Child Labor and Students' Participation in Primary School Education in Wolaita Zone, Ethiopia

Ermias Shirko Otaye[1*], Mary Thuo[1] and Tegegn Hailu[2]

[1]*Department of Educational Planning and Management, Wolaita Sodo University, Ethiopia.*
[2]*Livelihood and Poverty Studies, Wolaita Sodo University, Ethiopia.*

Authors' contributions

This work was carried out in collaboration between all authors. Authors ESO and MT designed the study and managed the literature review. Author ESO collected the data, performed the statistical analysis and wrote the first draft of the manuscript. Authors MT and TH managed the analyses of the study. All authors read and approved the final manuscript.

Original Research Article

ABSTRACT

Aim: The aim of the study was to determine the kind of work school children do, and to identify factors that predict engagement in child labor.
Study Design: A descriptive survey research design was employed.
Place and Duration of Study: The study was conducted in ten schools selected from four divisions and one administrative town in Wolaita zone from January 2017 to February 2018.
Methodology: Data were obtained from 120 students (6th-8th graders), who were randomly selected to respond to the questionnaire while interviews were conducted with 10 principals. Data were analyzed using descriptive statistics, Pearson Correlation and Linear Regression.
Results: Findings revealed that children combined work and schooling where main activities included; doing household chores, carrying materials in the town, agricultural activities (cultivating), hotel work and selling lottery tickets. Reasons for engaging in child labor were linked to poverty, need to help the family, parents' low education, large family size and students' need for money. Findings revealed that the consequences of child labor were; dropping-out, low academic performance and low participation in the classroom. To an extent, absenteeism, getting late to

---

Corresponding author: Email: ermyshi0@gmail.com;

school and repetition were also observed. Factors such as having a parent or not, individual and family characteristics predicted whether a student actively participated in schooling or not.

Conclusion: Strategies to counteract child labor practices require persistently working with parents in matters of their children education. The government, non-government organizations and local agencies should work collaboratively to enlighten the society on dangers and consequences of child labor. Besides, the government should look for ways to improve the infrastructure to create job opportunities for the community, in addition to enforcing child labor laws. At the institutional level, students should be given support through guidance and counseling on issues related to work and schooling.

Keywords: Education; child labor; participation; primary schools; Ethiopia.

1. INTRODUCTION

Child labor is widespread and a serious problem throughout the world, depriving school-aged children adequate participation in their education. Despite tremendous efforts by governments and donor agencies to reduce child labor, the International Labor Organization [ILO] [1] estimated that roughly 152 million children were engaged in child labor in the 2012 – 2016 period. Studies show that the agricultural sector takes the largest share of child labor; accounting for 71% [1].

Literature shows that Africa ranks highest in the percentage of children engaged in child labor as compared to Asia and Latin America [1]. For example, children in Ethiopia are exposed to extreme forms of child labor; they perform risky tasks in agriculture, engage in domestic work and textile weaving which in turn affects the accumulation of human capital. Understanding factors that influence the decisions that push school children into the labor market is important so as to design policies that would reduce child labor.

The term "child labor" is defined by ILO as work which deprives children of their childhood, their potential and their dignity, and that which is harmful to their physical and mental development [2]. This kind of work affects children schooling by depriving them of the opportunity to attend school (e.g., absenteeism /or dropping out) or it makes them to combine school and work [2].

Literature differentiates child labor and child work where the latter is considered healthy and less harmful where children are expected to receive training to be responsible persons later in life, especially in household related activities [3,4]. In many societies, children are traditionally expected to work at par with adults as a way to learn responsibilities and to acquire skills that eventually help them perform adult tasks [5].

Child labor is regarded as harmful if; children start working at an early age, work full time or work for long hours, and if they take on responsibilities that exert physical, social or psychological pressure [6,5]. Such work denies them an opportunity to pursue their education and undermines their dignity and self-esteem.

In Ethiopia, the literature shows that roughly half of the children aged between 5 to 14 years are engaged in the economic activities leading to low school attendance and grade completion [6,7]. The national child labor survey report of 2001 indicated that children are engaged in productive and non-productive work beyond their capacity due to situations of continuing poverty which require all family members to contribute to the household income [8]. Studies show that family survival is achieved through labor-intensive subsistence farming where children are widely used as laborers at a very young age [6].

A study conducted in Ethiopia reported that school-aged children start working at an early age due to factors such as; extreme poverty, the death of parents/guardian, peer pressure, gender imbalance, and rural-urban linkage where some factors lead to voluntary or forced migration of children from rural to urban centers [8]. A study conducted in Ethiopia on children time allocation indicated that children start participating in work activities at a very early age especially in rural areas where they assist their parents in farm work, herding, and/or domestic work activities [9]. The study reported that roughly 12% of the children started working as early as 4 years of age [9].

