perceptions of appropriate amounts and types of work for children as well possible predictors of their perceptions. The survey included, but was not limited to, the following questions: (a) In your household, what chores are completed by girls/boys? (b) How do you decide which chores the boys will do and with the girls will do? (c) What skills/knowledge do boys learn from household chores that they will need later in life? (d) At what age is it acceptable for a boy/girl to marry? These questions help to address sociocultural factors that relate to the allocation of work and local beliefs about the interplay between academic achievement and workload.

Procedures

Once the sample was determined and the instruments created, CARE Tanzania staff implemented the research procedures in the sample regions. Three critical steps were carried out prior to actual data collection.

Obtaining Consent

CARE Tanzania received written consent from Kahama and Mvomero district councils prior to approaching communities. Consent was then gained at the local level based on established CARE criteria (this typically does not involve written consent due to challenges with literacy level of participants and distrust of local participants for signing forms).

Training of Data Collectors (Theory & Practice)

A group of Tanzanian university graduates participated in hands-on training on field-based data collection techniques and ethical considerations.

Piloting Instruments

Instruments were piloted with a focus was on assessing clarity of visual aids, questions, flow of activities, and time required for administering each instrument. Piloting of instruments was also done to assess the overall design of the situation analysis in terms of relevance of assumptions and the probability of getting appropriate answers for research questions and common indicators. After piloting, minor adjustments were made to the original protocol.

Data collection procedures

The instruments used in the study required different procedures in order to gather data. The school journal was administered every day in the morning for all girls and boys in Standards IV-VII for 15 days (three consecutive school weeks). Children were asked to fill tick boxes in a checklist regarding activities they did 'yesterday'. For example, on a Tuesday, students would comment on all activities conducted the previous day.

On the first day of the study, demographic data was also collected. CARE research staff maintained a presence in classrooms to aid children in understanding the journal activity. After a few days (and in some cases after just one day), students were able to fill out journal forms independently. On the 15th day of the study, all journals were collected. Students were given the opportunity to opt out of the journal activity if they wished.

Collection of data for the parents' and children's surveys began immediately after obtaining community consent. At this time, CARE introduced the survey to parents. Households were systematically identified and approached each day at 13:00 (1:00pm). The timing of the

survey followed labor patterns (farmers often returned home from fields and children returned from school at this time). In each household, fathers were always the first to be interviewed. CARE country office staff knew from past studies they had conducted that males may be suspicious if mothers were first asked questions. In an effort to reduce anxiety (and increase participation in the study), CARE staff first interviewed fathers, then mothers and children.

The study was conceptualized and commissioned by a CARE program initiative - LEADER (Learning and Advocacy for education Rights). LEADER implements and tests an innovative set of rights-based strategies to help vulnerable girls' realize their rights to education and development through improved social support. Technical support for the study was provided by the Minnesota International Development Education Consortium (MIDEC).

Analysis

Upon consultation with CARE country staff, and in order to answer the research questions, quantitative analyses were conducted. Specifically, two specific statistical analyses were conducted. Analysis of Variance (ANOVA) techniques were used to compare group differences. ANOVA (and in some cases t-tests), were conducted to compare group results. Regression analyses were conducted in order to preliminarily identify correlations between demographic characteristics and increased workload or decreased attendance or achievement in school. All variables selected for analysis were identified by CARE country staff, with the direct intention of utilizing data to make programming decisions. Further analysis of data will take place over the next year to identify other correlations not originally identified by CARE staff, but that may be of interest to program designers or the broader research community.

Quantitative analysis took place for approximately six months as data was collected, entered, and received by MIDEC researchers. Two research team members mentioned in the

acknowledgements section of this paper received the guidance provided by the CARE country office team and conducted all analyses in SPSS. Results were interpreted by the authors of this paper and communicated back to the CARE team. It is anticipated that these results will be used for planning over the next several months.

Results

Results for each of the statistical analyses are reported below, followed by an overall summary of results. Statistically significant results for ANOVA (p-values less than .05) and regression results (p-values less than .05, with reported *beta* results – which represent standardized regression results) are reported below. In some instances, statistical significance was found, but practical results were negligible.

