Ethiopian Journal of Behavioral Studies, 2021, 4(1), 97 – 113

Academic Achievement of Grades Nine and Ten Female Students and its Major Determinants in Jimma Zone, Oromia Region

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Abstract: *Despite significant efforts made in Ethiopia to achieve gender parity in education, female students' academic performance remains a major challenge to the education sector (MoE, 2010). Thus, the study aims at finding out academic achievements of female students and its major determinants in lower secondary schools in Jimma Zone, Oromia Region. A cluster sampling technique was used to select participants for quantitative data while purposive sampling technique was in place for qualitative ones. A questionnaire was administered to 768 female students. In addition, interviews were conducted with students, school directors, and Woreda educational officers and FGDs were conducted with school teachers. The result indicated the mean academic performances for grade ten and nine students were 70 and 71 with standard deviations of 11 and 10, respectively. 6% of the variance in students' academic achievements was accounted for by the linear combination of the variance of teachers related variables, student's self-regulation and parental factors. Parental factors, socio-economic status, lack of interest for education among students, teacher, school and community related factors were among the factors that affect academic achievements of female students as evidenced by the qualitative data. Recommendations, including preparing and utilizing intervention packages comprising different strategies as per the findings of the study, were forwarded.*

Key words: Determinants, female student, academic performance, lower secondary schools

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Introduction

Education for All (EFA) Goals states that countries should work to reduce gender disparities in primary and secondary education by the year 2005; and achieve gender equity in education by 2015. Ethiopia had strived to achieve the EFA goal and the Millennium Development Goal (MDG) in education by 2015. Despite the significant efforts made in Ethiopia to achieve this goal, female students' poor academic performance remains a major challenge to the education sector (MoE, 2015).

Several researches have showed poor academic achievement of secondary school female students in Ethiopia relative to their male counterparts. For instance, the first National Learning Assessment report (2010) of grade 10 students indicated the composite national mean score of grade students for various subjects (measured in Mathematics, English, Biology, Physics and Chemistry) was 36%, male students' mean score was 38.7% whereas that of female students' was 32.2%. Various recent reports also confirm low academic achievements of female students (Abitew, 2019; Basazen & Alamirew, 2017; Tadesse et al., 2015). To substantiate the low academic performance of students, the Fourth Ethiopian Education Sector Development (MoE, 2010) document states that students' achievement is not improved as much though there are lots of investments in education. It reads as:

> *Notwithstanding major investments in improving the numbers and the qualifications of teachers and the availability of equipment, student achievements have not sufficiently improved. The gains in access are of little meaning if they are not accompanied by improved student learning. If students do not acquire significant knowledge and skills, Ethiopia will not be able to compete within a global economy (ESDP IV, 2010: p. 10).*

Therefore, this research aims at to find out academic achievements of female students and its major determinants in lower secondary schools taking Jimma Zone as a case in point and suggests recommendations that may serve as additional input for alleviating the problem.

Statements of the Problem

Though the government of Ethiopia is working aggressively to enhance quality of education, female students' academic performances still remain a serious concern in the country at large (Ministry of Education and UNICEF-Ethiopia report, 2012; NEAEA, 2011). In response to this, the government of Ethiopia, particularly the Ministry of Education (MoE) initiates different activities including providing higher quality of teaching and learning, creation of a conducive school environment for teaching and learning (with due attention given to female students), provision of better-quality teaching and learning input, establishing and strengthening feeding program in food insecure areas in the different parts of the country (ESDP IV, 2010). However, the problem is still persisting. The ESDP V (2015) report indicated the seriousness of the

problem and reported low academic achievement of female students relative to male students, 34% of females reaching a mark of 350 against 45% of males in grade 12 National Examination. Other research findings such as Abitew, (2019); Getahun and Jibat (2018); Tadesse et al., (2015) also reach at similar conclusions.

