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An investigation in to factors affecting female students' academic success in Ethiopian higher education

Obsa Kebede Wakuma[1]

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Abstract
The porpuse of this study was to investigate the factors affecting female students' academic success in Ethiopian higher education. To clarify reliable data from the participants, the study used a descriptive survey. The investigation was carried out using a combination of methodologies. One hundred regular undergraduate female students were selected for the sample population using simple random sampling techniques, proportional sampling method, and stratified random sampling because the students were divided into heterogeneous colleges and departments. The methods for gathering data were a questionnaire and concentrated, targeted group discussions. Primary and secondary sources of information were reviewed in order to gather reliable data. The obtained data was sorted, tabulated, and looked for patterns under the distribution of percentages and frequencies using the descriptive method of analysis. The results of this research demonstrate multiple factors influencing female students' academic performance in higher education institutions, including those connected to the institution, families, individuals, and instructors. The conclusions urge the involvement of all stake holders in order to resolve this issue.

Keywords Academic success · Affect · Factors · Female students · Investigate

1 Introduction

In the context of globalization and technological advancement, education is a prerequisite for all human endeavours. It is linked to people's opportunities for improved living and well-being and is crucial to the development of human capital [3]. People get the knowledge and skills necessary to increase productivity and lead better lives, it is guaranteed. Productivity gains also generate new sources of income, which support a country's economy even more [47].

Strong evidence of gender inequality worldwide is reported in line with Dahal et al. [15]. This implies that gender disparities occur in areas including social, economic, and educational. Most studies indicate that women are lagging behind in the areas of politics, economic issues, education, and the workforce.

Women's education history began with the passionate discussions regarding their right to an education, but the battle has been won. There aren't many strong, dependable measures in place to guarantee that women's access to education is preserved, despite the fact that they have a legally recognized and expressly recognized right to education [46]. The gender ratio in educational systems varied over the world, as evidenced by a multitude of sources. Equitable access to education has not been achieved in many countries [13, 61].

✉ Obsa Kebede Wakuma, obsakebede5@gmail.com | [1]Department of English Language and Literature, Bule Hora University, Bule Hora, Ethiopia.

Male and female have different educational experiences in a variety of areas, particularly enrollment, completion, and performance [35]. People who are less educated could find it more difficult to escape the global poverty cycle, which disproportionately impacts women. Studies show that women face several challenges while attempting to enroll in and successfully complete courses of study at all educational levels in developing nations. This research has highlighted some of the limitations. These include: religious beliefs, young marriage, cultural labor division, national and family poverty, and the career choices made by girls [42, 51].

Gender-based violence, sexism school curricula, religious beliefs, poverty, women's multiple roles, lack of physical facilities, restricted access to resources, university factors, individual factors, and proximity to nightclubs are the main causes of decreased female enrollment and participation in education [8, 21]. Ethiopia's Ministry of Education has been carrying out several programs to raise the proportion of girls enrolling in higher education. Hence, this study attempted to assess the factors affecting female students' academic success at Bule Hora University.

1.1 Problem statement

Throughout the world, female are more illiterate than males are. Typically, female lag behind male in terms of high school and college enrollment [14]. When females who had previously faced obstacles to their education finally make it to school, many of them become victims of peer and instructor sexual abuse and harassment [31, 50, 53]. Hassen and Mohammed [26] assert that male and female pursue significantly different courses, resulting in distinct career and educational pathways.

Abdulkadri et al. [1] conducted a study on gender equity in the New Delhi school system and concluded that the differences in educational performance between boys and girls can be attributed to unequal access to education. Despite advancements in women's access to education, there is still sex discrimination in the educational system. Research indicates that gender differences in the courses taken throughout high school lead to different educational and employment routes for men and women.

Girls, along with their families and the communities in which they live, gain a great deal from education, as stated by [19, 44]. Investing in human capital can be especially beneficial for female in developing countries, where gender parity in education often lags behind. Without educating female, female's efforts are weaker and national endeavors could prove less successful. Equal access to education for male and female is equally important. Women's involvement in education is characterized by low enrollment and poor performance in many developing countries [12].

In line with Raymond's [45] findings, most African societies prioritize the education of boys over that of girls. While some females overcame various obstacles to enroll in higher education, the majority continue to deal with issues specific to their gender and to obtain credentials once they do [10, 20]. Female students have various consequences from gender-related issues in higher education [11, 59, 63]. Poorer academic performance, a larger likelihood of dropping out, and a decreased likelihood of eventually finding a better career are among them. Scholars such as Bareke et al. [6], Hussen and Workie [28] assert that there is a significant issue with educational opportunity gaps in Ethiopia between and among different social strata.

Some local researchers like Desta and Amare [16]; Tiruneh and Petros [56], Zewdie and Dagne [65] conducted research on related topic. The finding of their study shows that background knowledge, department choice and studying strategies affect students performace.At the time this study was conducted, a variety of factors affected the academic achievement of female students at Bule Hora University. Academically, female pupils performed worse than male students, with a few notable exceptions. The academic performance of female pupils is, nevertheless, improving at the moment. However, previous research about female students' performance, both domestically and abroad, has not adressed the topic of this study.

1.2 Objectives of the study

Investigating the factors influencing female students' academic success in higher education institutions was the main goal of this study. Drawing from this overarching goal, the subsequent specific objectives were formulated to:

- Determine the primary variables influencing the academic achievement of female students.
- Pinpoint the main environmental factors, both on and off campus that affects female students' academic achievement.
- Evaluate the impact of instructor-related, institutional, personal, and parental factors on the academic achievement of female students

1.3 Research questions

The following research questions were addressed in order to evaluate the variables influencing female students' academic performance.