Among the three instruments, the most robust sample and instrumentation came from the *journal* study. As noted above, this study asked students to track their daily activities for a period of several weeks.

Journal Study

Multiple ANOVA and regression analyses were conducted on journal data. Results were reported for both school attendance and achievement. For both of these indicators we used teacher data from attendance records and exam scores as variables for analysis. Within the themes of attendance and achievement, we report both relevant ANOVA and regression analysis.

School Attendance

To our surprise, girls were found to attend school at a statistically significant rate higher than boys (sig. =.000). However, teacher report of student attendance percentage differed by only

1% (87 to 86%) and the beta score was .03. Despite the nominal differences in actual attendance rates, there were several factors which may have influenced the attendance rate of *some* children.

For example, there was a statistically significant difference in the time it took girls to walk to school than boys. Across the entire sample, this difference averaged eight minutes. In this case, perception matched distance (girls perceived that school was "too far" away at a statistically significant rate different than boys). These findings indicate that, although girls and boys travel the same number of meters to school, it takes girls longer and they perceive the distance to be more difficult than boys. Although we did not include items on specific barriers facing students from the time they leave home to school, there appears to be gendered differences in the school journey process. Further, the older a child is, the more likely she or he will be absent from school (α=.000, *beta* = .06)

Prior to leaving school, there also appears to be factors that may inhibit school attendance. For all children (no sex differences), there is a logical inverse correlation between distance to school and school attendance (*beta* = .10). There were also statistically significant inverse correlations between distance to a clinic (*beta* = .06) and water (*beta* = .05). These similar results may indicate a small "remoteness" effect on some students, meaning that students who live far from water, and more significantly, clinics and schools, may have more difficulty reaching school in a timely fashion or at all.

Finally, we looked for a correlation between when domestic or field work was completed by children and how it related to attendance rates. The only statistically significant correlation we found was the inverse relationship between work done in the morning and attendance at school. To this end, there appears to be a relationship between children working in the morning and either arriving late or not at all to school. Furthermore, according to our data, there is a direct

relationship between work done in the morning and the status of being a first- or second-born girl in the morning (α=.000, *beta* = .02 for girl status; and α=.001, *beta* = .03 for birth order).

In rural Tanzania, the work done in mornings appears to be done by girls, and more specifically girls who are born first in their families. Girls reported doing more work at a statistically significant rate higher than boys in both afternoons and evenings. Whether boy or girl, the more work a child did, the worse their attendance percentage (α=.000, *beta* = .04).

Achievement

Although there were many factors that correlated (positively or inversely) with school attendance, there were fewer that correlated with school achievement. One statistically significant finding that was noteworthy was that, although boys study a significantly larger amount of time than girls, a predictor of low examination scores is the status of being a boy (α=.002, *beta* = .03).

A second statistically significant relationship was between that of wealth and exam scores. In this study, we examined used several variables as descriptors for wealth. According to our CARE collaborators, wealth in rural Tanzania may be measured by the number of bags of rice or maize a family has in storage. In this case, families with more grain in storage had children with higher exam scores. However, children in remote areas (far from school, water, and clinic) tended to score lower on exam scores. As might be expected, those children with better attendance rates scored higher on exams.

Journal Summary

Table 3 below provides an overview of the statistical findings that emerged from the journal study. Overall, none of the regression analyses we conducted were particularly

explanatory, although all had statistically significant effects. Such findings are common in studies with large sample sizes. Despite small beta values, it is clear that certain trends emerged from the study that warrant consideration in programming.

Clearly, there is not an attendance crisis in Tanzania among the children we surveyed (those who are more at risk may not have been in school to complete the survey – this will be covered in the next section). Among the students we surveyed, however, girls appear to be doing much of the work at home before and after school. This appears to have some impact on attendance (likely more on some students than others). Girls also appear to be facing barriers in the process of going to school (it is perceived as far, and takes girls longer to arrive at school). Despite all this, girls are still achieving at a level slightly higher than boys. So, although the "bottom line" appears to favor girls, the process of coming and going to school appears to be differentially difficult for girls. Whether girls are facing challenges of finishing work in order to get off to school, facing barriers on the walk to school, or finding time to balance home and work commitments after school, potential programming considerations may be found in the process of moving to and from school for girls.

