

Exploring The Influence Of Psychosocial Factors Predicting High School Students Success, Kellem Wollega Zone, Ethiopia

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Abstract

This study was made to examine the influence of psychosocial variables in predicting academic achievements of secondary school students of Kellem Wollega, Ethiopia. The sample was formed of 255 Secondary school students at study time in five government school's Kellem Wollega Zone of which 163 were males, and 92 were females. Multiple regression and step-wise regression analysis was employed to find the contribution of each predictor variables in predicting academic achievement of student. The result of multiple regression and step-wise regression analysis indicates that academic self-concept, father involvement, and parental self-concept have significant and positive effect on academic achievement of students. The proportion of variance in academic achievement by the three predictor variables was 43.5%, 12.4%, and 6.9% respectively. The combined effect of the three predictor variables has 68% variance in academic achievement. The result indicates that all the above-mentioned psychosocial variables correlate positively with academic achievement. But the correlation between academic self-concept, father involvement, and parental self-concept correlates more strongly with academic achievement, $p < .05$.

The result suggests in this particular study educational intervention strategies geared to raise academic achievement would probably be more likely to succeed if they focus on enhancement of academic self-concept of students and, parental involvement. Based on the result of the study parents, students, teachers, and educators in general need to give attention to the role of parent's involvement in their children's schooling by contributing on their part in creating smooth interaction

Key word: Achievement, Psychosocial variables, Secondary school, Socio- economic status

Introduction

Education is the process by which knowledge, skill and attitudes are imparted to the learner and it's the way by which one country produces a qualified man power for country's economic, social, cultural and political development. Further, it is extensively believed that the

expansion of educational opportunities is a keystone to the nation's accelerated socio-economic development. Accordingly, ESDP-IV (MoE, 2005) document described that secondary education is an important part of an industrialization and modernization program and plays a vital role in laying the foundation for the further education of students which supports the

production of higher-level human power. Similarly, if a good foundation is laid at the secondary school level, students can better cope with the challenges of life and profession with great comfort, but at the same time there is a risk of academic failure, detachment from school, and other such negative effects within this adolescent development period (Maslen, Telzer, Fuligin, Lieberman, & Eisenberger, 2012).

However, Academic achievement of students is influenced by different psychosocial problems. Psychosocial factors includes self-concept, self-efficacy, attitude of students toward schooling, interest in learning, study habit, attribution or locus of control, self-efficacy, personality, motivation, creativity, sociability, age, persistence, and intelligence, parental involvement, parental socioeconomic status, parental educational background (Rice, 1992) plays a great role in student's academic achievements and are vital for the provision of high quality teaching and learning process. Whereas negative psychosocial factors mislead teaching and learning techniques, positive psychosocial factors facilitate academic success positively.

The improvement of any society is directly or indirectly linked with students' academic achievement (Mushtaq, 2012). Student academic achievement plays a fundamental role in bringing skilled graduates who will move a country to the right track in the near future (Ali, 2009). And poor student academic success is not only frustrating the students and parents, its effects are equally serious on the society in terms of shortage of skilled manpower in all aspects of the development (Aremu & Sokan 2003).

However, students' academic achievement is greatly influenced by different factors that affect education of country in

general and affect secondary students' academic achievements particularly.

Review of international and national literature has been shown that the psychosocial factors associated with students 'academic achievement is a well-recognized phenomenon, and has received increasing recognition and research attention in recent periods in the research literature (Prendergast, 2006). Accordingly, a number of studies have underlined that psychosocial factors are critical to predict achievement of students in all academic level (Chemers, Hu, & Garcia, 2001). Factors related with these aspects influence the academic achievement of all students of secondary school all over the world. Even though, talent and strength may play great role in influencing individual academic achievement in secondary school, but situational factors also have great deal to do with academic achievement. Many of the difference in academic achievement observed among learners are due not to difference in ability, motivation or beliefs, but due to differences in situations in which these abilities and motives are expressed, (Stemberg, 1989).

According to Rice (1992), students' academic success is significantly affected by different factors, but socio-economic status, family background, parental influence and students' interest in school are the key determinant of academic students' academic success. Educationalists frequently point out the critical role of the home and family environment on academic achievement of students. Hence, while teaching-learning activities are recognized, teachers must first make guarantee to deal with psychosocial factors of learners. A student who is frustrated and emotionally troubled will learn very little, a student who experience creative and positive school environment are much more likely to be

stimulated to realize their potential and to be excited about learning (Ornstein, and Hunks, 2004).

Therefore, the current study focused on selected psychosocial factors that have been associated with the achievement of secondary students' in the research literature and within the power of the individual to influence in some way.