1. What variables impact the academic achievement of female students?
2. What are the primary external factors, both on and off campus, that impact the academic achievement of female students?
3. What factors, relating to institutions, individuals, parents, and teachers, influence the academic achievement of female students?

1.4 Review of related literature

Though availability of space is a cost or supply element for individual family when making schooling decisions, it may also represent community demand for schools. A vital issue for the advancement of all societies, the role of women in development is most directly tied to the objective of comprehensive socio-economic development [5, 49]. There cannot be complete socio-economic growth through any development strategy that disregards the need to elevate the status of women. Rather from being a burden or expense, or even a token act of kindness to a marginalized group, women's roles are dynamic factors and significant assets for the process of growth as a whole [18].

Niaz [39] and UNICEF [60] contend that unrelated to policies and strategies for economic development or the structural changes in societies that result from economic changes, the dispersed, piecemeal, or curative approach to women's advancement views women as passive subjects of protection or as recipients of marginal welfare and social service. In most developing and even developed countries, such strategies have not been able to stop women's increasing marginalization in the political and economic spheres [54]. Without an integrated approach to development, a fragmented perspective on women's roles in development has been maintained, leading to the unsatisfactory option of advancing women through social welfare, humanitarian, and demographic approaches without paying enough attention to the changes required to establish environments where women can realize their full potential as development factors [58].

The development strategy for economic growth, human resource and material equity at the national and international levels should instead be implemented through an integrated and participatory approach that takes into account women's roles in development, their aspirations, and the critical areas, issues, and decisions in the strategy [27]. Recent study indicates that children are contributing more time and effort to the household economy. Girls frequently bear heavier loads than boys do. Putnick and Bornstein [43] state that girls can still make a financial contribution to the family by taking on childcare responsibilities, helping with household duties, working in the garden or in the field, obtaining and carrying items, engaging in commerce, and processing additional goods for sale.

In lower-class homes where there is a diminished awareness of the benefits of girls attending school, the amount of time girls spend participating in these activities can be especially noteworthy [9]. The extent and shape of development is determined by social and cultural patterns. In primitive communities social and cultural patterns were of a sample nature and factor influencing the state of education were few and clearly defined. However, in sophisticated communities, those are many, intricate elements. Education meets societal needs by creating human capital and writing [36].

Women's engagement in education is marked by low enrollment and subpar performance in many developing nations [17]. A nation's political, cultural, and economic facets are all significantly impacted by the substantial contribution that female education makes [57]. Somani [52] aserts that an educated woman will probably become: a more capable and informed mother,a more productive and well-paid worker; an informed citizen; a self-assured person; and an expert decision maker.

Their participation in public and political life is enhanced by education. While there are always potential advantages to education, women's education frequently has a bigger and more powerful effect than men's education [29]. This does not imply that men should not pursue an education. A study conducted in Ethiopia revealed that girls' low school attainment was associated with lower levels of literacy, political integration, and economic production [7].

Since women comprise at least half of the population in developing nations like Ethiopia, it is crucial to educate them. Additionally, women's participation in the development process shouldn't be minimized, as their education is a critical issue. Ethiopia, being a developing nation, cannot afford to overlook the advantages of utilizing the intellect and skills of both genders in laborious tasks. Furthermore, it may become clear that women's emancipation and education are closely related, and that women's independence is a direct result of how much education they receive [24, 48].

1.5 Theoretical framework of the study

The investigation's theoretical underpinning was Pearson's hypothesis, which states that all behaviors are determined by social roles and interactions between male and female. Gender roles as established by society are assumed here. It is clear that discrimination against women occurs in society since society appears to be the final arbiter of what exactly male and female accomplish and contribute to reproduction and production [37, 38, 59].

Biases have an impact on male's and female's performance in almost every aspect of life, including business, education, environmental development and conservation efforts. The gender relations paradigm developed by Pearson was deemed suitable for this study due to its emphasis on the different social, cultural, and economic norms and standards that female must take into account when they take advantage of social possibilities like schooling (Fig. 1).

The conceptual framework for this study was an attempt to assess the variables influencing female students' academic performance in higher education as well as the connections among student characteristics, socioeconomic, sociocultural, and institutional variables that affect female students' achievement.

1.6 Methodology of the study

A detailed presentation of the study design, subject, sampling strategies, data collection tools, data collection processes, and data analysis is provided within the chapter.