Table 1 provides information on school enrolment plan, students' enrollment, drop-out and repetition in Wolaita zone in 2016 and 2017. Data reveals that an estimated 12.9% and 17.5% of the students that were in the enrolment plan in 2016 and 2017, respectively, failed to enroll. The drop-out rate increased from .86% in 2016 to

Table 1. Data on Children enrollment plan, dropout and repetition for age 7-15 in primary schools of Wolaita zone

Number of children in the Zone		Enrollment plan		Students enrolled		Dropouts		Repeaters	
2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
547,008	558,102	537,039	543,707	467,743	448,596	4,044	4,096	7,567	7,815

Source: Wolaita Zone Education Department report [10]

.91% in 2017. Additionally, the number of repeaters increased in the 2016/2017 period [10].

The study sought to contribute to the body of knowledge on child labor by identifying the kind of work that school-aged children do, and how it relates to education participation. The study further identified factors that best predict involvement in child labor.

2. LITERATURE REVIEW

2.1 Theoretical Framework

Literatures on child work present different views regarding the causes of child labor, and how it affects school-aged children's education. Poverty, for example, has been cited as a common theory in relation to the causes of child labor [11,12]. In theory, researchers have argued that rarely do children choose to work, but, such decisions are made by their parents [12,5]. Researchers have noted that if a child runs away from home, the main cause(s) are traced back to the parental actions that made life unbearable for the child's survival [12]. Studies have identified three attributes of child labor supply [5]; child attributes (age, gender and birth order), household attributes (parental preferences, and cultural attitude and norms), and community attributes (access to schooling, quality of educational institutions, and employment opportunities).

Child attributes according to [5] can affect child time allocation in three ways. First, based on age, earning opportunities increase where younger children end up in school while older kids engage in market-oriented or household work. Second, gender difference may determine who works. Girls, for example, do well in the market and household work as compared to boys [5]. However, in livelihood systems like pastoralists, boys work with their fathers in herding cattle [13]. Third, with regard to credit constraint and multiple siblings, birth order may affect child time allocation and participation in school where the older child is sent to work while

the younger child goes to school [5]. In such a scenario, older girls are also expected to work more as compared to younger boys and girls.

In terms of household attributes, parental preference affects child time allocation based on how they value education and consumption [5]. A report by ILO [1] indicated that child labor is mostly traced within the family or the household. According to [5], parents allocate market and household work to their children based on the child's productivity. However, societal norms also determine child work where engagement is considered best for their development in some cultures [5].

Household and siblings sex composition is seen as crucial in child time allocation [5]. For example, researchers noted that in most cultures, girls are expected to take greater responsibility for sibling's care [13]. Based on [5], larger household tends to be poorer, hence, child time may be allocated to household activities rather than schooling. Besides, the competition for scarce resources may be experienced in larger households where more resources are devoted towards educating boys as compared to girls.

In terms of parental presence; that is, parents working outside the home, the death of parent(s) and being raised in a single-headed household may determine the type of duties allocated to a child [5]. Besides, the level of the living standard determines child time allocation wherein poor households' children spend more time working as compared to a rich household. Additionally, labor market imperfection and households owning small enterprises may capitalize on child labor due to lack of hired labor or the employment opportunity within the household may determine child time allocation [5].

In terms of community attributes, access to schooling and quality of educational institutions play a critical role on how child time is allocated [5]. Studies show that poor quality and remotely located schools have a lower return on

educational investment [5]. Poor quality schools may not facilitate technology adoption or innovativeness for the educated to seize the market opportunities. Besides, a subsistence economy presents little reward to education; meaning, households in such situations may prefer their children to work rather than spend more time in school [5]. For example, a study conducted in Ghana found that parents were reluctant to send their children to school due to the poor quality of teaching and teacher absenteeism [3].

Child labor has long-lasting consequences where excessive involvement in harmful work traps children in a vicious cycle of poverty [13]. The researcher stated that child work in the expense of schooling makes them lose opportunities to develop skills and competencies that are achieved during their school years. Although not all children involved in child labor are out of school [13], competing demand of work and education have consequences, like; dropping out of school, grade repetition, registering lower level of academic achievement, and an impact on children holistic human development where early employment could lead to lower earnings in the future which transmits into poverty across generations.

2.2 Empirical Studies on Child Labor

Studies conducted on child labor aligns with theoretical argument that classified child labor supply to three characteristics [5], that is; child, household and community characteristics. A study by [3] on child labor and schooling in Ghana found that majority of child labor was in unpaid work especially within the family agricultural enterprises. The researchers found that 90% of the children between 7 to 14 years were involved in domestic chores. The researchers revealed that high cost of schooling, low quality and weak relevance of education pushed many children into work. The study also found that family characteristics played a big role in a child's decision to attend school or work. Besides, fathers' education was found to have a significant negative effect on child labor.