Though there were attempts from different researchers (for example Abitew, 2019; Getahun & Jibat, 2018; Tadesse et al., 2015) to find out factors affecting students' academic achievements, there are apparent gaps among researcher to pursue a systemic approach (addressing the micro, meso and macro-level factors) with a mixed method design. For instance, Abitew (2019) addresses female students' academic achievements with more of quantitative information with little emphasis for the qualitative ones; Getahun and Jibat (2018) address students' academic achievements with a qualitative approach; and Tadesse et al. (2015) address female students' academic achievements with a quantitative approach. However, Creswell (2012) indicates mixed method design plays a crucial role to best understand and explain a research problem in educational settings.

Against these drawbacks, we aim to employ mixed method design so as to identify and explain the micro, meso and macro-level factors affecting female students' academic achievements taking lower secondary schools at Jimma zone as a case in point. To this end, the study addressees the following research questions:

- How do female students in Jimma zone perform academically?
- What factors influence female students' academic performances in lower secondary schools at Jimma zone?
- What possible intervention mechanisms could be employed to improve female students' academic achievement in lower secondary schools in Jimma Zone?

Operational Definition of Terms

Academic achievements: in this context academic achievement refers to female students' first semester average examination score measured in teacher made classroom examination of Mathematics, English, Amharic, Afaan Oromo, Biology, Physics, Chemistry, Geography, History, Civic, ICT and Sport subjects in 2007 E.C.

Top achieving students: in this context the top-ranking students are students who stand 1-10 in class rankings.

Low achieving students: refers to those students who scored below passing mark (50 semester average mark)

Conceptual Framework for Female Students' Academic Performance

Academic performance refers to the level of students' performance in school, accomplishment or success in school. Different factors in micro, meso and macro-levels are responsible for students' academic achievements. Scholars agreed that students' socio-demographic characteristic, motivation, self-efficacy parental and teachers support interacted to influence students' academic performance as indicated in figure

1. Students' socio-demographic characteristic, gender, age and father's education were significant contributors to student achievement (McCoy, 2005). Income of the family was also associated with academic achievement (Adams, 1996).

Previous researches also indicated that motivation was a necessary ingredient for learning (Biehler & Snowman, 1986). They believed that satisfactory school learning was unlikely to take place in the absence of sufficient motivation to learn (Fontana, 1981). Moreover, Skaalvik & Skaalvik (2006) revealed significant relationship between academic performance and motivation. Research works also showed that self-efficacy influences academic achievement and motivation and self-efficacy were one of the most powerful predictors of student achievement (Bandalos, Geske & Finney, 2005). Factors like parents' expectations, home environment, discipline and parenting involvement affected students' achievement (Sumari, Zaharah & Siraj, 2010). Research findings indicated that families that were less supportive of their children's education were not so attentive to their students' achievement, could not care about their homework and preferred students to help with house chores than doing their homework. Apart from family influences, the teachers' self- efficacy belief also affected students' achievements (Kagan, 1992). Martin as cited in Olkaba (2013) stated that teachers' support and pedagogical approach to teaching significantly affected students' academic performance. Regarding school level factors that affect academic performance of secondary school female students, lack of teachers instructional support like regular tutor for female students and inadequate guidance and counseling (Tadesse et al., 2015), lack of basic sanitation facilities and separate toilet room for female students, and unconducive or hostile school environment (Abitew, 2019) negatively affect academic achievement of females secondary school students.

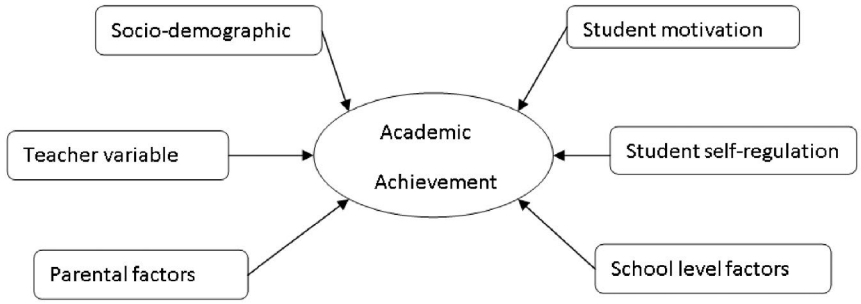

Figure 1: Conceptual framework for students' academic performance

Methodology

Research Design

A mixed method design involving qualitative and quantitative method, particularly

convergent parallel mixed method design, was used. Such design enabled us to generate comprehensive analysis of the research problem and helps in the interpretation of the overall results which in turn assists to have best-fit intervention strategies (Creswell, 2014).