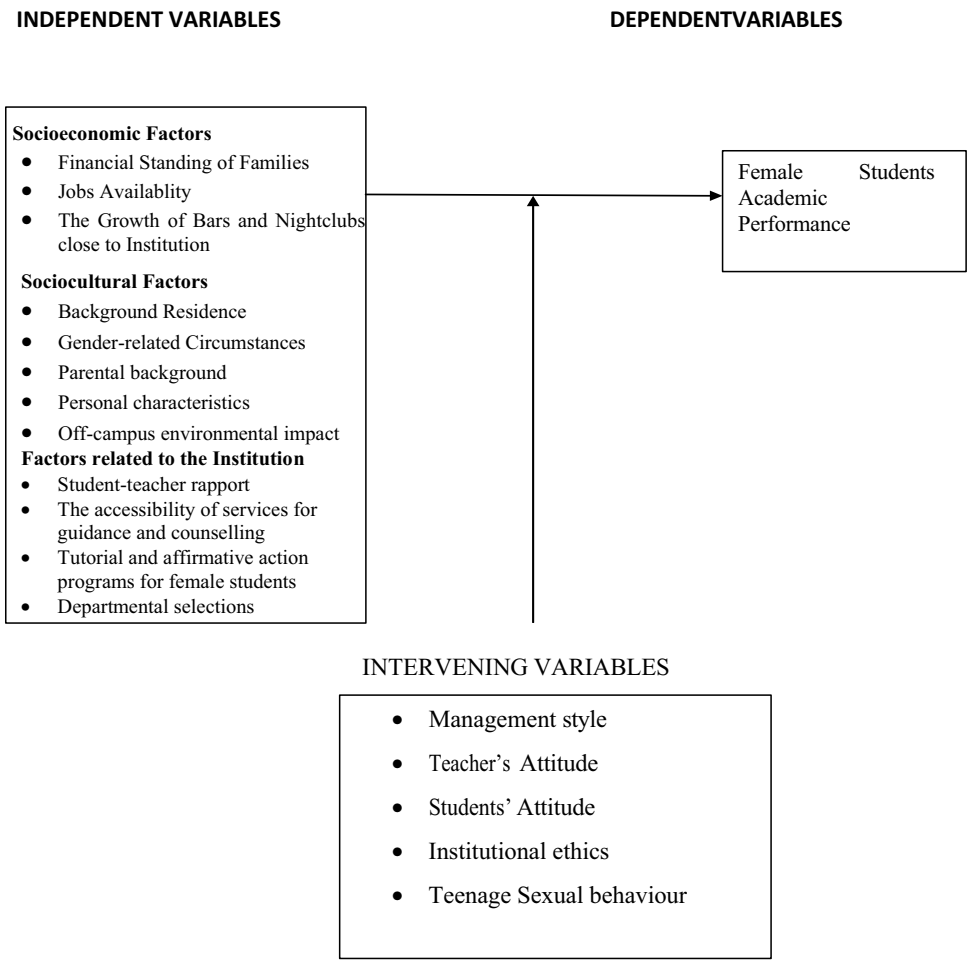


Fig. 1 Conceptual framework of the study

1.7 Research design

The purpose of the study was to evaluate the factors influencing female students' academic success in postsecondary education. Therefore, a descriptive survey was selected since it allows the researcher to provide an overview of the state of a certain field of study. For the purpose of investigating a phenomenon, a descriptive study can be useful [2]. Stated differently, descriptive research is utilized to characterize and explain the state of things and to derive reliable generalizations within their natural context [30]. To offset the drawbacks of using a single kind of research approach, the researcher combined qualitative and quantitative techniques.

1.8 Research participants

The study's focus was on female students from Bule Hora University. Female undergraduate students in their second year and higher were chosen due to their extended university attendance, which may have given them a thorough awareness of the factors influencing female students' academic success.

1.9 Sample dimensions

The study was conducted at Bule Hora University. The focus of the study was on 427 female students.

Background characteristics of the respondents

College / School of Respondents	Frequency	Percentage %
College of Business and Economics	39	39
College of Social Science and Humanities	38	38
College of Behavioural Science	18	18
School of Law	5	5
Total	100	100

As indicated in the above table, to obtain the necessary and representative data, a sample of one hundred female students was drawn from the total. Out of each college, one hundred female students were selected. Consequently, the College of Business and Economics accounted for 39% of the selected participants, followed by the College of Social Science and Humanities 38%, the College of Behavioural Science 18%, and the School of Law 5% respectively.

1.10 Strategies for sampling

The research employed several methods of sampling. Given that students are divided into diverse departments and colleges, implicit stratified and stratified random sample techniques were applied. Since departments and colleges have varying sizes, proportionate sampling was then utilized to divide the sample among them. Lastly, the simple random sampling method was used to choose the respondents. 100 female students from one school and three colleges were chosen at random using this manner. Simple random sampling and a proportionate sample size distribution to each college were utilized to choose the respondents because the populations of colleges vary. This sample strategy made use of the lottery method.

1.11 Sources for information

Both primary and secondary sources of data were used to gather the information. A questionnaire and targeted group discussions are two examples of the primary sources. Published materials from the library and unpublished materials from the internet are examples of secondary sources.

1.12 Data collection techniques

Questionnaires and targeted group discussions were employed as the data collection tools. *Questionnaire*: Data collection from students was accomplished through the preparation of both closed-ended and open-ended questions. The insight gained from the study's objectives, research questions, and literature review was used to design the questionnaire's items. This was done with the inclusion of contextual data, institutional factors, individual factors, instructor factors, and parent-related factors.

Focused group discussion: Cross-checking the data obtained from the questionnaire was done through semi-structured focused group discussions. As part of this study, three concentrated group discussion were conducted. The researcher decided to include the four female students who took part in one concentrated group discussion.

1.13 Variable description

The study includes variables that are both independent and dependent.

1.14 The study's dependent variables

The academic achievement of female students was the dependent variable in the study.

1.15 The study's independent variables

The study's independent variables were divided into the following categories.

Socioeconomic factors: The financial standing of families; the dearth of jobs available in their field; the growth of bars and nightclubs close to the institution;

Sociocultural factors: Female students' background residence and gender-related circumstances both inside and outside the university have an impact on their academic achievement.

Factors related to the institution: Student–teacher rapport, the accessibility of services for guidance and counselling. Tutorial and affirmative action programs for women, departmental selections, water supply and greenery are examples of environmental sanitation. Moreover, the primary determinants influencing the academic success of female students were personal characteristics, parental background factors, off-campus environmental factors, and university-related factors.

