ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCES
SCHOOL OF PUBLIC HEALTH

ASSESSEMENT OF THE DIFFERENCE OF SCHOOL FEEDING PROGRAMME ON SCHOOL PARTICIPATION AMONG PRIMARY SCHOOL CHILDREN IN BISHOFTU TOWN, EAST SHOA ZONE, OROMIA REGIONAL STATE

By

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A thesis submitted to School of Graduate Studies of Addis Ababa University in partial fulfillment of the requirements for degree of masters in General Public Health (MPH).

July, 2014

Addis Ababa

Assessment of the difference of school feeding programme on school participation among primary school children in Bishoftu Town, East Shoa Zone, Oromia Regional State

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Declaration

I, the undersigned, declared that this is my work and that all sources of materials used for this thesis have duly acknowledged

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Acknowledgements

I am strongly indebted to my research advisor Dr. Ababi Zergaw for his unreserved advice and meticulous comments I received throughout my thesis work. Without his advice the accomplishment of this thesis would have been impossible.

I am grateful to Addis Ababa University, for its financial support that enabled me to conduct my thesis research.

The School of Public Health College of Health Science, Addis Ababa University deserves special thanks for facilitating the accomplishment of this research project.

I am indebted to Ministry of Education for the logistic and material support during the thesis work without which the accomplishment of the thesis work would have been at best doubt.

My heartfelt thanks also goes to Bishoftu town Administration Education Office, each school principal for their unreserved support throughout my fieldwork. I am also indebted to the study participants.

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Acronyms

ABE	Alternative Basic Education
FFE	Food for Education
HER	Household Enrollment Ratio
HHs	Households
FMoE	Ministry of Education
SFP	School Feeding Programme
WFP	World Food Programme

Abstract

Introduction: Empirical studies reveal that school feeding programs have significant positive impact on school participation. Such studies suggest school feeding programs are effective in encouraging school enrollment, enhancing class attendances, and lowering student drop-outs. To the contrary, few other studies reveal that there are no observable impacts of school feeding program on school participation

Objective: Compare the difference in school participation; specifically on school enrollment, class attendance and drop-out of students of school feeding program beneficiary and non-beneficiary children of primary school, in Bishoftu *Town* of East Shoa Zone, Oromia Regional State, Ethiopia.

Methods: Community based comparative cross-sectional study was employed to compare the difference in school participation of 428 respondents from school feeding program and 428 respondents from non school feeding program schools. Simple random sampling technique was employed to identify the schools and study participants; household questionnaire, key informant interviews and school record review were used to collect data. Collected quantitative data were analyzed using mean, proportion, independent sample test and bivariate correlation techniques. The study was carried out after getting permission from research and ethics committee of School of Public Health, Addis Ababa University College of Health Science.

Results: Except enrollment (p=.001) the study found no significant positive effect of school feeding program on two of school participation indicators (attendance and drop-out), although it has some roles with regard to these objectives. The result also shows that the major factors affecting school enrollment are availability of school, school factor, distance to school, the availability of food incentives and safety concerns. Whereas, those affecting class attendance and student drop-out were illness, domestic work (29.3% for SFP and 21.41% for non SFP households), school hour hunger and distance to school. Besides, it has been determined that even among beneficiary (p=0.001) households, the older the household head is the higher likely that the children get enrolled. However, it is found that neither household head education nor household income have significant effect on student drop-out in beneficiary households.

Conclusion: The study recommends that both the nutritional and economic values of school feeding program should be improved in order to significantly enhance school participation.

1. Background

1.1. Introduction

In many poor households, hunger has been a barrier to school participation. A hunger-stricken child is not only unable to enroll in school at the right age but also cannot attend properly even if enrolled. Besides, such children are also likely to quit school because they have to deal with their immediate subsistence needs before they get ready for schooling. Thus, low school enrollment, low class attendance and high student drop-outs are recurring problems in child education among poor households especially in areas of high food insecurity. Due to these reasons the level of education attainment has also been low in many developing countries although both private and social returns to education are recognized to be high (1). However there is no doubt that other manifestation of poverty than hunger also affects school participation among poor households (2).

Ethiopia is one of the poor countries where hunger has been a major barrier to child education. The country has historically experienced severe famines, often in drought affected rural areas. Households in such areas usually find it difficult to feed the entire family since own production of food falls short of the demand in the household. Consequently, even children need to engage in some kind of activities to generate livelihood for their households. Thus, many primary school age children in food insecure areas remain out of school (2). In response to these challenges, various interventions have been undertaken. Prominent policies have been designed both at national and international levels to help households invest on their children education. School feeding program (SFP), also known as Food for Education program (FFE), is one such intervention that aims to address some of the nutrition and health problems of school-age children (2). School feeding programs are often integrated in to broad international and national education programs. For instance SFP is directly related to the first two Millennium Development Goals of halving hunger by 2015 (Goal 1) and of reducing gender gap in education by 2015 (Goal 2). Besides, SFP is also part of other international conventions like Education for All, among others (3).

The Federal Ministry of Education of Ethiopian (FMoE), in collaboration with the United Nations World Food Program (WFP), adopted School Feeding Program for the first time in 1994 with an initial pilot project covering 40 primary schools in selected zones of four different regions (4). As of 2012, the total beneficiaries reached 649,188 in food insecure areas of six regions with more than 1186 primary schools and alternative basic education centers (ABE) assisted (5). Accordingly SFPs are expected "to raise and maintain school enrollment with a particular focus on meeting the demand side of education of chronic food insecure and

vulnerable children‟ (6). In general, the expected outcome of SFP is to help households in poor rural areas invest on children education. It also aims at alleviating short-term hunger for children by feeding them in schools.

1.2. Statement of the Problem

School-age children in Ethiopia are affected by a wide range of health- and nutrition-related problems that constrain their ability to thrive and benefit from education. Some of the common health-related problems being parasitic infections, malaria, aneamia, trachoma, skin diseases, disabilities, injuries, sexual and reproductive ill-health, psychosocial and substance abuse. Some of the common nutrition-related problems being inadequate food consumption and associated levels of malnutrition as well as iodine and vitamin A deficiency, in most of the Ethiopian regions (2). Proponents of SFP claim that providing food in schools would apparently attract vulnerable children to school, improves their attendance and minimizes drop-outs. According to the United Nations World Food Program, School Feeding Program is an incentive for vulnerable families to invest in children education and encourages poor households to send children to school and helps to keep them there (3). Analysis of WFP survey data conducted in Northern rural India, school feeding-assisted schools attendance of girls are 15 % higher and 30 % higher chances that girls complete primary education. Similarly a survey data by WFP from 32 countries in sub-Saharan Africa that grouped 4,000 primary schools showed that girls' enrolments went up by 28 percent, twice the rate in schools not receiving assistance. In Bangladesh, in school feeding-assisted schools girls' drop out decreased from 14.7 % to 5.3 % and attendance increased from 71.3 % to 78.7 % (7).

Empirical studies also reveal that School Feeding Programs indeed have significant positive impact on school participation. Such studies suggest SFPs are effective in encouraging school enrollment, enhancing class attendances, and lowering student drop-outs (8, 9). A study done in southwest Ethiopia shows that food insecure adolescents and adolescents who were members of severely food insecure households were more likely to be absent from school and have a lower educational attainment in terms of the highest grade completed (10). To the contrary, study from Chile reveals that there is no observable impact of School Feeding Program on school participation (11). This study, therefore, takes account of these two contradicting arguments and evaluates the significance difference of a particular School Feeding Program in improving school participation among school feeding beneficiary and non beneficiary students of primary school children in Bishoftu Town.

2. Literature Review

2.1. The Theoretical Interactions of School Feeding Program and School Participation

This section will outline some of the theoretical links between school feeding program and school participation. However, it should be noted that SFPs also seek to address nutritional objectives. It must be understood that the interplay between SFP and school participation works in different ways. In this section, I will present two ways through which SFPs affect school participation: the economic and nutritional functions.

2.1.1. The Economic Function of School Feeding Program

Even though the economic motivations for investing in education and nutrition status of primary school-aged children are well established, many poor and credit constrained households usually invest less than what is privately or socially optimal. As a result, levels of education attainment remain extremely low in many developing countries (1). Primarily, extreme poverty restricts households from sending children to school due to the fact that their day to day survival, and not educational need, has to be their immediate priority. Consequently, such households cannot provide children the opportunity to go to school and learn. Thus, such households are unable to afford the cost of schooling and instead keep their children to work in money generating activities or make them care for younger siblings at home (1).

In response to such and other economic constraints for school participation, SFPs provide economic incentives for households to send their children to school. Adelman et al. show that the decision of households on whether to send children to school is determined by comparing the expected future benefits of this education to the current cost. The current value of these future benefits is a measure of household's discount rate i.e., how much household values the improvements in current well-being over future improvements in well-being. The costs of education, on the other hand, include such expenditures as school fees, supplies, books, uniforms, and travel cost to school (all known as direct costs) as well as the opportunity cost of child's time such as caring for other family members, working on a family farm or business, or working outside the household to provide additional income (all indirect costs). The idea is households will not send their children to school if the costs of schooling exceed the expected benefits and that households must have some kind of incentives to compensate for these costs in order to increase the net benefit of schooling. Hence, food-based incentives such as school meals and take-home rations will compensate for both direct and opportunity costs resulting from the loss of household labor due to school participation (1, 11, 12). However, not every School Feeding Program is expected to have the same effect since the size of the transfer relative to the cost also affects schooling decisions. In other words, it is important that the content and value of the school meals should be large enough to offset the current cost and also motivate the beneficiaries for positive action; i.e., to participate in schooling. For instance if the school meals are undervalued against the

opportunity costs of participating in school, then it is unlikely that households will be encouraged to send children to school.

2.1.2. The Nutritional Function of School Feeding Program

The interaction between nutrition and education can be generally understood in three ways (13). First, nutrition and health statuses influence the child's learning and his/her performance in school. That is poor nutrition among children affects their cognitive function and hence reduces their ability to participate in learning activities at school. Second, children who are malnourished or who are unhealthy are unable to attend school regularly and which in turn leads to poor academic performances. Third, hungry children encounter difficulties to concentrate and perform complex tasks than well nourished ones. Because poor children do not get the basic nutritional building blocks from birth, they will be unable to learn easily. Studies show that by the time these children grow to primary school age, most of the damages have occurred to them and in fact such damages are irreversible. Even if school meals are provided after this critical period, their learning capability is much less than what would have been if they were properly fed from infancy (14).

It has been argued that school meals increase school participation by improving child nutrition through two links. First, school meals improve nutrition by enabling children get more nutrients. Second, the improved nutrition leads to better educational achievements. The study also reveals that "since child nutrition, child health and schooling reflect household preferences in human capital investments in the child; they might be correlated without any direct causal relationship between them" (15). Another study also shows that school feeding programs can improve health by reducing morbidity and illness and hence attract children to school (10). However there are conflicting arguments as to whether households adjust the feeding practices of school children at home in response to SFPs. Ahmed (8) shows there is no reduction of food at home given to children who participate in SFPs in such a way that those children who benefit from SFP should get less at home. Instead, school meals are additional diets intended to what he or she can get from home. To the contrary, there are counter arguments to such claims. In response to the school meals, families may also adjust resource allocation among children within the household by taking away some resources from beneficiary children and redistributing them to other members of the household (13). As a result, those children from whom resources are taken away will be worse off if the food provided at school is not very useful compared to what they would have had at home.