Study area and Period

The study was conducted in Jimma Zone, Oromia region. The study was conducted in 2007 Ethiopian calendar.

Population and Participants

The population of this study includes female students in Jimma Zone, Oromia region. The participants of the study were active female students, teachers, school leaders and Woreda education office heads.

Sample size determination

For determining the sample size for active female students, a single population proportion formula was used with the following assumptions.

$$n = \frac{Z^2 p(1-p)(DE)}{d^2}$$

Expected percentage (P) on student's dropout was 0.5 (or 50%) because it produces the largest sample size, design effect (DE) of 2, 95% confidence level ($Z_{-\alpha/2}$) (1.96) and absolute precision (*d*) of 5%. This yields a total sample size (n) of 768. This sample size was allocated based on equal allocation method for the five selected schools. Moreover, 3 school directors, one Woreda educational officer and 8 teachers participated in the study.

Method of Sampling

First, data pertaining to students' academic achievements were obtained from the Zonal Educational Offices. Based on the 2006 E.C. data, we categorized schools in to two categories: school with low academic achievements and high academic achievements relatively. Then, two schools from the first category (Toba and Asendabo) which had severe problems in academic achievements; and three schools from the second category (Bilida, Ambuye and Agaro) which had better performance relatively were selected purposely to ensure proper representation of participants for the problem under investigation. Then, a cluster sampling technique was used to select the participants from the selected school taking the sections in each school as a cluster. Purposive sampling technique was used to select participants for interview and FGDs.

Data Collection Methods

Questionnaire, interview, and FGDs, were used. The details are given below.

Questionnaire for students: A questionnaire containing items on background

characteristics and items related to factors affecting academic achievements were administered for active female students. Ten items were included to assess background information of students, and 41 items were included to get information on factors that affect female students' academic achievements.

Interview: An interview guide was used to collect information from students, school leaders and Woreda education office head,

FGDs: FGD guide was used to secure information from teachers about females' academic achievements, factors affecting female students' academic achievements and suggestions for possible remedies for minimizing the problems.

Female students' academic achievements: It was secured from the registrar offices of the respective schools as per the name of respective participants selected for the study.

Pilot-testing

The content validity of the various items was checked by the principal investigator and co-principal investigators. Moreover, the wording and organization of the various items were checked. Then, pilot-testing was conducted at Serbo secondary school. Originally, there were 83 items in the instrument. Based on the pilot test result, some items were deleted as they had low inter item correlation and 51 items were presented to students finally. The Chronbach alpha estimates for students' motivation, self-regulation, parental factors, and teachers' variables were .81, .78, .94 and .71, respectively. Then, discussion was held among the investigators to correct and finalize the instrument.

Data Analysis Procedure

Both descriptive and statistical data analysis were used with a statistical package for social sciences (SPSS version 20). Mean scores of the first semester result and percentages of students at different markers were used to analyze students' academic achievements. A correlation analysis was used to identify factors relating to academic performance; and multiple regression analysis was used to find out independent variables that significantly predicted students' academic achievements. Simultaneously, thematic analysis was conducted for qualitative data and presented along with the quantitative findings.

Ethical Issues

All administrative procedures and research ethical standards were strictly followed in all steps of this study. Permission from public administrative bodies at different levels and consent of study participants were secured before the data collection starts. Objectives of the study and freedom of participants either not to begin or to interrupt their participation at any time if they feel to do so were also communicated.