1.16 Procedure for data analysis

Using a descriptive method of analysis, the acquired data was arranged, tabulated, and examined for commonalities under percentage and frequency distributions. To evaluate the quantitative data, SPSS16.0 was used. Furthermore, the qualitative data was characterized as additional supporting evidence for the quantitative data.

1.17 Moral points to remember

Researchers need to be aware of the ethical responsibilities and legal constraints associated with information collecting and reporting in order to protect the rights and welfare of study participants. The ethical issues surrounding the study were mostly related to participant rights. These include getting permission before starting the study. Confidentiality, informed consent, anonymity, protecting participants from harm, and telling the truth to each and every participant are the most important ethical considerations.

1.18 Display, analysis, and interpretation of data

The presentation, analysis, and interpretation of data gathered via questionnaires and focus group discussions are covered in this chapter. It was investigated how various circumstances affected the performance of the students. The background information for the female pupils served as the basis for the interpretations.

Table 1 Respondents Responses related to institutional factors

ITEM	Institutional related factors	Very high		High		Low		Very low		Total	
		F	%	F	%	F	%	F	%	F	%
1	Inability to obtain educational and literary materials	16	16	36	36	37	37	11	11	100	100
2	Counselling services are not available to female students in an effort to boost their academic achievement	37	37	33	33	20	20	10	10	100	100
3	There are no incentives given to female college students who perform well on exams	21	21	38	38	30	30	11	11	100	100
4	Lack of a suitable, attractive room with vegetation that is suitable for learning	19	19	27	27	31	31	23	23	100	100
5	Lack of female affirmative action in higher education	41	41	33	33	18	18	8	8	100	100
6	Inadequate food and water supply and quality at the university	53	53	23	23	10	10	14	14	100	100
7	Unavailability of position	31	31	30	30	23	23	16	16	100	100
8	The inability of students to choose their desired department	50	50	23	23	19	19	8	8	100	100

The percentile distribution of the variables influencing female students' academic achievement is shown in Table 1. Regarding the lack of instructional and reading materials, the findings show that whereas 37% and 11% of female respondents had extremely low academic performance, 16% and 36% of female respondents had high and very high academic performance, respectively.

With reference to the lack of guidance and counselling services for female students, the findings show that, respectively, 37% and 33% of all respondents had very high and high academic performance. While 10% and 20% of the female respondents, respectively, performed poorly or extremely poorly in school, correspondingly. Because 70% of respondents stated that the lack of guidance and counselling services had a significant negative impact on their academic performance, we can draw the conclusion that female students have been offered limited guidance and counselling services.

The focus group participants further corroborated this finding by stating that their academic performance was impacted by the lack of guidance and counselling services. There was no counselling or other kind of support available to them when they were depressed due to mental stress, which prevented them from getting better at their mental and academic issues. For instance, they needed assistance and counselling on matters pertaining to gender, but they were not provided with the necessary services. Their inability to access guidance and counselling services consequently had an impact on their academic achievement.

Regarding the lack of awards for female students who excel academically, the results show that 21% and 38% of the respondents, respectively, felt it had a very high and high effect on their performance. However, according to 30% and 11% of respondents, it had little to no impact on their academic achievement, respectively. This leads us to the conclusion that these elements hindered female students' ability to achieve well academically.

A deficiency of visually appealing green spaces that were appropriate for studying was another factor negatively impacting the academic performance of female students. According to the results, 19% and 27% of the respondents, respectively, thought that this issue had a very high and high impact on the academic performance of females, whereas 31% and 23% said it had a low and very low impact. It can be inferred from this that a deficiency of visually appealing green spaces has no effect on female students' academic achievement.

A further factor influencing the academic achievement of female students was the absence of affirmative action programs. In the fields of education and employment, affirmative action encompasses a wide range of both required and voluntary initiatives that can support the advancement of women and minority groups [23]. Regarding this matter, 41% and 33% of the participants said that the element in question had a very high and high impact, respectively, on their academic achievement. Additionally, 18% and 8% of those surveyed claimed that, depending on their academic achievement, this element had a minimal or very minimal impact. Also, they stated that they require affirmative action in the form of tutorial classes and other comparable assistance. Thus, it is reasonable to draw the conclusion that students' academic success is impacted by a lack of affirmative action. The answers to open-ended questions are even more convincing since the participants said:

> Because we were not given tutorial classes or other opportunities to improve our academic performance, we require affirmative action at the university. Affirmative action played a positive role in enhancing our academic achievement prior to entering university. However, affirmative action was not available after enrolling in the

university. Because of the numerous barriers that affected our performance, including those related to our gender and other reasons, we achieved less than men.

Data from targeted focused group discussions confirmed that the institution's lack of deliverology services and attention to detail is the reason why female students haven't yet got tutorial classes.

Their academic performance was also impacted by the university's supply of poor-quality food and water. As the results convey, 53% and 23% of the respondents, respectively, were looking for a reliable source of food and water at the institution. They claimed that the availability of wholesome food and clean water had a significant impact on their academic achievement, respectively. Conversely, around 10% and 14% of those surveyed claimed that this issue had no effect at all on academic success, respectively. The aforementioned rationale leads us to the conclusion that their academic performance is impacted by a lack of wholesome diet and water.

Another factor influencing female students' academic performance in universities was the dearth of role model female lecturers. About 31% and 30% of respondents, respectively, claimed that this element had a very high and high effect on their academic performance. Yet, 23% and 16% of respondents, respectively, claimed that this issue had a very low and low impact on the academic achievement of females.

The academic achievement of female students was also impacted by their inability to freely select their department. The data analysis reveale fifty per cent and twenty-three per cent of the respondents claimed that their academic performance was greatly impacted by their inability to freely choose their department correspondingly. Conversely, 19% and 8% of respondents claimed that their academic performance was minimally affected by not being able to freely select their department, and that the impact was negligible.

