



RESEARCH ARTICLE

Educational Big Data Mining: The Mediating Role of Study Time at School Impact on Romantic Relationship and University Student Academic Performance

Ting Tin Tin^{1*}, Pang Yu Von², Chay Yin Yoon³, Lee Shen Hai⁴, Ayodeji Olalekan Salau^{5,6}

^{1,3}Faculty of Data Science and Information Technology, INTI International University, Nilai 71800, Malaysia

²⁻⁴Tunku Abdul Rahman University of Management and Technology, Kuala Lumpur, Malaysia

⁵Department of Electrical/Electronics and Computer Engineering, Afe Babalola University, Ado-Ekiti, Nigeria

⁶Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences, Chennai, Tamil Nadu, India

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ABSTRACT

In the 21st century, young adults are inevitably in romantic relationships, this study can see that it is very common for young adults to be involved in romantic relationships and they make up the majority. In a romantic relationship, they will face various challenges, both physical and psychological, which may lead to negative emotions that may affect the student's performance. Immaturity and lack of parental care in a relationship can lead to insecurity and a sense of self in a relationship among young adults. Therefore, using school time as a mediating factor, this study studies the relationship between romantic relationships and academic performance. This study chose to use the ICPSR dataset for merging and analysis. SPSS statistics v23 was used to analyze the data and produce the results. Research has proven that romantic relationships have an impact on academic performance and that young people in relationships have many risks to learn to cope with. This study hopes to strengthen the link between young adults' romantic relationship and their academic performance so that students do not lose themselves in romantic relationships, while also ensuring that their academic performance does not decline and reducing the social angst about young adult romantic relationships.

***Corresponding Author:**

tintin.ting@newinti.edu.my

INTRODUCTION

Relational adjustment refers to the individual's ability to adapt to the dynamics of social interactions with peers [1], family [2], and romantic partners [3]. The adjustment of the relationship of university students has been found to have a significant impact on their academic performance. Good relationships with families, friends, and romantic partners can offer emotional support, inspiration, and a feeling of belonging, all of which can help students achieve higher academic standing [4]. Students are more likely to be motivated, focused, and involved in their academics when they believe

that their loved ones understand and encourage them. This emotional support can help students overcome challenges in the classroom, manage stress and anxiety, and maintain commitment to their academic goals. Additionally, encouraging interactions can motivate students to pursue their academic goals and take advantage of new opportunities. Student confidence and self-esteem can be boosted by supportive comments and encouragement from loved ones, friends, and romantic partners, which can help them succeed academically. These connections can provide students with a sense of community and belonging, which can improve their general well-being and academic experience.

On the other hand, negative relationship adjustments, such as experiencing stress, anxiety, or other mental health problems, can have adverse effects on academic success [5]. It can be challenging for people to focus on their academic goals and perform well while dealing with relationship-related stress or anxiety. In reality, studies have shown that anxiety and depression are frequently associated with lower academic achievement among university students, as well as other mental health problems. Relationship concerns can also lead to social exclusion and lack of social support, which can worsen mental health conditions and have a detrimental effect on academic achievement. Negative relationships can also force people to seek unhealthy coping strategies, such as substance abuse, which can further obstruct academic performance.

Several studies have investigated the impact of relationship adjustment on university student grades. Relationship satisfaction with romantic partners was significantly related to academic performance among university students; university students will also have a downward trend, when they are in the period of passionate love [6]. Students who say that they dedicate more time and effort to their love relationships typically perform worse academically than those who do not. This may be due to the fact that putting too much emphasis on relationships can result in avoiding academic obligations, contributing to stress, and creating distractions. On the other hand, positive social support from peers was positively associated with academic performance among university students [7]. Students who are more content with their relationships tend to perform better academically than those who are less satisfied on average. This may be due to the fact that people who have relationships often feel more emotionally secure, encouraged, and inspired to perform well at school.