A study conducted on child labor in Southern Ethiopia found that child labor was mostly linked with; poverty, loss of parents, disagreement with parents, and parental separation [8]. The study revealed that about two-thirds of the child laborers worked for more than 10 hours a day. In line with a study by [8] in Ethiopia and a research

by [14] on child labor and schooling in Brazil, they found that wealthy households and parents with higher wages had a positive association with lower child labor and higher school attendance.

A study by [15] focused on child labor and access to primary schools in Tanzania. The study used data from students who had recorded 50% absenteeism. The researcher found that children got involved in child labor to meet their basic needs; reason being poverty or loss of parents. Engagement in work consequently compelled children to miss school regularly or drop out, in-turn, the end result was missed educational opportunities and future development.

Similarly, [16] conducted a study on health and educational consequences of child labor in Nigeria. The study found that there were more female child laborers as compared to male children in Nigeria. The phenomenon was linked to practices by parents of giving away their female children to work as house-helps or in hawking business. Child laborers were observed to engage in such work like; hawking, begging and carrying heavy loads. Findings from the study identified major causes of child labor to include; poverty, broken family, cultural belief, helping the family, family size, and lack of schooling.

A similar study was conducted by [17] focusing on child labor and its associated problems in Wolaita zone, Ethiopia. The researcher found that most children's started working below the age of eight. In particularly, child labor involved household unpaid work like agriculture for the male child while the girls were engaged in household activities. The study revealed that family size and loss of parents or broken marriage had a positive and significant association with child labor. However, they found a negative and significant relationship for parents with an occupation and education level with child labor; meaning, engagement in child labor was less likely in a household with educated parents or for those with an occupation. The researcher suggested that improved infrastructure would create job opportunity for parents, and in-turn reduce child labor.

A study conducted in Ethiopia on "Young Lives" investigated factors that motivate children's pathways into and through work [18]. The researchers argued that child work may be linked with: 1) the context in which they grow up which

determines opportunities available for them to engage in work; 2) child's age and gender norms dictated by the society or culture; 3) educational opportunities available to them; 4) household's poverty level; and 5) children's relationships and networks.

In a study conducted on Nigerian cocoa farmers and child labor, the researchers found that children worked in very inhumane conditions that expose them to dangerous chemicals, infections, and use of inappropriate agricultural tools which lead to poor academic performance [19]. The researchers found that about 80% of secondary school students engaged in work and schooling. Besides, roughly 60% of households employed their children in agricultural activities. From the study, about 53% of the respondents noted that child labor was recognized by both households and the community as a way of socialization to prepare children for the future [19].

3. RESEARCH DESIGN AND METHODS

3.1 Study Design

The study employed a descriptive survey research design since it is economical in terms of time and cost efforts, and it is convenient to receive reliable and adequate information from a large number of respondents within a short time. Besides, respondents can provide answers more easily and quickly [20,21].

3.2 Study Site

The study was conducted in four rural divisions out of 12 in Wolaita zone and in one administrative town out of three. Ten schools were purposively selected, including Kindo Didaye (Bosa Borto and Kindo Halale), Damot Woyde (Demba Girara and Mayo Kote), Humbo (Gututo Larena and Humbo Tebala), Sodo Zuria (Delbo Atiwaro and Tome Gerera) and from Sodo town (Abiyot Chora and Kokate). Purposive sampling was used based on schools' students' dropout rate. The economic activity in the selected areas is mainly dominated by agriculture, livestock rearing and small-scale businesses.

3.3 Sample and Sampling Techniques

The study employed a non-probability technique to determine the sample size [22]. In this case, a purposive sampling technique was used to select 120 grade 6th–8th students based on their record of absenteeism in the classroom. This group of students was chosen because they might provide specifically the factors which contribute to engagement in child labor. The sample determination also took into consideration the sample size needed to run a regression analysis. The sample size of 120 was considered adequate based on the formula by [23]:

$$\text{Sample size} = 50 + 8m \qquad (1)$$

Where, "m" is the number of independent variables to be included in the regression model. From the sample, 40 students were included from each grade level where efforts were made to balance the sample based on gender.

3.4 Instruments and Procedure of Data Collection

Questionnaire and face-to-face interview were used to gather data for this study. Students responded to the questionnaire which comprised of both open- and closed-ended questions. The questionnaire comprised of 5-points Likert scale items where responses ranged from *"always, frequently, occasionally, seldom to never."*

Content validity was achieved through discussions with experts in the area of study. Additionally, the reliability of the questionnaire was achieved based on a pilot test conducted at Bale primary school in Kindo Koysha woreda with 12 students. The Cronbach's alpha coefficient for the Likert scale items ranged from .78 to .89 indicating that the tool was acceptable for data collection. To obtain reliable information, the questionnaire was constructed in both English and local language [24].