The outcome was further reinforced by the focus group participants. They claimed that their academic performance suffered when they joined a department of their choice. Because it was not their decision, they didn't care when they joined a department out of interest because they thought they couldn't do better in order to land a job.

The percentile distribution of personal factors influencing female students' academic success is shown in Table 2. The respondents were asked to rank their personal issues as very high, high, low, or very low in relation to how they impair their academic performance.

Regarding the effect of not being self-motivated to get good grades, the results showed that 47% and 28% of respondents, respectively, claimed this aspect had a very high and high effect on their academic performance. Conversely, however, 19% and 6% of participants contended that this element had a negligible impact on their academic achievement, respectively. Furthermore, in response to the open-ended questions, participants clarified that:

Several factors influence our academic performance, including as low self-esteem and drive, the belief that we are not as successful as men, and a lack of self-choice in matters of motivation. The academic achievement of students is significantly influenced by their characteristics, which include their well-being, perception of the school environment, motivation, involvement in extracurricular and academic activities, perceptions of parental support and involvement, and locus of control in all areas [32, 41, 55].

The results show that, when asked if missing class frequently affected their academic performance, roughly 26% and 41% of respondents said it had a very high and high effect, respectively. Furthermore, a majority of the female participants (24% and 9%, respectively) indicated that it had a negligible to no impact on their academic achievement.

Female students' drug addiction was another personal element that had an impact on their academic achievement. Regarding the impact of this behaviour on females' academic achievement, 33% and 26% of respondents said it had high effects, while 24% and 17% said it had extremely low effects. One such factor influencing female students'

Table 2 The impact of personal relationships on academic achievement

Q. No.	Personal related factors	Very high		High		High		Very low		Total	
		F	%	F	%	F	%	F	%	F	%
1	Insufficient drive to attain high academic standing	47	47	28	28	19	19	6	6	100	100
2	Frequent absences from class	26	26	41	41	24	24	9	9	100	100
3	Addicted to a variety of substances and drinks	33	33	26	26	24	24	17	17	100	100
4	Appreciate dancing and nightclubs	43	43	23	23	26	26	8	8	100	100
5	Inadequate study before to the test	45	45	29	29	15	15	11	11	100	100

Table 3 Reactions to parental-related factors that impacted academic achievement of female students

Q.No.	Parent-related factors	Very high		High		Low		Very low		Total	
		F	%	F	%	F	%	F	%	F	%
1	Socio-economic status	53	53	28	28	14	14	5	5	100	100
2	Negative perception of female pupils' academic success	36	36	36	36	21	21	7	7	100	100
3	Insufficient communication between students and their families	30	30	24	24	31	31	15	15	100	100

Table 4 Reactions to instructor-related factors that impact academic outcomes for female students

Q.No.	Issues associated with instructors	Strongly agree		Agree		Disagree		Strongly disagree		Total	
		F	%	F	%	F	%	F	%	F	%
1	Instructors harassing female pupils sexually	43	43	30	30	20	20	7	7	100	100
2	Tutorial class for girls is not being offered	33	33	53	53	9	9	5	5	100	100

academic achievement was their enjoyment of and dancing at nightclubs. According to the results, 26% and 8% of respondents said that it had a low effect, while 43% and 23% of respondents said that it had a very high consequence.

Numerous female students expressed their enjoyment of attending nightclubs for recreational purposes, as per the participants in the focused group discussion. They consumed various types of alcohol while they were inside the club. As a result, female suffered financial and time losses as well as exposure to gender-related problems such sexual harassment and abuse by male partners [34].

Another factor affecting female students' academic success was not preparing for the exam. For example, according to 45% and 29% of the respondents, respectively, the impact of inadequate preparation was extremely high and high on their academic achievement. However, 15% and 11% of respondents said it had a very little impact on their academic achievement, respectively. This leads us to the conclusion that attending nightclubs has a negative impact on the academic achievement of the majority of female students.

The percentile distribution of parental factors that impacted a girl's academic achievement is shown in Table 3. The socioeconomic level of parents has a significant impact on the academic achievement of female students, as indicated by the strong agreement or agreement of 53% and 28% of the respondents, respectively. However, 14% and 5% of those surveyed claimed that it had no effect at all or very little effect on the academic achievement of female students, respectively. This indicates that a parent's socioeconomic situation has a significant impact on the academic achievement of female students.

The socioeconomic status of the parents and their attitude toward the academic success of their female offspring are the two most significant parent-related determinants. Yan and Gai [62] state that students from low-income families do worse academically because their basic needs are not satisfied, which makes learning more difficult for them. In addition to the above mentioned factors, socioeconomic position is one of the educational aspects that has been studied and discussed in relation to female students' academic achievement. The majority of studies feel that kids' academic performance is negatively impacted by their socioeconomic condition. Because when basic needs are not satisfied, students do not perform better academically [22, 33]. Additionally, a student's performance in the classroom may be impacted by their attitude regarding female students' academic success. Of the students, 36% and 36% said that their attitude had a significant impact on their academic achievement. Conversely, between 21 and 7% of the participants clarified that attitude had a very low impact, or neither. Therefore, parental attitudes, sociocultural ideas, conventions and practices, girls' expectations, etc., can have a big impact on kids' academic performance and even cause repeat and dropout [4, 25, 64]. Low parent-student interaction is another factor that affect the academic progress of female students. The findings show that, correspondingly, 24% and 30% of respondents felt it had a high effect and a very high effect. On the other hand, about 31% and 15% of respondents, respectively, claimed it had no bearing whatsoever on academic ability.

