

**Contribution of Prior Academic Achievement, Family
Background and Peer Support to First Year Students'
Academic Performance at Salale University**

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This is to certify that the thesis conducted by Kefale Negash, entitled: Contribution of Prior Academic Achievement, Family Background and Peer Support to First Year Students' Academic Performance at Salale University, and submitted to the Department of Psychology in Partial fulfillment of the requirements for MA Degree in Educational Psychology. Consequently, the thesis complies with the regulations of the University and meets the accepted standards concerning originality and quality.

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Letter of Declaration

I, an undersigned graduate student, declare that this is my original work and has never been defended in any undergraduate or graduate program in any university. I have also acknowledged according to the references I have used in the study.

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Abstract

The academic performance of university students is affected by multiple factors; including prior academic achievement, family background, and psychological factors, and so on. So the main aim of this study was to examine the contribution of prior academic achievement (university entrance exam (UEE), preparatory average mark (PAM), and scholastic aptitude test (SAT)); family background (family education, family income, number of siblings and residence area), and peer support to first-year academic performance at Salale University. The study employed a cross-sectional and correlation study design. A total of 320 students were selected using stratified and systematic sampling techniques from a population of 1600 regular freshman students who enrolled into Salale University in the 2012 E.C academic year. The study used both primary and secondary data that were analyzed by using linear regression analysis. The result revealed that among prior academic achievement variables included in the study PAM contributed 26.70% and SAT contributed 23.80% to the UGPA. Moreover, among family background variables parent education level has 12.0% contribution; family income has accounting 1.60%, and number of siblings contributed 8.90% to UGPA. And also the result showed that peer support was 7.60% accounted for predictor variable. Among the variables incorporated in the study, PAM has the highest contribution to first-year first semester UGPA. Finally, it is recommended that the ministry of science and higher education, and other admission personnel should give more emphasis to PAM and review the appropriateness of other factors that improve university GPA.

Keywords: *prior academic achievement, family background, peer support, university GPA.*

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Acronyms

ACT – American College Testing

ESLCE - Ethiopian School Leaving Certificate Examination

GPA – Grade Point Average

UGPA – University Grade Point Average

HCAM – High School Class Average Mark

NACAC - National Association for College Admission Counseling

PAM – Preparatory Average Mark

SAT - Scholastic Aptitude Test

UEE – University Entrance Exam

UTME - Unified Tertiary Matriculation Examination

Chapter One: Introduction

1.1. Background of the study

The United Nations Report (2010) articulated education as a basic right and need which is important in the achievement of the second Millennium Development Goals; this is because good education academic performance guarantees skilled and dynamic citizens. A research article by Heng (2014) shown that students' academic achievement has been an important indicator of institutional quality and has been a focus of higher education research. Academic achievement is important for students themselves because they have to obtain a predefined grade-point average in the first year to continue their studies (De Koning et al., 2013; Moss & Yeaton, 2015) cited in (Petrie et al., 2018). According to this view, students' academic achievement is an indicator of the quality and efficiency of an educational program, on which funding for higher education institutions is also often based.

Hence, most universities are seen when they give much attention to first-year students as the first year is the time since it is when students put the base on their later academic achievement and persistence. Even researchers and educators are increasingly paying special attention to the academic achievement of students as a measure of effectiveness. However, since numerous variables influence students' academic success, deciding which criteria is the most precise in predicting student academic performance in higher education is a complex task.

Accordingly, different researchers have conducted many studies on factors that contributed to academic performance such as prior academic achievements (university entrance exam, preparatory average mark, and scholastic aptitude test or American college test); psychological factors (such as motivation, self-efficacy, etc.), family background (family income, family education level, residence area, number of siblings, parenting style, etc.), peer

support, gender, faculty wise different, and so on, especially in tertiary education during the first year. Therefore, the current study focused on the contribution of prior academic achievement, family background, and peer support to first-year university students' academic success by taking into consideration gender and faculty.

Prior academic achievements (UEE, PAM, and SAT) which were later used for admission criteria were seen as the prominent indicator of university academic performance. The study by Maria and Leandro (2019) revealed that the university entrance result is the strongest predictor of first-year academic performance. Moreover, a study conducted by Melaku (2014) assessed the predictive validity of high school GPA and the UEE scores to first-year college GPA and results shown that both high school GPA and the UEE scores significantly predict first-year college GPA in common and for each study program as well, but UEE has a strong correlation with the criterion variable. However, a study conducted by Roberto et al. (2019) shown that a high school GPA is more effective to predict first-year university students' academic success. In the same way research finding by Robert (2016) suggested that preparatory average mark is the strongest predictor of first-semester UGPA. On the other hand, Silabat's (2017) study outcome shown high school average marks and university entrance examination jointly better predict college performance but when it has seen comparatively high school average mark was found the best significant predictor. In addition, most studies have shown that students with better university entrance exam scores (such as the ACT and SAT scores) were more likely to achieve academically at university (Bowman, 2014; Gibbison et al., 2011; Jamelske, 2009; Kot, 2014; Shaw et al., 2011; Shaw et al., 2012; Soria et al., 2013 & Zhou et al., 2015) cited in (Paulien et.al, 2018). These have shown that even if there is inconsistency in their

level of prediction all prior academic achievements might have a significant contribution to students' UGPA in their first year.

Family background variables such as parent educational qualification, economic status, and home location are associated with and have significant influences on students' academic performance (Egunsola, 2014). A study by Anders et al. (2003) cited in Doan et al. (2016) mentioned that there is a great attachment between parental income and the education performance of their children. The different studies cited in NACAC (2016) revealed that there are diverse results on the contribution of family education to student GPA, so five studies (Bowman 2014; De Wit et al. 2012; Nunez, 2009; Shaw et al., 2012; Yazedjian, Toews, & Navarro, 2009) indicated that students with highly educated parents performed better in the first year at university, while three studies (Dika, 2012; Friedman & Mandel, 2011; Zhou et al., 2015) found there was no relationship. A research article by Geremew and Abdissa (2015) shown that there is a strong association between the academic performance of students and the economic status of parents. The number of children is also one of the significant factors affecting academic performance (Amoo et al., 2018). A study by Ali (2018) indicated that there was a positive relationship between home-related aspects and student academic performance. Even though there are divergence findings that have occurred with the contribution of family background to the academic performance they have their influence on university students' academic performance.

Peer support is also another variable that contributes to students' academic performance. According to Ming and Jacquelynne (2012) and Guangbao et al. (2020), peer support has a significant impact on students' academic performance. And also different research findings such as Byl et al. (2011), Callcott et al. (2014), and Lehmann (2014) cited in Emmeline (2016) demonstrated that peer support provides important opportunities to help new students survive in

the first year of university. So these illustrated that peer support has a significant role in first-year university students' academic success.

Concerning to gender of the students in predicting academic performance, there were inconsistent findings. A research article by Ryland et al. cited in DeBerard et al. (2004) through reviewing several studies reported that gender significantly contributed to the academic success of higher education indicated that male students excelled female students in courses like economics and engineering while females did better in other subjects that required verbal ability. On the other hand, the study carried out by Melaku (2014) shown that the validity coefficients were found to be not significantly different for gender. It may be demonstrated that student's academic performance across gender can be different from faculty to faculty or department to the department it may also vary from course to course. In addition, faculty has a significant contribution to UGPA, so a research article by Lizzio et al. (2002) shown that faculty affects university students' academic performance.

Even though prior academic achievement and other variables of the different studies discussed above have significant effects on first-year university academic performance independently, they are exclusively not sufficient to do it, as a result, the current study was incorporated family background (family education level, family income, number of siblings, and residence area) and peer support with prior academic achievement (UEE, SAT and PAM) to examine their independent and collective contributions to the first-year first-semester academic performance of Salale university students.

Salale University is found in the town of Fiche in the Oromia region of Northern Ethiopia, at a distance of 112 kilometers from Addis Ababa. This university is the most recently established among forty-six universities currently found in the country. It was established in

2016 as one of the Ethiopian universities. The university has started academic programs by three colleges namely Business & Economics, Agricultural & Natural Resource, and Health Science Colleges with a total of 254 students. Currently, the university has 30 departments under five Colleges which are Health Science, Agricultural & Natural Resource, Business, and Economic, Social Science and Humanities, and Natural & Computational Science Colleges and it has a total of 5394 students including regular and extension programs in both undergraduate and postgraduate program. Salale University was selected by the researcher since it is the most recent university, researcher assumes that no more research was conducted in this area and meanwhile the outcome of the study may help the university to further investigate students' academic performance.

1.2. Statement of problem

Numerous studies have been undertaken concerning factors that influence university academic performance. Hence, a research finding by Abdulghani (2012) shown that the predictive power of UEE was high. In the same way studies by Tesema and Melaku (2014) and Zebdewos et al. (2015) revealed that UEE took the highest contribution to UGPA.

However, a study by Birari and Randhawa (2014) shown that UEE has a very weak correlation with UGPA. The research findings by Yoseph (2014) and Desta (2017) have found that high school average mark was the dominant contributor for academic performances. Moreover, a study by Noble (1991) cited in Bryan (2019) output shown that PAM and standardized test scores, such as SAT or ACT used in the United States, were significant predictors of student academic success. On the other hand, a study by Nitza (2015) reported that no logical tie between admission policies and students' actual achievements of UGPA in their

first year. Therefore, the different study findings discussed above have shown that when prior academic achievements have inconsistent effects on university students' academic performance.

Regarding the contribution of family background to academic performance, divergent studies result existed. Accordingly, a research article by Weiser and Riggio (2010) found that family background influence students' academic success. A study by Tsegaye et al. (2020) shown that family educational level, monthly allowance, residency type, etc. were significant predictors of students' academic performance. But a study by Gemechu (2018) has shown that family income did bring nothing to students' academic performance; whereas family education level has a strong correlation with students' UGPA. Study result has shown that having a larger number of siblings negatively affect students' educational result (Karwath et al., 2014). Doan et al. (2016) study results inference that parents' living locations in rural areas have an undesirable impact on the GPA of students at university. However, A research article by Melaku (2017) shown that the impact of parental residence environment on academic attainment was found no significant, suggesting that both urban and rural children achieved similar overall scores.

Peer support has also a contribution to students' academic performance. Fidelia's (2016) study finding showed that there was a significant association between peer support and academic performance. Besides, a study by Emmeline (2016) revealed that peer support was important to students' success in their first year of university.

According to Ali et al. (2018), the study result found that significant gender differences exist, female students, perform better than males. However, a study by Melese (2018) indicated that there was no significant gender difference in students' academic performance. Faculty has also contributed to academic performance; according to Mikaël et al. (2012), study results show that faculty has a significant contribution to students' first-year UGPA. And also the work of

Malaku (2014) revealed that faculty have significantly predicted UGPA. These may point out that even if there is an inconsistency of prediction both gender and faculty have their influence on students' academic success.

