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THE RELATIONSHIP BETWEEN SEX ROLE STEREOTYPICAL BELIEFS, SELF EFFICACY, ACADEMIC ENGAGEMENT AND ACADEMIC ACHIEVEMENT: IN THE CASE OF TANA HIQ SECONDARY SCHOOL STUDENTS, ETHIOPIA

Abstract: The main objective of the study was to assess the relationship between sex role stereotypical beliefs, self efficacy, academic engagement and academic achievement in Tana Hiq Secondary School. This research was also examining the predictive effects of sex role stereotypical beliefs, self efficacy and academic engagement on academic achievement of students. Data were collected from 287 students through questionnaire and document. Data were analyzed by one sample t-test, independent t-test, Pearson Coefficients and multiple linear regressions. One sample t-test was employed to investigate the level of students' sex role stereotype beliefs, self efficacy, academic engagement and academic achievement. Independent t-test was used to examine if there is significant difference in sex role stereotypical belief, self-efficacy, academic engagement and academic achievement between female and male students. Person Product Moment Correlation Coefficient was employed to explore relationship between sex role stereotypical belief, self-efficacy, academic engagement and academic achievement, and multiple linear regression analysis was used to examine the predictive effects of sex role stereotypical beliefs, self efficacy, and academic engagement to academic achievement. The major findings of the study include students' self-efficacy, academic engagement and academic achievement were significantly higher than the expected levels, there were no significant differences between females and males in sex role stereotypical belief, self-efficacy, academic engagement and academic achievement, the correlations among all variables in this study except correlation between sex role stereotypical belief and academic achievement were significant and positive and students' self efficacy and academic engagement significantly predicted academic achievement. Based on the findings, the conclusions are drawn and recommendations are forwarded.

Key words: Stereotype, Self -efficacy, Academic engagement & Academic achievement.

INTRODUCTION

Gender role stereotypes remain strong influences in society, schools and the daily life in classrooms. A major challenge for educators is to establish classroom environments that do not favour one group of students to the detriment of another group, and recognize that gender role stereotypes remain a major influence on schools' organization, teachers' practices and students' attitudes and behaviours. Gender role stereotyping occurs when a person is expected to enact a series of norms or behaviours based upon their sex. Gender is a social

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construction, and other social categories such as race, ethnicity, class, religion, and language also influence that construction. In most European and North American societies, gender roles divide through male and female behavioural norms. Certain types of behaviours are categorized as masculine or feminine. However, gender as a continuum is social and relational, rather than categorical. In other words, gender only exists as a comparative quality (if people are "less masculine" than others, they are also "more feminine" than those same others, even if their biological sex is the same). Thus, gender role stereotyping occurs when individuals are expected to enact certain practices or behaviours because of their gender (AAUW, 2001).

Gender role stereotypes also influence classroom interactions between teachers and students. First, students who dominate the classroom, answering and asking most of the questions, and using the available resources, are called target students. Regardless of the schooling level, target students are typically white males. Teachers predominantly ask white male students more and harder questions than any other group of students because these students are viewed as inherently smart. If a target student fails to answer a question, teachers will often reconstruct the question, breaking a difficult question into a series of simpler questions to attain the answer. If other students are unable to answer a question, teachers typically moves on, usually to a target student (Scantlebury, K. 2006).

Overall, boys are more likely than girls to answer teachers' questions. Often they call out answers, a risk-taking behaviour expected of males, and seek the teacher's attention. In contrast, girls are more likely to receive criticism rather than praise for such risk-taking behaviour. Teachers reward girls for being compliant, quiet, and helpful, which are stereotypic feminized behaviours. These behaviours in girls are also associated with White culture (AAUW, 2006).

Self efficacy is commonly defined as the belief in one's capabilities to achieve a goal or an outcome. Students with a strong sense of efficacy are more likely to challenge themselves difficult tasks and be intrinsically motivated. These students will put forth a high degree of in order to meet their commitments, and attribute failure to things which are in their control, rather than blaming external factors. Self-efficacious students also recover quickly from setbacks, and ultimately are likely to achieve their personal goals. Students with low self-efficacy, on the other hand, believe he cannot be successful and thus are less likely to make concerned, extended effort and may consider challenging tasks as threats that are to be avoided. Thus, students with poor self-efficacy have low aspirations which may result in disappointed academic performances becoming part of a self-fulfilling feedback cycle (Tamire Andualem, 2006).