2.2. School Feeding Program and School Participation

Having examined the conceptual relationships between school meals and school participation, this section discusses some of the relevant empirical studies. The majority of the literatures analyzed for this study reveal that SFP have indeed positive impact on school participation as measured by school enrollment, class attendance, and student drop-out status (8, 15,16). However, most of these findings are based on empirical data obtained from schools where the program was popular and has been relatively effectively implemented.

Vermeersch and Kremer (15) conducted a field-study in Western Kenyan preschools between 2000 and 2002 to evaluate the impacts of School Feeding Program on school participation and achievement. Preschoolers, in this context, are defined as children between ages of 4 and 6 who lived within walking distance of school. They found that children in the treatment group participated 35.9 percent of the time compared to 27.4 percent in the comparison (control) group and this difference was statistically significant. The program increased participation of both children who were previously enrolled (what they call intensive margin) and children who would have gone to school in absence of the program (extensive margin). But they emphasize that any increase in school participation in the absence of qualified teaching falls short of better educational achievement since there are strong complementarities between teacher characteristics and school meals. Nevertheless, their study was on preschools and hence this may not have much relevance for primary school children. Besides, preschoolers are early-age children and may not have family obligations like many primary school age children might have in poor areas. Thus preschoolers are relatively free of duties that could keep them away from school.

Another study conducted in Jimma shows that school meals indeed improve education of beneficiaries. They found that school performance indicators (enrollment, attendance, and drop-out rate, repetition of grades, school attainment levels, cognitive function, and class-room behavior) have all improved in response to school feeding. This is because the provision of school meals reduces the parents' cost of sending children to school thereby promoting early enrollment and improving attendance. The more time children spend on learning in response to school meals, the more they will learn and the less they repeat school or drop-out (10).

To the contrary, certain other studies are critical to school meals and they doubt if they have any positive impact on school participation whatsoever. Patrick J. Mc Ewan (11) for instance found that children that consume additional calories and nutrients in treated schools, it is still plausible that learning does not increase. In the following subsections, some of the literatures in relation to the three aspects of school participation (school enrollment, class attendance and student drop-out) will be discussed.

2.2.1. School Feeding Program and School Enrollment

As was discussed previously, the availability of subsidized in-school meals will increase school enrollment if the program changes the household's schooling decision for some children who would not have been enrolled in school otherwise. And for these households to enroll their children, they need to be convinced that the net benefits of participating in the program exceed the gap between direct and opportunity cost of schooling and the expected benefit of schooling (1). In other words, households usually compare the size of the transfer relative to the size of the cost-benefit gap and these comparisons ultimately determine the magnitude of the increase in enrollment rates.

Another important point is about the roles that school meals play in encouraging early enrollment. Even though in-school meals are believed to affect age at entry through an income effect, i.e., by increasing household income and raising the benefit of attending school, yet this income effect should be large enough to make households send their children to school (1). Adelman, Gilligan et al. (8) shows that school meals affect the age at entry in different ways. First, the provision of food offsets the cost of educating children by making available additional income for households, and consequently raising the benefits of attending school. This is called an income effect of school feeding. When this income effect is large, it can cause households to send their children to school at a relatively younger age thereby minimizing the possibility of late entry. Secondly, the neighborhood effect resulting from School Feeding Program may also influence the age at entry. That means the act of households to send their children to school earlier with the commencement of School Feeding Program would create a social pressure and prompt similar action on the part of those who haven't enrolled their children yet (1).

In this subsection, I will present some of the empirical studies in the area of School Feeding Program and the impacts on enrollment. Ahmed (8) conducted a study in food insecure areas of Bangladesh to see the impact of School Feeding Program on school participation. The data collection took place in 2003 after children in the treatment schools received a mid-morning snack of fortified wheat biscuits every school day for one year. To determine whether the increases in enrollment (and attendance – as well shall see in the next section) were indeed due to the program, he carried out econometric analysis to isolate other potential explanatory factors. Thus Ahmed's study found that School Feeding Program have statistically significant positive impacts on both gross and net enrollment rates with 14.2% and 9.6% increases respectively (1). However, this finding does not take account of other unobservable characteristics of households in the treatment area that could affect household's decision to enroll children. Therefore, it appears inconclusive to claim that the difference in enrollment between treatment and control groups was the result of the program without considering unobserved factors.

Another study on 32 Sub-Sahara African countries shows that providing food in school under the Food for Education (FFE) scheme contributed to increasing absolute enrollment in WFP assisted schools by 28% for girls and 22% for boys in just one year (17). After the first year, however, enrollment pattern showed variation depending on the type of FFE program; i.e. whether the provision of food in school was combined with take home rations or was served alone. In those places where on-site feeding and take home rations were offered together, girls' absolute enrollment kept on increasing by 30% subsequent to the first year. Meanwhile, schools that provided only on-site feeding have just recorded increase in an absolute enrollment that was same as before the feeding program was implemented.

Along with enhancing enrollment, School Feeding Programs also help to adjust the age at entry by attracting children during their right age. In poor countries like Ethiopia, children may begin primary education much later than the recommended age for various reasons. For instance factors such as lack of funds, lack of childcare and little awareness about the benefit of enrolling children during the recommended age are some of the causes for late entry (1).

School meal program in Ethiopia aims to improve access to education by reducing short term hunger and enables children to concentrate in their study. In 2012, the program reached 649,188 children with annual growth rate of 6.2% while the national annual growth rate shows 4.5%. Comparing with non-program schools whereby the enrolment growth rate showing 1.5%, there a significant difference as compared to intervention schools (5).

2.2.2. School Feeding Program and Class Attendance

The second indicator of school participation analyzed in this study is class attendance. It is believed that school meals can be effective at increasing class attendance because children receive the meal only when they attend school. As discussed earlier the opportunity cost of allowing a child to attend school varies across school days and seasons and this cost could even be higher than the expected benefit. For instance in places where child labor forms the integral part of agricultural work during a particular day/season of a year, class attendance could be low. In such cases, school meals may or may not encourage attendance depending on how the beneficiaries value them. Thus, the value of the meal relative to the difference between the cost and expected benefit of schooling also determines attendance (1).

Adelman, Gilligan et al. (1) show three aspects of nutrition can influence class attendance. First school meals alleviate short term hunger of school children during the school day by providing more nutrients to the child, providing the child with a meal when he or she would have not otherwise have

had one, or replacing a meal that would have been received after school with one during school hours(1). Thus this aspect of nutrition targets for short term impact and enables a child concentrate and learn more. A review of different researches from published studies on the association between nutrition among school aged children and their performance in school shows that overcoming school hours hunger leads to better concentration and learning (18). Second, school meals may also generate nutritional improvements for a child over long run. The improved nutritional status as a result of school meals will in turn enhance a child's physiological capacity for learning thereby increasing the benefits of schooling and the child's desire to attend school. Third, school meals can also reduce morbidity through improved nutrition and consequently enhance attendance. Morbidity is a cause of absence in many developing countries and school meals help children overcome this problem and learn longer. In this regard school feeding increases micronutrients intake and hence will strengthen children's immunity and avoid infectious diseases among children (1).

Ahmed (8) evaluated the impact of school feeding on attendance in Bangladesh and found that the SFP has a statistically significant positive impact. The program increased class attendance of participating students by 1.34 days per month. However, class attendance from school registers showed attendance increased in both program and control schools during this period, and that the increase was 1.1 percentage points higher in program schools.

School meal program in Ethiopia is believed to improve attendance and lower absenteeism of children through provision of hot meal and take home rations. In 2012, the program result showed 99% of attendance rate as set on the target. Compared to 2011 where the attendance rate was 95%; the result was found positive. Analysis of sampled schools showed high absenteeism was observed in February, April and May (5).

2.2.3. School Feeding Program and Student Drop-out

Adelman, Gilligan et al. (1) present the interplay between school meals on one hand and grade repetition, learning achievement, and school performance on the other. They show that this effect works in two mechanisms. First, because school meals improve class attendance, children will spend more time learning in school. So the more time children spend in school, the better they learn and these interplays ultimately result in improved school performance, which thus minimizes the probabilities of drop-out. This is however dependent on other factors such as school quality, availability of learning materials and teacher quality. Thus, unless properly implemented, school feeding has rather the potential to worsen drop-outs. Second, improved nutrition may also enhance school retention and performance in the short and over long run. In the short run, school meals could alleviate hunger and make children concentrate and learn better so that school performance will be improved and hence drop-out is minimized. In the long run, school meals could enhance learning

provided that school meals improve the nutritional status of children and if nutritional status also affects learning (1).

Ahmed's (8) study in Bangladesh; School Feeding Program has a statistically significant negative impact on student drop-out. This study reveals that the primary school drop-out rate in the program rural area was 29 percent and that the overall completion rate in this area is 6 percentage points higher than control rural areas. Controlling for child and household characteristics, he found that school meals reduce the probability of dropping out of school by 7.5 percent.

Empirical studies also reveal that School Feeding Programs indeed have significant positive impact on school participation. Such studies suggest SFPs are effective in encouraging school enrollment, enhancing class attendances, and lowering student drop-outs (8, 9). A study done in southwest Ethiopia shows that food insecure adolescents and adolescents who were members of severely food insecure households were more likely to be absent from school and have a lower educational attainment in terms of the highest grade completed (10). WFP 2012 food for education performance report also indicates that there is a significant increase in attendance and enrollment among intervention school than others (5). To the contrary, study from Chile reveals that there is no observable impact of School Feeding Program on school participation (11).

Assessing the difference of school feeding program on school participation among beneficiary and non-beneficiary children is very crucial. This study, therefore, takes account of these two contradicting arguments and assesses the significance of a particular School Feeding Program in improving school participation among beneficiary and non beneficiary primary school children.

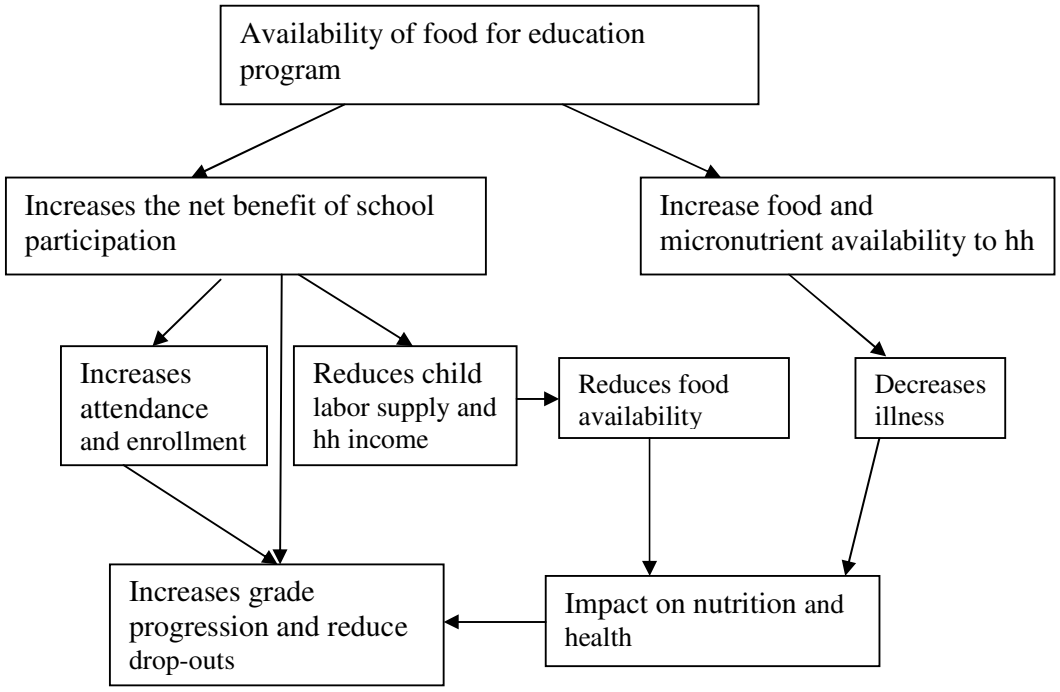

Figure 1 Conceptual frame work for assessment of the difference of school feeding program on school participation developed from literature.