Even if various researches have been conducted on the area of factors that contribute to university academic performance at different times by using different variables and came up with a different result, especially by using prior academic achievement independently and jointly with other variables still there is a research gap in an area. For example, researchers such as Abera (1999); Zebdewos et al. (2015), and Tsegaye et al. (2020) conducted on prior academic achievement by including the socio-economic background that indicates family background to examine their prediction power, but in any of these and others studies, the indicators of family background variables such as family educational level, family income, number of siblings and residence area did not include together in one and also none of them incorporated peer support variable in their study with prior academic achievement. As a result, the current study was apprehended to reduce this gap by conducting a study on the contribution of prior academic achievement (UEE, PAM, and SAT), family background (family education level, family income, number of siblings, and residence area) and peer support to the first year first semester UGPA by taking into consideration gender and faculty contribution. Consequently, to fill this gap study was accompanied among 2012 E.C admitted regular freshman students at Salale University. Therefore, the study has tried to answer the following research questions:

- ⊕ Are the prior academic achievements significant predictors of first-year first-semester university students' academic performance?
- ⊕ What are the contributions of family background variables to the academic performance of university students?

- ⊕ What is the extent of peer support contribution to the academic performance of first-year students at university?
- ⊕ What are the contributions of gender and faculty to the first-year first-semester academic performance of university students?
- ⊕ Which variables have the highest contribution in predicting the first-year first semester GPA of university students?

1.3. Objective of the Study

1.3.1. General Objective

- ✚ To explore the contribution of prior academic achievement, family background, and peer support to first-year first-semester University study academic performance.

1.3.2. Specific objectives

- ✓ To examine the predictive validity of prior academic achievement individually and jointly with first-year first-semester university study performance.
- ✓ To find out the independent and combined contributions of family background to first-year first-semester university study performance.
- ✓ To assess the contribution of peer support to students' academic performance during freshman in university.
- ✓ To explore the contributions of gender and faculty to the first-year first-semester academic performance of university students.
- ✓ To identify which variables are more significantly contribute to the first year first semester GPA of university students.

1.4. Significances of the Study

This study has examined the contributions of prior academic achievement, family background, and peer support to know how well they predict freshman university students' GPA. Accordingly, the study may give important information and help the student, educators, parents, and university management in many aspects. This study might bridge a research gap in the study of the academic performance of students attending higher institutions and serves as a motivation for future research to be conducted in this area. University admission officers can use these variables in their prediction model. Educators may improve the academic performance of their students by designing educational practices that could positively influence the variables of this study. The result of this study will also assist counselors who work with students for enhanced academic and personal planning.

1.5. Delimitation of the study

The study was conducted on undergraduate freshman students of Salale University who were admitted in 2012 Ethiopian academic calendar in the regular program by focusing on the contribution of prior academic achievement, family background, and peer support to university academic performance of first-year first semester students.

1.6. Limitation of the Study

The shortcoming that encounters in the study was lack of obtaining participants on time, and unwillingness to give sufficient information in the process of data collection. Some respondents did not respond well and also refused to fill the informed consent form and some respondents were not willing to return the questionnaire. Moreover, the registrar's office also delayed giving information on time for secondary data.

1.7. Operational Definition

As words may mean differently in different contexts, the following definitions are given as the words used as intended to be understood for this study:

- ✓ **Academic Performance:** This refers to how well a student performs in academic knowledge and skills which is reflected by first-year first-semester UGPA.
- ✓ **Family Educational level:** This refers to students' mother and father educational level.
- ✓ **Family income:** It is the household monthly earns from their source of income.
- ✓ **Number of siblings:** It is the total number of children in the family in addition to the student himself/herself.
- ✓ **Peer support:** It is when a friend encourages a friend to do something positive concerning study in university.
- ✓ **Preparatory Average Mark:** It is an individuals' total score across all subjects taught during the preparatory programs.
- ✓ **Prior Academic Achievement:** Prior academic achievement refers to UEE, PAM, and SAT.
- ✓ **Residence area:** refers to the area/environment (rural or urban) where the family and the student lived before joining university.
- ✓ **Scholastic aptitude test:** It is aptitude test scores that are given together with the Ethiopian higher education university entrance exam.
- ✓ **University entrance exam:** It is subjects' total scores in the Ethiopian higher education entrance examination of the year.
- ✓ **Faculty:** Social science and natural science stream.

Chapter Two: Review of Related Literature

2.1. Introduction

There were several studies developed on the factor that contributes to the academic performance of first-year university students; those factors are prior academic achievement, family background, peer support, psychological factor, environmental setting, gender, faculty, etc. are among various factors. However, the issue of how these factors influence students' academic performance and which one is more important is widely debated. The literature review in this chapter is going to investigate the contribution of prior academic achievement; family background; peer support, gender, and faculty contribution outlined by different scholars and researchers.

2.1.1. *Prior Academic Achievement*

A prior academic achievement is used as higher education admission criteria and they may differ in respective to universities or from country to country. The study by Sawyer (2002) cited in Bryan (2019) shown admission process can require academic variables like high school grade point average, aptitude tests like the scholastic aptitude test (SAT) and American college test (ACT), institute based entrance exams, and non-academic variables like portfolio on extracurricular activities, recommendation letters, etc. are used. According to Eric et al. (2018), an entrance examination is an examination that many educational institutions use to select students for admission and these examinations may be administered at any level of education, from primary to higher education, although they are more common at higher levels. According to Eric et al., the assessment entrance examination is common in many countries such as Australia, Brazil, Burma, Chile, China, France, Germany, and United Kingdom, and in West Africa, many countries use the university entrance examination systems, for example in Nigeria, there is

Unified Tertiary Matriculation Examination (UTME) and National Common Entrance Examination. In this regard, Ethiopia has its train of applying admission producers to admit students at university. At the end of grade twelve, students sit for Ethiopian UEE, which tests their knowledge in seven subjects, including mathematics, English, civics, general academic aptitude, and three stream-related specialization subjects.

Moreover, among many variables of prior academic achievement, more attention has been given to preparatory average marks and it lasts two years (grades 11 and 12) and also students can select from natural science and a social science stream. Both streams have a common core curriculum that makes up the study weight and it includes English, Civics, and Mathematics, Physical Education, an elective language (Amharic or local languages), and Information Communications Technology. The courses taught in the natural sciences stream are Biology, Chemistry, Physics, and Technical drawing, while the social science stream includes Geography, History, Economics, and Business. At the end of grade 12, students sit for the UEE, which tests their knowledge in seven subjects, including Mathematics, English, Civics, General academic aptitude, and three stream-related field subjects. Entrance examination may refer to any standardized test which is needed for one to be considered eligible for application by a post-secondary institution and SAT is one component of entrance exam score that is a combination of English and Mathematics test items used for admission criteria. Colleges and universities use scores on this test as a major determinant in their admission decision; it includes sections that test reading, writing, language, and math skills and it is for about 100 years SAT has been used as a benchmark to evaluate college and university candidates (Daniel, 2018).

2.1.1.1. The Contribution of Prior Academic Achievement to UGPA

University admission and university graduation are two significant cornerstones, which decide the future of a student's academic success. However, the students' performances sometimes do not match with the achievement they have in the university entrance exam and preparatory average mark; for instance, some students that got high scores in their admission test do not get good achievements in university and also in the same way with preparatory average mark and SAT.

Though several studies have been undertaken to study the correlation between the student's prior academic achievement and their university academic performance, it looks like that results vary particularly in developing countries (Silfverberg & Orbeta, 2014). Scott-Clayton (2012) from a study conducted in community colleges found that the predictive power of entrance examinations was high. Moreover study apprehended by Kuncel and Hezlett (2007) shown as the university entrance exam has the greatest capacity to predict academic performance in both graduates as well as professional college programs. And also according to Burton and Ramist (2001) wide review conducted to assess the capability of standardized test and high school average mark to predict future performance. They concluded that a combination of both scores was capable of making significant and exact contributions to predict first-year UGPA, cumulative UGPA, as well as graduation, and also they were found that the prediction accuracy was more with the combination of them.

Furthermore, the study held by Kobrin et al. (2008) found that an incremental increase in the predictive validity when university entrance exam and high school average mark used together. In the same way study by Wiley (2014) indicated that the combination of UEE and PAM outperformed the university students' academic performance. Besides the previous

cumulative examination scores and entry prerequisite scores are associated positively and significantly with the performances of the students in various degree programs (Nauman, 2018). In the same way, a research finding of Myburgh (2019) identified that, academic performance at pre-university levels as the most significant predictor of university GPA. They argued that a student who enters university with better grades is most likely to perform academically better than his/her counterpart who has not scored good points in pre-university achievement.

However, Cerdeira et al. (2018) investigated the predictions of students' success in higher education based on secondary school scores and national examinations and they found that the preparatory average mark was a better predictor of UGPA than the national examination scores. A research finding by Jansen and Bruinsma (2005) found that students with a higher GPA in their high school were more possible to be in a better position to translate their learning experiences in a more preferred manner and to achieve a higher GPA at the end of the first year of a college education. Moreover, a study conducted by Gabriel and Marius' (2011) was shown the same result with high school grade point average is the only one of the admission criteria that efficiently predicts university academic performance. Additionally, they indicated that a great number of studies attempted to recognize high school grade point average and general success in high school as two factors remarkably inter-related with university GPA. Moreover high school GPA and SAT predict first-year college academic performance for students, but high school GPA was more strongly correlated to first-year college GPA than SAT scores (Michal, 2018).

Furthermore, the baccalaureate exam, high school GPA, and Scholastic aptitude test are referring to as the tests that reflect the future academic performances (Gabriel & Marius, 2011) cited in (Doan et al., 2016). Both the aptitude test scores and high school GPA are positively and significantly associated to first-year college GPA, but aptitude test has a higher correlation to

first-year GPA than high school grade point average (Bryan, 2019). According to the study of Joel et al. (2017), American College Test and Scholastic Aptitude Test scores have been parts of the admission requirements, and their study result has shown that ACT and SAT were relatively strong positive correlation. The study by College Board's validity research on SAT by using data from 221,300 students enrolled at 169 four-year colleges and universities, examined relationships between SAT scores, test scores, cross-test scores, and sub-scores with domain-specific course grades earned in college; so a result of study shown that SAT scores are strongly predictive of college performance and students with higher SAT scores are more likely to have higher GPA across multiple academic domains (Paul et al., 2020).

On the other hand study by Azrinawati et al. (2013) result indicated that there was no significant relationship between prior academic achievement backgrounds with academic performance and they concluded that there is no significant relationship between prior academic achievement and academic performance. And also study by Davison and Dustova (2017) revealed that standardized test has no significant contributions to students' academic performance.

2.1.2. Family Background

The family background themes included in this study are family education level (father and mother education level), family income, number of siblings, and residence area (urban or rural). The family provides a sound situation for their children's education and confirms that family background affects student's academic performance in the sense that there is a difference between students with good socioeconomic backgrounds and students with low socioeconomic backgrounds (Gyamfi, 2015). A study by Weiser and Riggio (2010) cited in Doan et al. (2016) points out that family background make a huge effect on academics success. Moreover, a study

by Maria et al. (2015) shown that family background has a big contribution to play in the performance of first-year students in university study. This may have shown that family background affects the reaction to life conditions and the level of a student's academic performance.