For boys, lower exam scores may be problematic. Boys, on average, played more than girls (α=.000) and also did more work for wages (α=.000). However, their load of work in the home appears to be lower as well as the barriers they face en route to school. Despite these apparent advantages, girls are still scoring higher on examinations.

Table 3

Statistically Significant Findings from Journal Study

Variable	*α*	*beta (regression only)*

Girls attendance rate higher than boys	.000	.03
Older children have worse attendance	.000	.06
Distance to school predicts poor school attendance	.000	.10
Distance to clinic predicts poor school attendance	.000	.06
Distance to water predicts poor school attendance	.000	.05
Status of girl predicts more hours of work per day	.000	.02
Birth order predicts work in morning and afternoon	.001	.03
Workload predicts poor attendance for girls	.000	.04
Boys score worse on exams	.002	.03
Wealth predicts higher exam scores	.000	
Boys play more than girls	.000	
Boys work for wages more than girls	.000	

Household Surveys

Household surveys were also conducted with parents and children in order to validate findings from the broader children's journal exercise. The sample (as noted above) was much smaller for the household survey. Therefore, correlations appeared to be much larger. Results are reported below in relation to journal findings.

Household surveys confirmed that a strong predictor of daily work is the status of being a girl (beta = .330). As expected, the tasks of washing utensils and cooking also correlated

significantly with status of a girl (betas of .490 and .477 respectively). Likewise, the task of looking after cows correlated with boy status.

Similarly, strong correlations were found among the small sample of household surveys regarding reasons for absence from school. In this sample, absentees could be predicted by children doing work at home (beta = .384). Likewise, the remoteness factor mentioned above was present in household surveys. Distance to clinic (beta = .366) and water source (beta = .300) were predictors of school absence. Finally, wealth predicted school attendance. Families who were unable to afford uniforms were more likely to have students who missed school (beta = .321). Families who owned multiple uniforms per child reported the highest attendance rates (beta = .492).

Overall, correlations in the household survey were much stronger than the journal survey (in this sample there were more out-of-school and frequently absent children surveyed). Further, it is likely that the variance introduced in the very large journal study was not present in the much smaller household studies. In the household study, it was found that girls both did more work and did specific types of work (washing, fetching water, collecting firewood). Boys' work typically consisted of tending cattle and fishing. Boys were also found to spend more time in extra-curricular activities that girls. Table 4 summarizes the journal results.

Table 4

Journal Results

Variable	*α*	*beta (regression only)*
Girls work more than boys	.000	.330
Girls wash utensils more than boys	.000	.490

Girls cook more than boys	.000	.477
Absence from school predicted by work at home	.000	.384
Absence from school predicted by distance to clinic	.000	.366
Absence from school predicted by distance to water	.000	.300
Poverty predicts poor school attendance	.000	.321

Results Summary

The two studies provided valuable information for programming decisions. In both studies, it was found that the prevalence of work during a given day could be predicted by the sex of the child (i.e., girls did more work). This work may interfere with attendance at school. Although the journal study showed no significant impacts on girls' achievement scores, their attendance did appear to be impacted by the need for them to be working at home.

Further, poor attendance was predicted by distance to schools and general services. Children in the most remote communities spend longer amounts of time to get water, reach a clinic when needed, and get to school. Although not always the case, poverty is often associated with remoteness in Tanzania. In this study, poverty also predicted poor attendance in school.

Finally, perceptions of distance varied from girls to boys. Girls perceived schools to be farther from home. They also estimated it took them significantly longer (both practically and statistically) to reach schools than boys. No specific explanation for this difference emerged from our data, but further investigation of the barriers or choices that girls make which slow their walk to school may be warranted.

Finally, despite the challenges that girls face with attendance, boys are still faring worse on exam scores. Boys play more and work more for wages than girls, which may partially

explain why they are not studying. However, with the relative advantage of attendance and decreased home workload, this result was unexpected.

Discussion

The findings from this research highlight specific issues that could be targeted for future interventions, many of which will be outlined in this section. Several interesting findings related to school attendance. First, there was an inverse relationship between age and rate of attendance. This means that older students are likely to have lower attendance rates. In families where older children must bear greater responsibility for household tasks, it is logical that their attendance might suffer. Furthermore, student attendance decreases as the amount of work increases. This finding is not surprising, but it is particularly important because this study also shows that student achievement decreases along with attendance. Thus, students who are missing school due to work-related factors are less likely to perform well in school.