Results

Socio-demographic characteristics of respondents

The objectives of the study were to find out academic achievements of female students and its major determinants in lower secondary schools at Jimma Zone. To achieve these objectives data were collected from 768 grades nine and ten female students attending their education in five selected secondary schools of Jimma zone in 2007 E.C. (see Table 1). However, 22 (3%) participants failed to fill out the instrument correctly and were excluded from the final analysis which make the response rate around 97%.

Table 1: Sampled Schools and Grade Levels

Variable		Frequency	Percent
Schools	1. Toba Secondary school	166	22.3
	2. Asendabo Secondary school	150	20.1
	3. Agaro Secondary school	143	19.2
	4. Bilida Secondary school	146	19.6
	5. Ambuye Secondary school	141	18.9
	Total	**746**	**100.0**
Grade Level	9th Grade	355	51.60
	10th Grade	333	48.40
	Total	**688**	**100.0**

Table 1 showed schools distribution and grade level of respondents that were included in the study. Accordingly, 166 (22.3%) students were taken from Toba, 150 (20.1%) from Asendabo, 143 (19.2%) from Aggaro, 146 (19.6%) from Bilida and 141 (18.9%) from Ambuye Secondary schools. With respect to grade level of respondents, the table indicated that 355 (51.6%) and 333 (48.4%) participants were selected from grade nine and grade ten, respectively. The mean age of respondents was 16.26 with a standard deviation of 1.10.

The majority of respondents were Muslims 515 (72.2%) followed by Orthodox 167 (23.4%) and the remaining 31 (4.3%) were Protestants with respect to ethnic composition, the majority was Oromo 576 (81.7%) followed by Amhara 67 (9.5%), Gurage 33 (4.7%) and Tigray 29 (4.1%). With regard to the marital status, 31 (4.3%) were married and 690 (95.7%) were not married. Concerning the residence, 306 (49.8%) respondents were from rural areas and 308 (50.2%) lived in urban areas.

Table 2: Socio-demographic characteristics of respondents

Variables		Frequency	Percent
Religion	Muslim	515	72.2
	Orthodox	167	23.4
	Protestant	31	4.3

Ethnicity	Oromo	576	81.7
	Amhara	67	9.5
	Gurage	33	4.7
	Tigray	29	4.1
Students marital status	Married	31	4.3
	Not Married	690	95.7
Residence	Rural	306	49.8
	Urban	308	50.2

Analysis pertaining to academic achievements

Female students' academic achievements

The mean score for grade ten and nine students were almost 70 and 71 with standard deviations of nearly 11 and 10, respectively.

Table 3: Female students' academic achievement by grade level

	N	Mean	Median	Std. Dev
Grade 9	355	69.6672	69.0000	10.83367
Grade 10	333	71.4787	71.4100	9.53292

Further analysis showed that 10%, 25%, 50%, 75% and 90% of female students scored 58.45%, 63.59%, 70%, 76.5%, and 97.1%, respectively in their first semester academic achievements.