Research question

This study was guided to answer the following basic research questions:

1. What is the relationship between psychosocial factor and student academic achievement among secondary school student Kellem Wollega Zone?
2. What is the Overall influence of psychosocial factors to predict students' academic achievement among secondary school of Kellem Wollega Zone?
3. What are the relative influences of psychosocial variables to predict students' academic achievement among secondary students Kellem Wollega Zone?
4. Is there a difference between male and female students in their academic achievement?

Objectives

General objective

The general objective of this study was to investigate the influence of psychosocial variables to predict students' academic achievement among secondary students in Kellem Wollega Zone. Ethiopia

Specific Objective of the study

The specific objectives of this study are:

- To examine the relationship between psychosocial factor and student academic achievement among secondary school students
- To identify the Overall influence of psychological factors to predict students' academic achievement among secondary student of Kellem Wollega Zone
- To determine the relative influences of psychosocial variables to predicts students' academic achievement among secondary students
- To Examine the difference between male and female students in their academic achievement among secondary student of Kellem Wollega Zone

Materials and Method

Study Design

This study was used both qualitative and quantitative approach with descriptive research survey design in order to achieve the intended objective of the study. Creswell (2007) states survey design provides numeric description of trends or opinion of a population by studying a sample of that population. It is also relatively coast effective way of gathering information from a large number of people. Thus, in order to provide a clear understanding about the influence of selected psychosocial variables to predict student academic achievement among secondary school students of Kellem Wollega Zone.

The quantitative approach be employed because it have strength in dealing with large number of participants which involved in this study and the mainly focuses on gathering

numerical data and generalizing it across groups of people or to explain a particular phenomenon (Creswell, 2003). The researchers, therefore, choose descriptive survey study design with quantitative approaches to gather information in relation to the influence of selected psychosocial variables to predict student academic achievement among secondary school students of Kellem Wollega Zone which is helpful to fill the gap of providing insightful data concerning the topic of the study

Sources of Data

In this study, relevant data collected both from primary and secondary source from which relevance sample is going to be selected for data collection. The primary source of data is students, relevant documents, yearly reports prepared by ministry of education and the wide related literature were used as secondary sources of data.

Population of the study

The population of the study includes all government secondary school students of grade 9-12 which enrolled in the year of 2021 GC in Kellem Wollega zone.

Samples and Sampling Technique

It is difficult and unmanageable to conduct a study in all secondary schools in the Zone by including all target populations, it is important to determine and identify the number of sample schools and the number of respondents. In this study in order to get relevant information about the influence of psychosocial factors to predict students' academic achievements, the study populations were selected by using various techniques. Accordingly, based on the nature of population multistage sampling method was employed to select the sample students from the total population in the study area. In multi-stage random sampling, the researcher chose a sample in two or more stages because either the

researchers cannot easily identify the population or the population is extremely large (Vogt, 2005). Then the researcher randomly samples within each district. Accordingly, out of 12 districts five districts were selected by simple random sampling techniques which is 41 % district of the Zone were taken as a sample. Therefore, the researcher randomly selected Dambi Dollo Town Administration, Dale Sadi District, Sadi Chanka District and Sayo District in Kellem Wollega Zone. After identifying the districts, one sample secondary School selected randomly from each of the five sample districts

Following this, participants stratified based on sex grade and section. After that in each school two classes from each grade level were selected randomly and then, out of total population, sample students were selected from each grade level by using stratified random sampling technique. Finally, participants were selected proportionally from each stratum by utilizing stratified random sampling technique. Finally, to calculate the sample size of this study, statistical equations of Yamane (1967) sample size determination formula was used. His sample size determination formula found to suitable due to the fact that, it is the simplified one in the case of large population. The formula considers 95% of confidence, and 5% of margin of error. The sample size was calculated by using the following standardized formula:

$$n = \frac{N}{1 + N(e^2)}$$

Where: n= required sample size, N= population size, e = margin of error

Therefore, based on the suggested formula from the total population of student who were from Kellem Wollega Zone 255 both male and female participants was selected by stratified and simple random sampling techniques.

Instruments for Data Collection

The study employed both quantitative and qualitative data. Both types of data were gathered by using appropriate data collection tools in order to obtain relevant information from respondents. Thus, the main instruments used for data collection in this study were questionnaire (scales), interview guide, and focus group discussion and documents analysis.

Thus, the tools of data gathering methods were used in the study explained below.

Questionnaires

Questionnaire is a data collection tool, which enables the researcher to get wider information from widely dispersed sample population and make possible an economy of time and expense and provides a high proportion of usable responses (Best and Kahan, 2003).