According to Bandura (2002), self-efficacy is cognitive and causes self-regulating decisions that determine behaviour, effort, and persistence. Because academic (self-efficacy) belief is cognitive and not the same as behaviour, self-efficacy can be measured separately from self-regulating behaviours and academic results. Therefore, self-efficacy can be used to predict behaviour, effort, persistence, and results.

Engagement is more than motivation or the general desire to succeed in school. It involves participation, connection, attachment, and integration in particular settings and tasks. As such, engagement is the opposite of alleviation isolation, separation detachment and fragmentation. Persons are engaged to a greater or less or degree with particular other

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people, tasks, objects or organizations. Thus, engagement helps to activate underlying motivation and also generate new motivation. Engagement in academic work is a student's psychological investment in learning, comprehending, and mastering knowledge or skills. Students' levels of engagement in academic work can be inferred from the way the complete academic tasks; the amount of time they spent, the intensity of their concentration, the enthusiasm they express, and the degree of care they show (Unger,R.& Crawford,M. 2006).

Academic achievement (performance) is the outcome of education, the extent to which a student, teacher or institution has achieved their education goals. Academic achievement is commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important – procedural knowledge such as skills or declaration knowledge such as facts (Burn, 2004).

Therefore, the current researcher would like to assess sex role stereotypical belief, self-efficacy, academic engagement, and academic achievement. Gender role stereotypes occur when a person expected to enact a series of norms or behaviors based upon their sex. Academic achievement is the average result of the students.

The reason why I was concerned to solve this problem was the following. The primary reason was my interest to improve female's academic achievement in the classroom during teaching learning process by giving moral and award that initiated them to be enthusiastic and strong academic achievement like male students. Obviously, females could not actively participate on the given jobs such as classroom activities or class work, giving answer to question etc. like males because most teachers apply a sex role stereotype on the classroom. Borich and Tombar (2003) stated that teachers calling on boys more for answer during mathematics or science but girls more during language. The stereotypical belief of teachers resulted in the demoralization and discouragement at females not to achieve equally with male students in the classroom.

The second reason was to change females attitude towards them and make them equal competent with male students in the classroom. Most of the time females view themselves as having low capacity to learn all subjects and academic achievement in the classroom. Supporting this idea, Genet Zewdie (2000) noted that due to long lasting influence of the society, females accept themselves as incompetent with male students. They believe that their mental ability to learn is somewhat less than males. As result, they do not exert their full efforts towards education. They lose the interest to study hard, achieve in the classroom and became competent enough in their learning. However, Zufan and Enatalem (2001) in their research assure that students can achieve a better result what they spent enough time in their learning and have a strong self efficacy. i.e., when they hold the motto, "I can do what males do" in contrast, most females ignore this fact and accept, as they are inferior.

The thirds reason was to encourage group discussion in the classroom. Group discussion increases student's interaction with each other and with teacher. As a result, females could develop self-confidence and avoid shyness during the presentation in front of their classmates.

The fourth reasons was to aware the important of education clearly to female students and stimulate them to be academic achievement in the classroom. According to Tsion (2002), education is essential for both boys and girls, but the belief of educating girls tend to be

greater it enables women to respond to opportunities, change their traditional role and their life circumstances.

Traditionally, there has been stereotypical belief regarding female student in our society. Consequently, this belief leads female students to underestimate their potential. Therefore, this study is initiated in closing and narrowing stereotypical beliefs. When the researcher observe the self efficacy of female students in Tana Hiq secondary school female students tend to develop negative attitude towards themselves because of traditional belief of the society towards females. And this has resulted in low academic achievement and performance. While there is good academic engagement among females and male students in the school the stereotypical belief towards female has continued to affect the overall academic situations of female than males.

This study is aimed to answer the following Basic Research questions:
1. What are the levels of sex role stereotypical beliefs, self efficacy and academic engagement and academic achievement of students?
2. Are there significant differences in sex role stereotypical beliefs, self-efficacy, academic engagement, academic achievement of female and male students?
3. Are there significant relationships between sex role stereotypical beliefs, self efficacy and academic engagement and academic achievement of students?
4. What are the joint and individual effects of the predictor variable (sex role stereotypical beliefs, self-efficacy, and academic engagement) to the criterion variable (academic achievement)?