The frame work shows that SFPs will increase the benefits of school participation and gives more incentives for households to invest on child education. As a result, enrollment and attendance will increase which in turn improves learning, grade progression and reduces drop-outs.

3. Objectives

3.1. General Objective

The general objective of this study was to compare the difference in school participation; specifically on school enrollment, class attendance and drop-out of students of school feeding program beneficiary and non-beneficiary among primary school children, in Bishoftu *Town* of East Shoa Zone, Oromia Regional State, Ethiopia.

3.2. Specific Objectives

3.2.1. To assess significant positive difference of school feeding program on school enrollment.

3.2.2. To assess significant positive difference of school feeding program school absenteeism rate.

3.2.3. To assess significant positive difference of school feeding program on drop-out.

3.2.4. To identify other factors that affect school participation in the study area.

4. Methods

4.1. Study area

This study was conducted in Bishoftu Towen, one of the 25 towns of East Shoa Zone in Oromia Regional Sate of Ethiopia. Bishoftu is located at 8^0 45 0" N, $38^0$59'24"E. The total population is estimated to be 118,260 with 56,640 male and 61,620 are females.

As of 2013/14, Bishoftu town has 22 primaries, 2 first cycle secondary and 1 preparatory schools which are owned by government.

Regarding the malnutrition status of the town there is no as such an organized data but Blessing the Children currently has a child sponsorship program supporting 154 children but there are so many more children in Bishoftu and the surrounding villages that are not receiving support (19).

In Bishoftu Town there are a total of 10 primary schools where school meals are served for 2264 children. The intervention has increased enrollment in the study area but due to uniformity of meals served throughout the year there were no significant difference in terms attendance between the intervention and non intervention schools.

4.2. Study Design

Community based comparative cross-sectional study was conducted to compare the difference in school participation of school feeding program and non school feeding program households in Bishoftu Town.

4.3. Source Population

All households who have primary school students enrolled in the selected four schools.

4.4. Study Population

All households who are randomly selected from both programme and non programme schools.

4.5. Sample Size

The sample size was calculated using sample size determination formula for two population proportions with the following assumptions.

n,(for each group)= $[z_{\alpha/2}\sqrt{\left(1+\frac{1}{r}\right)*p(1-p)}+z_{\beta}\sqrt{p_1(1-p_1)+p_2(1-p_2)/r}\ ]]^2/(p_1-p_2)^2$

Assumptions:

- No national or local data on the evaluation effect of school feeding programme on educational participation among beneficiaries and non beneficiary students. Hence, prevalence of 50 % was used in order to maximize the sample size
- P_1 (50 %): assumed prevalence of beneficiaries since there was no previous study.

- P_2(40%): assumed prevalence of non beneficiaries to detect 10 % difference between the two study groups(n_1 and n_2)
- n_1: study population of beneficiaries
- n_2: study population of non beneficiaries
- r: the population allocation ratio between n_1 and n_2:1:1
- $Z_{1-\alpha/2}$: a standard Z score which is 1.96, corresponding to a 95% confidence level for rejecting a true null hypothesis; H_o: $p_1=p_2$,
- $Z_{1-\beta}$: the Power of study to detect 10% difference between the two study units, 80%

P= (pooled population proportion); $(p_1n_1+ p_2n_2) / n_1 + n_2$

- None response rate of 5 %.

Based on these assumptions, the total calculated sample size is 856. Of these 428 participants for beneficiary schools and 428 participants for a non beneficiary school is allocated. For the qualitative data with purposive sampling we have selected school principals and also 30 students with simple random sampling.

4.6. Sampling Procedures

There are ten schools in Bishoftu town which was supported with the contemporary WFP School Feeding Program during the 2012/2013 academic year. This study however conducted on two of them; which were selected with simple random sampling method along with two other non supported schools. The household sample consist of households located within 5 kilometers of distance from the schools and at the same time those who have got at least one child in any of the four primary schools. These households were stratified based on whether they have children in program or non program schools. A list of all such households was obtained from schools and *Kebelle* Offices (small administrative units) and with the help of local field assistants.

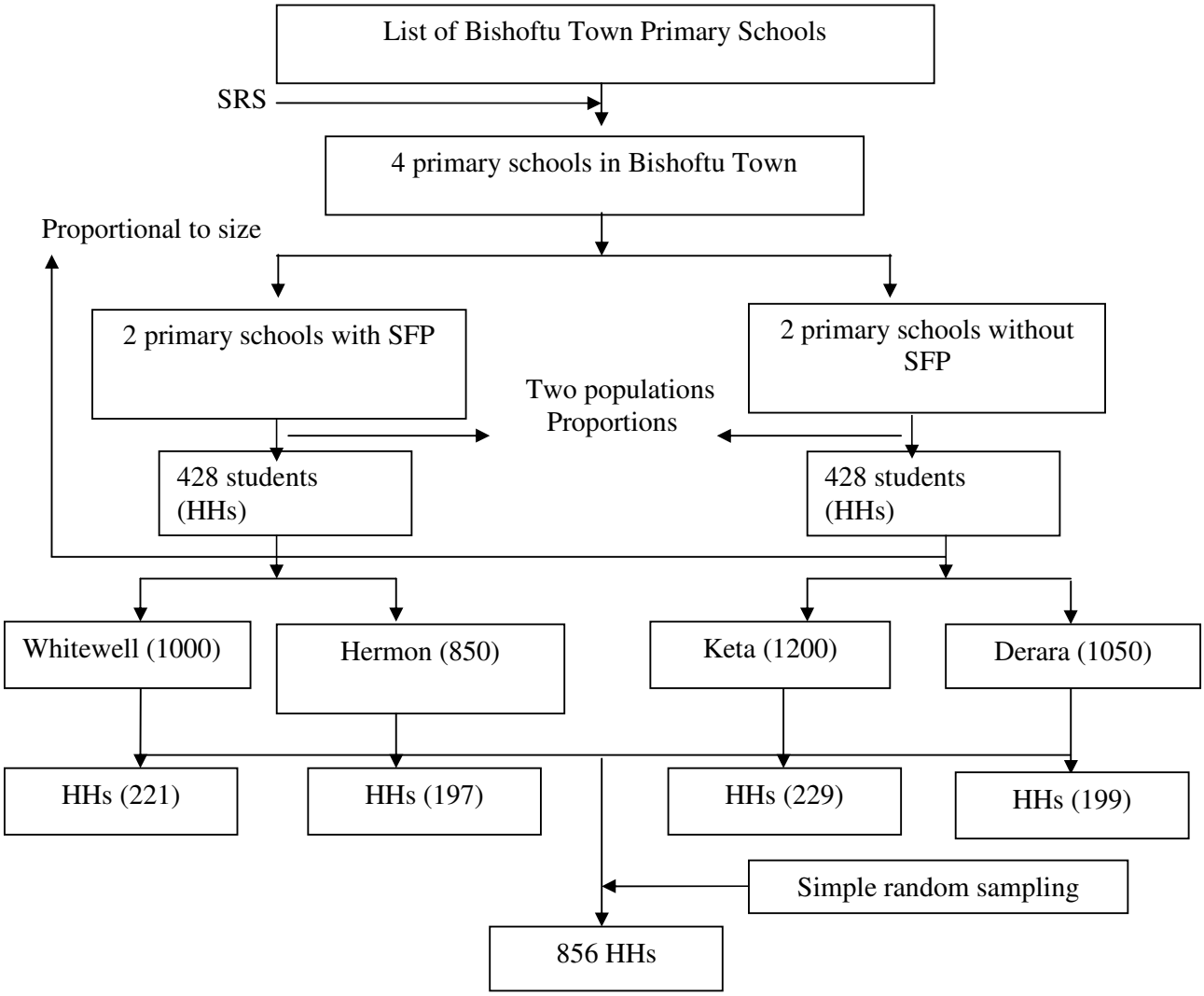

Figure 2. Schematic presentation of sampling procedure

4.7. Data Collection Instrument and Procedures

The quantitative data were collected using pretested and structured Amharic version questionnaire via face to face interview of the study participants and also the qualitative data were collected using key informant interview after getting ethical clearance from responsible bodies and informed verbal consent from study participants. Before the actual data collection the questionnaire was pretested in 5% (44 HHs) other than the study schools for its understandability and metric characteristics. Based on the pretest results, necessary modification was made on the questionnaire and participants who were involved in the pretest were excluded in the actual data analysis. The questionnaire was prepared in English and translated to Amharic and later translated back to English. The questionnaire was adopted from previous researches. The questionnaire focused on household demographic and state of school participation such as class attendance and drop-out rates.

Data collection was done by four urban health extension workers and one assistant supervisor after two-days training. When the selected respondents were absent, the data collectors tried to visit three times otherwise they were considered as non respondents. The data was collected from March to April 2014.

4.8. Data Management

After the data were collected, the quantitative data were coded, edited and entered into a computer using Epi Info version 3.5.4 then exported to SPSS version 21. Data was cleaned in SPSS by running frequencies and cross tabulations. Preliminary frequencies were run to identify missing variables. Data was backed up by saving it in different folders in the computer, removable flash disk and email

4.9. Data Analysis Procedure

After the data were collected, the quantitative data were coded, entered into Epi Info version 3.5.4 and exported to SPSS version 21, and cleaned and verified. Following this the data were analyzed using three techniques. First, the three school participation indicators were compared and contrasted for both groups of households using an Independent Samples T Test. The main reason for using this technique was because both the data type and study design fit in to the assumptions of the model. Second, descriptive statistics such as weighted averages, totals and proportions were employed to determine some household characteristics. Third, two-variable correlations were established to test the relationships between selected household characteristics and school participation indicators and to determine if these correlations are significant. On the other hand, the qualitative data were integrated into the findings of the quantitative data to strengthen the discussion.

4.10. Ethical Considerations

The study was carried out after getting permission from the Research and Ethics Committee of Addis Ababa University College of Health Science through School of Public Health. Then, data was collected after getting written consent from Ministry of Education and Bishoftu Town Education office. Even though this research has not harm on the study participants; informed verbal consent were asked from each school principals and study participant. Confidentiality was granted for information collected from each school and study participant. Each respondent was informed about the objective of the study and privacy during interview was insured.

4.11. Communication of Results

Findings of the study will be submitted to School of Public Health College of Health Science of Addis Ababa University. It will also be communicated to Ministry of Education, Oromia Education Bureau, Bishoftu Town Administration Education Office and to each studied Schools. Peer reviewed publication will also be considered

5. Results

A total of 428 household heads from non school feeding program and 428 household heads from school feeding programme schools were visited in 4 "kebeles" found in Bishoftu Town. We interviewed 839 household heads. Out of 839 study subjects who responded to the interviews, 422(49.3%) were from households having children in non school feeding programme schools and 417(48.7%) were from households having children in school feeding programme schools. There were 2% non-responses found during the data collection.