2.1.2.1. Family Education and Students' Academic Performance

A study by Anna (2016) result revealed that parental education is frequently identified as the single strongest predictor of a students' academic success whether it is a direct or indirect effect and highly educated parents are more likely to understand their children, enhancing early literacy skills and building foundational content knowledge of their children. Mariam et al. (2020) study output revealed that the education of both father and mother has a positive impact on the academic performance of the students, however, mother education has a greater effect on the academic outcomes of the students as compared to father education.

Furthermore, a study by Geremew and Abdissa (2015) result shown that mother's and father's education levels have an effect on students academic achievement, and those whose fathers or mothers are at the college level have more success as compare with those whose parents are illiterate, primary or secondary education level. And also study by Abeya (2018) results revealed that there was a statistically significant difference between the academic performance of children from educated and illiterate parents on academic achievement. Additionally, Abeya's study output has shown that children's academic performance increased as their parental education level increased so educated parents positively influenced the students' academic success.

However, a research article by Oladele (2014) results shows that there was no correlation between father's and mother's education with academic achievement of the students. So the

study result concludes that the educational background of parents does not influence students' academic attainment. Moreover, a study by Melaku (2017) result revealed that the effect of family education on students' academic performance was statistically not significant and this implies that, students from families of varied educational qualification levels achieved similarly. This is so higher educational qualification intensity of the family by itself did not essentially imply or guarantee better attachment.

2.1.2.2. Family Income and Students' Academic Performance

Concerning students' family income, scholars at different times found out that income has a positive impact on the academic success of freshmen students (Jing & Sedlacek, 2001). Concerning children's educational achievement, Kim (2002) maintained that there was a direct relationship between parental financial income and human resources and the successful education practice of their children. Furthermore, a study by McLeod et al. (2004) cited in Kamau (2013) shown that parents who experienced income loss became more refuse of their children and that their children were at risk for developing feelings of inadequacy associated with parental rejection. Furthermore study by Reindolf et al. (2016) on the association between family income and academic performance of higher education students' output were the diverse results. The findings of this study partially imply that family income may affect their learning process, motivation, and academic performance in the long run. Thus, the strong financial status of families helps develop students' motivation, learning procedure, and hence better academic performance. However, some subjects strongly argued that family income is not an essential predictor of better academic performance. The study concludes that though family income may improve students' performance, for accountable and serious students, low family income should not be a reason for poor performance.

Furthermore according to Daniel and Bamlaku's (2017) study result family income status is highly associated with student academic performance. Thus creating a better monthly income is desirable for not only improving the living standard of the household but also positively affect their children's academic performance.

On the other hand, studies conducted by De Wit et al. (2012); Jamelske (2009), and Pike et al. (2011) cited in NACAC (2016) were found that family income was not associated with student's academic attainment. Even if divergent results have existed with family income effect on students' university academic performance, most of the study shown as it has a great contribution.

2.1.2.3. Number of Siblings and Students' Academic Performance

A number of siblings in this context refer to the total number of children in the family including the child himself. Children from larger families are found to be worse than children from smaller families on academic performance (Lacovou, 2001) cited in (Kamau, 2013). According to him, the attention of parents' turns down as the number of siblings increases and later-born children perform less than earlier born. A study conducted by Rushton and McLanahan (2012) cited in Kamau (2013) found out that children success depends on inputs of time, money, attention, resource dilution, and so on from their parents; the more children there are in the family the less of both inputs and this leads to lower them in education attainment. In the same way study by Gyamfi (2015) shown that the more the number of children in a family, the more those children have to share family resources; as a result, children have lesser achievements on those academic outcomes.

Furthermore, most studies on siblings size verify a negative effect on educational outcomes with an increasing number of children as family resources decrease with every

additional child (Härkönen, 2014). Similarly, a study by Daniel and Bamlaku (2017) shown that being in a large family is an inconvenience for the academic performance of students whereas small size families are well achievers.

2.1.2.4. Residence Background and Students' Academic Performance

The review of different literature by Shahzadi and Ahmad (2011) indicated that the home environment is important on students' academic performance and the homes have a great influence on the students' psychological, emotional, social, and economic state. In the same way, Amber's (2013) study results found that urban students have more benefits than rural students, as urban students performed significantly better on the examination. Moreover study by Ajila and Olutola (2007) revealed that circumstances of the home affect the individual since the parents are the first socializing means in an individual's life. And also study conducted by Abdulghani (2012) in 13 colleges revealed that there were significant differences between rural and urban students for all except one college. On the other hand, a study by Ali (2013) shown that residential area (urban and rural) has insignificant impact on students' academic performance.

2.1.3. Peer Supports

Peer support is a kind of mutual teaching-learning practice that can be defined as a student assisting another student in any subject (Newton & Ender, 2010). And also peer support is an active support of students among themselves who have equivalent status and social grouping (Topping, 2005). Moreover, it can be defined as the conversion of experience and knowledge from one to another (Irfan et al., 2017). In addition, peer support includes horizontal support, where students within the same year cluster support each other, and vertical peer support, where more senior students support first-year students (Fiona & Jane, 2008).

2.1.3.1. The Contribution of Peer Supports to Academic Performance

According to Paul (2014), peer support scheme for the students who are supported each other is positively and significantly correlated to academic performance. The different studies cited in Mikael et al. (2012) shown that peer support emerged as a predictor of academic achievement in some studies (Fass & Tubman 2002; Hackett et al. 1992; Larose et al. 1998; Robbins et al., 2004), however, the impact of peer support on academic achievement may be indirect. And also Fass and Tubman (2002) found that peer support was a better predictor of scholastic competence, which is the main predictor of academic success. Peer support was an important issue for the academic achievement of students. This is for the reason that students find it easier to discuss with their peers for assistance than to ask the teacher. Peers understand each other and can explain matters in a way that builds others' understanding of them (Reem et al., 2019). When individuals experience support from their peers, the change to college and college adjustment could be impacted positively (Pittman & Richmond, 2008).

2.1.4. Gender Contribution to Academic Performance in Higher Education

Regarding the gender of the students in predicting academic achievement, there were conflicting results. Some scholars like Garton et al. (2000) and Belechier (2002) indicated that gender did not predict frequently academic success. In the same way, studies showing that there are no significant differences in the academic performance in the gender of students (R. Dorta-Guerra et al., 2019). On the other hand, several researchers reported that gender significantly predicted academic performance in higher learning and indicated that male students excelled female students in courses like economics and engineering (Schram, cited in De Berard et al., 2004), while females did better in other subjects that required verbal ability (Ryland, Riordan, and Brack, cited in De Berard et al., 2004). Meanwhile, a research article by Ali (2008)

recognized that being male is a sign of academic performance for nursing students whereas Elizabeth et al. (2011) cited in Doan et al., (2016) revealed that in some specific majors like nursing, female students do better than male students.

2.1.5. Contribution of Faculty to Academic Performance in Higher Education

Mekonnen (1991) in his project on ranking and selection procedures and their relevance to the educational attainment of students at has shown that the grade point average in Ethiopian School Leaving Certificate Examination (ESLCE) cannot stand alone as the sole selection criterion for admission of students to the university. He has also shown that ESLCE Mathematics grade is the best predictor of success in the faculty of natural science. However, a research finding by Abera (1999) indicated that students with good performance in the ESLCE possibly have good performance in the first year first semester and also his study revealed that students admitted to the faculties of Science, Medicine, Technology and College of Agriculture appear to perform poorly as compared to those admitted to the College of Social Science.

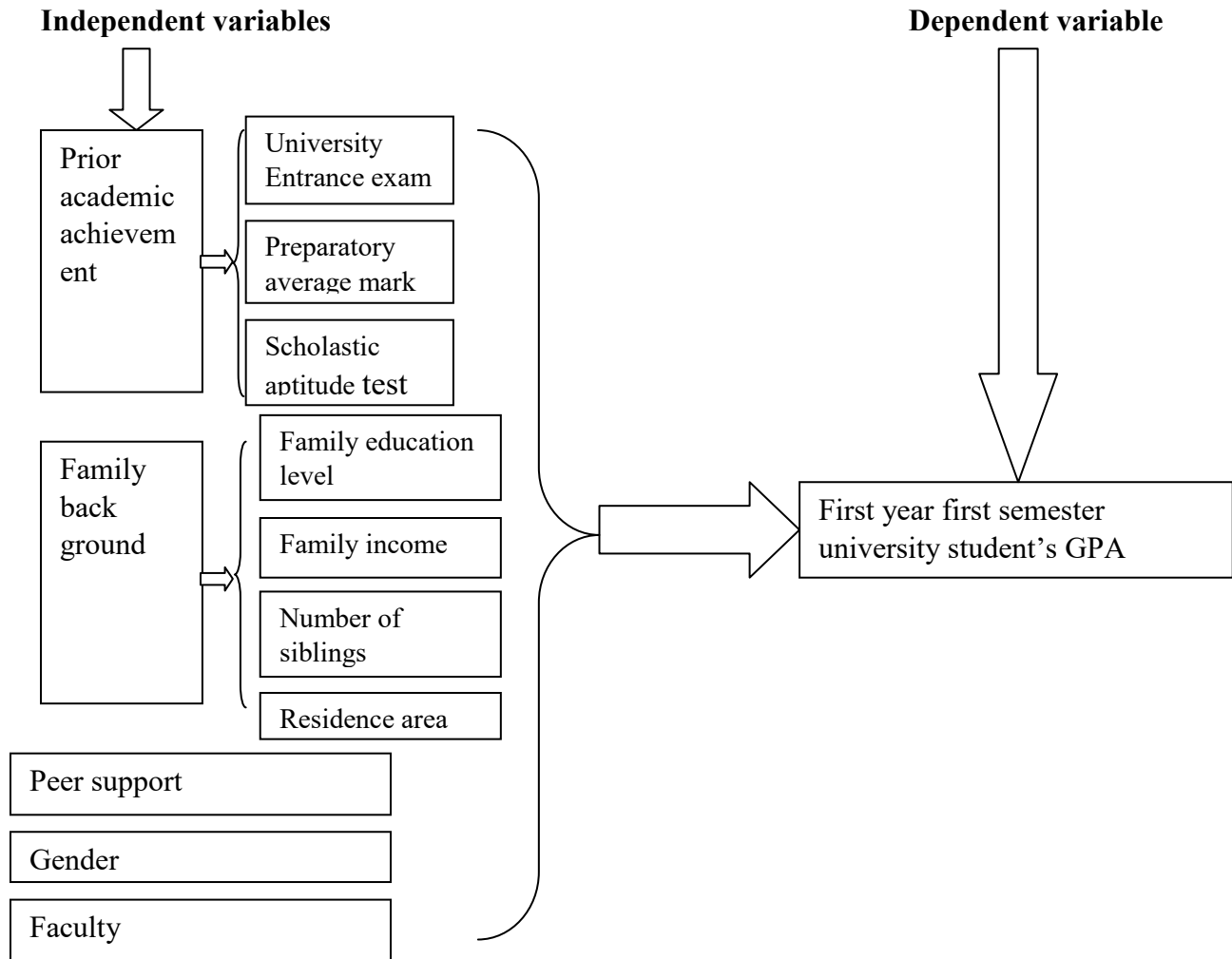
2.1.6. Academic Performance

Academic performance can be defined as the performance outcomes that showed the degree to which a person has accomplished a specific objective in instructional environments (Steinmayr et al., 2017). Academic performance is considered as the measure between the numbers of academic European Credit Transfer System acknowledged and the number of registered and students who have the right to attend two exam sittings to pass the subject and had to attend one of them (Juan & Guadalupe, 2019). So they considered that each higher education institution defines the first-year student as an element of the admissions and reporting standards. Many institutions include the qualification that a first-year student has not at all attended a college or any other post-secondary institutions after completing their high school studies

whereas some add other qualifiers to the definition such as a restrict on the age, the inclusion of military service, and condition of independence from family (Blinn College, 2014; University of Louisville, 2014; University of South Carolina, 2014; The University of Texas at Austin, 2014) as cited in (Staten & Shannon, 2016). The qualities of students are a component of the inputs into the educational procedure and it may be affected by the prior educational experience and point achieved by the students, the method of selection, and the degree it can take into account matters that are not frankly measured by high school results but that will impact on their chance to succeed in an advance study (Kumlachew, 2016).