The main objective of this study was to assess the relationship between sex role stereotypical beliefs, self efficacy, academic engagement and academic achievement *Tana Hiq* Secondary School. Accordingly, this study focused on the following specific objectives that explore the level of sex role stereotypical beliefs, self efficacy and academic achievement of female and male students, identify whether there is difference in sex role stereotypical beliefs, self efficacy, academic engagement, academic achievement between female and male students, assess the relationship between stereotypical beliefs, self- academic engagement and academic achievement and examine the effects of the sex role stereotypical beliefs, self – efficacy and academic engagement on academic achievement.

MATERIALS AND METHODS

This study aimed at finding relationship between student's sex roles stereotypical beliefs, self efficacy, academic engagement and academic achievement. Moreover, it attempted to examine the predictive effects of sex role stereotypical belief, self efficacy, and academic engagement on academic achievement of Tana Hiq Secondary high school students. The design of this study was Correlation.

Sources of Data

Grade 9th and 10th students of Tana Hiq secondary school in 2016 academic year were taken as a source of data for the study.

Population, Sample and Sampling Techniques

The target population of this study in Tana Hiq secondary school students of 2016 academic

year. From the total population, 1093 are female and 904 are male. From the total population 15% (300) students were selected as a sample by using stratified random sampling technique to identify those who were involving in this study.

Table 1: Sample Determination

Strata	9th	10th	T	15%
Female	554	539	1093	164
Male	472	432	904	136
	1026	971	1997	300

Source: Tana Hiq Secondary school Record Office

Data Gathering Instruments

Questionnaire and document were used to gather data. Questionnaire was used to collect data from the participants of the study regarding their stereotypical beliefs, self efficacy and academic engagement. Questionnaire is likert scale type with (5) scales ranging from never true of me (1) to always true (5) in the case of stereotypically belief and self efficacy. Where as in the case of academic engagement scales ranging from strongly disagree (1) to strongly agree (5). Stereotypical belief part has 24 items, self efficacy part also has 15 items, and academic engagement part has 44 items. Students' academic achievement was taken from the record office of Tana Hiq Secondary School. The questionnaire was translated in to Amharic Version to avoid language barriers.

Method of Data Analysis

The study used quantitative method. The statistical data was analyzed by using descriptive and inferential statistics. To compute descriptive and inferential statistics, SPSS version 20 was used. Then, the gathered data were analyzed using the following methods of data analysis
1. One sample t-test was used to examine the level of Stereotypical belief, Self efficacy, Academic engagement and Academic achievement.
2. Independent samples t-test was used to compare mean scores of female and male students
   Stereotypical belief, Self efficacy, Academic engagement and Academic achievement.
3. Pearson product moment correlation coefficient was used to see whether there is relationship between variables.
4. Multiple regression analysis was used to investigate whether Stereotypical Belief, Self efficacy, and Academic engagement Predict students' Academic achievement.

Results

Level of Sex Role Stereotypical Beliefs, Self Efficacy, Academic Engagement and Academic Achievement

To investigate the level of students' sex role stereotype beliefs, self efficacy, academic engagement and academic achievement, one sample t-test was employed. Results of one sample t-test are presented in table 2.

Table 2: Mean score, Standard Deviation and one sample t-test for STB, SE, AE and AA

Variables	Expected Mean	Actual Mean	SD	t-Value	df	Sig(2tailed)
STB	72.00	72.76	15.50	0.83	286	0.405
SE	45.00	49.69	9.50	8.38	286	0.000
AE	132.00	149.34	27.83	10.56	286	0.000
AA	50.00	62.47	10.11	20.89	286	0.000

Key: STB=stereotype belief; SE=self efficacy; AE= academic engagement & AA=academic achievement

As can be seen from Table 2, the actual mean of academic achievement was significantly higher than the expected mean (t= 20.89 at α =0.000). The observed mean of academic engagement was significantly different from its expected mean (t= 10.56 at α =0.000). The actual mean score of academic engagement was significantly higher the expected level. This indicated that students engage in their educational activities. The actual mean score of students' self efficacy was also significantly higher than the expected level (t= 8.38 at α =0.000). This showed that students have higher level of self efficacy than the required level. The observed mean of stereotype belief was not significantly differently from the expected mean (t= 0.83 at α =0.405).

Comparison of Male and Female Students in STB, SE, AE and AA

To examine the significant difference in sex role stereotypical belief, self-efficacy, academic engagement and academic achievement between female and male students, independent t-test was used. Results from independent t-test are presented in Table 3.