5.1 Household Demographics

As presented in Table 1, the household head gender composition is almost equal between the two groups in that both are dominated by male headed households with nearly comparable proportions [279(66.9%) in SFP households and 286(67.8%) in non SFP households]. The mean sample household head age was 44.38 and 44.25 years in both SFP and non SFP categories of households respectively (see Table 1). The mean grade attained in both groups, as shown in Table 1, is grade 3.34 and 3.66 respectively. The mean annual household income was also found to be almost the same for both groups; 17,005.74 birr for SFP households and 17,030.74 birr for non SFP ones (see Table 1). Due to resource constraint, information was not collected on the other determinants of wealth and hence income remains to be the only measure of household wealth. The average number of children in each household (SFP and non SFP) is 3.01 and 3.98 respectively, excluding the household head and his/her spouse. As shown in Table 1, the average number of primary school age children (7-14 years of age) was also almost the same for both groups of households (about 1.68 and 2.12 children). Finally, the survey reveals that 96(23.0%) of the households from school feeding group and 126(29.9%) in non school feeding group either benefited from relief programs or participated in Food Productive Safety Net Program (see Table 1).

Table 1. Socieodemographic Characteristics of Households in Bishoftu Town in selected primary schools, April 2014

Variables	Household Group			
	School Feeding Programme		Non School Feeding Programme	
	Count	Percentage	Count	Percentage
Household head gender				
Male	279	66.9	286	67.8
Female	138	33.1	136	32.2
Total	417	100	422	100
HH participated in relief food aid programme				
Yes	96	23.0	126	29.9
No	321	77.0	296	70.1
Sub total	417	100	422	100

5.2 School Feeding Program and School Participation

Here the data on school participation was analyzed and compared for school feeding programme and non school feeding programme households. Household Enrollment Ratio, Absence Rate and Drop-out Ratio have been calculated for both groups of households and analyzed using the independent sample t-test technique. Further, the qualitative data have also been put together for further understanding.

5.2.1 School Feeding Program and Enrollment

It was observed that children in Bishoftu town of the East Shoa Zone have greater roles in household domestic work activity.

The result of this study shows school feeding program has less role in affecting household's decision to enroll children to school(14.05%), compared to abundance and qualification of teachers(17.48%) and also safety concerns to children(16.27%) but it has greater effect compared to other seven identified factors (see fig.3).

After analyzing the data from the household questionnaires, it was found that the household enrollment ratios (HERs) for school feeding and non school feeding households were 100.14 and 100 percent respectively indicating high level of enrollment in both groups.

Table 2. Mean Household Enrollment Ratio, Absence rate and Drop-out Ratio between household groups at Bishoftu Town in selected primary schools, April 2014

Variables (Indicators)	HH Group	
	SFP	Non SFP
Household Enrollment	100.14	100
School Absence Rate	3.96	4.23
Drop-Out Ratio	0.002	0.009

From Table 2, it can be observed that the mean HER in SFP households is 100.14% and in non SFP households it is 100%, on the other hand, the independent samples t test shows that the difference in terms of Household Enrollment Ratio between SFP and non SFP households was statistically significant (see Table 3). In other words, the mean Household Enrollment Ratio of SFP and non SFP households are statistically different from zero at the 5% level of significance. In addition there is an estimated sample mean difference of -0.437, there is sufficient evidence (p=.001) to suggest the difference is statistically significant. The t test statistic is -5.892 and the 95% confidence interval of the difference is between -0.583 and -0.292. This interval does not include 0 and hence it implies significant difference between SFP and non SFP households in terms of HER. For instance, Whitewell school principal said the following during our interview:

> *Since the SFP was launched in 1999, we observe an increase in the number of children enrolled in our school. I think SFP is an important factor and should be further strengthened. In fact, it does not mean that there are no weaknesses with the existing programme. But I do believe that further improvements in the program's implementation can enhance enrollment rates even beyond the current level…*

Table 3. Independent Samples T-test of Household School Participation in Relation to School Feeding Programme at Bishoftu Town in selected primary schools, April 2014.

Variables (Indicators)	T-test for equality of means			
	t	Sig. (2-tailed)	Mean Difference	95% CI
HH Enrollment	-5.892	.000	-.437	-.583--.292
School Absence Rate	-1.274	.203	-.538	-1.367-.292
Drop-Out Ratio	1.332	.183	.007	-.003-.018

5.2.2 School Feeding Program and Class Attendance

Class attendance, measured by Absence Rate, is also analyzed to determine if the school feeding program has significant positive effect on school participation. However, the study found no evidence of significant effect of school feeding program on class attendance (p=.203).

Referring to the results of the study the mean Absence Rates in SFP and non SFP households were 3.96 and 4.23 days respectively. Although the Absence Rate is lower in SFP than non SFP, the difference is, however, not statistically significant at 5% (see Table 3). Thus, based on p=0.203 it can be concluded that Absence Rate in SFP households is not statistically different from that of non SFP households. Besides, the 95% confidence interval of the difference is between -1.367 and .292, implying the mean differences could even be 0. This concern is also shared by the SFP principal (Whitewell School) who argues:

> *….each student receives bread of just 150 grams, one dish soup and macaroni a day in a single meal but this is monotonous to concentrate in school. There are children who come from distant areas walking 30-40 minutes each day. By the time they arrive in school they get hungry but will not eventually get food. Since the donor instructs us to provide food during the launch hours, these hungry children will have to wait for 4 more hours to get a meal. Besides, the current dishes served are the same through the last six academic semesters that they are not interested to have it. For these reasons, children are unable to stay longer in school and miss school for extended time.*

One beneficiary student also said the following during a Key Informant Interview:

> *What we usually get is bread, soup and macaroni during lunch hours and we find it boring to eat the same food every day. In some situation children (including me) even do not want to eat school meals because we are fed up of having similar dishes routinely…..*

5.2.3 School Feeding Program and Student Drop-out

The result of the study shows that illness 1(100%) is the main reason for student drop-out for SFP group; whereas illness 2(50%) and other factors like family transfer and divorce 2(50%) were main reasons of drop-out for non SFP group households (see Table 4).

The quantitative data shows that a total of 1 child from SFP and 4 from non SFP households dropped out of school during the study period. The mean drop-out ratios (number of drop-outs in each household during the year as a percentage of number of children who were enrolled to school during the same year) are 0.002 and 0.009 respectively (see Table 2). This means 0.2% of children from school feeding programme schools and 0.9% from non school feeding programme schools enrolled in primary school during the study period dropped out of school the same year.

The statistical differences of these drop-out ratios are again tested using the Independent samples t-test and it was found that the drop-out ratio in SFP households were not statistically different from that in non SFP households at 5% level of significance. The sample mean difference is .007 and the 95% confidence interval of the difference is between -0.003 and 0.017 in which 0.007 could be the real difference.

5.3 Factors Affecting School Participation

In this section, an attempt was made to identify some of the factors that affect school enrollment, class attendance and student drop-out in the study area.

5.3.1 Factors Affecting Enrollment

There were various factors that affect households' enrollment decisions. Figure 2 shows some of these determinants of enrollment in the study area. The result shows that factors such as availability of school, abundance and qualification of teachers, safety concerns, school factors (teaching quality and school infrastructure), and distance to school and availability of food incentives were some of the most important determinants of enrollment in the study area. Details of each factor are presented in the following sections.

5.3.1.1 School Availability

This factor is closely related to abundance of schools in the study area. Referring to Figure 3 again, the availability of school was another factor affecting school enrollment with 182(10.62%) of the responses in SFP households and 130(24.06%) in Non SFP households.

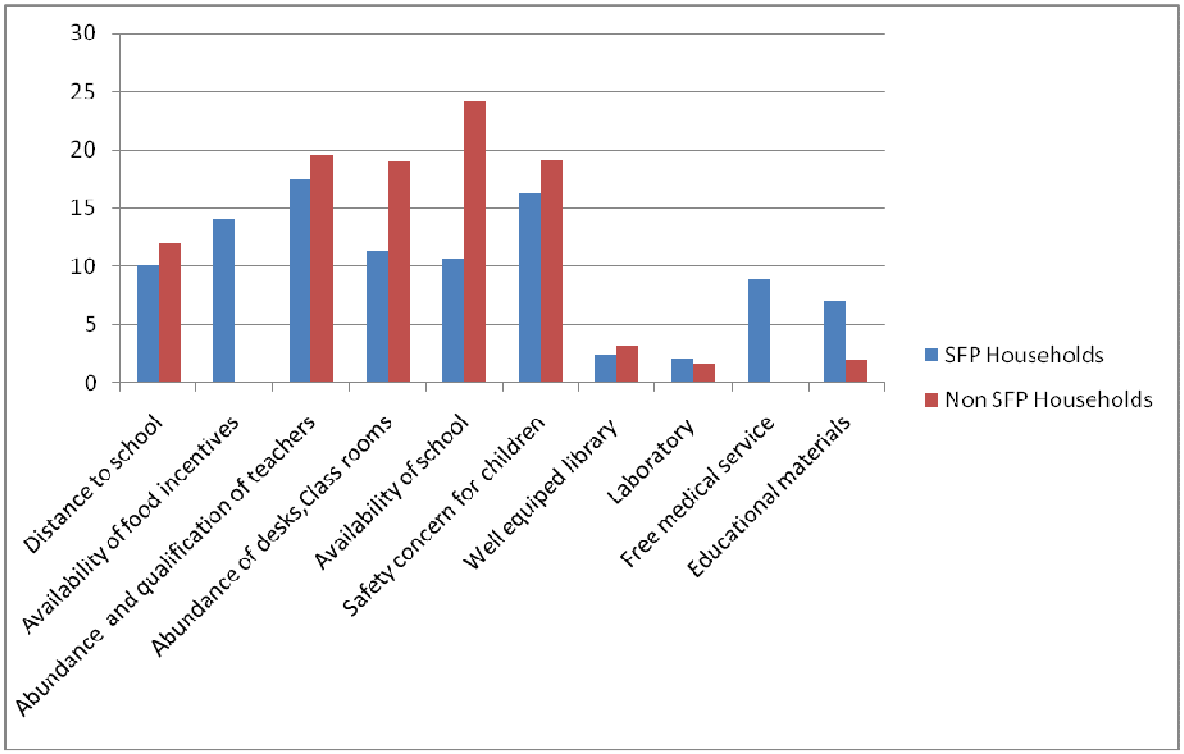

Figure 3: Factors affecting household school enrollment at Bishoftu Town in selected primary schools, April 2014.

5.3.1.2 School Factors

School factors are factors peculiar to the school compound. These include teaching quality and school infrastructure. Teaching quality refers to abundance of teachers (teacher-student ratio), qualification of the teachers and standard of the teaching-learning process.

In this study about 726(40.17%) of the responses in SFP households and 494(45.03%) in non SFP households show that school factors were issues that affected households' enrollment decisions (see Figure 2). During Key Informant Interview, the SFP principal (Hermon school) said:

> *….before few years, the school accepted more students than its capacity leading to congestion of class rooms and overburdening the teachers. To overcome this, we admit students using lottery method from those who bring support letter from kebele…*

5.3.1.3 Distance to School

Distance to school was also one of the factors affecting school enrollment. In some cases, it takes children 30 to 40 minutes to reach their schools and thus without doubt distance to school was a major factor in enrollment decision in this area.

The result of the study shows that 182(10.07%) of the responses in SFP households and 130(11.85%) in Non SFP ones identify distance to school as a factor affecting their children enrollment decision (see Figure 3).