The questionnaire items were adopted in sight of basic research question of the study. Close-ended items questionnaires were prepared for students. The close-ended items were used when the responses from the respondent are expected clear and easier to be analyzed. It also provides a high uniformity of responses among the sample respondent and to make the response easier to be processed. The questionnaire was filled by students to assess information which can describe the influence of psychosocial factor on student academic performance based on different dimensions. Thus, this instrument was providing the quantitative data that can be properly analyzed statistically. The types of questionnaire will be used to collect data from students: Self-esteem inventory and parental involvement questionnaire. The researchers preferred questionnaires because it is easier to handle and simple for respondents to answer within short period of time (Kohl, 2007).

Self-esteem inventory

Culture free self-esteem inventories (battelle 1992) was used to measure students' self-concept and self-esteem. The scale comprises four sub scales that assess students' general self-concept, (20 items), academic self-concept (10 items) parental self-concept (10 items) social self-concept (10 items). Originally, the instrument comprises items that would be rated on a two-point scale or forced choice format (yes or no) as used by Solomon (1999). For the present study the items were rated on a five-point scale (strongly agree, agree, undecided, disagree, strongly disagree), so as to accommodate any responses other than a simple yes or no.

Questionnaire for students to measure parental involvement

The items in this questionnaire were developed on the basis of activities that can reflect parents' direct and indirect involvement in their children's schooling at home as well as at school. Direct reinforcement of improved performance, and progress, verbal encouragement initiation and reward for better performance general academic guidance, support and supervision, reducing workload at home and providing the child cognitively stimulating activities and events such as talking about currents and educational values at home. Students rated the items on a five-point scale on the basis of their perceptions of their parents' level of involvement in their schooling both at home and at school. This tool is previously done by Adimasu Sajii (2004).

Document Analysis

The document analyses were conducted using the registrar data of the school to know the number of student's enrolment in each year. Generally; all instruments were adjusted and modified through referring the previous studies and consulting experts.

Interview

Interview is the major tool in which a qualitative evaluator seeks to understand the perceptions, feeling and knowledge of people in programs through in depth (Leedy and Ormrod, 2005). In this study, interview guide is the data gathering tools which was used in collecting data from teachers. The reason for using interview was that it could permit the exploration of issues, which might be too complex to investigate through questionnaires and also justified as it allows better chance to explain more explicitly what he/she knows on the issue (Best and Kahn, 2003). The researcher collected data by taking notes during the interview and discussion.

Focus group discussion

The objective of focus group discussion that was held with students was to obtain additional information on students' problems and magnitudes of the problem as well as to secure suggested solution from students themselves.

Data Collection Procedures

Before collecting the data, the pilot testing was conducted at Kellem secondary school which is one of the secondary schools in Kellem Wollega zone in order to check the reliability and validity of data gathering tools. Then, after the pilot testing data was collected, the validity and reliability of data gathering tools was checked and revised depending on comments collected during the tryout. Then, to gather the final data,

the questionnaires were distributed to the selected participants with brief orientation about the objectives and serious follow-up was made collaboratively with the researcher assistant.

Data Analysis

The responses obtained from the students and their academic achievements through different data gathering instruments were analyzed based on the nature of the data. First, the quantitative data was tallied; organized and tabulated and enter into computer by using Microsoft Excel 2010 computer software package, while statistical analysis were done using SPSS 23 version statistical software package. To analyze the quantitative data both descriptive and inferential statistics were employed in order to achieve the objective of the study. Accordingly, frequencies and percentage were used to analyze the demographic features of the participants. In order to examine the overall influence of selected psychosocial variables on students' academic achievements multiple regression was employed while step wise regression were used to identify the relative contribution of each variable in influencing student academic achievement.

Furthermore, Pearson correlation coefficient were used to compute the data relating the inter relationship between the selected psychosocial factor and academic achievements. The probability of less than 0.05 will be used as a cut off point for all significant tests.

Results

Table 1. Educational background of respondent's parents

Level of education	Father or male guardian		Mother or female guardian	
	Frequency	Percent	Frequency	Percent

No education	57	34.97	37	40.2
Primary education	40	24.53	29	31.5
Junior education	25	15.3	11	12
Secondary education	21	12.9	15	16.3
Certificate	8	4.9	-	-
Diploma and above	12	7.4	-	-
Total	163	100	92	100

This section shows the demographic and personal information of the respondents. As displayed in table 1, the gender profile of the study indicates that majority of the respondents were males 64 % female 36 %. Table 1 shows respondents female guardian background in the sampled school 37 (40.2%) of respondents male guardian did not have any formal education (illiterate) whereas 29 (31.5%), 11 (12) of them had gone through primary and secondary education respectively and 15 (16.3%) had certified from college.