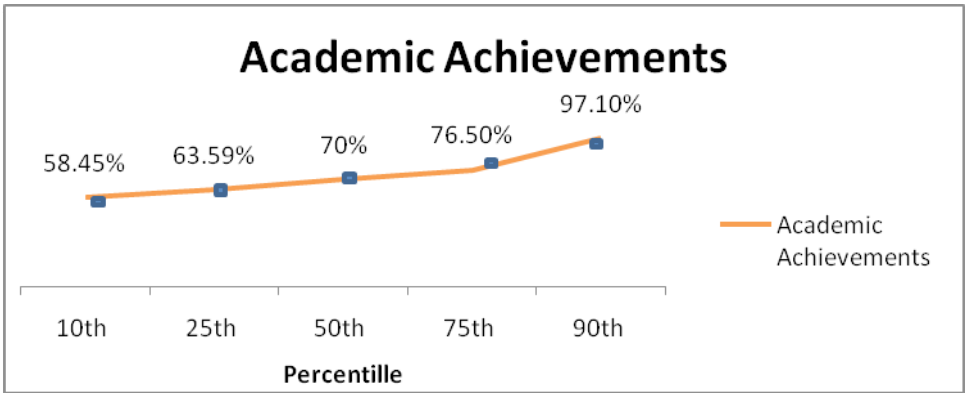

Figure 2: Female students' academic achievement at different markers

With respect to academic achievement of students, the interviewed director and the FGDs discussants agreed female students perform equally as male students in the top achieving categories even exceeding males sometimes. But the problem is in the low achieving category. The FGD participants said that female students' academic achievements increased from time to time and they added that those who stood 1-3 were females most of the time. Some discussants also suggested that females compete equally

with males in the top achieving category but most of female students are categorized under low achieving group. As one discussant said '*large number of female students existed in low achieving category as opposed to their male counterparts'.* Some of the interviewed school leaders added that there were more females than males who got 2.0 or below in grade 10 National Examination. However, some of the interviewed students remarked academic performance of female students is ranging from average to low in general.

Relationship of various factors with academic achievements

Several analyses were conducted to find out how well students' socio-demographic characteristics, students' motivation, teacher's factors, student self-regulation, and family factors related to and predicted students' academic achievements.

Relationship of Socio-demographic with academic achievements

In this research residence, father's/mother's educational level, father's/mother's occupation and income of the family were tested for their relationship with academic achievements. The zero-order correlation analysis indicated that residence (r=.088, p=.035), father educational level (r=.093, p=.021), father occupation (r=.117, p=.003) had weak statistically significant relationship with academic achievements. The rest did not have statistically significant relationship with academic achievements (p >. 05).

Table 3: ***Zero order correlation between socio-demographic variables and academic achievements***

	1	2	3	4	5	6	7
1. Residence	-						
2. Father's education	.148**	-1					
3. Mother's education	.126**	.650**	-				
4. Father's occupation	.488**	.200**	.185**	-			
5. Mother's occupation	.233**	.037	.098*	.269**	-		
6. Income	.103*	.073	.095*	.088*	.080*	-	
7. Academic achievement	.088*	.093*	.077	.143**	.057	.114**	-

**p < .01; *p < .05 (2-tailed).

Students' motivation, parental factor, students' self-regulation and teachers' variables as related to student academic achievements

Student's motivation, parental factor, students' self-regulation and teachers' variable were correlated with students' academic achievements. The correlation analysis indicated that there were weak positive and statistically significant relationship between student's motivation and academic achievements (r=.087, p=<.05), parental factor and academic achievements (r=.107, p=<.05), students' self-regulation and academic

achievements (r=.102, p=<.05) and teachers variable and academic achievements (r=.166, p=<.05).

Table 4: A zero order correlation between students' motivation, parental factors, students' self-regulation, and teachers' factors to academic achievements

	1	2	3	4	5
1. Semester Average	1	.087*	.107**	.102*	.166**
2. Students motivation		1	.254**	.348**	-.022
3. Parental factors			1	.275**	.085*
4. Students regulation				1	-.046
5. Teachers factors					1

The qualitative evidences also generated a wealth of information on factors contributing to low academic achievement among females. These factors could be categorised as family related, students related, teachers related, school related and community related factors.

The interviewed female students mentioned that household chores, going to farm as substitute for males and lack of follow up from parents were some of the factors affecting female students' academic achievements negatively. The FGDs discussants also mentioned various reasons relating to family factor such as lack of follow up from family, lack of model for female students, household chores and lack of awareness among the community as affecting females' education negatively.

The FGDs discussants added that female students from educated family, government workers and from urban areas tend to be successful in their education as they had proper follow up from their families. Specifically, one teacher said that '*students who are from educated family and or government workers are good achievers whereas students with no follow up from families tend to be low achieving.*' The other discussants also added that

> Females who have follow up from family are good and even excelling male students, those who lack the support from their family eventually end up with low performing category. Most female students, however, fall in the low achieving category' and others said that 'Parents only support students economically but there is no follow up for students whose parents are business men or farmers.