5.3.1.4 Availability of Food Incentive

For households who have children in program schools, the provision of food in school has also influenced the enrollment decision. This study reveals that 254(14.05%) of the responses in SFP households mention school feeding as a determinant of enrollment (see Figure 2).

5.3.1.5 Safety Concerns

Safety concerns are factors such as fear of accident concerns while children are go to school, concern for harassment incidents and so on. As shown in Figure 2, safety concerns also affect enrollment, with 294(16.27%) of the responses in SFP households and 209(19.05%) of those in Non SFP households being in favor of this factor.

5.3.1.6 Other Determinants of Enrollment

For households who have children in program schools, the provision of free medical service 159(8.79%), school uniform and exercise books have also influenced the enrollment decision. For instance, Whitewell school principal said the following during our interview:

> *In addition to the food incentive we provide, we also give free medical service to students and their parents, school uniforms, exercise books and pens, we observe an increase in the number of children enrolled in our school. I think these factors are an important factor and should be further strengthened…'*

5.3.2 Factors Affecting Class Attendance and Student Drop-out

This section highlights some of the determinants of attendance and drop-out. The result of this study reveals that the major factors affecting class attendance and student drop-outs in the study area were illness, domestic work and some other factors (see Table 4). In fact, the major causes of absence and drop-outs in Bishoftu town in general were illness, domestic work and child refusal to go to school.

Table 4: Causes of School Absenteeism and Drop-out at Bishoftu Town in selected primary schools, April 2014.

Causes	Household Type			
	SFP		Non SFP	
	Absence	Drop-Out	Absence	Drop-Out
Illness	48.57%	100%	55.16%	50%
Work for Money/food	5.71%	0%	11.84%	0%
Domestic work	29.3%	0%	21.41%	0%
Child refused to go to school	13.21%	0%	5.8%	0%
Hunger	2.5%	0%	2.77%	0%
Other	0.71%	0%	3.02%	50%
Sub Total	100%	100%	100%	100%

5.3.2.1 Illness

Illness is the major problem that hinders attendance and it was also a cause of drop-outs. It ranges from mild to severe sicknesses that often relates to poverty and inadequate nutrition of children. Table 4 shows that about 48.57% of the causes of class absences in SFP households and 55.16 percent of those in non SFP households are due to illnesses. On the other hand, illness constitutes for 100% of the causes of drop-outs in SFP households and 50% in Non SFP ones.

5.3.2.2 Work for money/food

The result of this study shows that of all causes of absences reported, 5% in SFP and 11.84% in non SFP households are due to children's participation in works for money/food (see Table 4).

5.3.2.3 Domestic work

Looking again at Table 4, domestic work constitutes 29.3% of the reasons for school absence in SFP households and 21.41% in Non SFP households.

5.3.2.4 Child refusal to go to school

This is another cause of absence mentioned by SFP and Non SFP households due to lack of motivation, dissatisfaction with school environment and so on. Such factors account for 13.21% of the causes of absences in SFP households and 5.8% in Non SFP households (see Table 4).

5.3.2.5 Other Factors Affecting Class Attendance and Student Drop-out

Other causes of absence and drop-out mentioned by SFP and non SFP households mainly include hunger during school hours, long distance to school, birth delivery and death of the family member, divorce and so on. Such factors account for 3.21% of the causes of absences in SFP

households and 5.79% in non SFP households. On the other hand, they account for 50 % of the reasons for drop-outs in non SFP (see Table 4).

5.4 Relationship between School Participation and Household Factors

In this section, an attempt is made to see the correlation of Household Enrollment Ratio, Absence Rates and Drop-out Ratios with some of the household factors. Information about household head age, education level and household income are collected to test their relationships with school participation indicators. Then bivariate (two-variable) correlations are established using SPSS. In the following three sub-sections, such tests are shown for the three school participation indicators used in this study.

5.4.1 Household Enrollment Ratio Vs Household Head Age, Education level and Household Income

This study reveals that the correlation between Household Enrollment Ratio and household age in SFP households is 0.165 where this is significant at 5% (sig. 0.001). For non SFP households the correlation is, however, a weak positive 0.050 and this relationship is not significant at 5% (sig. 0.306). This shows although the average household age in both groups of households is same, the age effect on Household Enrollment Ratio is however not significant for non SFP households (see Table 5).

Household Enrollment Ratio and household head education level have weak negative relationship in SFP households as well as in non SFP households. This is given by -0.153 (sig. 0.002) for SFP households and -0.099 (sig. 0.042) for Non SFP households at 5% showing significant correlations in both cases (see Table 5).

Finally, the correlation between Household Enrollment Ratio and household income is also a weak negative relationship for SFP households and a weak negative relationship for non SFP households. The correlation is -0.08 (sig. 0.110) for SFP households and -0.009 (sig. 0.853) for non SFP ones at 5% level of significance which also indicate no significant relationships in both groups of households (see Table 5).

5.4.2 School Absenteeism Rate Vs Household Head Age, Household Head Education level and Household Income

Similarly correlations are also tested for Absence Rates and the three factors for both groups of households. The correlation between average number of days children are absent from class and household head age was 0.021 (sig. 0.668) for SFP households and 0.051 (sig 0.300) for non SFP ones at 5% level of significance which indicates no significant relationships in both groups of households (see Table 5).

Likewise correlation between the absence rate and household head education level for SFP and non SFP households was 0.082 (sig. 0.093) for SFP households and -0.067 (sig 0.171) for non SFP ones at 5% level of significance which indicates no significant relationships in both groups of households (see Table 5).

Similarly the correlations between Absence Rate and household income in SFP household was 0.099 (sig. 0.047) and for non SFP households it was 0.007 (sig. 0.890) at 5% which indicates no significant relationship (see Table 5).

5.4.3 Drop-out Ratio Vs Household Head Age, Household Head Education level and Household Income

The third levels of correlations were those between drop-out Ratios and the respective three independent variables (household head age, household head education level and household income). The correlations between drop-out ratios and household head age are found to be not statistically significant for both groups of households. There is a weak negative correlation in SFP households represented by -0.004 (sig. 0.936) while there is a weak positive correlation in non SFP households as given by 0.060 (sig. 0.217) (see Table 5).

Drop-out ratios in both SFP and Non SFP households were correlated to household head education level (0.010 and 0.026 respectively).

Finally, there were correlation between drop-out ratio and household income in both groups of households with a correlation coefficient of 0.063 (sig. 0.206) and 0.046 (sig. 0.363) respectively (see Table 5).

Table 5: Correlations (Pearson's r) of HH Demographic Characteristics and School Participation at Bishoftu Town in selected primary schools, April 2014.

		HH Head Age	HH Head Educational level	Annual HH Income in (ETB)
HH Enrollment Ratio in SFP HHs during the last six months	Pearson Correlation	**.165****	**-.153****	-.080
	Sig. (2-tailed)	.001	.002	.110
	N	417	417	403
HH Enrollment Ratio in Non SFP HHs during the last six months	Pearson Correlation	.050	**-.099***	-009
	Sig. (2-tailed)	.306	.042	.853
	N	422	422	393
Absence Rates in SFP HHs during the last six months	Pearson Correlation	.021	.082	**.099***
	Sig. (2-tailed)	.668	.093	.047
	N	417	417	403
Absence Rates in Non SFP HHs during the last six months	Pearson Correlation	.051	-.067	.007
	Sig. (2-tailed)	.300	.171	.890
	N	422	422	393
Drop-out Ratio in SFP HHs during the last six months	Pearson Correlation	-.004	.010	.063
	Sig. (2-tailed)	.936	.838	.206
	N	417	417	403
Drop-out Ratio in Non SFP households during the last six months	Pearson Correlation	.060	.026	.046
	Sig. (2-tailed)	.217	.598	.363
	N	422	422	393

*correlation is significant at the 0.05 level (2-tailed)

**correlation is significant at the 0.01 level (2-tailed)

6. Discussion

This community based study attempted to assess if School Feeding Program had positive effect on school participation; specifically on school enrollment, class attendance and drop-out in the last 6 months among SFP beneficiary and non beneficiary households in Bishoftu Town. Inaddition, the study tried to investigate other factors which affect school enrollment in the study area.

We have seen in the literature that one of the primary objectives of providing school meals is to increase school enrollment. It was observed that children in Bishoftu town of the East Shoa Zone have greater roles in household domestic work activity. Since this region is an industrial and agricultural area specially where metals, plastic bags, detergents are manufactured and flowers are cultivated most of households are engaged in these economic activity to generate income, due to this reason for domestic work households almost exclusively depend on their children labor especially during work hours. Consequently, households tend to keep children on household duties than encouraging their schooling since the opportunity cost of schooling exceeds the expected benefits. It is claimed that households will not enroll their children to school if the costs of schooling exceed the expected benefits and that households must have some kind of incentives to compensate the current costs to keep the benefit of schooling high (1). However, the value of such compensation should be high enough for the beneficiaries to enroll their children to school, which is not the case in the study area.

The result of this study shows school feeding program has less role in affecting households decision to enroll children to school(14.05%), compared to number and qualification of teachers(17.48%) and also safety concerns to children(16.27%) but it has greater effect compared to other seven identified factors (see fig.2). Thus, school meals do have influence in parent's enrollment decisions for such households. On the other hand, the opportunity cost of sending children to school, which is the child labor for domestic work that households would have lost if they had enrolled their children to school, is considered very high given the important roles of children in the household duties. Consequently, for such households the expected benefit of enrolling children in the program school is lower than the opportunity cost of doing so.

After analyzing the data from the household questionnaires, it was found that the household enrollment ratios (HERs) for school feeding and non school feeding households were 100.14 and 100 percent respectively indicating high level of enrollment in both groups (see Table 2). The fact that the HERs calculated for both groups could be seen as significant achievement in enrollment. Studies show that because of late entry and grade repetition, many children in developing countries have already reached adolescence by the time they join primary schools (1).

From Table 2, it can be observed that the mean HER in SFP households is 100.14% and in non SFP households it is 100%, suggesting relatively lower over-age, under-age or repeated children exist in SFP schools than in non SFP ones. On the other hand, the independent samples t test shows that the difference in terms of Household Enrollment Ratio between SFP and non SFP households was statistically significant (see Table 3). In other words, the mean Household Enrollment Ratio of SFP and non SFP households are statistically different from zero at the 5% level of significance. In addition there is an estimated sample mean difference of -0.437, there is sufficient evidence (p=.001) to suggest the difference is statistically significant. The t test statistic is -5.892 and the 95% confidence interval of the difference is between -0.583 and -0.292. This interval does not include 0 and hence it implies significant difference between SFP and non SFP households in terms of HER.

Generally, from the discussion so far, it can be concluded that the school feeding program in Bishoftu Town of East Shoa Zone have significant positive effect on enrollment. This is because the economic role of child labor in this area is so minimal that parents would rather prefer to send their children to school than keeping them at home. Second, there is high household enrollment ratio in SFP groups, which shows, there is high relative value of the school feeding program in attracting children to school during their school age. Finally, the HER in SFP households is significantly different from those in non SFP households suggesting that there is unique performance of the SFP.

Class attendance, measured by Absence Rate, is also analyzed to determine if the school feeding program has significant positive effect on school participation. However, the study found no evidence of significant effect of school feeding program on class attendance (p=.203). First, the result of this study shows that even though the nutritional benefits of school meals are adequate in quantity as observed during the field work. Some beneficiary children argue that the food they receive in school is monotonous because through each week they will be served with similar dish and that it hardly affects their class attendance.