The descriptive analysis alone is not sufficient enough to grasp full understanding about the association and strength that exist between

dependent and independent variables. The relationship and strength of association between the variables can be successfully explained with the help of correlation and regression analysis. Therefore, this study used correlation and regression analysis to examine the influence of psycho social factors to predict secondary School student's academic performance Kellem Wollega zone.

Inter-correlation of predictor variable and outcome variable

Table 2 shows inter correlation matrix. Inter correlation matrix is mainly used to evaluate the magnitude and strength of relationship between predictor variables and criterion variables.

Table 2 The inter-correlation of the main variables of the study

	X1	X2	X3	X4	X5	X6	X7	X8	Y
Father education	1								
Mother education	.66**	1							
Academic self-concepts	0.81	-.130*	1						
Parental self-concept	-.153*	-0.05	.238**	1					
Social self-concept	0.03	0.026	0.027	0.071	1				
General self-concept	-0.072	-0.045	.236**	.219**	.125*	1			
Mother involvement	.180**	.242**	0.067	0.004	-0.02	.161*	1		
Father involvement	-.172*	.253**	.375**	.162**	.332**	.209**	-0.004	1	
Academic achievement	.185**	.166**	.660**	.439**	.269**	.420**	.144*	.573**	1

The two significant levels used in correlation analysis are 0.05 and 0.01 used in research report. The correlation coefficients

Following the above empirical test, a matrix of correlation coefficients was generated along with its statistical significance by Pearson correlation to see the influence of psychosocial factors predicting high school student's success. Accordingly, Table 2 shows the Interco-relation among predictor variables (father education, mother education academic self-concept, social self-concept, general self-concept, parental self-concept, mother involvement, father involvement), all predictor variables have significant relationships, showing differences in terms of strength. The link between academic achievement and some of the predictor variables such as academic self-concept ($r=0.66$), father

involvement ($r=0.58$), and parental self-concept ($r=0.44$) were moderate and significant. On the hand, the correlations between academic achievement and other variables like father education ($r=0.19$) and social self-concept ($r=0.27$) were low and although significant.

The overall contribution of Psychosocial Variables on Students' Academic achievement

Table 2 displays the result of multiple regression analysis, in order to evaluate the combined effect of all predictor variables (father education, mother education, academic self-concept, parental self-concept, general self-concept, social self-concept, mother involvement, and father involvement) on the criterion variable (academic achievement) the independent variables were entered simultaneously,

Table 3 Results of multiple regressions

Variable	Regression coefficient	Standard error of (SEB)	Beta (B)	T	P
Academic self-concept	0.727	0,066	0.443	11,056	0
Father involvement	0,187	0.027	0,292	7,050	0
Parental self-concept	0.435	0,068	0,240	6,397	0
General self-concept	0,176	0,039	0,172	4,508	0,000
Social self-concept	0,226	0,070	0,123	3,08	0.002
Mother involvement	0,0521	0,070	0,123	3,208	0,002
Constant	-9,751				

Note: only significant predictor variables are presented here.

As shows in table 6, the analysis disclosed six variables that make significant contributions to the prediction of students' academic achievement. Academic self-concept ($\beta=0.443$, $p<.01$), father involvement ($\beta=0.292$, $p<.01$),

and parental self-concept ($\beta=0.240$, $p<.01$) have significant positive effect on academic achievement in descending order. The inclusion of the remaining variables, nevertheless, in the regression equation did not contribute in any

significant way to the prediction of the academic achievement.

Table 4, Relative contribution variables

Relative Contribution of Psychosocial Variables in Predicting Student Academic achievement

t	Variables entered	R	R2	Adjusted R square	Standard error of	R2 increase
1	Academic Self-concept	0.66	0.435	0.433	7.1245	0.435**
2	Academic Self-concept Father involvement	0.792	0.628			
3	Academic self-concept Father involvement Parental self-concept	0.792	0.628	0.623	5.8053	0.069*

To make the study complete, regression analysis of independent variables on the influence of psychosocial factors predicting high school student’s success was paramount important as the relationship between dependent and independent variables can successfully be explained with regression analysis. In addition to this, regression is a powerful tool for summarizing the nature of the relationship between variables and for making predictions of likely values of the dependent variable (Bryman & Cramer, 2005).