3.5 Ethical Considerations

The study was conducted as part of a thesis work. Ethical clearance was obtained from the Department of Educational Planning and Management in Wolaita Sodo University to engage in this kind of research after ethical review. Further clearance was obtained from the district or Wolaita Zone education office before proceeding to the schools. To get contact with the students, the school principals approved the study and consent was further sort from the students through their subject teachers. A verbal consent was sought from the subjects to participate in the study. Students were also

informed that the study was voluntary and that they were free to participate or opt out. Questionnaires and interview data were handled with strict privacy from data collection to analysis after getting informed consent from the respondents.

3.6 Data Analysis

A Multiple Linear Regression models was used to determine predictors of students' participation in schooling. Based on [25], the linear regression model has the ability to identify the independent effects of a set of variables on a dependent variable. The dependent variable was measured through a 5-point Likert scale with seven items (i.e., 1 = never, 2 = seldom, 3 = occasionally, 4 = frequently, and 5 = always). Based on the literature, six explanatory variables were included (i.e., age, gender, having parent(s) or not, personal characteristics, household, and institutional factors) [5,26]. Data were aggregated to give a Likert scale score for the analysis. To ascertain if an association exists between variables, a Pearson Correlation test was performed using the SPSS software version 20. Data obtained from the face-to-face interview with school principals were analyzed and used to supplement quantitative data in the discussions. Identifiers for principals were removed and coded school principal (SP) with a subscript to identify the school, such as; SP_1, $SP_2 \ldots SP_{10}$.

4. RESULTS AND DISCUSSION

4.1 Students' Background Information

The demographic information of 120 students (6th - 8th graders) is presented in Table 2, including age, parents, siblings and hours worked.

On age, data on Table 2 showed that students were between age 12 to 17 with the majority being age 13 to 14. The average mean of students was roughly 13.72 with a standard deviation of 1.022. Most of the students, 60.8% had both parents but about 27.5% had a single parent while 11.7% were orphans. Studies have shown that death of parents was a reason that led school children to engage in child labor at an early age [8].

From Table 2 results indicate that only 7.5% of the students had one or two siblings, majority 75.8% had between 3 to 5 siblings while about 16.7% had an equivalent of six or more sibling. Researchers have argued that the more the sibling in a household the higher the chances of a child engaging in work since there are more mouths to feed and high costs especially for education [16,24].

On the number of hours children worked, about 38 (31.7%) worked for up to 5 hours, 50 (41.7%) worked for 6-10 hours while 32 (26.7%) worked for more than 10 hours. Studies show that

Table 2. Demographic information of Students (N=120)

Item	Category	Frequency and percent	
		Freq.	%
Age of students	12 yrs	11	9.2
	13 yrs	42	35.0
	14 yrs	44	36.7
	15 yrs	18	15.0
	16 yrs	3	2.5
	≥17 years	2	1.7
Students' parents	Have both parents	73	60.8
	From single parents	33	27.5
	No parents	14	11.7
Number of siblings	Have ≤ 2 brothers/sisters	9	7.5
	3 brothers/sisters	22	18.3
	4 brothers/sisters	36	30.0
	5 brothers/sisters	33	27.5
	≥ 6 brothers/sisters	20	16.7
Hours of work	0-5 hrs	38	31.7
	6-10 hrs	50	41.7
	> 10 hrs	32	26.7

children who work for long hours may experience physical or psychological stress where too many responsibilities deny them an opportunity to follow through with their education [6].

The following section discusses issues related to child labor based on data obtained from students through the questionnaires. Qualitative data obtained from interviews with principals were categorized into three areas: *Kind of work, causes, and effects of child labor.* Interview data were discussed concurrently as a supplement to quantitative data.

4.2 Type of Work Done by School Children

The result on the type of work performed by school-aged children is presented in Table 3.

On household activities (Table 3), the mean value for the item was 4.15 and a standard deviation of .64, with the 1st rank. Majority of students 68 (56.7%) frequently did household activities, about 35(29.2%) said always while only 17(14.2%) mentioned occasionally. Finding supports research by [16,24] that household work especially domestic chores were the highest consumer of child labor.

From Table 3 item 4, carrying material in the city (running errands) was ranked 2nd with a mean

value of 3.81 and a standard deviation of .77. Majority of students, 53 (44.2%) replied frequently, 40 (33.3%) stated occasionally, 24 (20%) said always, but, only 3 (2.5%) replied seldom.