There was an inverse relationship between working in the mornings and attending class. Therefore, it is presumed that children with more chores in the morning will have a lower attendance rate. Conversely, children who do more work in the afternoons have higher attendance rates. Although this finding is not particularly significant when devoid of context, it becomes more relevant to development interventions when the local, gendered context is considered. More specifically, if primarily girls are required to fetch water and prepare breakfast, it may be that they are underperforming at school as a result of these duties. The data did reveal, however, that girls complete more work during all sections of the day, morning, afternoon, and evening. If this is the case, what technical interventions and changes in perceptions might increase girls' abilities to attend school?

Finally, because boys spend more time playing than girls, one is called to question girls' abilities to exercise their rights to play. What elements of their emotional, intellectual, and personal development could be enhanced by increased opportunities to play? Moreover, from a feminist perspective, what messages about gendered allocations of time are being implicitly taught to girls in Tanzania? In general, girls perceived that they were working longer hours than boys. In this case there may be a qualitative link between accepted sociocultural norms and opportunities lost for girls. Addressing the reproduction of these norms may be a target for intervention in the days ahead. Further, learning more about the resiliency of girls (who still scored higher than boys on exams despite disadvantages) may be instructive to programming and theory worldwide.

This study also raises three broader questions about the nature of gender and development in Tanzania. Although this research examined boys' and girls' workload, it did not explore how their participation in work affects their future employment opportunities. If, for instance, more boys are engaged in wage-related labor than girls, are they more apt to find meaningful employment as a result of this prior work experience? A concomitant issue is whether the skills learned by girls through household work are less marketable outside of the home than the skills boys learn. Many parents perceive girls' household work as training for marriage and also believe that the appropriate age for girls to marry is younger than for boys. Therefore, does the capability for girls to develop and exercise agency in vocational decisions diminish as a result of their house-related responsibilities, which are largely established because of parents' gendered perceptions of acceptable work?

This question relates to the second broad question grounded in the data. As an international development agency charged with the explicit purpose of supporting girls' agency

and development, to what degree should CARE International and other development organizations focus on technicist interventions instead of those aimed altering local perceptions? Technicist innovations might include establishing wells and other social services in closer proximity to students in the community in an attempt to decrease workload and simultaneously increase attendance and achievement. Interventions aimed at altering local logic, on the other hand, are likely more challenging and contentious, yet perhaps more significant for long-term change.

The third question pertains to what was not considered. Unexamined in this study was the overall quality of schooling at the schools under study. This provides an additional avenue for future research as well as raises questions about 'pull' factors that may encourage students to attend school instead of engage in work. Therefore, it is difficult to know if parents and students are resisting school because of perceptions, correct or incorrect, about the overall quality and ultimate benefit of attending school.

Next Steps: Tanzania

The findings from this study confirm some of the hypotheses already constructed by CARE Tanzania. There is a differential between both the types of work and time spent at work for girls and boys. Findings from the study will inform designs of new interventions for CARE Tanzania, however immediate steps for the LEADER project are based on CARE's role as an agent of community change and partnership. This role necessitates sharing, validating, and co-constructing intervention plans alongside communities.

Dissemination of Findings from the Study

CARE Tanzania will share findings from the workload study with communities where the study was conducted and where CARE Tanzania works. This sharing will validate findings and recommendations from the study with stakeholders. In these discussions CARE Tanzania and communities will examine key policy issues emerging from the study for further dialogue. This process will capture inputs and opinions from the key actors on the issues emerging; and stimulate dialogue about barriers to girls' education and initiate action among stakeholders.

Review LEADER Implementation

After sharing and disseminating the study's results, CARE Tanzania will review LEADER implementation strategies to reflect findings from the workload study and identify possible advocacy avenues for harmonization of workload at community, district and national level. This review will help to frame the types of interventions that both CARE Tanzania and communities will be most effective in addressing the disparities found in this study. Challenging decisions about whether to focus efforts on technical solutions, community engagement, or policy change will be made over the next several months.

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