Based on Table 4, it can be shown that 43% and 30% of participants highly agreed or agreed that sexual harassment of female students by their instructors had a major impact on the academic performance of girls. However, 20% and 7% of respondents, respectively, said they "strongly disagreed" and "disagreed" that their instructors' sexual harassment

had no effect. The respondent stated in response to the open-ended questions that: *Both male teachers and male pupils engaged in sexual harassment. That was done in secret. When teachers rejected their requests for sex and attempted to impede their grades, female students experienced moral despair. Since this activity was carried out in secrecy, the institution ignored this issue. The university should thus provide a remedy for this concealed trait of its male professors and students.*

The outcome of focus group discussion helps to validate the impact of sexual harassment on female students. However, many girls who have overcome obstacles that keep them from going to school now have to deal with issues like peer and teacher sexual harassment [40].

Furthermore, Table 4's findings shows that 86% of respondents felt that University did not offer tutorial classes for female students. On this factor, 14% of the respondents were in disagreement. *"We need tutorial class to improve our academic achievements, but the instructors didn't have tutorial class,"* respondents said in response to open-ended questions.

2 Conclusion

Numerous factors that affected how well female students performed academically were assessed. These factors were determined to be related to institutions, individuals, parents, and instructors. When comparing the effects of those factors, we find that personal factors have the most influence on academic performance, followed by parental problems and instructor-related factors, which have the third-biggest impact on the academic performance of female students.

The main institutional issues that had an impact on female students' academic performance were the lack of teaching materials, the lack of rewards for female students who scored well, the absence of tutorial classes and other affirmative action programs for women, the poor quality of the food and water supplies, and the lack of free department choice.

Major personal factors that affect academic performance of female students include: lack of self-motivation and self-confidence to achieve good score; negative attitude towards oneself, such as thinking one cannot do well; frequent absences from class; enjoyment of nightclubs and dancing clubs; and lack of preparation prior to the exam.

Additionally, there are environmental influences off campus that have an impact on the academic success of female students. A few of these variables include the growth of nightclubs near the university and the development of residences for chat rooms and drug dealers close to the campus, which usually had an impact on the academic performance of female students. Lastly, the institution ought to arrange study sessions, libraries, and females' organizations to enable them to engage in education to a greater extent.

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Declarations

Ethics approval and consent to participate The College of Social Sciences and Humanities Research Ethics Committee granted approval for this study (permission number: css012-23). The research was conducted in compliance with the guidelines set forth by the College of Social Sciences and Humanities Research Ethics Committee. Human participants were portrayed in this work by the researcher. Because the researcher respected the respondents' rights, he made sure informed consent was obtained before distributing the questionnaires. Given that all participants were over the age of 18, they were able to give their informed consent to participate after being fully informed about the study's objectives and how their data would be used. No further permission from legal representatives was needed since the study posed no risks or obligations.

Competing interests The authors declare no competing interests.