The discussants further stated that urban female students perform better than rural students. Some of the interviewed school leaders also shared this view and added that poor follow-up from family, household chores and disallowing students to attend tutorial in opposite shift because a family needs female for house-hold activities were some of the factors for female students' poor academic achievements. One of the interviewed school leaders also noted that *'female students in rural area even eat and study after taking care of the house hold activities. They don't have conducive learning environment compared to their male counterparts.'*

Other factors for low academic achievement for female students rests on students' interest, motivation, resource utilization, aspirations and learning in general. As evidenced from the various parts of the qualitative findings, students had low interest and motivation for learning. One FGD discussant mentioned that '*students don't have a culture of using a library, no culture of reading in a library, students only attend their class and don't have an interest in exerting effort in their education, and barely visit the library*.' One discussant also added that

> It is not appropriate to put all the responsibility on parents. Students also need to take their share as they had low interest in schooling, no base, no interest in utilization of school resources though different initiatives are there (for example tutorial class, laboratory, library) as they are more interested in marriage and travelling to Arab countries after completing grade 10.

Moreover, some students spend their time on the surrounding cafeteria and also attend the 'Shisha' houses than thinking of their education.' Some of the discussants also said that

> Students aspire only for completing grade 10, and even they are not fit for preparatory classes as they lack base and low achievers. As the area is the cash crop area students are not as such interested in their learning because the cash they get after graduation is not as much as they earn from coffee harvesting and trading.

Students' academic background was also one factor for negatively affecting female students' academic achievements. In this regard, one of the FGD discussants added that

> The reasons for poor achieving are not a onetime event. Rather students' background in lower grades contributed a lot. In secondary schools where all subjects are taught in English, the problems of low achieving are vividly apparent as a result of poor students' academic background in English language.

Some of the interviewed students also shared this view. One of the interviewed students said that

> We were good academically when we were in elementary. However, walking 4 hours to and from a school leads to exhaustion to put effort in our education after school. A poor skill in our English language is also another serious problem as most of the subjects are taught in English language in secondary education.

There are also school levels and teacher related factors that negatively affect female students' academic achievements. Some of the discussants put the importance of developing an attitude that female students' business is not only the business of female teachers but also the business of all teachers among the school community. Specifically,

they said that '*affairs of female students are usually left for female teachers'. It should be the responsibility of the school, education office and every body's business.* The discussants added that poor feedback provision from teacher and lack of encouragement from some teachers, poor practices of the continuous assessments, poor communication of teachers with parents about student performances, and lack of female role model and qualified personnel like counselor who address problems of female students were some of the problems affecting academic achievements of females negatively.

Multiple Regression Analysis

Multiple regression analysis was conducted to find out those variables which significantly predicted students' academic achievements taking only those variables which had a statistically significant relationship with students' academic achievements. The relationship of teachers related variables, student's self-regulation and parental factors to students' academic achievements (R=.203) was significant, F (2.608) = 13.084, p<.05. The regression analysis indicated that almost 6% of the variance in students' academic achievements was explained by the linear combination of the variance of teachers related variables, student's self-regulation and parental factors. Teacher-related variables (b= 5.26, t=4.31, p<.05), students' self-regulation (b= 6.86, t=3.01, p<.05) and parental factors (b=5.75, t=2.047.p<.05) predicted significantly students' academic achievements.

Table 5: Beta coefficients, t value and Sig. level of predictors of academic achievements

		Unstandardized Coefficients	**Standardized Coefficients**	**t**	**Sig.**
	B	Std. Error	Beta		
(Constant)	48.534	5.008		9.691	.000
Teachers variable	5.255	1.220	.171	4.307	.000
Students self-regulation	6.859	2.281	.120	3.007	.003
Parental factors	**5.752**	**2.792**	**.099**	**2.047**	**.041**

Discussion

The objectives of the study were to find out academic achievements of female students and its major determinants in lower secondary schools at Jimma Zone, Oromia Region. To achieve these objectives, 746 female students were taken from five schools at Jimma Zone.