2.2. Conceptual Framework

A simple conceptual model that has been developed for this study, included predictor variables such as prior academic achievement variables i.e. university entrance exam result, preparatory average mark, and scholastic aptitude test score; family background indicators such as (family education background, family income, number of siblings and residence area); peer support, gender (male and female) and faculty wise (natural science and social science) with predicted variable academic performance of university students i.e. first-year first-semester UGPA.



Chapter Three: Methodology

This chapter of the study includes the study design, description of the study area, study population, sample and sampling techniques, variables of the study, sources of data, data collection instrument and procedures, pilot study of data collection instrument, the procedure of data analysis, and ethical issue which have discussed one by one according to the following:

3.1. Study Design

Research design articulates the procedures to be followed for collecting, analyzing, interpreting, and reporting data in a research study (Creswell, 2003). The study design was a quantitative study that used cross-sectional and correlations design that involving descriptive and inferential statistical analysis. The study employed a cross-sectional research design in that the data was obtained from the respondents at a single point on one occasion without any attempt to follow up. Data collection at one time is sufficient for assessing or describing the current implication of the study. And also the design was chosen due to the rationale that it is well used to describe and interprets existing conditions, situations, opinions, a process that was going on, and possessions that were evident. Moreover, correlation design was employed to analyze research objectives through regression analysis statistics.

3.2. Description of the Study area

Salale University is the most recent university among forty-six universities that exists in the country which is found in Oromia National Regional State in North Shoa zone Fiche town. It is located in the North direction of the region and the center of the country at about 112 km from Addis Ababa, the capital city of Oromia/Ethiopia.

3.3. Participants of the Study

The study population was the first-year students of Salale University that enrolled in a regular program in 2012 E.C which were 1600 students. Accordingly, the study has assessed the contribution of prior academic achievement, family background, and peer support to first-year students' academic performance at Salale University. Thus, from the total of 1600 (male 1060 and female 540) students, 320 (male 212 and female 108) samples were drawn systematically by using Yamane (1967) simplified formula to calculate sample sizes, $n = \frac{N}{1 + N(e)^2}$; where n is the sample size, N is the population size, e is the level of precision i.e. 0.05.

3.4. Sample and Sampling Techniques

Sampling and sample techniques play an essential role in the accomplishment and achievement of the objectives of the study. To conduct this study stratified sampling method was employed to identify study participants and to collect the required data. Even if the study was conducted on university students the variables proposed in the study need different subgroups; as a result, the study population was needed to divide into a subgroup of homogeneities such as study program that is natural science and social science faculty, and gender (male and female). Then systematic sampling was carried out within each stratum to choose the sample.

The sampling unit was selected systematically from students by sampling fraction that is the ratio between sample size and population size. Under this method, only the first unit of the sample was selected at random and the remaining units are selected at fixed intervals. Accordingly, personal demography, family background information, and peer support information were collected from respondents, and their corresponding UEE, PAM, SAT, and UGPA were collected from the university registrar.

3.5. Study Variables

3.5.1. *Predictor Variables*

Predictor variables utilized in this study were prior academic achievement, Family background, peer support, gender, and study faculty.

Prior academic achievement measures included in this study were university entrance exam scores, preparatory average marks, and scholastic aptitude test scores.

University Entrance Exam (UEE): The UEE is designed to measure a student's preparedness for future university academic success and it is composed of a combination of different subject matter. In the case of our country in both social science and natural science seven subjects that are calculated out of 700 were taken as admission criteria. However, in 2012 E.C. due to administration and correction problem faced by the Ethiopian National Educational Assessment and Examination Agency four subjects was used for admission; which were for natural science field Mathematics, English, Aptitude and Physics courses whereas for social science stream Mathematics, English, Aptitude and Geography courses which were calculated out of 400. As a result the researcher used for this study the result of a subject that gets recognition by the ministry of science and higher education and used for admission.

Preparatory Average Mark (PAM): Preparatory average mark refers to the average score of overall subjects taken during two years of preparatory which are calculated out of 100.

Scholastic Aptitude Test (SAT): Aptitude test scores are subjects' scores on the scholastic aptitude test which is given together with the UEE. It is a subject composed of mathematics and English calculated out of 100 used for admission requirements with UEE.

The other theme of variables incorporated in this study was family background (family education, family income, number of siblings, and residence area).

Family education level: Family education levels include father and mother education levels which are measured in adult education and below (adult education was to mean education given for matured adults who could not get the chance of formal education), primary education (grade 1-8), secondary education (grade 9-12) and tertiary education (diploma and above)

Family income: Family income is the cumulative household income, which includes father and mother monthly income that they get from any source of their income.

Number of siblings: Number of siblings is the number of sisters and brothers in the family including the respondents him/self and her/self.

Residence area: Residence area is the area where the family and his/her children lived before enrolled in university, which is either of urban or rural area.

Peer support: Peer support is the support of a friend with each other during the university study or the friend helping each other regarding their study area in a different way.

Gender: It is the role of sex (male or female) contribution to academic performance in the first year first semester university study.

Faculty: Faculty is a social science or natural science stream; to determine the existence of faculty difference or not on students' academic performance in university study.

3.5.2. Dependent variable

The dependent variable in this study was UGPA earned by each student in the first year first semester of university study. The grades ranged on a scale from 0 to 4, where 0 is very poor and 4 is an excellent grade.

3.6. Sources of Data

The study was incorporated primary and secondary data sources, the primary data were respondents' demography, family background information, and peer support information which

was collected from the subjects who were selected in the course of the researcher's fieldwork through the questionnaire. And the secondary data which were respondents corresponding prior academic achievement scores (UEE, PAM, and SAT) and semester UGPA data were collected from the university registrar.

3.7. Data Collection Instrument and Procedures

Primary data were gathered through the questionnaire that comprises close-ended questions to collect relevant data by administering a survey for respondents. The questionnaire was prepared to look easy, attractive, and interesting. The researcher has also used questionnaires to keep the confidentiality of the respondents and also to save time.

The entire questionnaires employed for data collection were self-developed. After developing the questionnaire permission was requested from the respective university and respondents by showing the letter written from the corresponding department and discussing the aim of the study as it was only for academic purposes. The subjects were informed not to expose their identity and were confident that the information given was purely for research purposes and would not affect them individually. Therefore, the researcher has started the process of data collection in the study area and written questionnaires were distributed in hand to the subjects.

3.8. A pilot study of data collection Instrument

A pilot test is used to check the clarity of the questions, instructions, validity, and reliability of the various questions. The researcher looks over the various balances of the content and face validity. Therefore, the questionnaire was administered to 30 first-year students who were selected from both faculties (natural science and social science) of Salale University. Accordingly, the researcher evaluated the appearance of the questionnaire in terms of readability, consistency of style and formatting, and the clarity of the language used and also ensures that the

questionnaire included an adequate set of items that hit the concept of the research objectives. In addition, a questionnaire developed for peer support inventory was measured by Cronbach Alpha formula and found with the reliability of 0.84 and above. So this result was relevant with the survey questionnaire of Architha and Aithal (2020) that the Cronbach's alpha value is expected to be at least 0.70 to indicate adequate internal consistency of a given questionnaire. Finally, depending on the comment given from respondents questionnaires were edited and improved before administration for data collection.

3.9. Data Analysis Procedure

The raw data has no meaning by itself unless it is arranged and analyzed appropriately. First, data was cleaned, coded, and entered into SPSS and ready for analysis. Descriptive statistics were employed to summarize the sample characteristics and it was described by using a frequency table, percentage, range, mean, & Std. deviation to describe characteristics of the respondents. Moreover, the objectives of the study were analyzed by using inferential statistics (linear regression and correlation). All the analyses were conducted using Statistical Packages for Social Science (SPSS) version 23 software.

3.10. Ethical consideration

Ethical issues arise in any stage of the research process, starting from title selection to result in report ethics should be considered. In the progress of a study, researchers need to respect the participants and the position for research (Creswell, 2003). Taking this into consideration, a maximum effort has been applied to keep the rights of all research participants; take consent from respondents, keeping their confidentiality, respecting each of them, and acknowledging their values, norms, and government laws in the whole process of carrying out this study.

Chapter Four: Results of the study

The main purpose of this study was to examine the contributions of prior academic achievement, family background and peer supports to first-year students' academic performance at Salale University. The research questions focused on the independent and joint contribution of the study variables to criterion variable (first-year first-semester university grade point average), the study also aimed to determine the highest predictor variable of university academic performance. Therefore, depending on the research questions analysis of the study was held on.

4.1. Data Presentation and Describing

Descriptive statistics such as frequency distribution, percentage, mean, standard deviation, and range were tabulated to describe the participant's opinions and to compare their performance based on selected variables. The predictor variables selected for comparison are demographic information, prior academic achievement, family background, peer support, and predicted variable (first-year first-semester UGPA).

4.1.1. Response Rate

The total number of questionnaires distributed was 320 and from distributed questionnaires, 304 (95%) questionnaires were returned. Among 304 returned questionnaires six respondents, questionnaire were eliminated because they had a large amount of missing data, as a result, 298 (93%) respondents' questionnaires were used for data analysis.

4.1.2. Background Information of Participants

Background information of the study participants has included gender, faculty, and age information, which are presented in tables 4.1 and 4.2.

Table 4.1 Gender and faculty distribution of students

Variables	Measures	Frequency	Percentage
Gender	Male	199	66.8
	Female	99	33.20
	Total	298	100
Faculty	Natural science	167	56
	Social science	131	44
	Total	298	100

The findings showed that among 298 participants of the study 199 (66.8%) were male and 99 (33.20%) were female and also from the total respondents 167 (56%) were from the natural science field and 131 (44%) were from social science faculty.