Table 3: Independent Samples t-test for Female and Male Students

No	Variables	Gender	N	Mean	SD	Mean Difference	t-value	Df	Sig. (2-tailed)
1	AA	Female	158	63.05	10.35	1.29	1.069	285	0.286
		Male	129	61.76	9.80				
2	STB	Female	158	72.44	16.78	-1.16	-1.042	285	0.298
		Male	129	73.60	13.29				
3	SE	Female	158	50.22	10.19	1.13	1.023	285	0.307
		Male	129	49.09	8.58				
4	AE	Female	158	151.74	29.48	5.34	1.621	285	0.106
		Male	129	146.40	25.46				

Results from independent t-test showed that there was no significant difference between female and male students in sex role stereotypical belief, self-efficacy, academic engagement and academic achievement (t= -1.042 at p =0.298, t= 1.023 at p =0.307, t= 1.621 at p =0.106 and t= 1.83 at p =0.286, respectively). This implied that sex has no significant effect on students' stereotypical belief, self-efficacy, academic engagement and academic achievement.

The Relationships between Sex Role Stereotypical Beliefs, Self Efficacy, Academic Engagement and Academic Achievement

To explore relationship between sex role stereotypical belief, self-efficacy, academic engagement and academic achievement, Pearson Product Moment Correlation Coefficient was employed. The results of this analysis were presented in Table 4.

Table 4: Means, Standard Deviations and Correlation Coefficients for Stereotypical Beliefs, Self Efficacy, Academic Engagement and Academic Achievement (n=287)

Variables	STB	SE	AE
SE	0.148*		
AE	0.234**	0.643**	
AA	0.102	.414**	.381**

p<0.01**, p<0.05*

The results from correlation analysis showed that students' self efficacy and academic engagement were significant related to academic achievement (r=0.414 at α=0.01 and r=0.381at α 0.01), respectively. This indicated that students who reported high level of self efficacy and academic engagement tended to score higher. The relationship between sex role stereotypical belief and academic achievement was not significant but positive. The correlation of academic achievement with all independent variables was positive, which implied that their increment might result in better academic achievement.

Regarding the relationships among the independent variables (sex role stereotypical belief, self-efficacy and academic engagement), sex role stereotypical belief was positively and significantly related to self-efficacy and academic engagement(r=0.148 at α=0.05 and r=0.234 at α 0.01), respectively. The correlation between students' self efficacy and academic engagement was positive and significant (r=0.643 at α 0.01). The relationships among all predictor variables were found to be significant and positive. That is, rise in one of predictor variables might bring about growth in the others.

The Predictive Effects of Sex Role Stereotypical Beliefs, Self Efficacy, Academic Engagement to Academic Achievement

To examine the predictive powers of sex role stereotypical beliefs, self efficacy, and academic engagement to academic achievement, multiple linear regression analysis was used. The results are indicated in Table 5.

Table 5: Regression Coefficients and Multiple Regression values for **Sex Role Stereotypical Beliefs, Self Efficacy and Academic Engagement** *(n =287)*

Variables	Beta	t-value	P
STB	0.015	0.265	0.791
SE	0.288	4.138	0.000
AE	0.192	2.715	0.007
Overall R=.441,	R^2 =.1945	F(83.29, 1895.83) = 22.763, p=0.000	

As it can be seen from Table 5, students' self efficacy (β= 0.288, t=4.138, P = 0.000) and academic engagement (β= 0.192, t = 2.715, p = 0.007) were found to significantly predict academic achievement. But, sex role stereotypical belief did not significantly predict academic achievement (β= 0.015, t = 0.265, p = 0.791). The joint contribution of the independent variables treated in the study to the dependent variable was 19.45% (R=0.441, R^2=0.1945, F (83.29, 1895.83) = 22.763, p<0.000). Students' self efficacy together with academic engagement explained 19.45% (98.92% of R^2) of the variance in academic achievement. Students' self efficacy alone had contributed 11.92% (61.29% of R^2) of the variance in academic achievement.

Discussions

Based on the results obtained, this section presents the discussion on what the findings implied, practical indications, and the possible conclusions, and recommendations were drawn. An attempt was also made to answer the leading research questions, and showed the study's relevance to prior research. The discussion was interwoven with the existing literature and with points under the leading research questions raised earlier as thematic priorities.