The mean score in grades 9 and 10 academic achievement was 70% and 71% respectively. This finding was inconsistent with the findings of National. Learning Assessment (2010) where majority of students in NLA failed and the average academic achievement for females was 32.2%. The reasons for the difference might be that teacher made tests usually have poor validity and the continuous assessments may have contributed to the inflated students' academic achievements. Regarding mark inflation resulting

from continuous assessment is that teachers poorly practiced continuous assessment causing mark inflations. It is because of teachers tending to give students continuous assignments and carelessly marking that did not reflect students' actual performance. A household chore is an important factor influencing negatively academic achievements of female students in this research. We found out that female students usually engage in household chores and thus they don't get the time for studying and even they may be instructed to be absent from regular classes or from tutorial session for doing the family businesses consistent with the findings of other researcher (Atayi, 2008).

We also found out that lack of follow up from parents contribute a lot for low academic achievement of females. Various studies, consistent with the present findings, reported that parental follow up, stimulation and support are very important ingredients for meaningful learning to occur and enhance students' academic achievements (Sumari, Zaharah & Siraj, 2010). Without meaningful parental participation in schooling, learning is at risk. We also discovered that parents who are educated government workers and reside in urban areas support their students in their education and their children achieved better in academic performance consistent with the report of McCoy (2005).

The research also came up with lack of awareness among the community on the benefit of female education which contributes negatively for female academic performances. In line with this, various scholars indicate the importance of the community to have adequate knowledge on the importance of educating females (Uemura, 1999). Otherwise, the whole effort would be in vain with prevailing negative stereotype on female education (Teshome, 2002).

The study also discovered that students' academic background as an important factor in influencing students' current academic achievements. Students need to have a sound academic background to effectively engage in current academic work as various scholars indicated the importance of academic background for latter learning (Zhang, 2014). Contrary to this, we found out that female students have poor academic backgrounds and also poor skills in English language which lead to major problem in understanding the content taught as most of the subjects in secondary education are taught in English (OOSC, 2012).

A long-term aspiration is must for education to be meaningful and also to achieve academically. We found out that students' interest, motivation, poor resource utilization of students, and lack of aspirations for education were also the factors for low academic achievement for female students. We came across that some female students did not have the motivation and the interest for schooling. As indicated by various scholars, students need to have a solid interest and motivation for their education. Otherwise, their education would suffer a lot without these important ingredients of learning (Skaalvik & Skaalvik, 2006).

Poor resource utilization among female students was also one factor for low academic achievement of females. Female students do not have a culture of using library resources. In line with this, various findings have shown that students who attend library regularly can excel academically as library resources can be valuable input to substantiate what they have learnt in class with additional inputs and also can serve as a place for finding a referencing material (Michele, 2003).

We found out that female students did not have long-term aspirations/goals. They simply want to complete grade ten. A long-term aspiration is a must for education to be meaningful and also to achieve academically (Zhang, 2014).

We also found out that some school level and teacher related variables affect female students' academic achievements consistent with the finding of some studies (Akey, 2006; Zhang, 2014). Specifically, there was no concerted effort in school level to improve female students' academic achievements as this effort is left for female teachers only. Evidences show that there should be concerted effort from all the parties to improve female education at all levels. We also came across that poor practices of continuous assessment, poor feedback provision and limited encouragement from some teachers characterize the education of females in secondary schools.

Implementing continuous assessment effectively, providing constructive feedback and frequent encouragement of female students can enhance their academic skills significantly (Martin as cited in Olkaba, 2013). For instance, many studies found out that having female teachers in the school has a positive impact on female students' academic achievement outcomes (Carrell et al., 2010). Therefore, lack of female teachers in school may negatively impact females' students' academic achievements.