From Table 3 item 2, agricultural work ranked 3rd on activities that consume child labor with a mean value of 3.45 and a standard deviation of .77. The majority, 54 (45%) replied frequently, about 47(39.2%) said occasionally while 11 (9.2%) and 7(5.8%) said seldom and always, respectively, but, only 1 (.8%) said never.

From Table 3 item 7, hotel activities ranked 4th with a mean value of 3.23 and a standard deviation of .59. Majority of students, 72 (60%) replied occasionally, a third 38 (31.7%) said frequently while very few 10 (8.3%) replied seldom.

From Table 3 item 3 selling lottery tickets was ranked 5th on child labor activities with a mean value of 3.22 and a standard deviation of .93. Most students, 44 (36.7%) replied occasionally, about 35 (29.2%) said frequently while 30 (25%) and 11 (9.2%) replied seldom and always, respectively.

Preference of child workers in activities such as; running errands in town, working in hotels, and selling lottery tickets was identified as areas where employers prefer to hire children because

Table 3. Type of work done by school-aged children (N=120)

Variables	Freq	Rating scale					Mean	Std. dev	Rank
	%	A	F	O	S	N			
1. Doing house hold activities	F	35	68	17	-	-	4.15	.64	1
	%	29.2	56.7	14.2	-	-			
2. Agricultural work like cultivating	F	7	54	47	11	1	3.45	.77	3
	%	5.8	45.0	39.2	9.2	.8			
3. Selling lottery tickets	F	11	35	44	30	-	3.22	.93	5
	%	9.2	29.2	36.7	25.0	-			
4. Carrying material in towns	F	24	53	40	3	-	3.81	.77	2
	%	20	44.2	33.3	2.5				
5. Doing a family business	F	1	7	23	41	48	1.93	.95	7
	%	0.8	5.8	19.2	34.2	40			
6. Manufacturing of wood, metal, clothes, etc.	F	-	-	12.	28	80	1.43	.67	9
	%	-	-	10.0	23.3	66.7			
7. Doing hotel activities	F	-	38	72	10	-	3.23	.59	4
	%	-	31.7	60	8.5	-			
8. Herding cows, goat/sheep, etc.	F	-	34	63	23	-	3.09	.68	6
	%	-	28.3	52.5	19.2	-			
9. Shoe-shining work	F	-	-	25	62	33	1.93	.69	8
	%	-	-	20.8	51.7	27.5			

Note: Mean value: $\leq$1.49=never (N), 1.50-2.49=seldom (S), 2.50-3.49=occasionally (O), 3.50-4.49=frequently (F) and $\geq$4.50=always (A)

they are quick to obey and less likely to cause trouble [5,26]. Besides, children are more trustworthy, less likely to steal, and they don't form labor unions.

Results in Table 3 item 8, herding cattle, goats and sheep ranked 6th on child labor activities with a mean value of 3.09 and standard deviation of .68. Majority of the students 63 (52.5%) said occasionally, less than a third 34 (28.3%) said frequently while 23 (19.2%) replied seldom.

Working on family business (Table 4, item 5), the item ranked 7th on child labor activities with a mean value of 1.93 and a standard deviation of .95. About 7 (5.8%) of students replied frequently, 23 (19.3%) said occasionally, about a third 41 (34.2%) said seldom, and majority 48 (40%) replied never.

Item 6 and 9 in Table 3 presents responses on engagement in the manufacturing of wood and metal work, and shoe-shining activities. Shoe-shining ranked 8th with a mean of 1.93 and a standard deviation .69 while manufacturing ranked 9th with a mean of 1.43 and a standard deviation of .67. Considering the area is rural, working in family businesses, shoe-shining or in the manufacturing of wood and metal were least observed as activities that engage child labor.

A face-to-face interview with principals supported the findings that more than half of the students combined work and schooling. Household work, participating in agricultural activities and running errands in towns were frequently mentioned by the participants.

For example, a principal said that *"… school children get engaged in domestic work … like fetching water, washing clothes, preparing food, housekeeping ...." (SP$_1$).*

Another principal said that "… *school children get engaged in agricultural work, they herd cattle, goat, and sheep … they carry heavy loads and walk long distance to the market" (SP$_2$).*

Working in small businesses was also reported by a principle that *"… children sometimes go to town and get employed in small businesses to sell lottery tickets, work in hotels, and carry materials in the city and some work as shoe-shiners" (SP$_3$).*

In summary, the study concluded that domestic work, running errands or carrying materials in the city, agricultural activities, working in hotels, selling lottery tickets and herding animals were areas where child labor was mostly used in the study area. Working in family business, shoe-shining and working in manufacturing seldom or rarely employed child labor.

4.3 Factors that Lead to Employment of Child Labor

Results in Table 4 presents information obtained from students on factors that lead to child labor. The study focused on three attributes; personal, household, and institutional characteristics.