As to the research question 1: What is the level of Stereotypical Belief, Self-Efficacy, Academic Engagement and Academic Achievement in female and male students? The study revealed that the observed mean of academic engagement is significantly higher than the expected mean. From this result it is possible to infer that students of the study area engage in their education activities. The finding of this study is in line with Sharine (2003) which concluded that students engage in their educational activities at each of their respective study areas. The finding of the study on self-efficacy is supported by Bandura's (2002) social cognitive theory, the choices that individual makes and the actions she/he will follow will be influenced by self efficacy beliefs.

Regarding research question 2: Are there differences in sex role stereotypical beliefs, self-efficacy, academic engagement, academic achievement of female and male students? An independent t-test was computed. Then, the result showed that there is no significant difference in academic achievement, self-efficacy academic engagement and stereotypical beliefs between male and female students. On the other hand, significant mean difference was not observed in self-efficacy and others between female and male students.

3. Are there relationships among sex role stereotypical beliefs, self efficacy, academic engagement and academic achievement of students?, The results of Pearson product moment correlation analysis shows that there was significant and positive correlation between academic engagement; academic achievement and stereotypical belief, and stereotypical belief and academic engagement were significantly positive correlation. Besides, self efficacy and stereotypical belief, academic engagement and self-efficacy, and academic achievement and academic engagement were significantly positive relationship. In the same way, the finding is consistent to studies like Rayner (2001) mentioned that there is a positive relationship between self efficacy beliefs and academic achievement; and the effect of skills, pervious experience, mental ability or other self beliefs on subsequent achievement can be medicated by these self efficacy beliefs.

4. What are the joint and individual effects of the predictor variable (sex role stereotypical beliefs, self-efficacy, and academic engagement) to the criterion variable (academic

achievement) of students? The result of the regression model showed that the predictor variables, i.e. self efficacy, and academic engagement were the predictors of academic achievement. In contrast to this Stereotypical beliefs, do not influence academic achievement of students. In addition, the three significant predictors of academic achievement, self efficacy has the highest t-value followed by academic engagement and the stereotypical belief respectively. The analysis showed that students self efficacy together with academic engagement had predicting power of 19.45% (98.92 of R^2) of the variance of academic achievement. Self efficacy alone predicts 11.92% of students' academic achievement. From this discussion it is possible to say that students of the study area perform better with high self efficacy and academic engagement. But stereotypical belief has no prediction power of students' academic achievement.

Conclusions

The main objective of the study was to assess the relationship between sex role stereotypical beliefs, self efficacy, academic engagement and academic achievement in Tana Hiq Secondary School. This research was also to examine the predictive effects of sex role stereotypical beliefs, self efficacy and academic engagement on academic achievement of students. Questionnaire was administered to these 300 students in their classrooms. From 300 students, 287 of them appropriately completed the questionnaires. The instrument was Likert Scale type with five point scales. This instrument was used to gather data about sex role stereotypical beliefs, self efficacy and academic engagement. Data about academic achievement were collected from record's office of Tan Hiq Secondary School. Data were analyzed by one sample t-test, independent samples t-test, Pearson Coefficients and multiple linear regressions. One sample t-test was employed to investigate the level of students' sex role stereotype beliefs, self efficacy, academic engagement and academic achievement, independent samples t-test was used to examine if there is significant difference in sex role stereotypical belief, self-efficacy, academic engagement and academic achievement between female and male students, Pearson Product Moment Correlation Coefficient was employed to explore relationship between sex role stereotypical belief, self-efficacy, academic engagement and academic achievement, and multiple linear regression analysis was used to examine the predictive powers of sex role stereotypical beliefs, self efficacy, and academic engagement to academic achievement

Recommendations

Based on the conclusions, the following recommendations are forwarded.
1. The study showed that the students have high self-efficacy, academic engagement and academic achievement. Hence, teachers, school principals, and district education office should design mechanism to strengthen the existing, students' self-efficacy academic engagement and academic achievement level. As a result, they can perform better academically.
2. The study indicated that students' self-efficacy, academic engagement, and academic achievement have positive relationship. Hence, the school community should understand these and support the students to develop appropriate levels of academic efficacy and academic engagement to promote students' academic performance.
3. The results suggest that self efficacy has positive contribution and academic engagement for academic achievement. Therefore, parents, teachers, principals and other stakeholders should help students to facilitate development of self efficacy and

to be engaged in educational activities to improve students' performance.

4. Finally, the findings of this study suggest that qualitative study is necessary to examine the reasons why and how the variables affect students' academic performance.

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