It is found that the main cause of absence in both SFP as well as non SFP households is illness (see Table 4). Because of the direct implication of nutrition on health status (21), we may infer that the nutritional benefit of school feeding program is not significant to make children attend school. This is contrary to the claim that school feeding program improves the nutritional status of children so that they can attend school (1). Thus the nutritional function of SFP, discussed in the literature, might be low to have significant effect on attendance. On the other hand, children eat

monotonous meals throughout the week and hence get bored of school meals since it is prepared from just same food items.

A report by the World Bank shows that for children who have plenty food at home, it may be less appealing to eat monotonous school meals every time though such attitude could change owing to long school hours which forces children to eat even if they complain (12).

However, no direct generalization can be made in this study about the lack of nutritional benefits of the school feeding program because of the nature of the data we collected and thus more experimental field studies are required to scientifically determine the nutritional effect of school feeding program on children and the subsequent effects on class attendance.

Referring to the results of the study the mean Absence Rates in SFP and non SFP households were 3.96 and 4.23 days respectively. Although the Absence Rate is lower in SFP than non SFP, the difference is, however, not statistically significant at 5% (see Table 3). Thus, based on p=0.203 it can be concluded that Absence Rate in SFP households is not statistically different from that of non SFP households. Besides, the 95% confidence interval of the difference is between -1.367 and .292, implying the mean differences could even be 0. This finding is, however, contrary to other studies that show class attendance as a measure of school participation can be improved by school feeding program (8, 15). They claim that because children receive food only when they come to school, in-school feeding therefore makes them attend classes.

In sum, we may generalize from the above discussions that there is no evidence that suggests school feeding program has significant positive effect on class attendance.

First, there is a perception that the school meals in this area are not nutritionally rich to prevent children from nutrition-related illnesses. In turn, when children are ill, they cannot attend classes and hence we may infer that the school feeding program has no significant positive effect on class attendances. Second the variety of the school meals is limited and this could not significantly encourage children to attend. Finally independent test of absence rates shows there are no significant differences between SFP households and non SFP households in terms of class attendance.

Children who could not fulfill their food needs grow stunted and in most cases are vulnerable to diseases. Consequently such children are unable to participate in school properly because of illnesses, most of which result from hunger and poor nutrition. Studies have shown that child hunger is associated with higher rates of chronic illness (21). When there are no means to combat hunger, children are forced to drop-out of schools. Thus one of the reasons behind launching

school meals in this area was to enable children cope up with the effect of hunger and make them actively participate in school.

Although some studies reveal that in-school feeding programs have positive effect on drop-outs (22), some others claim the evidences are inconclusive (1). The result of the study shows that illness 1(100%) is the main reason for student drop-out for SFP group; whereas illness 2(50%) and other factors like family transfer and divorce 2(50%) were main reasons of drop-out for non SFP group households (see Table 4). And some of these drop-outs are due to hunger-related incidents of illness, while others are due to some other causes of illnesses. Thus there is no evidence that shows the school feeding program overcomes hunger and hence prevents children from dropping-out of school. On the other hand, there are also some drop-outs due to family reasons (see Table 4). Children could also drop-out of school in order to work on cash generating activities, notably marketing. Thus the economic function of school feeding program discussed in the literature is once again not significant enough to prevent children from dropping out.

The study shows that a total of 1 child from SFP and 4 from non SFP households dropped out of school during the study period. The mean drop-out ratios (number of drop-outs in each household during the year as a percentage of number of children who were enrolled to school during the same year) are 0.002 and 0.009 respectively (see Table 2). This means 0.2% of children from school feeding programme schools and 0.9% from non school feeding programme schools enrolled in primary school during the study period dropped out of school the same year. The statistical differences of these drop-out ratios are again tested using the Independent samples t-test and it was found that the drop-out ratio in SFP households were not statistically different from that in non SFP households at 5% level. The sample mean difference is .007 and the 95% confidence interval of the difference is between -0.003 and 0.017 in which 0.007 could be the real difference. Thus we have no sufficient evidence to conclude the drop-outs in SFP households are significantly different from those in non SFP.

In general, there is no evidence that suggests significant positive effect of the school feeding program on student drop-out. Unlike the claim that school feeding program improves the nutritional status of children, which in turn reduces drop-outs, no such association are observed in this study leading us to conclude the school meals are not nutritionally rich enough to affect drop-outs. Finally the independent samples t-test of drop-out ratio between the two groups of households shows no significant difference.

There were various factors that affect household's enrollment decisions. Figure 2 shows some of these determinants of enrollment in the study area. The result shows that factors such as availability of school, abundance and qualification of teachers, safety concerns, school factors

(teaching quality and school infrastructure), and distance to school and availability of food incentives were some of the most important determinants of enrollment in the study area. Details of each factor are presented in the following sections.

This factor is closely related to abundance of schools in the study area. Referring to Figure 3 again, the availability of school was another factor affecting school enrollment with 182(10.62%) of the responses in SFP households and 130(24.06%) in Non SFP households.

School factors are factors peculiar to the school compound. These include teaching quality and school infrastructure. Teaching quality refers to abundance of teachers (teacher-student ratio), qualification of the teachers and standard of the teaching-learning process. In fact, households have little knowledge about these at the time of enrollment decisions. However they extensively seek information from neighbors, friends or relatives before making up their mind about which school they want their children enrolled.

School infrastructure refers to teaching facilities such as number of class rooms, desks or other learning aids and materials. Studies reveal that such factors largely affect enrollment in Ethiopia (23). It was observed that there is relatively high overcrowding in SFP schools and therefore some households preferred to send children to Non SFP schools.

In this study about 726(40.17%) of the responses in SFP households and 494(45.03%) in non SFP households show that school factors were issues that affected households' enrollment decisions (see Figure 2).

Distance to school was also one of the factors affecting school enrollment. In some cases, it takes children 30 to 40 minutes to reach their schools and thus without doubt distance to school was a major factor in enrollment decision in this area. In fact, studies also show distance to school is one of the factors affecting enrollment in Ethiopia (24). Since out of the sampled schools three are located at the peripheral areas of the town, children from center areas will find it difficult to go to school. Thus, distance to primary school was a very important determinant of enrollment decision to households. The result of the study shows that 182(10.07%) of the responses in SFP households and 130(11.85%) in Non SFP ones identify distance to school as a factor affecting their children enrollment decision (see Figure 3).

For households who have children in program schools, the provision of food in school has also influenced the enrollment decision. Besides, some stakeholders claim that in school meals determine enrollment of children to school.

The role of school feeding in enhancing enrollment was broadly discussed in the literature part (8, 13, 15). This study reveals that 254(14.05%) of the responses in SFP households mention school feeding as a determinant of enrollment (see Figure 3).

Safety concerns are factors such as fear of accident concerns while children are go to school, concern for harassment incidents and so on. In some cases, parents insist they are not willing to enroll their children to distant schools fearing the risk of harassment. Similar concern is given for safety of the children on their way to school, which includes traffic accidents and risk of getting lost. As shown in Figure 2, safety concerns also affect enrollment, with 294(16.27%) of the responses in SFP households and 209(19.05%) of those in Non SFP households being in favor of this factor.

For households who have children in program schools, the provision of free medical service 159(8.79%), school uniform and exercise books have also influenced the enrollment decision.

In general, the above discussions attempt to find out possible determinants of enrollment in Bishoftu town. Accordingly, abundance and qualification of teachers, availability of school, distance to school, the availability of food incentives, safety concerns and some other factors are the main factors affecting enrollment.

The result of this study reveals that the major factors affecting class attendance and student drop-outs in the study area were illness, domestic work and some other factors (see Table 4). In fact, the major causes of absence and drop-outs in Bishoftu town in general were illness, domestic work and child refusal to go to school.

Illness is the major problem that hinders attendance and it was also a cause of drop-outs. It ranges from mild to severe sicknesses that often relates to poverty and inadequate nutrition of children. Studies also show that school age children with severe hunger have significantly higher chronic illness rates than those with moderate or no hunger. Poverty has also direct implications for health. It is shown that severe poverty has negative effects on children health (21). When poor children are sick, they will stay at home for extended period of time without seeing a medical practitioner. The fact that many of the households were poor implies that they cannot afford the cost of medication, but instead rely on traditional healing practices which may not help children recover from their illness.

Table 4 shows that about 48.57% of the causes of class absences in SFP households and 55.16 percent of those in non SFP households are due to illnesses. This indicates illness is the main cause of absence for school children in the study area. On the other hand, illness constitutes for

100% of the causes of drop-outs in SFP households and 50% in Non SFP ones. showing again illness is the major cause of student drop-outs in the study area.

Work for money/food may refer to engagements that would earn money/food for the household. Such activities include undertaking of private businesses like selling of soaps, plastic bags, blades and etc. It was shown that the decision of parents to enroll children to school depends on how much they value schooling against the contribution of children in such household duties (1). Similar consideration also affects class attendances of children from school. Some children would have to miss school in order to work for their private businesses especially on Tuesday and Thursdays to generate income and hence support their family's economy. The result of the study shows that of all causes of absences reported, 5% in SFP and 11.84% in non SFP households are due to children's participation in works for money/food (see Table 4).

Domestic works refer to household tasks and may include taking care of siblings and elderly, fetching water from public tap water provider, making food, looking after the house and so on. Looking again at Table 4, domestic work constitutes 29.3% of the reasons for school absence in SFP households and 21.41% in Non SFP households.

Child refusal to go to school is another cause of absence mentioned by SFP and Non SFP households due to lack of motivation, dissatisfaction with school environment and so on. Such factors account for 13.21% of the causes of absences in SFP households and 5.8% in Non SFP households (see Table 4).

Other causes of absence and drop-out mentioned by SFP and non SFP households mainly include hunger during school hours, long distance to school, birth delivery and death of the family member, divorce and so on. Such factors account for 3.21% of the causes of absences in SFP households and 5.79% in non SFP households. On the other hand, they account for 50 % of the reasons for drop-outs in non SFP (see Table 4).

In sum, the main determinants of attendance and drop-outs are illness, work for money/food, domestic work, school hour hunger, divorce and long distance to school.

The relationship between Household Enrollment Ratio and household head age is supposed to work in a same direction. As already outlined in the previous discussion, a higher Household Enrollment Ratio implies the inclusion of over-age or under-age enrollment and/or grade repetition. This study reveals that the correlation between Household Enrollment Ratio and household age in SFP households is 0.165 where this is significant at 5% (sig. 0.001). Thus there is a moderate positive relationship between the two variables; i.e., the higher the household head

age, the higher is the Household Enrollment Ratio, but also that other variables clearly influence the pattern of Household Enrollment Ratio. It can thus be inferred that households with older heads tend to have more over-aged or under-aged children in primary education than households with younger household heads. This relates to our previous discussion about the dependency of households on domestic work especially when the household head gets older. In other words children are kept to engage in commercial trading than going to school, but this problem is more apparent in households with older heads than those with younger heads.

For non SFP households the correlation is, however, a weak positive 0.050 and this relationship is not significant at 5% (sig. 0.306). This shows although the average household age in both groups of households is same, the age effect on Household Enrollment Ratio is however not significant for non SFP households (see Table 5). Thus we may conclude that the household head age in non SFP households does not affect children's enrollment and that there could be other factors affecting the enrollment.

Household Enrollment Ratio and household head education level have weak negative relationship in SFP households as well as in non SFP households. This is given by -0.153 (sig. 0.002) for SFP households and -0.099 (sig. 0.042) for Non SFP households at 5% showing significant correlations in both cases (see Table 5).