Table 4.2 Age distribution of study participants

No.	Measures	Range	Minimum	Maximum	Mean	Std. Deviation
1	Age	7	18	25	20.23	1.46

Age distributions of respondents were varying from 18 to 25 with a range of 7. And also participant's mean score and Std. deviation were 20 & 1.46 respectively.

4.1.3. Description of prior academic achievement and UGPA

Prior academic achievement included university entrance exam results, preparatory average mark, and aptitude test score which have been taken as predictor variables, and university academic performance which has been taken as predicted (first-year first-semester students UGPA), which were presented in table 4.3.

Table 4.3 Description of prior academic achievement and UGPA

Variables	Range	Minimum	Maximum	Mean	Std. Deviation
Preparatory average mark	42.00	51.00	93.00	73.1846	10.98098
Scholastic aptitude test	66.00	27.00	93.00	51.82	12.65
University entrance exam	214.00	166.00	380.00	201.3826	17.58619
First year first semester UGPA	2.37	1.63	4.00	2.7753	.52031

The result of the university entrance examination was the subject's total score on the exam which is given at the end of preparatory programs. Even if the score was calculated out of 700 by using seven subjects, the ministry of science and higher education has decided to use four subjects to university entrance exam which was calculated out of 400 and used for admission purposes for students who were enrolled in university education in the year 2012 E.C., because of administration and correction problem faced by the Ethiopian National Educational Assessment and Examination Agency in 2011 E.C with UEE. So for this study university entrance exam was used a score of 400 of four subjects that got recognition by the ministry. Accordingly, the lowest and the highest score of respondents were 166 and 380 correspondingly with the range of 214. And also students mean score and Std. deviation were 201.38 and 17.59 respectively.

The preparatory average mark is the individual's average score across all subjects trained during the preparatory program and it was calculated out of 100. As a result, the study outcome showed that the minimum and the maximum score of the study respondents were 51 and 93 respectively with the range of 42. The subject's mean score was 73.18 and the Std. the deviation was 10.98.

The scholastic aptitude test score of the study subject was shown in table 4.3, so the output revealed that the highest score of the respondents was 93 while the lowest score was 27 with a range of 66. And also the students' mean score and Std. deviation were 51.82 and 12.65 respectively.

First-year first-semester university GPA was calculated out of 4.00. Accordingly, the highest score of respondents of the study was 4.00 and the lowest score was 1.63 with the range of 2.37. And the students' mean score and Std. deviation were 2.78 & 0.52 correspondingly.

4.1.4. Description of the family background

Family background indicator variables such as family education level (mother education and father education), family income, number of siblings, and residence area have been used for the study. So respondents' reported about their family background were illustrated in tables 4.4 to 4.7.

Table 4.4 Frequency distribution of family education level

Variables	Measures	Frequency	Percentage
Mother level of education	Adult education and less than	155	52.0
	Primary level education	78	26.2
	Secondary level education	49	16.4
	Tertiary level education	16	5.4
	Total	298	100.0
Father level of education	Adult education and less than	117	39.3
	Primary level education	91	30.5
	Secondary level education	55	18.5
	Tertiary level Education	35	11.7
	Total	298	100.0

The above table focused on the frequency distribution of respondents' reports about their mothers' and fathers' levels of education. Thus, the result showed that 155 (52%) of the respondents' mothers had adult education and less than; 78 (26.20%) learned primary level education; 49 (16.40%) learned secondary level education, and 16 (5.40%) of respondents mothers had tertiary level education. In addition, the study outcome revealed that 117 (39.30%) of the respondents' fathers had adult education and less than; 91(30.50%) learned primary level education; 55(18.50%) learned secondary level education, and 35 (11.70%) students fathers had tertiary level education. So the study output indicated that around 70% and 78% of respondents' fathers and mothers had primary education level and below respectively.

Table 4.5 Description of family income

Variables	Measures	Frequency	Percentage
Family income	1500-4000	149	50.0
	4001-6500	67	22.5
	6501-9000	43	14.4
	9001-11500	22	7.4
	Above 11500	17	5.7
	Total	298	100.0

Table 4.5 above indicated that participants report about their family monthly income in Ethiopian birr. So the result showed that 149 (50%) of respondents families have earned 1500-4000 birr; 67 (22.5%) families have earned 4001-6500 birr; 43 (14.4%) families have earned 6500-9000 birr; 22 (7.4%) families have earned 9001-11500 and 17 (5.7%) of respondents family have earned above 11500 birr. The result specifies that the majority of students joined the university from low-income families.

Table 4.6 Frequency distribution about a number of siblings

Variables	Measures	Frequency	Percentage
Number of siblings	0-2	42	14.1
	3-5	139	46.6
	6-8	83	27.9
	Above 8	34	11.4
	Total	298	100.0

The above table illustrates the participants report about their number of siblings. Accordingly, the output revealed that 42 (14.10%) of respondents families had 0-2 children, 139 (46.60%) families had 3-5 children, 83 (27.90%) families had 6-8 children and 34 (11.40%) of respondents family had above 8 children.

Table 4.7 Description of residence area

Variable	Measures	Frequency	Percentage
Residence background	Urban	87	29.20
	Rural	211	70.80
	Total	298	100.0

As observed from table 4.7 from the total respondents 87 (29.20%) were enrolled in Salale university from urban areas while 211 (70.80%) were from rural areas. So the result demonstrated that the majority of students were enrolled in the university from rural parts of the country.

4.1.5. Description of Peer Support Inventory

Table 4.8 Description of peer support inventory

Variable	Measures	Frequency	Percentage
Peer support inventory	Greater extent	39	13.1
	Average extent	119	39.9
	Some extent	94	31.5
	Uncertain	39	13.1
	Never	7	2.3
	Total	298	100.0

Table 4.8 above presented respondent's opinions on peer support inventory on average. And the result showed that 39(13.10) were responded to a greater extent; 119 (39.90%) were replied to an average extent; 94 (31.50%) were reacted to some extent; 39 (13.10%) were responded to uncertain and 7 (2.3%) were reacted to never peer support.

4.2. Result of Correlation and Regression Analysis

The correlation has been used to investigate the relationship between prior academic achievement variables and criterion variable as well as peer support and UGPA. And also linear regression (multiple and simple regression) analysis has been employed to check how much variation in first-year university grade point average is explained by the independent variables of the study, which are prior academic achievement (PAM, UEE, SAT); family background (family

level of education, family income, residence area, and a number of siblings), peer support, gender, and faculty. Accordingly, all research questions were analyzed one by one.

The main purpose of this study has to examine the contribution of prior academic achievement, family background and peer supports to first-year students' academic performance at Salale University. In case the assumptions of linear regression were diagnosed, as a result, multicollinearity between independent variables was detected, so none of the coefficients of tolerance were less than .637 and none of the coefficients of VIF were greater than 1.571 and also the correlation between variables were 0.56 and below. In all cases, the values of the residuals are independent since Durbin-Watson was greater than 1 and less than 4. And also other assumptions like linearity, normality, homoscedasticity, and so on were diagnosed across regression analysis; as a result, the assumptions have been met and the model was good.

4.2.1. The Study Result of Prior Academic Achievement to UGPA

The first research question developed for the study was; are the prior academic achievements significant predictors of first-year first-semester university students' academic performance. The prior academic achievement theme includes the university entrance exam, preparatory average mark, and scholastic aptitude test score. Therefore, the correlation and linear regression analysis of prior academic achievement to university students' academic performance were presented in tables 4.9 - 4.11.

Table 4.9 Correlation coefficient between prior academic achievement and UGPA

Variable	n	Correlations			
		1	2	3	4
1. UGPA	298	-			
2. University entrance exam	298	.039	-		
3. Preparatory average mark	298	.516**	.128*	-	
4. Scholastic aptitude test	298	.488**	.171**	.574**	-

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

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

The above table output revealed that the correlation between the university entrance exam and UGPA was very weak, since $r_{xy} = 0.039$. And the association between the preparatory average mark and UGPA was 0.516, so they have a positive and moderate relationship. Finally, the correlation between SAT and UGPA has been evaluated as a result, they have a positive and moderate relationship since $r_{xy} = 0.488$. Accordingly, the correlation between predictor variables has been seen to check the assumption of multicollinearity, therefore the result indicates that .128, 171, and 0.578 are less than .80, as a result, the assumption has been met.

Table 4.10 Independent contribution of prior academic achievement to UGPA

Predictor variables	R	R ²	F-ratio	df1	df2	Sig.
University entrance Exam	.04	.002	.453	1	296	.501
Preparatory average mark	.516	0.267	107.597	1	296	.00
Scholastic aptitude test	.488	0.238	92.703	1	296	.00

Dependent variable: UGPA

Predictors: (Constant), UEE, PAM and SAT; * significant at .05 level or $p < .05$

The regression analysis output showed that the university entrance exam result has been not significant to predict first-year first-semester UGPA since the p-value was greater than alpha value .05. Whereas the preparatory average mark was statistically significant that UGPA ($F(1, 296) = 107.597, P < .05$) and 26.70% of the variation in academic performance was accounted for by PAM. And also SAT was statistically significant that UGPA ($F(1, 296) = 92.703, P < .05$) and 23.80% of the variance in academic performance was explained by SAT.

Table 4.11 Joint contributions of prior academic achievement to UGPA

Model Summary ^b								
Variable	R	R ²	Std. Error	ΔR^2	F	df1	df2	Sig. F
Prior academic achievement	.570 ^a	.325	.42976	.325	47.116	3	294	.000

* Significant at .05 level or $p < .05$

Predictors: (Constant), prior academic achievement (UEE, PAM and SAT)

Dependent variable: UGPA

As observed from table 4.11 the joint contributions of prior academic achievement (UEE, PAM, and SAT) were statistically significant that UGPA ($F(3, 294) = 47.116, P < .05$); as a result 32.50% of the variation in the first year first semester UGPA was accounted for by prior academic achievement (PAM, UEE, and SAT). So the joint contributions of prior academic achievement were more effective in the prediction of first-year first-semester university GPA than their independent role.

4.2.2. *The contribution of family background to UGPA*

The second research question developed for the study was; what are the contributions of family background variables to the academic performance of university students. In case family background indicators included in this study were family education (mother and father level of education), family income, number of siblings, and residence area (urban & rural). So the outputs of the study were illustrated in tables 4.12-4.16.

Table 4.12 Contribution of parents education level to UGPA

Predictor variables	R	R ²	F-ratio	df1	df2	Sig.
Mother level of education	.299	0.09	29.155	1	296	.000
Father level of education	.272	0.074	23.603	1	296	.000
Mother and Father level of education jointly	.347	0.012	20.126	2	295	.000

* Significant at .05 level or $p < .05$

Predictors: (Constant), mother level of education, father level of education

Dependent variable: UGPA

Table 4.12 output indicated that the contribution of family educational status (mother and father educational level) to university academic performance. Accordingly, the regression analysis result showed that the mother's educational status was statistically significant that UGPA ($F(1, 296) = 29.155, P < .05$) and 9.00% of the variation in academic performance was explained for by mother level of education. In the same way, father education status was also significant that UGPA ($F(1, 296) = 23.603, P < .05$) and 7.40% of the variance in academic

performance was accounted for by father level of education. Furthermore, both mother education and father education status were jointly statistically significant that UGPA ($F(2, 295) = 20.126$, $P < .05$) and 12.0% of the variation in UGPA was accounted for by parent education level (educational level of mother and father). So these results indicated that students whose father and mother educated were more effective in academic success than either of them learned.