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References

1. Abdulkadri A, John-Aloye S, Mkrtchyan I, Gonzales C, Johnson S, Floyd S. Addressing gender disparities in education and employment: A necessary step for achieving sustainable development in the Caribbean. Studies and Perspectives Series-ECLAC Subregional Headquarters for the Caribbean, 109 (LC/TS-2022/144-LC/CAR/TS.2022/3). 2022.
2. Aggarwal R, Ranganathan P. Study designs: part 2—descriptive studies. Perspect Clin Res. 2019;10(1):51–6. https://doi.org/10.4103/picr.PICR.
3. Ayertey Odonkor A, Asiedu-Nketiah K, Ato Brown EO, Mamun Miah M. Human capital development and economic growth in developing economies. SSRN Electron J. 2019. https://doi.org/10.2139/ssrn.3305421.
4. Azhar M, Nadeem S, Naz F, Perveen F, Sameen A. Impact of parental education and socio-economic status on academic achievements of university students. Eur J Psychol Res. 2014;1(1):1–9.
5. Badey PB, Harcourt P, State R. Commerce Commerce The Role of Women in Development Institute of Foundation Studies Rivers State University of Science and Technology. May, 3–5. 2015.
6. Bareke ML, Agezew BH, Dedho NH, Herut AH, Demissie MM, Yimer BM, Fufa Lebeta M. Education inequalities in Ethiopia: a macro-level analysis and its policy implications. June. 2022.https://doi.org/10.20944/preprints202206.0341.v1
7. Baten J, de Haas M, Kempter E, Meier zu Selhausen F. Educational gender inequality in sub-Saharan Africa: a long-term perspective. Popul Dev Rev. 2021;47(3):813–49. https://doi.org/10.1111/padr.12430.
8. Belay HG, Liyeh TM, Tassew HA, Ayalew AB, Goshu YA, Mihretie GN. Magnitude of gender-based violence and its associated factors among female night students in Bahir Dar City, Amhara Region, Ethiopia. Int J Reprod Med. 2021;2021:1–7. https://doi.org/10.1155/2021/6694890.
9. Borghese MM, Janssen I. Duration and intensity of different types of physical activity among children aged 10–13 years. Can J Public Health Revue Can Sante Publique. 2019;110(2):178–86. https://doi.org/10.17269/s41997-018-0157-z.
10. Bradshaw S. Sustainability and gender equality. Environ Sustain Glob World. 2019. https://doi.org/10.4324/9781315714714-14.
11. Cao C, Duan H, Ng LL. The impact of gender inequality in higher education on female employment. J Educ Hum Soc Sci. 2023;8:2355–61.
12. Charles K, Djaya HGN, Taye MS, Olubunmi OA, George A, Eunifer C, Rare WD, Khaing T. Exploring education access, opportunities, and massification in higher education in Uganda. December. 2023. https://doi.org/10.5281/zenodo.10371455
13. Chemulwo MJ, Ali MF. Equitable access to education and development in a knowledgeable society as advocated by UNESCO. Educ Res Rev. 2019;14(6):200–5. https://doi.org/10.5897/err2018.3647.
14. Colombo M, Salmieri L. The education of gender. the gender of education. Sociological Research in Italy. Associazione "Per Scuola Democratica," November, 1–209. 2020.
15. Dahal P, Joshi SK, Swahnberg K. A qualitative study on gender inequality and gender-based violence in Nepal. BMC Public Health. 2022;22(1):1–15. https://doi.org/10.1186/s12889-022-14389-x.
16. Desta Brhanu G, Amare T. Factors affecting academic performance of female students at Mekelle. RUFORUM Working Document Series. 2016;14(2):1107–14.
17. Dube T. Gender disparities in educational enrolment and attainment in sub-Saharan Africa. J Educ Soc Res Nov. 2015. https://doi.org/10.5901/jesr.2015.v5n3p279.
18. ECLAC. Women's autonomy in changing economic scenarios. January. Emancipatory Education and Contemporary Challenges (n.d). 2020.
19. Ember H. Benefits of investing in girl education. Idosr J Curr Issues Soc Sci. 2020;6(1):27–32.
20. Vedhavalli S, et al. A study on problems and challenges faced by female college students in Thoothukudi. Turk J Comput Math Educ. 2021. https://doi.org/10.17762/turcomat.v12i10.5556.
21. Gebrie S, Wasihun Y, Abegaz Z, Kebede N. Gender-based violence and associated factors among private college female students in Dessie City, Ethiopia: mixed method study. BMC Women's Health. 2022;22(1):1–15. https://doi.org/10.1186/s12905-022-02076-3.
22. Gossling N. Impacting student learning outcomes by addressing basic impacting student learning outcomes by addressing basic needs of students and their families needs of students and their families. 2019. https://nwcommons.nwciowa.edu/education_masters/156.
23. Gulick AW. Introduction to campus forms. J Afr Cult Stud. 2023;35(1):1–6. https://doi.org/10.1080/13696815.2023.2169664.
24. Guvenen F, Rendall M. Women's emancipation through education: a macroeconomic analysis. Rev Econ Dyn. 2015;18(4):931–56. https://doi.org/10.1016/j.red.2014.11.004.
25. Gužíková L, Mendelová E. Parental attitudes and expectations as a determinant of children's success in school. Proc CBU Soc Sci. 2022;3(November):35–42. https://doi.org/10.12955/pss.v3.302.
26. Hassen SM, Mohammed BH. Sexual violence and associated factors among female students at Debre Berhan University, Ethiopia. Cureus. 2021;13(7): e16189. https://doi.org/10.7759/cureus.16189.
27. Hosein G, Basdeo-Gobin T, Gény LR. Gender mainstreaming in national sustainable development planning in the Caribbean 87 studies and perspectives ECLAC subregional headquarters for the Caribbean. 2020;1–59.
28. Hussen N, Workie DL. Multilevel analysis of women's education in Ethiopia. BMC Women's Health. 2023;23(1):1–8. https://doi.org/10.1186/s12905-023-02380-6.
29. Reshi IA, Sudha T, Dar SA. Women's access to education and its impact on their empowerment: a comprehensive review. Morfai J. 2022;1(2):446–50. https://doi.org/10.54443/morfai.v1i2.760.
30. Langkos S. Research methodology. Athens Int Tour Destin. 2014;2018(September 2014):5. https://doi.org/10.13140/2.1.3023.1369.
31. Makarova E, Aeschlimann B, Herzog W. The gender gap in STEM fields: the impact of the gender stereotype of math and science on secondary students' career aspirations. Front Educ. 2019. https://doi.org/10.3389/feduc.2019.00060.
32. Mamta R, Regina G. The role of parental involvement and social/ emotional skills in academic achievement: global perspectives. School Community J. 2018;28(2):29–46.
33. Martin KE. Scholar commons helping high school students succeed academically by meeting their more basic needs. 2021.