From Table 4, results on personal characteristics indicate that majority, 73.3% engaged in work always or frequently due to the *'need for money'*.

Table 4. Reasons for engaging in child labor (N=120)

Variable	Scale				
	Always	**Frequent**	**Occas.**	**Seldom**	**Never**
Individual	Freq. (%)	Freq. (%)	Freq. (%)	Freq.(%)	Freq.(%)
Need for money	30 (25.0)	58 (48.3)	32 (26.7)	-	-
Peer influence	-	**-**	33 (27.5)	79(65.8)	8(6.7)
Family violence			30 (25.0)	82 (68.3)	8 (6.8)
Poverty	45 (37.5)	60 (50)	13 (10.8)	79 (65.8)	2 (1.7)
Large family size	-	27 (22.7)	57 (47.5)	36 (30)	-
Helping the family	37 (30.8)	63 (52.5)	20 (16.5)	-	-
Family low educ. level	7 (5.8)	54 (45)	47 (39.2)	11 (9.2)	1 (.8)
Parents' negative attitude	4 (3.3)	6 (5.0)	32 (26.7)	68 (56.7)	10(8.3)
School					
Low access to learn	-	-	27 (22.5)	88 (73.3)	5 (4.2)
Punishment of students	-	1 (.8)	20 (16.5)	81 (67.5)	18 (5.0)
Poor curriculum design	-	-	15 (12.5)	55 (45.8)	50 (41.7)

Peer influence did not feature as a serious problem on the part of the student.

On family factors, students highlighted key factors that 'always or frequently' lead to child labor, including poverty (87.5%), helping their family (83.3%), parents' low education level (50.5%), and large family size (22.7%). However, other factors like family violence and parents' negative attitude towards education were rated occasionally or seldom as causes of child labor.

From Table 4 on school characteristics, less than a third of the students rated occasionally on each of the three factors (i.e., low access to learning, punishment and poor curriculum design) in relation to child labor. More than two third of the students stated that seldom or rarely do these factors lead to engagement in child labor.

4.4 Consequences of Child Labor on Students' Schooling

Table 5 provides a summary of the influence of child labor on students' schooling. Seven items were included as a measure of students' participation in education.

From Table 5, results indicate that over 50% of the students identified the end result of engaging in child work to include; drop-out, low performance in education and low participation in the classroom as factors that always or frequently affect their participation in schooling. About a third or less said child work frequently leads to absenteeism, lateness at school, repetition and physical tiredness while more than two-third rated occasionally or seldom.

Interview data from principals confirmed these results. For example, a principal said that *"in our school, children are always late to enroll or never enroll … after enrolling, some do not start their*

schooling on time which makes them perform poorly in academic" (SP$_4$),

In another school, the principal had this to say:

> *In my school, we have meeting program on students' participation four times a year … I have observed that parents are not aware of the negative effect of child labor because they send their children to work for other people, then they miss to enroll and sometimes they combine education with work. Due to this children drop-out from school (SP$_6$).*

Another principal mentioned that:

> *Our school has high dropout and high late coming because students are engaged in work … when I inquire, they say that their parents sent them to do other activities in the city area with a target of getting money (SP$_8$).*

4.5 Econometric Analysis

4.5.1 Pearson correlation analysis

A Pearson Correlation coefficient was computed to access the association of six factors with students' participation in education (Table 6). From six factors (i.e., age, gender, parent, personal, family and school factors), only school characteristics had a negative relationship, while five factors had a positive correlation with the students' participation. However, only three factors "parent, personal and family characteristics" had a statistically significant relationship with students' participation.

Results on parent factor indicated a low degree and positive relationship with students participation in education (*r =.220, p =.016*). The coefficient of determination (R-square) between individual factors and students participation was .048, meaning, 4.8% of the variance of students'

Table 5. Influence of students' schooling due to child labor (N=120)

Variables	Rating scale				
	A	F	O	S	N
	Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)	Freq. (%)
1. Dropping out of school	37 (30.8)	63 (52.5)	20 (16.7)	-	-
2. Low performance in academic	29 (24.2)	59 (49.2)	32 (26.7)	-	-
3. Low participation in class like group work	16 (13.3)	44 (36.7)	48 (40.0)	12 (10.0)	-
4. Absenteeism	-	36 (30.0)	61 (50.8)	23 (19.2	-
5. Coming to school late	-	34 (28.3)	63 (52.5)	23 (19.2)	-
6. Repetition	3 (2.5)	27 (22.5)	59 (49.2)	31 (25.8)	-
7. Physical tiredness	1 (.8)	11 (19.2)	58 (48.3)	50 (41.7)	-

Table 6. Correlation analysis

		Mean	SD	1	2	3	4	5	6	7
1.	Participation	23.73	2.045	1						
2.	Gender	-	-	.074	1					
3.	Age	13.72	1.022	.040	.049	1				
4.	Parent	-	-	.220*	-.052	.026	1			
5.	Personal	6.19	.901	.261**	-.139	-.123	.107	1		
6.	Family	19.33	1.759	.242**	-.005	.061	.008	.263**	1	
7.	School	8.08	1.412	-.050	-.024	-.094	.058	.238**	.118	1

*** . Significant at the 1% level and *significant at the 5% level (2-tailed)*

participation in school can be explained by whether a student has a surviving parent or not.