Conclusions and Recommendations

Conclusions

The objectives of the study were to find out academic achievements of female students and its major determinants in lower secondary schools at Jimma Zone, Oromia Region. To achieve these objectives, 768 female students were taken from five schools at Jimmie Zone. The study was cross-sectional in nature and with this design we cannot establish direct cause and effect relationship between the variables and thus readers should interpret the findings cautiously. Similarly, the classification of school as high and low performing and the context of Jimma zone might limit generalizing of the findings to other areas and settings difficult. Thus, these limitations should be considered to generalize the findings. Moreover, the first semester academic achievements of students should be interpreted cautiously as the teacher made test may have limitations of reliability and validity. However, in spite of these limitations, the study came up with the following major findings.

- Students' academic achievement as measured by the first semester average score indicated that half of the students score nearly 70% or below and three fourth of students score 76% or below in the first semester academic achievements.

As evidenced in this research, some female students were as competent as male students in the top achieving category but the majority of females were in the low achieving category. These findings may give an insight to the government and the educational officials in every level for giving due emphasis for female students who are in low achieving category rather than only telling success story based on females who were in the top achieving category**.**

- Various factors were responsible for female students' academic achievements. Socio-demographic variables (such as parents education, residence, parents occupation, academic backgrounds), students motivation (such as lack of model for female students , low interest in learning), parental factor (such as household chores, lack of follow up from parents), self-regulation (such as poor resource utilization , no aspiration/goal, low effort) and school and teachers related variables (such as that female students business is only the business of female teachers, poor feedback provision from teacher, lack of encouragement from some teachers, poor practice of continuous assessment, parents poor communication with students, and no qualified personnel like counselor) and communities factor (such as lack of awareness among the community) were the variables affecting female students academic achievements.

Recommendations

In line with the major findings of the study, the following recommendations are made.

The Zonal education heads, the Wereda education Office heads, the school director and teachers need to work hard on improving female students' academic achievements, particularly low achieving females by designing a multi-faceted academic enhancement strategy. The strategies should focus on creating awareness on the importance of follow-up and minimizing household chores for females, motivating students for their learning, reattribution training, designing strategies for students to use school resources and creating awareness among the school community that female academic achievements is the business of all parties, improving feedback provision, create mechanisms of encouragement for females, improving the practice of continuous assessment, improving teacher-parent communication and establishing and strengthening the counseling services. To enhance female students' academic achievements, we recommend a holistic approach involving the various stakeholders at different levels as indicated below.

School level

- Design a strategy of strengthening and conducting effectively the tutorial class for female students emphasising low achieving females;
- Establishing or strengthening the counselling services for females and working on how to bolster female students' self-esteem, motivation and interest towards schooling;
- Inviting model teachers to share their experience to female students and even for teachers;
- Creating a school environment which is attractive and refresh students with

adequate facility;
- Enhancing relationship of school and the community;
- Designing strategies and create awareness for female students on how to effectively utilise school resources;
- Creating experience sharing program for grades 7 and 8 female students with high achieving secondary school female students;

Community level
- Educating the community about the importance of giving time for female students;
- Orienting the community on the negative side of absenteeism in regular classes and for tutorial, and how the burden of household activities deter female students' academic achievements;
- Meeting regularly with parents by creating focal places;
- Creating a culture of experience sharing with parents of high achieving students and with high achieving female students;
- Working in collaboration with Jimma University, College of Education and Behavioural Sciences, to facilitate short term training for teachers on innovative instructional methods, continuous assessment and feedback provision;
- Utilising the media effectively, especially Jimma Fana Radio, JU community radio, for creating awareness among the community on the benefit of female students' education, discussing educational issues with students, parents, teachers and educational professionals;

Government level
- Proper recognition for high achieving students from Wereda office;
- Arranging in service pedagogical trainings for teachers and checking how well the method of teaching is participatory of female students.

Student level
- Creating awareness among student on understanding the reasons for coming to schools and using the school resource (library, laboratory, tutorial) efficiently and effectively;
- Design intervention strategies to enhance students' psychological ingredients of learning such as motivation and self-regulation study;

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Acknowledgements

The authors acknowledge College of Education and Behavioral Sciences, Jimma University for funding the research project.