Table 4.13 Contribution of family income to academic performance

Model Summary ^b								
Model	R	R ²	Std. Error	ΔR^2	F	df1	df2	Sig. F
Family income	.125 ^a	.016	.51711	.016	4.688	1	296	.031

* Significant at .05 level or $p < .05$

Predictors: (Constant), Family income

Dependent variable: UGPA

The regression output presented in table 4.13 revealed as family income was statistically significant that UGPA ($F(1, 296) = 4.688$, $P < .05$) and 1.60% of the variation in the first year first semester UGPA was explained by family income.

Table 4.14 Number of siblings Contribution to academic performance

Model Summary ^b								
Variable	R	R ²	Std. Error	ΔR^2	F	df1	df2	Sig. F
Number of siblings	.298	.089	.49757	.089	28.771	1	296	.000

* Significant at .05 level or $p < .05$

Predictors: (Constant), Number of siblings

Dependent variable: UGPA

The other family background indicators incorporated in this study was the number of siblings, which significantly predict first-year UGPA. So it was statistically significant that UGPA ($F(1, 296) = 28.771$, $P < .05$) and 8.90% of the variance in academic performance was accounted for by the number of siblings.

Table 4.15 Contribution of residence area to academic performance

Model Summary^b								
Variable	R	R ²	Std. Error	ΔR^2	F	df1	df2	Sig. F
Residence background	.071 ^a	.005	.51987	.005	1.500	1	296	.222

* Significant at .05 level or $p < .05$

Predictors: (Constant), Residence background

Dependent variable: UGPA

Among the theme of family background indicators included in this study, residence area was not significantly predicted university academic performance, since the p-value was greater than alpha value 0.05.

Table 4.16 Joint contribution of family background to UGPA

Model Summary^b								
Variable	R	R ²	Std. Error	ΔR^2	F	df1	df2	Sig. F
Family background variables	.426	.181	.47487	.181	12.913	5	292	.000

* Significant at .05 level or $p < .05$

Predictors: (Constant), family background variables (family education, family income, residence area, and the number of siblings)

Dependent variable: UGPA

The joint contributions of family background (family education, family income, residence area, and the number of siblings) to university students' academic performance were significant. So the family background was statistically significant that UGPA ($F(5, 292) = 12.913, P < .05$) and 18.10% of the variation in first-year first-semester academic performance was explained by family background indicators variable of the study.

4.2.3. The contribution of peer support to UGPA

The third research question developed for the study was; what is the extent of peer supports contribution to the academic performance of first-year students at university.

Accordingly, the correlation and regression analysis reports were presented in tables 4.17 and 4.18 below.

Table 4.17 Correlation between peer support and students academic performance

Correlations			
Variable	n	1	2
1. UGPA	298	-	
2. Peer support	298	-.276**	-

** . Correlation is significant at the 0.01 level (2tailed).

As indicated in table 4.17 above the correlation coefficient between peer support and first-year first-semester UGPA was -.276, so they have a negative and weak relationship.

Table 4.18 Contribution of peer support to students academic performance

Model Summary^b								
Variable	R	R ²	Std. Error	ΔR^2	F	df1	df2	Sig. F
Peer supports	.276 ^a	.076	.50099	.076	24.354	1	296	.000

* Significant at .05 level or $p < .05$

Predictors: (Constant), peer supports

Dependent variable: UGPA

Peer support has a significant contribution to first-year first-semester university academic performance. So it was statistically significant that UGPA ($F(1, 296) = 24.35, P < .05$) and 7.60% of the variation in first-year first semester academic performance was accounted for by peer support.

4.2.4. The contribution of Gender and faculty to UGPA

The fourth research question of the study was; what are the contributions of gender and faculty to the first-year first-semester academic performance of university students. Hence, the regression analysis output of gender and faculty to academic performance was illustrated in the following table.

Table 4.19 Contribution of gender and faculty to academic performance

Variable	R	R ²	F-ratio	df1	df2	Sig.
Gender	.011	.000	.037	1	296	.848
Faculty	.154	0.024	7.195	1	296	.008

* Significant at .05 level or $p < .05$

Predictors: (Constant), gender, faculty

Dependent variable: UGPA

Gender has not significantly contributed to first-year first semester academic performance at university study, since the p-value was greater than alpha value .05. Whereas faculty was significantly predicting university study academic performance ($F(1, 296) = 7.195, P < .05$) and 2.40% of the variance in first-year first semester UGPA was explained by faculty.

4.2.5. Identifying the variables that more contribute to UGPA

The fifth research question of the study was; which variables have the highest contribution in predicting first-year first-semester UGPA of students. Therefore, to answer this research question hierarchical multiple regression has been employed and the outcome of the study was presented in table 4.20.

Table 4.20 Comparison of variables that more contribute to UGPA

Model Summary^a							
Predictor variables	R	R ²	ΔR^2	F-ratio	df1	df2	Sig. F
Step 1. PAM	.516	.267	.267	107.597	1	296	.000
Step 2. PAM & Mother educational level	.579	.335	.068	30.304	1	295	.000
Step 3. PAM, Mother educational level & Number of siblings	.613	.376	.041	19.196	1	294	.000
Step 4. PAM, Mother educational level, Number of siblings & SAT	.641	.410	.035	17.272	1	293	.000
Step 5. PAM mark, Mother educational level, Number of siblings, SAT & Peer support	.658	.433	.023	11.727	1	292	.001
Step 6. PAM, Mother educational level, Number of siblings, SAT, Peer support & Faculty	.673	.453	.020	10.633	1	291	.001
Step 7. PAM, Mother educational level, Number of siblings, SAT, Peer support, Faculty, Father educational level	.680	.463	.010	5.308	1	290	.022

* Significant at .05 level or $p < .05$

Predictors: (Constant), PAM, mother educational level, number of siblings, SAT, peer support, faculty, father educational level

Dependent variable: UGPA

As indicated in the above table among variables included in the study six of them stay in the model and the rest were excluded from the model. Thus, in the first step among those variables that remain in the model, PAM was found to be the best predictor of UGPA ($F(1,296) = 107.597, P < .05$), accounting for about 26.7% of the variance in UGPA independently. In the second step, when the mother's education level was added into the model, both PAM and mother's education level contributed significantly in predicting academic performance and accounting for 33.50% of the variance in UGPA. Mother education level independently contributed 6.80% to the model. In the third step, when the number of siblings was added to the

model the prediction power was improved to 37.60%, and a number of siblings alone 4.10% contributed to the model. Moreover, in the fourth step, when SAT was added to the model they were accounting for about 41.00% and SAT was separately 3.50% contributed to the model. In the fifth step, when peer support was added to the model it enhanced to 43.30% that peer support was individually 2.30% contributed to the model. In the sixth step, when faculty was added to the prediction was increased to 45.30% and faculty was independently 2.00% contribute to the model. Finally when father education level was added to the model; the six variables remain in the model (PAM, mother educational level, number of siblings, SAT, peer supports, faculty and father educational level) together contributed significantly to the prediction of UGPA ($F(1,290) = 5.308, P < .05$), accounting for 46.30% of the variance in UGPA and father educational level individually 1.0% contribute to the model. Whereas the rest variables were family income, residence area, UEE, and gender were excluded from the model. It was concluded that PAM and Mother educational status has the highest contribution compared to the rest variables respectively.

4.2.6. The joint contributions of study variables to Academic performance

The joint contributions of study variables include prior academic achievements that are university entrance exam, preparatory average mark and scholastic aptitude test result; family background such as family education level (father and mother education), Number of siblings, family income, and residence area; peer supports, gender and faculty to first-year first-semester university study academic performance.

Table 4.21 Joint contribution of all variables of the study to UGPA

Model Summary^b

Variable	R	R ²	Std. Error	Δ R2	F-ratio	df1	df2	Sig.
Prior academic achievements, family background variables Peer support, gender & faculty	.691	.477	.38333	.477	23.74	11	286	.000

Dependent variable: UGPA

Predictors: (Constant), Prior academic achievements, family background variables Peer support, gender & faculty, $p < .05$

As observed from table 4.21 prior academic achievement (UEE, PAM and SAT), family background (family education level, family income, number of siblings and residence area), peer support, gender, and faculty were jointly statistically significant that UGPA ($F(11, 286) = 23.75$, $P < .05$) and 47.70% of the change in academic performance was accounted for by prior academic achievement, family background, peer support, gender, and faculty.

Chapter Five: Discussion of study results

5.1. Discussion

This chapter has focused on the study results discussion with previous studies outcomes. This study aimed to investigate the contributions of prior academic achievement, family background and peer supports to the academic performance of first-year first semester students at Salale University. Thus, the study examined the ability of the study variables in predicting the first year of first semester UGPA independently and jointly.

The first research question of the study was; are the prior academic achievements (UEE, PAM & SAT) significant predictors of first-year first-semester university students' academic performance. As a result, the study output indicated that the university entrance exam was statistically insignificant because the p-value was greater than alpha 0.05 and its contribution to UGPA was only 0.20%. So this result agreed with the study of Birari and Randhawa (2014) which found out that UEE has a very weak correlation with regards to academic rank in the first year. However, this study result was contradicting the work of Maria and Leandro (2019) revealed that the university entrance result is the strongest predictor of first-year academic performance. And also it is inconsistent with the research findings of Melaku (2014) and Zebdewos et al. (2015) that UEE has the highest predictive power to first-year academic performance.

On the other hand, the analysis of the study revealed that the preparatory average marks explained the highest percentage of the variance in students' first year UGPA. This result corresponded to the findings of many studies. For instance, it was in line with Roberto et al. (2019) result that indicates high school grade point average is more effective in predicting first-year university students' academic success. Moreover, it was consistent with a research report by

Robert (2016) that PAM was the strongest predictor of first-semester UGPA. It was also correlated with studies by Aboma (2009), Yoseph (2014) and Desta (2017) that found preparatory average mark was the highest contributor for academic performance.

SAT was also another variable of prior academic achievement indicator that significantly predict university academic performance, which was agreed with the studies of Jamelske (2009), Gibbison et al. (2011), Shaw et al. (2011), Shaw et al. (2012), Soria et al. (2013), Bowman (2014), Kot (2014) and Zhou et al. (2015) cited in Paulien et al. (2018) found that students with better SAT were more possibly academically success at university. In the same way, this result was in line with the study result of Paul et al. (2020) that SAT was a somewhat strong positive correlation with university academic success. And also the result was similar to the study of Joel et al. (2017) that SAT score has been part of the admission requirements and the study result was a positive correlation with academic performance.