Accordingly, the result of the regression model of social factors analysis in table 5 shows that the step-wise regression analysis. Academic self-concept, parental self-concept, social self-concept, general self-concept, mother education. Father education, mother involvement, and father involvement were the independent variables considered in this analysis. That is, the variables: academic self-concept. Parental self-concept, general self-concept, social self-concept, Academic self-concept (43.5%) father involvement (12.4%) and parental self-concept (6.9%) were statistically significant. The remaining variables (father education, social self-concept, general self-concept, and mother

To evaluate the relative contribution of each predictor variable in predicting academic achievements, stepwise regression analysis was employed,

involvement) which were included in the regression model did not contribute significantly to the prediction of academic achievement. The increase in the proportion of variance in academic achievement that was explained by father education, mother education, social self-concept, and mother involvement was not statistically significant (6.5%) (R2=0.065, p>0.05).

Discussion

The purpose of this study was to see whether or not psychosocial variables (academic self-concept, parental self-concept, social self-concept, general self-concept, father involvement, mother involvement, mother education, father education, and parental socioeconomic status) predict academic achievement of high school students, to this effect, the study investigated the combined and relative predictive power of the aforementioned variables using multiple regression analysis and step wise regression analysis.

From the data one can see that the majority of fathers (34.97 %) and mothers (40.2 %) had no access to. education. On the other hand, few

fathers and mothers were reported to have access up to degree level education.

Similarly, the step-wise regression analysis confirmed that the three predictor variables from first to third taken together explained 62.8% of the variation in students' academic performance. When academic self-concept and father involvement were taken together, they explained 55.9% of the variation in students' academic achievement.

In relation to this, the results from students indicated that a substantial proportion (34.97 %) and (40.2%) of male and female parents respectively had no knowledge and skill to help their children in their education.

The data revealed that academic self-concept and academic achievement are strongly correlated ($r=.660$, $p<.01$) moreover, the step-wise regression analysis has revealed that academic self-concept by itself has statistically significant contribution to the prediction of academic achievement of high school students. It accounts for 43.5 percent of the variance in academic achievement of high school students.

The study was conducted in Kellem Wollega Zone on 163 male, and 92 female students who were selected using stratified random sampling technique. The subjects were sampled from five high schools of Kellem Wollega Zone. The study made use of four instruments (the adapted self-esteem inventory to measure self-concept, parental involvement questionnaire, focus group discussion, and interview). Data on academic achievement were obtained from the record office of the schools.

Result of the correlation analysis indicates that all predictor variables had positive relation with academic achievement. The multiple regression and step-wise regression analyses revealed the

combined and unique effects of the predictor variables.

The three significant predictor variables which contributed more to the academic achievement of students in Kellem Wollega Zone are academic self-concept, father involvement, and parental self-concept. The three significant predictor variables contributed 62.8 percent of the variance in academic achievement.

The overall conclusions from the analysis is that the relationship between academic self-concept, father involvement, parental self-concept is stronger than the relationship between the other psychosocial variables and academic achievement of high school students in Kellem Wollega Zone.

The present study supported the general hypothesis that male and female students have difference in academic achievement. According to the present results, a female earns low scores in their academic performance than do males. Many scholars have considered the origin of sex differences in achievement. Many of these scholars have looked for the origin in female motivational deficits or in expectancy / attritional/ differences, arguing that females avoid male achievement activities because they lack confidence or because they are afraid of the consequences of success.

Conclusion

From the findings, therefore one may possibly arrive at the following conclusion. Academic-self-concept, father involvement, and parental self-concept taken together do significantly predict the academic achievement of high school students. That is, they are jointly responsible for the variation among high school students in their academic achievement.

Regarding the relative contribution of these variables to the prediction of academic achievement, of the nine variables academic self-concept is the strongest significant predictor of high school students' academic achievement while father involvement is the next strong significant predictor of the same dependent variable. The result of the study suggests that mother involvement, mother education, and social self-concept have very small or non-significant contribution to the prediction of academic achievement.

Based on the findings from teachers' interview it can be concluded that parents do not have significant knowledge and skill on how to get involved in their children's education despite the results from different sources (students, teachers, and school directors) indicated that parents were involved moderately in children schooling's .It can be concluded that attracting parents to school can bring parents and school together to work jointly for children's education. It can also be concluded that parents can improve their knowledge and skills on how to involve in their children's education as they communicate with their children's teachers.

More specifically, as parents are attracted to the school, they may be modeling the importance of the schooling and such behavior may provide the

parent with information so that she or he. Can help the children manage his or her schooling?

The present study clearly showed that improvement of the parent's participation particularly fathers' involvement in their children's schooling at home as well as at schooling is beneficial in the attempt to improve student's achievement. The study also suggested that there is a clear difference in the effect of involvement of fathers and mothers in student's academic performance. Targeting on barriers related to mother's involvement such as culture and gender biases are important to raise level of the mother's involved.

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