Results on personal factor indicate a low degree and positive relationship with students' participation in schooling (*r =.261, p =.004)*. The coefficient of determination (R-square) between the personal/individual factor and students' participation in education was .068; meaning, 6.8% of the variance of students' participation can be explained by individual factors (i.e., need for money and peer influence).

Results from Table 6 on family factor indicated a low degree and positive relationship with students' participation in education (*r =.242, p =.008)*. The coefficient of determination (R-square) between the family factor and students' participation was .059; meaning, 5.9% of the variance of students' participation can be explained by family factors.

4.6 Regression Analysis

A Multiple Linear Regression analysis was used to determine the relationship between the predictor variables and students' participation in education. From Table 7, the F-test ($F_{(6, 113)}$ = 3.88) and *p* = .0015 in the regression analysis indicate that the model is statistically significant. The R-squared is .171 meaning that about 17.1% of the variability of *student participation in education* is accounted for by the variables in the model. Results revealed positive and significant relationship between three variables: parent (have a parent or none), individual/personal and family factors. Age and gender maintained the expected sign, but the coefficients were not

Table 7. Multiple linear regression model

Model summary				
Model	R	R-square	Adjusted R-square	Std. error of the estimate
1	.413	.171	.127	1.910

ANOVA[a]					
Model		Sum of squares	df	Mean square	F	Sig.
	Regression	85.057	6	14.176	3.884	.001
	Residual	412.410	113	3.650		
	Total	497.467	119			

a - Dependent variable: Student participation in schooling

Model	Un-standardized coefficients		Standardized coefficients	t-value	Sig.
	B	Std. Error	Beta		
Constant	15.332	3.261		4.701	.000**
Age	.068	.174	.034	.391	.696
Gender	.464	.353	.114	1.315	.191
Parent	1.306	.548	.206	2.384	.019*
Personal	.547	.211	.241	2.594	.011**
Family	.222	.104	.191	2.136	.035*
School	-.198	.128	-.137	-1.540	.126

*** . Significant at the 1% level, and *significant at the 5% level*

statistically significant. The coefficient for the school factor was negative and not statistically significant.

The result from Table 7 showed that parent factor was positive and statistically significant at the 5% level. This means that a percentage increase of students with parents would consequently have an increased impact on students' participation (e.g., drop out, repetition, absenteeism) of 1.3 points holding all other variables in the model constant. The findings relate with [5] who argued that parents make decisions on whether a child attends school or work.

From Table 7, the coefficient for the family factor was positive and statistically significant at the 5% level. This implies that a unit increase on family characteristics (e.g., large family size, poverty or low education) would increase the impact on students' participation in education (e.g., drop out, repetition, absenteeism) by .22 points, holding all other variables constant. The findings align with what [3] found that family characteristics played a big role in the child's decision to attend school or work.

From Table 7, the coefficient for personal factor was positive and statistically significant at the 5% level. This implies that a unit increase on personal factor (e.g., need for money and peer influence) would consequently increase the effect on students' participation in education (e.g., drop-out, repetition, or absenteeism) by .55 points while holding all other variables constant. To support these findings, a principal mentioned that ''*most of the students are physically tired and do not actively participate in different activities in class or group work … this is because of work*'' (SP_6).

From this study, it was apparent that parents and family members play a critical role on the extent to which children participate in their education. However, individuals' decision to work also had an impact on how they participated in schooling.

5. CONCLUSION

This study determined the kind work school-aged children do and established factors that led to such engagement and the impact on children's education. In this region, the majority of children aged 13 to 17 years combined work and schooling. Key areas included; household activities, carrying materials in the city, doing agricultural activities, hotel work, selling lottery tickets, and herding animals. Working in family business, shoe-shining and working in manufacturing seldom or rarely employed child labor.

Reasons attributed to child labor were linked with; poverty, helping the family, low education level of parents, high family size and need for money on the part of the student. The main effect due to child labor was; dropping out of school, low academic performance and low participation in classroom-like group work. To an extent, absenteeism, getting late to school and repetition also featured as an end result of child work. Having a parent or not, individual and family characteristics were key predictors of how a student participated in schooling. The study concluded that decisions related with child labor were mainly made by the parent(s), and partly by the child due to the need for money which was linked with poverty.