34. McCarthy KJ, Mehta R, Haberland NA. Gender, power, and violence: a systematic review of measures and their association with male perpetration of IPV. PLoS ONE. 2018;13(11):1–27. https://doi.org/10.1371/journal.pone.0207091.
35. McCowan T, Bertolin J. Inequalities in higher education access and completion in Brazil. (Universities and Social Inequalities in the Global South). United Nations Research Institute for Social Development (UNRISD): Geneva. https://www.unrisd.org/en/library/publications/inequalities-in-higher-education-access-and-completion-in-brazil.
36. Mikiewicz P. Social capital and education—an attempt to synthesize conceptualization arising from various theoretical origins. Cogent Educ. 2021. https://doi.org/10.1080/2331186X.2021.1907956.
37. MOWCY, UNICEF Ethiopia, & SPRI. Gender equality, women's empowerment and child wellbeing in Ethiopia. 2019;11–83.
38. MWCY Affairs and UNICEF. Changing trends in gender equality in Ethiopia research brief. April 2018.
39. Niaz MU. Socio-Economic development and sustainable development goals: a roadmap from vulnerability to sustainability through financial inclusion. Econ Res-Ekonomska Istrazivanja. 2022;35(1):3243–75. https://doi.org/10.1080/1331677X.2021.1989319.
40. Nyanama A. Barrier to girls' education in the liberian school system and how to empower them to remain in school. All electronic theses and dissertations. 2021. https://spark.bethel.edu/etd/720
41. Ozcan M. Factors affecting students' academic achievement according to the teachers' opinion. Educ Reform J. 2021;6(1):1–18. https://doi.org/10.22596/erj2021.06.01.1.18.
42. Pourtaheri A, Sany SBT, Aghaee MA, Ahangari H, Peyman N. Prevalence and factors associated with child marriage, a systematic review. BMC Women's Health. 2023. https://doi.org/10.1186/s12905-023-02634-3.
43. Putnick DL, Bornstein MH. Girls' and boys' labor and household chores in low- and middle-income countries. Monogr Soc Res Child Dev. 2016;81(1):104–22. https://doi.org/10.1111/mono.12228.
44. Raj A, Salazar M, Jackson EC, Wyss N, McClendon KA, Khanna A, Belayneh Y, McDougal L. Students and brides: a qualitative analysis of the relationship between girls' education and early marriage in Ethiopia and India. BMC Public Health. 2019;19(1):19. https://doi.org/10.1186/s12889-018-6340-6.
45. Raymond A. Girls' participation in formal education: a case of Maasai pastoralists in Tanzania. Educ Res Policy Pract. 2021;20(2):165–85. https://doi.org/10.1007/s10671-020-09273-7.
46. Relations E. Safeguarding a woman's right to education and water in Africa. 2018;1–10.
47. Ribaj A, Mexhuani F. The impact of savings on economic growth in a developing country (the case of Kosovo). J Innov Entrepreneurship. 2021;10(1):1–13. https://doi.org/10.1186/s13731-020-00140-6.
48. Saluja R, Gobindgarh M. International Research Journal of Shri Param Hans Education & Research Foundation Trust. Irjmst. 2018;8(1):49–61.
49. Semela T, Haile H, Abraham R. Women and development in Ethiopia: a sociohistorical analysis. J Dev Soc. 2019;35:230–55. https://doi.org/10.1177/0169796X19844438.
50. Sevilla MP, Luengo-Aravena D, Farías M. Gender gap in STEM pathways: the role of secondary curricula in a highly differentiated school system—the case of Chile. Int J STEM Educ. 2023. https://doi.org/10.1186/s40594-023-00450-7.
51. Singh P, Pattanaik F. Unfolding unpaid domestic work in India: women's constraints, choices, and career. Palgrave Commun. 2020;6(1):1–13. https://doi.org/10.1057/s41599-020-0488-2.
52. Somani T. Importance of educating girls for the overall development of society: a global perspective. J Educ Res Pract. 2017. https://doi.org/10.5590/jerap.2017.07.1.10.
53. Stahl G, McDonald S. Investigating the role of gender, social class and curriculum in the first-in-family higher education experience. Educ Rev. 2023. https://doi.org/10.1080/00131911.2023.2176468.
54. Survey W, The ON, Of R. About the world survey on the role of women in development. 2021. https://doi.org/10.18356/9789210049351c003.
55. Thapa U, Dhakal S. Factors affecting students' achievement motivation in private colleges of Kathmandu Valley. J Bus Soc Sci Res. 2023;8(1):131–46. https://doi.org/10.3126/jbssr.v8i1.56597.
56. Tiruneh WA, Petros P. Factors affecting female students ' academic performance at higher education : the case of Bahir Dar University. Ethiopia. 2014;2(December):161–6.
57. Tusiime M, Otara A, Kaleeba A, Kaviira A, Tsinda A. Gender differences in enrollment and graduation rates in private and public higher learning institution in Rwanda. Rwanda J. 2017;4(1):5. https://doi.org/10.4314/rj.v4i1.2b.
58. UN. Integrated Approaches to Sustainable Development Planning and Implementation. United Nations, Department of Economic and Social Affairs, Division for Sustainable Development, May, 50. 2015. https://sustainabledevelopment.un.org/content/documents/8506IASDWorkshopReport20150703.pdf.
59. UN Comission on the Status of Women. Challenges and opportunities in achieving gender equality and the empowerment of rural women and girls 2018: Commission on the status of women: agreed conclusions. 2018. http://www.unwomen.org/-/media/headquarters/attachments/sections/csw/62/csw-conclusions-62-en.pdf?la=en&vs=4713.
60. UNICEF. National situation analysis of children and women in Ethiopia. Unicef. 2019;138.
61. Workie MB. Reconnoitering teachers' vocabulary teaching strategies: the case of grade nine teachers' in Kokebe Tsibah Secondary and Preparatory School, Addis Ababa. Int J Afr Asian Stud. 2020;60(1999):22–30. https://doi.org/10.7176/jaas/60-04.
62. Yan Y, Gai X. High achievers from low family socioeconomic status families: protective factors for academically resilient students. Int J Environ Res Public Health. 2022. https://doi.org/10.3390/ijerph192315882.
63. Yigeremu M, Zenebe M, Abebe W, Sisay MM. Gender inequity in higher education in Ethiopia. Ethiop J Health Dev. 2021;35(2):1–2.
64. YilmazBodur Z, Aktan S. A research on the relationship between parental attitudes, students' academic motivation and personal responsibility. Int J Soc Educ Sci. 2021;3(4):636–55. https://doi.org/10.46328/ijonses.187.
65. Zewdie S, Dagne T. Factors affecting female students' academic achievement in high school: the case of aberuswolkite high school in Ethiopia. Ame Res J Hum Soc Sci. 2017;1(4):23–8.

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