Finally, the correlation between Household Enrollment Ratio and household income is also a weak negative relationship for SFP households and a weak negative relationship for non SFP households. The correlation is -0.08 (sig. 0.110) for SFP households and -0.009 (sig. 0.853) for non SFP ones at 5% which also indicate no significant relationships in both groups of households (see Table 5). Thus, the significant correlations we found is that of Household Enrollment Ratio and household age for SFP households, Household Enrollment Ratio and household head education for both group of households and all the others remaining are being weak.

The correlation between average number of days children are absent from class and household head age is a weak positive relationship for both groups. The correlation is 0.021 (sig. 0.668) for SFP households and 0.051 (sig 0.300) for non SFP ones at 5% which indicates no significant relationships in both groups of households (see Table 5). Likewise weak positive and negative correlation is found between the Absence Rate and household head education level for SFP and non SFP households respectively. The correlation is 0.082 (sig. 0.093) for SFP households and -0.067 (sig 0.171) for non SFP ones at 5% which indicates no significant relationships in both groups of households (see Table 5).

Similarly the correlations between absence rate and household income in SFP household are represented by weak positive relationship being significant at 0.099 (sig. 0.047) and for non SFP households the correlation is weak positive with correlation 0.007 (sig. 0.890) at 5% which indicates no significant relationship (see Table 5). It can be, therefore, inferred that the higher the household income the higher students miss school to help their parents in domestic work while their parents go for work but also that other factors affect the attendance too.

Overall, there are significant positive and negative correlations between household head age and Household enrollment ratio for SFP and non SFP household respectively. Besides, the correlations of household head education level with household enrollment ratio are also significant and negative for both groups.

The third levels of correlations studied were those between drop-out ratios and the respective three independent variables (household head age, household head education level and household income). The correlations between Drop-out Ratios and household head age are found to be not statistically significant for both groups of households. There is a weak negative correlation in SFP households represented by -0.004 (sig. 0.936) while there is a weak positive correlation in non SFP households as given by 0.060 (sig. 0.217) (see Table 5). Thus household head age has no statistically significant effect on the number of children dropping out of school implying there are other more prominent factors instead.

Meanwhile, drop-out ratios in both SFP and Non SFP households are positively correlated to household head education level (0.010 and 0.026 respectively) although the correlation is not significant for both groups of households (see Table 5). Hence we may infer that there are other factors that affect drop-out ratio.

Finally, there are weak positive correlation between drop-out ratio and household income in both groups of households with a significant correlation coefficient of 0.063 (sig. 0.206) and 0.046 (sig. 0.363) respectively (see Table 5).

In sum, the correlations between Drop-out Ratios versus household age, household educational level and annual household incomes are not significant for both groups of households.

Strength and Limitation of the Study

Strength

1. As there is no published data on effect of school feeding on school participation among school meal beneficiary and non beneficiary in Ethiopia, the results of this study can provide some information.
2. Use of multiple methods of data collection like record review and on site feeding programme observation to validate the self -reported information regarding school feeding programme and school participation
3. Being a comparative study design could be mentioned as the strength of study.

Limitation

1. The study gathered data only on households who got at least one primary school child and thus it is difficult to represent the results of the study to those households who have not yet enrolled their children.

2. The study does not establish immediate causal relationship between SFP and school participation indicators since other external factors might have also affected the relationships. The relative impact of the program could have better been explained by capturing the impacts of such external factors. To be able to certainly claim that measured differences in outcomes between the beneficiary group and the comparison group are precisely caused by the program, it is necessary to control for the effects of such and other factors. However this was not the case in the study the nature of the data made it impossible to employ advanced techniques to conduct such an analysis. Thus further data needed to determine the absolute effect of the program while also controlling for other contextual variables through the application of advanced techniques such as regression analysis.
3. Unavailability of adequate baseline data about schools performances. Thus it was not clearly understood how school participation looked like prior to the introduction of the program. Such data could have supported the argument about the impacts of the program.
4. There is some degree of skepticism over the reliability of data as some of them could have been inflated. This is because of the tendency of people to manipulate data during project appraisals so that the project continues to function. Data collected from households may not also be reliable in some cases as the respondents in many households are people who are either illiterate or partially-literate. Thus there is some concern that the household head may have provided inaccurate information, for example about the level of the children's school participation.

7. Conclusion and Recommendation

7.1 Conclusion

In this study, attempts have been made to assess the significance of school feeding program in enhancing school participation among primary school children in Bishoftu Town of East Shoa Zone, Oromia. The result shows that although school feeding program has some roles, yet its effect on school participation is not significant.

Except Household Enrollment Ratio there are no significant differences in terms of school participation as measured by, Absence Rate and Drop-out Ratio between the groups and hence this might lead us to conclude the school feeding program in Bishoftu town has not brought any significant difference in enhancing class attendance and reduction of drop out but it has significant effect in terms of increasing enrollment. Nevertheless, such generalization could be inconclusive given limited data set.

The result of the study found significant increase in enrollment as a result of school meals. In other words the relative impact of school feeding program on enrollment is significant. It is observed that the existing program presents somewhat moderate incentive to attract children to school or enable parents send children to school. Household Enrollment Ratios in both groups are almost 100% indicating over-age/under-age enrollment and/or grade repetition. This is because some children help their family during their primary school age and hence their enrollment could delay for this reason. Independent test of Household Enrollment Ratios also shows significant difference between the two groups of households, SFP and non SFP, in terms of enrollment pattern. We may thus infer the current school feeding program has significant effect on school enrollment.

Finally, some correlations have been computed to examine the relationships between certain household demographics and school participation indicators. The correlation between Household Enrollment Ratio and household age is significant and positive for SFP households. On the other hand, there are no significant correlations between household age and Absence Rate for both groups of households. Besides, the correlations of household head education level with Household Enrollment Ratio is significant and negative for both groups; which implies the higher the household head education level the lower is the Enrollment. Last, the correlation of annual household income with Absence Rate is significant and positive for SFP households meaning absence rate higher in households who high annual income.

7.2 Recommendation

The study shows that the school feeding program in Bishoftu Town could not cause significant increase in school participation except in enrollment because both its nutritional and economic values are negligible relative to the costs of schooling. Although SFP offers less potential benefits compared to programs that deliver food directly to beneficiaries in terms of, for example, meeting short term hunger and specific nutritional needs, it can still be an incentive to significantly enhance school enrollment. Thus,

1. Programme administrators should look for ways to improve quality of school meals in order to reduce hunger related illness if the objectives are to be satisfactorily achieved.
2. Program administrators should consider the possibility of diversifying school meals.
3. Program managers and policy makers should, therefore, consider the possibility of delivering meals early in the day before lesson begins so that children do not leave school early in the day.
4. Take home rations in addition to school meals should also be assessed to reach some member of households and increase the benefit of school participation.
5. Further research should have to be done on this area in order to measure the nutritional value of the food as well as the nutritional status children.

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Annex 1: Household Questionnaire

0.1 Interviewer Name_____

0.2 Date | ___| |/ |___| |/ | | |

0.3 Village Name: _____

Consent Form

My name is_____ and I am an enumerator in this survey on behalf of Mr. Asmamaw Guta Boreja, a graduate student of Master of Public Health at Addis Ababa University. The purpose of this interview is to collect data for his master's thesis about the impacts of School Feeding Program on school participation among primary school children in Bishoftu Town of East Shoa Zone, Oromiya-Ethiopia. The information gathered in this interview will be used only for academic purposes and that they are strictly confidential. Your full name will not be written down anywhere and there will be no way to identify you. Your participation is voluntary. You may refuse to answer any question and choose to stop the discussion at any time. You can also ask questions about this study at any time.

There is no direct benefit or money to be given for you in participating to this study. However, I hope that the study will benefit your community by helping the researcher understand the impacts of School Feeding Program and recommending what should be done to improve school participation. Thank you in advance!

For any information need please contact me with:

Cell Phone: - (+251)-911-065-892

Email: - lasmamaw@yahoo.com

Section I: Household Demographics

101. Household head sex (gender):

1 Male 2 Female

102. Household head age (in years): ----------

103. Household head's education level: (please enumerate the sum of formal education years)

104. Annual household income (in Birr): ----------

105. Household participated in Productive Safety Net Program or relief programs with food aid:

1. Yes 2. No

106. Total number of children in the household?

Male	Female

107. Number of children in the household whose age is between 7-14 years

Male	Female

108. Number of children enrolled in school whose age is between 7-14 years

Male	Female

109. Do you have a child enrolled in school feeding programme? (If No, skip to Q201)

1. Yes 2. No

110. Number of children enrolled in School Feeding Program schools:

Male	Female

Section II: The State of School Participation

201. In a scale from 1 to 5, where 1= to very small extent, 2= to small extent, 3= to some extent, 4= to great extent and 5= to very great extent, indicate whether the following factors affected enrollment of children to school (put "X" mark where it applies).

Factor affecting school enrollment	to very small extent	to small extent	to some extent	to great extent	to very great extent
1. Distance to the school					
2. Availability of food incentive					
3. Abundance and qualification of teachers					
4. Abundance of desks, class rooms, etc					
5. Availability of school					
6. Safety concerns for children					
7. Other:-					
i . _____	( )	( )	( )	( )	( )
ii. _____	( )	( )	( )	( )	( )
iii. _____	( )	( )	( )	( )	( )

202. Have your child ever missed school during the last six or two weeks? (If No, skip to Q206)

203. Average number of day's children missed school during the last six months?

---

204. Average number of day's children missed school during the last two weeks?

---

205. Average number of day's children missed school during the last one week?

---

206. Indicate whether any of the following factors was/were the reason for the absence in 202:

Reason for absence	Yes	No
1. Illness		
2. Work for money/food		
3. Helping in domestic work		
4. Child refused to go to school		
5. Huger		
6. Other reason:		

207. Does your child dropped from school during the last six months? (If No, skip to Q209)

1.Yes 2.No

208. Indicate whether any of the following factors was/were the reason for dropping out in 207:

Reason for absence	Yes	No
1. Illness		
2. Work for money/food		
3. Helping in domestic work		
4. Child refused to go to school		
5. Huger		
6. Other reason:		

209. Do you think school participation increases if school feeding programme introduced in a sustainable manner?

1. Yes 2. No

End of questionnaire

Thank you for your time

Annex 1: Amharic Version Household Questionnaire

0.1 የጠያቂው ስም ----------

0.2 ቀን /---/---/-----

0.3 የመንደሩ ሥም: _____

የፍቃደኝነት መጠየቂያ ቅጽ

እኔ አቶ/ወ/ሮ/ወ/ት ---------- እባላለሁ። እዚህ የመጣሁት የአዲስ አበባ ዩኒቨርሲቲ የሕብረተሰብ ጤና ትምህርት የድህረ-ምረቃ ተማሪ የሆነውን አቶ አስማማው ጉታን በመወከል መረጃ ለመሰብሰብ ነው። የዚህ ቃለ መጠይቅ አላማ ለድህረ ምረቃ መመረቂያ ጽሁፍ በኦሮሚያ ክልል በምስራቅ ሸዋ ዞን ቢሾፍቱ ከተማ ላይ የትምህርት ቤት ምገባ ፕሮግራም በትምርት ቤት መቅረት እና በትምህርት ውጤት ላይ ያለውን ተጽዕኖ አስመልክቶ መረጃ ለመሰብሰብ ነው። ከዚህ የሚሰበሰበው መረጃ ለትምህርት አገልግሎት ብቻ የሚውል ከመሆኑም በላይ ሚስጥራዊ ነው። በየትኛውም ቦታ ላይ ሙሉ ስምዎ የማይፃፍ በመሆኑ በየትኛውም መልኩ እርስዎን መለየት አይቻልም። ተሳትፎዎ በፍቃደኝነት ላይ የተመሰረተ ነው። በመጠይቁ ሂደት መመለስ የማይፈልጉትን መልስ ያለመመለስ፣ ውይይቱን የማቋረጥና ስለዚህ ጥናት በማናቸውም ሰዓት ጥያቄ የመጠየቅ መብትዎ የተጠበቀ ነው።.