Interventions geared towards ending child labor should focus mainly on parents by involving them in their children education. The government, non-government agencies and community-based organizations should collaboratively work together in the area to enlighten parents and the society on dangers and consequences of child labor. Child labor laws should also be enforced to discourage child work during school hours. Additionally, the government should improve the infrastructure so as to create job opportunities to improve households' socio-economic status. Institutions on their part should work towards providing students with guidance and counseling in relation to work and schooling. More research is also needed to determine best approaches to retain students in school while discouraging child labor.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. International Labor Organization. Global estimates of child labor: Results and trends, 2012-2016. Geneva: ILO; 2017.
2. Srivastava K. Child labor issues and challenges. Industrial Psychiatry Journal. 2011;20(1):1–3.
3. Conagarajah S, Coulombe, H. Child labor and Schooling in Ghana. Policy Research

Working Paper. Washington, D.C. World Bank; 2006

4. International Labor Organization. World report on child labor economic vulnerability, social protection and the fight against child labor. Geneva: ILO; 2013.

5. Edmonds EV. Child Labor in South Asia. OECD Social, Employment and Migration Working Papers; 2003;5.

6. Teferi EF, Gurara TK. Child labor exploitation and children's participation in education: A study in selected primary schools at Debub Omo zone. International Journal of Novel Research in Education and Learning. 2014;1(1):34-42

7. Ministry of Education. Education Statistical Annual Abstract (2010/2011), Addis Ababa Ethiopia: MOE, EMIS; 2011.

8. Sorsa S, Abera A. A Study on Child Labor in Three Major Towns of Southern Ethiopia. Ethiopian Journal of Health Development. 2006;20(3):1-10.

9. Assefa A. Allocation of Children's Time Endowment between Schooling and Work in Rural Ethiopia. ZEF Discussion Papers on Development Policy, no.44, Bonn; 2002

10. Wolaita zone education department. Annual work report. WZED; 2015.

11. Basu K, Tzannatos Z. The Global Child Labor Problem: What do we know and What can we do? The World Bank Economic Review. 2003;17(2):147-173.

12. Cigno A, Rosati FC, Tzannatos Z. Social Protection Discussion Paper Series: Child Labor Handbook. Washington D.C.: The World Bank. 2001;0206.

13. Brown G. Child Labor and Educational Disadvantage: Breaking the Link, Building Opportunity. London: The Office of the UN Special Envoy for Global Education; 2012.

14. Kruger D, Soares RR, Berthelon M. Child Labor and Schooling: A Simple Model with Application to Brazil. IZA Discussion Paper. 2007;2776.

15. Nyamubi GJ. The Impact of Child Labor on Primary School Children's Access to and Participation in Basic Education in Tanzania. International Journal of

Learning, Teaching and Educational Research. 2015;13(2):26-36

16. Agbo MC. The Health and Educational Consequences of Child Labor in Nigeria. Health Sci J. 2017;11:1-9

17. Borko ZP. Child Labor and Associated Problems: The Case of Damot Gale District in Wolaita Zone, Ethiopia. International Journal of Economics & Management Sciences, 2017;6(5). DOI: 10.4172/2162-6359.1000450

18. Pankhurst A, Crivello G, Tiumelissan A. Work in children's lives in Ethiopia: examples from Young Lives communities. Children's Work and Labor in East Africa: Social Context and Implications for Policy; 2015. 15

19. Williams OA, Famuyiwa BS, Abdulkarim IF. Perception of Nigerian Cocoa Farmers on Child Labor: Implications for Hazardous Child Labor. Asian Journal of Agricultural Extension, Economics & Sociology.2016;10(3):1-11.

20. Creswell J. Research redesigns qualitative, quantitative and mixed methods approaches. 3rd ed. Los Angles: SAGE Publications, Inc.; 2009.

21. Tefera B, Ahemed A. Research methodology in Education: volume 1. Ethiopia, in Addis Abeba and Jijiga University; 2015.

22. Cohen L, Manion L, Morrison K. Research Methods in Education. 5th ed. New York: RoutledgeFalmer; 2000.

23. Tabachnick BG, Fidell LS. Using Multivariate Statistics. 6th ed. Boston: Pearson Education; 2013.

24. George F, Mallery M. Quantitative method for estimating the reliability of data. Western Machinegun University; 2003.

25. Greene WH. Econometric Analysis. 6th ed. New Jersey: Prentice Hall, Upper Saddle River; 2007.

26. Webbink E, Smits J, de Jong E. Household and context determinants of child labor in 221 districts of 18 developing countries. Soc Indic Res. 2013;110(2): 819–836.