The combined contributions of prior academic performance (PAM, UEE & SAT) were statistically significant and the joint contributions were more effective than their independent contribution. This result was correlated with the previous study of Wiley (2014) that the combination of prior academic achievement was more favorable to predict UGPA than their independent contribution. And also it was similar to Burton and Ramist's (2001) and Aboma's (2009) studies result that a combination of standardized tests and high school average marks were capable of making significant contributions to predict first-year UGPA. Furthermore, the study was in line with a research finding of Aciro (2021) identified that, academic performance at pre-university levels as the most significant predictor of university GPA. However, it contradicted with the research finding of Nitza (2015) reported that, no logical tie between admission policies and students' actual achievements of UGPA in their first year. And also this

study finding was inconsistent with the study by Azrinawati et al. (2013) result indicated that there is no significant relationship between prior academic achievement and academic performance.

The second result of the regression analysis was held to answer the research question, what are the contributions of family background variables to the academic performance of university students. Therefore, among family background indicators included in this study family education (father and mother education), family income, and the number of siblings were significantly predicting university academic performance whereas residence area was insignificant.

Thus, family education (father and mother education) result was in line with the study of Mariam et al. (2020) that the education level of both father & mother has a positive impact on the academic performance of the students, however, mother education has a greater impact on the academic performance of the students as compared to father education. And also it was agreed with Tsegaye et al. (2020) study result that family educational background was a significant predictor of students' academic performance. Moreover, it was also similar to Gemechu's (2018) study result that family education level has a significant contribution to UGPA.

Another variable of family background that significantly predicts the first year UGPA was family income, which was in line with a previous study of Anders et al. (2003) cited in Doan et.al. (2016) that a parental income and education achievement of their children has positive correlation. It was also consistent with the study of Daniel and Bamlaku (2017) that suggest family with better monthly income students better perform in their education. Furthermore, the study result also agreed with a research article by Geremew and Abdissa (2015) found that family income has a significant contribution to university students' academic performance.

However, this study result was inconsistent with a research report by Oladele (2014) shown that there was no correlation between father's and mother's education with the academic achievement of the students. And also the current study finding has contradicted the work of Gemechu (2018) shown that family income did bring nothing to students' academic performance.

Regression analysis of the study also showed that the number of siblings was significantly predicting university students' academic performance, so the result was similar to the work of Amoo et al. (2018) that the number of siblings was a significant contribution to academic performance. In addition, a study by Gyamfi (2015) was consistent with the present study outcome that the greater the numbers of children in a family, the more those children have scores of poor grades. And also the study result of Lacovou (2001) cited in Kamau (2013) agreed with this study in that siblings from extended families are found to do worse than children from smaller families which indicates that attention of parents declines as the number of sibling's increases.

Among family background indicator variables included in this study, residence area was not significantly predicted UGPA, which was in line with a study by Ali (2013) shown that residential area (urban and rural) has insignificant impact on students' academic performance. And also the present study result was equivalent to the study findings by Melaku (2017) that the impact of parental residence area on academic performance was found no significant. On the other hand, the current study was contradict with a study by Ali (2018) indicated that, there was a positive relationship between home-related aspects and student academic performance. And also this study was disagreed with the work of Doan et al. (2016) study results that inference parents' living locations in rural areas have an undesirable impact on the GPA of students at university.

In general, the combined contributions of family background were significantly predicting university students' academic performance. Though none of the previous studies were used the variables of family background indicators included in this study together without other additional variables, the current result was equivalent to the study by Weiser and Riggio (2010) that revealed family background influences academic performance. And also it was consistent with a study by Maria et al. (2015) that family background factors have a large role in the performance of first-year students in higher education. Moreover, the current study result was in line with research findings of Maria et al. (2015) shown that family background has a big contribution to play in the performance of first-year students in university study.

The third finding of regression analysis was to answer the research question of what is the extent of peer support contribution to the academic performance of first-year students at university. Accordingly, the result of the study showed that peer support was significantly predicting UGPA, which was agreed with Emmeline (2016) that peer support in the first year of university was critically important to students' success. It was also similar to a study by Fidelia (2016) that there is a significant association between peer support and academic performance of the students. Furthermore, the result of this study was also consistent with Paul (2014) the students who are supported each other are positively and significantly associated with academic performance. Likewise, it was matched with the work of Guangbao et al. (2020) that peer support has a significant impact on students' academic performance.

The fourth research question was sought to check the contributions of gender and faculty to the first-year first-semester academic performance of university students. Therefore, this study result showed that gender was not significantly predicted UGPA; for instance, the study result was in line with R. Dorta-Guerra et al. (2019) that there are no significant differences in academic

performance in the gender of the student. It also corresponded with the study result by Melese (2018) indicated that there was no statistically significant gender difference in UGPA.

Nevertheless, the research findings of Ali et al. (2018) found that significant gender differences exist, female students, perform better than males.

The present study revealed that faculty has a significant contribution to academic performance and it was similar to the study result of Mikaël et al. (2012) that faculty has a significant contribution to first-year students' academic performance and also the work of Lizzio et al. (2002) shown similar result.

The study also answers the research question of which variables have the highest contributions in predicting first-year first semester GPA of university students and to answer this research question hierarchical multiple regression was held on. Accordingly, the present result showed that PAM was the highest predictor variable because it has independently contributed 26.70% for the model from the total variables contribution of 46.30%. For instance, the result was in line with the study result of Gabriel and Marius (2011) that indicates a great number of studies attempted to recognize high school grade point average was a high correlation with university GPA. And also the result was in line with studies by Jansen & Bruinsma (2005) cited in Ali (2013) and Cerdeira et al. (2018) that found students with a better preparatory average mark were more likely to be in a better position to achieve a better GPA at university.

Chapter Six: Summary, Conclusion, and Recommendation

6.1. Summary

The purpose of this study was to examine the contribution of prior academic achievements, family background, and peer support to a first-year first-semester academic performance at Salale University. And also the contributions of gender and faculty have been seen in the study. The study design was quantitative used cross-sectional and correlation design and the study was used stratified and systematic sampling techniques to select study participants. Accordingly, a total of 320 students were selected using stratified and systematic sampling techniques from a population of 1600 regular freshman students who enrolled into Salale University in the 2012 E.C academic year. The study employed both primary and secondary data, in that way primary data such as demographic information, family background, and peer support inventory were collect from subjects through self-report inventory. While secondary data which were prior academic achievement data and first-year first-semester university GPA were collected from the registrar's office. The data were analyzed using descriptive and inferential statistics (simple and multiple regressions) by using SPSS version 23. Thus, the study findings were summarized depending on research questions as follows.

Question 1: Are the prior academic achievements significant predictors of first-year first-semester university students' academic performance?

The prior academic achievement includes the UEE, PAM, and SAT scores. Hence, the relationship between UEE and UGPA was very weak, since $r_{xy} = .039$ whereas PAM, and SAT have a moderate relationship with UGPA because $r_{xy} = .516$ and $.488$ respectively. And also regression analysis output showed that UEE did not significantly predict the first year of first semester UGPA, since the p-value was greater than alpha value $.05$. While PAM and SAT scores

were significant predictors of university students' academic performance. And 26.70% and 23.80% of the variation in academic performance was accounted for by PAM and SAT respectively. The joint contributions of prior academic achievement (UEE, PAM, and SAT) were also statistically significant and 32.50% of the variation in the first year of the first semester UGPA was accounted for by prior academic achievement variables. Therefore, this result showed that joint contributions of prior academic achievement can be more effective than their independent role.

Question 2: What are the contributions of family background variables to the academic performance of university students?

Family background variables included in this study were family education (mother and father level of education), family income, number of siblings, and residence area (urban & rural). Accordingly, regression analysis output showed that parent's educational level significantly predicts first-year first-semester university students' academic performance. Thus, 7.40% and 9.00% of the variation in university students' academic performance were explained by father and mother level of education respectively. In addition, both mother and father education levels were jointly statistically significant and 12.0% of the variance in UGPA was accounted for by parent education level (educational level of mother and father). Consequently, both mother and father educated students were more effective in university study than either of them educated.

Another family background variable incorporated in the study that significantly influences academic performance was parent income and 1.60% of the variation in UGPA was accounted for by family income. The number of siblings has also a significant contribution to first-year first-semester university students' academic performance and 8.90% of the variation in academic performance was explained by the number of siblings. However, among family

background indicators included in this study residence area was insignificant in predicting university academic performance, because the p-value was greater than alpha value 0.05.

The combined contributions of family background (family education, family income, number of siblings, and residence area) were significant to predict UGPA and 18.10% of the variation in first-year first semester UGPA was accounted for by family background indicator variables included in the study. Thus, the combinations of family background indicators were more efficient in contribution to university academic performance than their independent role.

Question 3: What is the extent of peer support contribution to the academic performance of first-year students at university?

Peer support has a negative and weak relationship with UGPA as $r_{xy} = -.276$. Therefore, it has a significant contribution to the first-year first-semester academic performance of university students as 7.60% of the variation in academic performance was accounted for by peer supports. So the result signified that students who support each other with their friends in university study can be academically successful than the other.

Question 4: What are the contributions of gender and faculty to the first-year first-semester academic performance of university students?

Other variables incorporated in this study were gender and faculty. So the study result revealed that gender was not significantly contributed to first-year first semester academic performance. While faculty were significantly predicting university GPA and 2.40% of the variation in university academic performance was accounted for by faculty.

Question 5: Which variables have the highest contribution in predicting the first-year first-semester GPA of university students?

To identify the variables that more contribute to the model, hierarchical multiple regressions method analysis was used. So among all variables included in the study six of them stay in the model and the rest were excluded from the model. Thus, preparatory average mark, mother educational level, number of siblings, scholastic aptitude test, and peer supports, faculty and father educational level remain in the model. And they collectively accounted for 46.30% of the variation in first-year first semester UGPA. Among those variables that remain in the model 26.70% of the variance in academic performance was accounted for by preparatory average mark solely, while the remaining 19.60% of the variation in first-year UGPA was accounted for the rest variables that remain in the model (mother educational level, number of siblings, scholastic aptitude test, peer supports, faculty and father educational level) collectively. Therefore, the study suggested that preparatory average mark and mother educational status were the dominant predictors of first-year first-semester university GPA respectively. However, the rest variables such as the university entrance exam, family income, residence area, and gender excluded from the model.

In general, the joint contributions of study variables were statistically significant to predict university academic performance and 47.70% of the variance in academic performance was explained by prior academic achievement, family background, peer support, gender, and faculty. This has confirmed that the combined contributions of the study variables were more efficient in predicting first-year first-semester UGPA than their independent contribution.

6.2. Conclusion

This section has focused on the conclusion of the study result depending on research questions. Then, the results of the study point out the contributions of each predictor variable and their combined effect on the predicted variable. Accordingly, among previous academic achievement indicator variables, UEE was not significant in predicting UGPA and this result has disagreed with many previous study results. While PAM and SAT were statistically significant in predicting first-year first-semester UGPA. And also the study result revealed that a preparatory average mark has the highest contribution than the other variables in the study. Furthermore, prior academic achievement (PAM, UEE, and SAT) included in this study together significantly predict the academic performance of university study, which was more effective than their independent contribution and also more efficient than all other variables incorporated in this study.