በዚህ ጥናት ተሳታፊ በመሆንዎ የሚያገኙት አንዳችም ቀጥተኛ ጥቅም ወይም የሚሰጥ ገንዘብ የለም። ነገር ግን የትምህርት ቤት ምገባ ፕሮግራም ተጽዕኖ ምን እንደሚመስል እንድረዳ እና መፍትሔ እንዳስቀምጥ ድጋፍ በማድረግ ሕብረተሰብዎ ተጠቃሚ ይሆናል የሚል ተስፋ አለኝ።. በቅድሚያም አመሰግናለሁ!

መረጃ ማግኘት/መጠየቅ ቢፈልጉ፣

በሞባይል ቁጥር፡- (+251)-911-065-892

በኢሜል አድራሻ፡- lasmamaw@yahoo.com ያግኙን።

ክፍል 1: ማሕበራዊና ስነ-ሕዝባዊ ገጽታዎችን በሚመለከት

101. የአባወራ ፆታ: 1. ወንድ 2. ሴት

102. የአባወራ እድሜ በአመት: ----------

103. የአባወራ መደበኛ የትምህርት ደረጃ፡ ----------

104. አመታዊ የቤተሰብ ገቢ በብር፡----------

105. ቤተሰብዎ በሴፍትኔት/በእርዳታ ፕሮግራም ተሳትፎ ያውቃል፡

1. አዎ 2. የለም

106. አጠቃላይ በቤተሰብ ውስጥ ያሉ ልጆች ብዛት፡

ሴት ---------- ወንድ ----------

107. በቤተሰብ ውስጥ እድሜያቸው ከ7-14 ያሉ ልጆች ብዛት፡

ሴት ---------- ወንድ ----------

108. ትምህርት ገበታ ላይ የሚገኙ እድሜያቸው ከ7-14 ልጆች ብዛት፡

ሴት ---------- ወንድ ----------

109. በትምህርት ቤት ምገባ ፕሮግራም የሚሳተፉ ልጆች አልዎት፡(ከሌለ ወደ ተ.ቁ 201 ይሂዱ)

1. አዎ 2. የለም

110. በትምህርት ቤት ምገባ ፕሮግራም የሚሳተፉ ልጆች ብዛት፡

ሴት ---------- ወንድ ----------

ክፍል 2: የትምህርት ተሳትፎ ሁኔታ

201. ከ 1-5 ባሉት መለኪያዎች ማለትም 1= በጣም ባነስተኛ መጠን፣ 2= ባነስተኛ መጠን፣ 3= በመጠኑ፣ 4= እጅግ በመጠኑ እና 5= እጅግ በጣም በመጠኑ የተማሪዎትን የትምህርት ተሳትፎ ተጽዕኖ ምክንያቶች የ (X) ምልክት በማድረግ አመልክቱ።

	ምክንያት	በጣም ባነስተኛ መጠን	ባነስተኛ መጠን	በመጠኑ	እጅግ በመጠኑ	እጅግ በጣም በመጠኑ
1	የትምህርት ቤት ርቀት					
2	የምግብ አቅርቦት					
3	የመምህራን ቁጥርና ብቃት					
4	የክፍሎችና መቀመጫዎች ብዛት					
5	የትምህርት ቤቶች መኖር					
6	ለልጆች ደህንነት ያላቸው ኃላፊነት					
7	ሌላ ፡-					

i. ----------

ii. ----------

iii. ----------

202. ባለፉት ስድስት ወራት ወይም ሁለት ሣምንት ውስጥ ልጆች ከትምህርት ቤት ቀርቶ ያውቃል? (መልስዎ አይ ከሆነ ወደ ተ.ቁ 206 ይሂዱ)

203. ባለፉት ስድስት ወራት ውስጥ ልጆች በአማካይ ከትምህርት ቤት የቀሩበት ቀን ብዛት፡

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204. ባለፉት ሁለት ሣምንት ውስጥ ልጆች በአማካይ ከትምህርት ቤት የቀሩበት ቀን ብዛት፡

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205. ባለፉት አንድ ሣምንት ውስጥ ልጆች በአማካይ ከትምህርት ቤት የቀሩበት ቀን ብዛት፡

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206. ከታች ከተዘረዘሩት ውስጥ ከትምህርት ለመቅረታቸው ምክንያት የሆነውን አመልክቱ (202)

	ምክንያት	አዎ	አይ
1	ህመም		
2	ሥራ ለገንዘብ/ምግብ		
3	የቤት ውስጥ ሥራን በማገዝ		
4	ትምህርት ቤት ለመሄድ አለመፈለግ		
5	ረሃብ		
6	ሌላ ምክንያት		

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207. ልጅዎት ባለፉት ስድስት ወራት ውስጥ ከትምህርት አቋርጧል? (መልስዎ አይ ከሆነ ወደ ተ.ቁ 209 ይሂዱ)

1.አዎ 2. የለም

208. ከታች ከተዘረዘሩት ውስጥ ከትምህርት ለማቋረጣቸው ምክንያት የሆነውን አመልክቱ (207)

	ምክንያት	አዎ	አይ
1	ህመም		
2	ሥራ ለገንዘብ/ምግብ		
3	የቤት ውስጥ ሥራን በማገዝ		
4	ትምህርት ቤት ለመሄድ አለመፈለግ		
5	ረሃብ		
6	ሌላ ምክንያት		

ይህ የጥያቄያችን መጨረሻ ነው። ጊዜዎን ወስደው እነዚህን ጥያቄዎች ለመመለስ ላደረጉልን ትብብር በጣም እናመሰግናለን።

Annex 2: Key Informant Interview with School Principal

0.1 Name of the school _____

0.2 Village _____

0.3 Date I ___| |/ |___| |/|___| I

Consent Form

My name is Asmamaw Guta Boreja, a graduate student of Master of Public Health at Addis Ababa University. The purpose of this interview is to collect data for my master's thesis about the impacts of School Feeding Program on school participation among primary school children in Bishoftu Town of East Shoa Zone, Oromiya-Ethiopia.

The information gathered in this interview will be used only for academic purposes and that they are strictly confidential. Your full name will not be written down anywhere and there will be no way to identify you. Your participation is voluntary. You may refuse to answer any question and choose to stop the discussion at any time. You can also ask questions about this study at any time.

There is no direct benefit or money to be given for you in participating to this study. However, I hope that the study will benefit your community by helping me understand the impacts of School Feeding Program and recommending what should be done to improve school participation. Thank you in advance!

1. When was the school established? ----------
2. When was the feeding scheme introduced in the school? ----------
3. Which organization is/are supporting the program? ----------

4. What is the total enrollment of children under the feeding scheme during the 2013/14 academic year?

Boys	Girls	Total

5. What type of food is served?
6. How much quantity of food is allocated for each student during the school day?

7. Based on your records, has school participation (attendance, drop-out and students performance) improved during the last six months? Why do you think is that?

8. What factors affect participation in the school?

9. Do you think that the school participation (attendance, drop-outs and student performance) will improve if children are fed in schools? Why?

10. What will happen on school participation (attendance, drop-out and student performance) if school feeding programme has stopped?

Annex 3: Key Informant Interview with beneficiary Student (SFP School)

0.1 Name of the school _____

0.2 Village _____

0.3 Date | ___| |/ |___| |/|___| |

Consent Form

My name is Asmamaw Guta Boreja, a graduate student of Master of Public Health at Addis Ababa University. The purpose of this interview is to collect data for my master's thesis about the impacts of School Feeding Program on school participation among primary school children in Bishoftu Town of East Zone, Oromiya-Ethiopia.

The information gathered in this interview will be used only for academic purposes and that they are strictly confidential. Your full name will not be written down anywhere and there will be no way to identify you. Your participation is voluntary. You may refuse to answer any question and choose to stop the discussion at any time. You can also ask questions about this study at any time.

There is no direct benefit or money to be given for you in participating to this study. However, I hope that the study will benefit your community by helping me understand the impacts of School Feeding Program and recommending what should be done to improve school participation. Thank you in advance!

1. Do you get food from school every day? ----------
2. How much food do you get from the school every day? ----------
3. Does the food you get from school satisfy you? If no, why?

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4. Have you been hungry during the school hours? If yes, what did you do?

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5. Why did you choose this school to study?

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6. Have you ever been absent from school during the last six month? 1. Yes 2. No

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7. If yes how many times? And, why?

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8. Did you quit your study during the last six month? If yes, why?

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9. What is your opinion regarding the school feeding program?

Annex 4: Key Informant Interview with Non beneficiary Student (Non SFP School)

0.1 Name of the school _____

0.2 Village _____

0.3 Date | ___| |/ |___| |/|___| |

Consent Form

My name is Asmamaw Guta Boreja, a graduate student of Master of Public Health at Addis Ababa University. The purpose of this interview is to collect data for my master's thesis about the impacts of School Feeding Program on school participation among primary school children in Bishoftu Town of East Zone, Oromiya-Ethiopia.

The information gathered in this interview will be used only for academic purposes and that they are strictly confidential. Your full name will not be written down anywhere and there will be no way to identify you. Your participation is voluntary. You may refuse to answer any question and choose to stop the discussion at any time. You can also ask questions about this study at any time.

There is no direct benefit or money to be given for you in participating to this study. However, I hope that the study will benefit your community by helping me understand the impacts of School Feeding Program and recommending what should be done to improve school participation. Thank you in advance!

1. Why did you choose this school to study?

   ---

2. Have you ever been hungry during school hours? If yes, what did you do?

   ---

3. Have you ever been absent from school during the last six month? If yes how many times and why?

   ---

4. Did you quit school during the last six month? If yes, why?

   ---

5. Do you think you will participate more in school if you get school meals? Why?

Annex 5: Key Informant Interview with Parent-Teacher Association member

0.1 Place_____

0.2 Date | ___| |/ |___| |/|___| |

Consent Form

My name is Asmamaw Guta Boreja, a graduate student of Master of Public Health at Addis Ababa University. The purpose of this interview is to collect data for my master's thesis about the impacts of School Feeding Program on school participation among primary school children in Bishoftu Town of East Zone, Oromiya-Ethiopia.

The information gathered in this interview will be used only for academic purposes and that they are strictly confidential. Your full name will not be written down anywhere and there will be no way to identify you. Your participation is voluntary. You may refuse to answer any question and choose to stop the discussion at any time. You can also ask questions about this study at any time.

There is no direct benefit or money to be given for you in participating to this study. However, I hope that the study will benefit your community by helping me understand the impacts of School Feeding Program and recommending what should be done to improve school participation. Thank you in advance!

1. What is your role in the school feeding program?

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2. Do you think that school feeding program has improved enrollment? Why?

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3. Do you think that school feeding program has improved school attendance? Why?

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4. Do you think that school feeding program has reduced drop-outs? Why?

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5. What other factors affect enrollment of children to school?

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6. What other factors affect school attendance?

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7. What other factors affect drop-outs from school?

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8. What are the weaknesses of school feeding program in this region?

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9. In your opinion, what must be done to improve school feeding program?