The other theme of the variable included in this study was family background. Thus, the regression analysis results showed that among family background indicators incorporated in the study, parent education (father and mother level of education), family income, and the number of siblings were significantly predicting university students' academic performance whereas residence area was insignificant. Furthermore, the family background variable of the study was jointly significant in predicting UGPA and their joint contributions were more effective than their independent contribution. The study result also implies that among family background indicators parent education has the highest contribution to university students' academic performance.

Peer support has also significantly contributed to first-year first semester university study. However, gender was statistically insignificant as the p-value was greater than alpha 0.05 while faculty were significantly contributed to academic performance.

The hierarchical multiple regression has carried out to evaluate the variable that more contributes to the model; as a result, the study demonstrated that among all variables incorporated in the study preparatory average mark and mother educational status were the most powerful in predicting the first-year university students' academic performance respectively.

Generally, the study variables jointly contributed 47.70% to university students' academic performance in their first year of the first semester.

6.3. Recommendation

Many types of research were conducted on prior academic achievement; family background and peer support separately. Although many studies of prior academic achievement have included socio-demographic factors that explain family background indicators, all the variables included in this study were not incorporated together in any of the previous studies. Therefore, this study had included three main variables and the other to explore their independent and combined effects on university students' academic performance. Hence, this study may serve as a baseline for further research to better understand the contribution of prior academic achievement; family background, and peer support to first-year first semester UGPA.

Among the variables included in this study, PAM has more effectively contributed to the model, which was similar to many of previous study results discussed in a different chapter of this thesis. Therefore, university curriculum designers and the university admission committee should have considered the university admission criteria, since currently in Ethiopia university entrance exam is the only admission criteria.

The researcher also recommended that parents should plan to be academically sound if they have to influence their children's academic performance. The researcher suggested that for children to attain academic success the family should have a stable income from whatever source. In addition, the researcher recommended that the number of siblings should be the average size as the parents have to meet all the basics for their children, and at that the children have performed academically. It is suggested for educators, teachers, counselors, university curriculum designers, and students to focus not only on prior academic achievement but also on the other factors such as family background, peer support, and other relevant variables since academic performance is the result of numerous factors.

Moreover, since a great amount of variance in the criteria variable is unexplained by the predictor variables in this study, there is an opportunity for more research to study the unexplained portion of academic performance in university study.

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Appendix A: Questionnaire

Jimma University College of Education and Behavioral Sciences Department

of Psychology

Thesis Title on:

Contribution of Prior Academic Achievement, Family Background and Peer

Support to First Year Students' Academic Performance at Salale University

Questionnaire to be filled by students

Dear students,

The objective of this questionnaire is to gather information regarding the family background and Peer support of first-year Salale University students' that admitted in 2012 E.C.

The information obtained will be used for research purposes only. As a result, your frank and sincere responses to each item have useful and valuable significance in the accomplishment of the study. The questionnaire consists of three parts: General Information, family background, and Peer support information.

Thank you for your assistance!

I. GENERAL INFORMATION

Please make a tick mark (✓) or fill in the blank spaces.

1. Sex. Male Female
2. Age _____
3. ID No. _____
4. Faculty Natural Science Social Science

II. FAMILY BACKGROUND INFORMATION

Please make encircle the letter that best indicates your family background information.

A. PARENT'S EDUCATIONAL LEVEL

5. What is the average education level of your mother?
 - A. Adult education and less than
 - B. Primary level education
 - C. Secondary level education
 - D. Tertiary level education
6. What is the average education level of your father?
 - A. Adult education and less than
 - B. Primary level education
 - C. Secondary level education
 - D. Tertiary level education

B. FAMILY INCOME

7. Please indicate your approximate family monthly income in Ethiopian birr?
 - A. 1500-4000
 - B. 4001- 6500
 - C. 6501- 9000
 - D. 9001-11000
 - E. Above 11000

C. NUMBER OF SIBLINGS

8. How many numbers of brothers and sisters are there in your family including yourself?
 - A. 0 to 2
 - B. 3 to 5
 - C. 6 to 8
 - D. Above 8

D. RESIDENCE BACKGROUND

9. Where were you and your family lived before you join the university?
- A. Urban B. Rural

Please make encircle the letter that best indicates about your friend encourage you.

III. PEER SUPPORT INVENTORY

10. To what extent do your friends encourage you to study with him/her?
- A. Greater extent B. Average extent C. Some extent D. Uncertain E. Never
11. To what extent do your friends provide you with study and learning materials on campus?
- A. Greater extent B. Average extent C. Some extent D. Uncertain E. Never
12. To what extent do your peers support in doing an assignment and for exam preparation?
- A. Greater extent B. Average extent C. Some extent D. Uncertain E. Never
13. To what extent do your friends encourage you to come to class every day?
- A. Greater extent B. Average extent C. Some extent D. Uncertain E. Never
14. To what extent do your friends want to do their best in all courses of your study?
- A. Greater extent B. Average extent C. Some extent D. Uncertain E. Never
15. To what extent do your friends encourage you to ask a question during lessons or classes that you have not understood?
- A. Greater extent B. Average extent C. Some extent D. Uncertain E. Never
16. To what extent does your friend support you to attempt every question asked during lessons and exams?
- A. Greater extent B. Average extent C. Some extent D. Uncertain E. Never
17. Do you think that you scored a good grade due to assistance in all ways with your friends?
- A. Greater extent B. Average extent C. Some extent D. Uncertain E. Never

Appendix B: Informed Consent Letter

The purpose of this research study is to examine the contribution of prior academic achievement, family background, and peer support to first-year students' academic performance. As a participant in this study, you will be asked to fill out questionnaires that will address these issues and permission for gathering your respective information from the registrar regarding preparatory average mark, university entrance score, aptitude test result, and first semester GPA that used in this study.

Right to Privacy: All information that is collected may be used for research purposes. However, it is important to note that your name will not be used in any manner and that individual scores are not being looked at.

Participants' Rights: Your involvement in this research is voluntary. You have the right to withdraw from this research at any time. If you have any questions or concerns or would like more information about the research please contact me, Kefale Negash (negashkefale@gmail.com) or 0910931534

Permission Slip

Thesis Title: Contribution of prior academic achievement, family background, and peer support to first-year students' academic performance at Salale University

Researcher: Kefale Negash

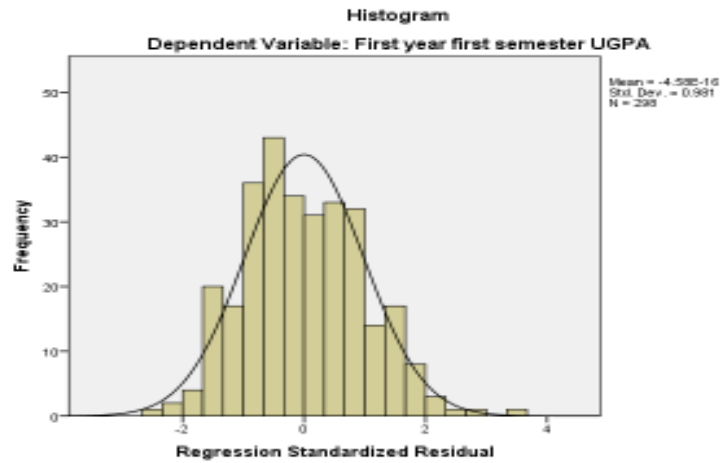
I _____ hereby certify that I have been informed by Kefale Negash about the research on contribution of prior academic achievement, family background and peer support to first-year students' academic performance. I have been told about the procedures and understand that any records that can identify, I will be kept confidential. I understand that I have the right to ask questions at any time and that I should contact Kefale Negash for answers about the research. I understand that my participation is voluntary and that I may refuse to participate or withdraw from taking part in this study at any time without penalty or prejudice.

I freely participate in this research project.

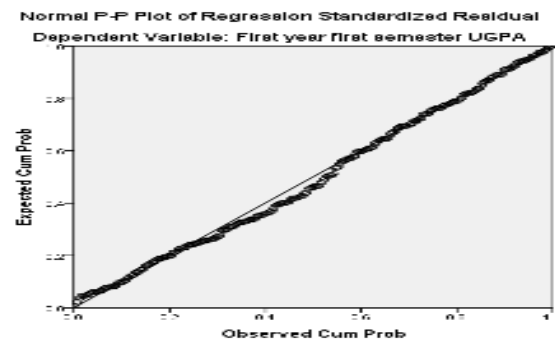
Respondent Signature _____ Date _____

Appendix C: Checking Assumptions

Histogram showed normality of the residuals model



P-P plot of standardized regression residual of the model



Scatter plot showed different assumptions of the model

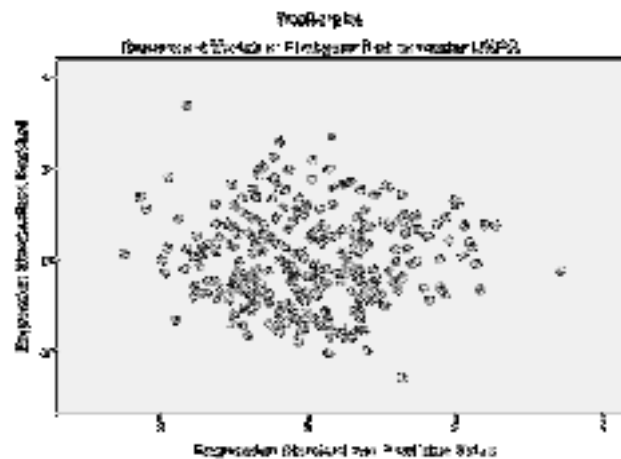


Table that show assumption of multicollinearity

Variable	Coefficients ^a							VIF
	B	Std. Error	Beta	Zero-order	Partial	Part	Tolerance	
(Constant)	1.767	.328						
University entrance exam	-.002	.001	-.077	.039	-.103	-.075	.934	1.071
Preparatory average mark	.015	.003	.316	.516	.333	.255	.655	1.528
Scholastic aptitude test	.009	.002	.229	.488	.245	.183	.637	1.571
Mother educational level	.093	.027	.163	.299	.196	.145	.785	1.275
Father educational level	.057	.024	.112	.272	.140	.102	.834	1.199
House hold income	.004	.019	.009	.125	.012	.009	.940	1.064
Number of siblings	-.121	.027	-.201	-.298	-.258	-.193	.922	1.084
Residence background	.095	.052	.084	-.071	.109	.079	.889	1.125
Peer support	-.093	.024	-.170	-.276	-.220	-.163	.915	1.093
Gender	-.050	.049	-.045	-.011	-.060	-.044	.942	1.062
Faculty	.162	.045	.155	.154	.208	.153	.982	1.019

a. Dependent Variable: First year first semester UGPA