Other studies have explored the impact of family relationships on academic performance. For example, family cohesion was positively associated with academic achievement among university students [8]. Positive family relationships increase the likelihood that university students will receive emotional support and encouragement, which can reduce stress and anxiety and improve mental health. The stability and support that come from family cohesion might help students focus on their academic goals. Students may be more motivated to excel academically and may feel more secure in their skills if they feel like they have a supportive family. Furthermore, parental attachment was a significant predictor of academic performance among university students [9]. A student's GPA might be higher if they had a stable attachment type with their parents as opposed to an insecure one. These results imply that parental attachment is a significant factor that can affect the academic success of university students.

The results imply that a student's academic performance at a university might be significantly impacted by the adjustment of the relationship. Better academic results can result from having strong relationships with family, friends, and love partners because they can offer emotional support, inspiration, and a sense of belonging. On the other hand, unfavorable relationship experiences, such as stress, anxiety, or disagreements, could impair a student's academic achievement. Universities and other educational institutions should offer students the tools and assistance they need to establish and maintain healthy relationships with their friends, family, and love partners. These resources may include workshops, seminars, mentorship programs, counseling services, and counseling services that encourage students to create supportive and healthy relationships. The academic performance and general well-being of university students can be enhanced by addressing relationship concerns.

1.1 Problem Statement

The problem of mental immaturity, premarital sex, and cohabitation can all have a significant impact on student grades. Mridula conducted a survey focusing mainly on the relationship between 13-25-year-old students and their ability to express emotions and said that almost 75% of the respondents were immature in expressing emotions [10]. According to research by Ava Green and her team, 7.7% of men in the general population are narcissists [11]. Mentally immature can lead to difficulty in time management, organization, and prioritization, which can all impact the student's ability to complete assignments and study effectively. Additionally, it can be challenging for people to focus and maintain motivation when they are suffering from mental health problems such as depression or anxiety, which can affect their academic performance.

Premarital sex and sexual activity before marriage can also negatively impact academic performance. Individuals who engage in premarital sex may experience emotional distress and anxiety related to their sexual behavior. The population of this study consisted of high school students in the Indonesian province of East Java's Trenggalek Regency. 38 million girls aged 14 to 20 are at risk of pregnancy and more than 20 million teenage pregnancies occur, with around 50% of pregnancies being unplanned. [12]. According to the annual records of Komnas Perempuan, the prevalence of forced sex is higher among unmarried women who are adolescents or the equivalent of high school students, that is, 35% [13]. Additionally, premarital sex can cause an unintended pregnancy, which can disrupt academic schedules and make it difficult to attend class or complete assignments.

A student's time and energy may be diverted and expended in ways that interfere with their academic goals if they live with a romantic partner. Cohabiting students may struggle to strike a balance between their academic duties and the demands of their personal and romantic relationships, which can cause stress and anxiety. According to the research by Wendy D. Manning, there has been a major shift away from marriage, a roughly three-fold increase in cohabitation, a substantial share remaining in relationships, and numerous single people who make up around 35% of the population [14]. According to Ting et al., romantic relationship significantly affect adolescent academic performance [15]. According to research by Julia et al., between the ages of 18 and around 45, 60% of people have co-habitation compared to 50% of those who have been married [16]. Lower grades and poorer academic performance may result from this. Some of the health effects of underage cohabitation and premarital sex include unplanned pregnancy, adolescent pregnancy, pregnancy loss, sexually transmitted infections, AIDS and HIV, regret, remorse, decrease in confidence, hopelessness, loss of support from family members, substance misuse, and suicides [17].

2.0 LITERATURE REVIEW

Young people's attachment is an important indicator of the development of one's identity, functioning, and ability to relate closely during adolescence. For young people, it is a time of transition to understand early to late adolescent romance [18,19]. When entering secondary or college education, young adults will face many classroom pressures and university activities, resulting in the need to devote sufficient time and energy to their studies to succeed academically [20]. Therefore, as a student, this study should ensure that this study is in healthy romantic relationships and ensure that this study does not indulge in unhealthy relationships. Research has shown the consequences of young adults and romantic relationships, and this study can find that for young adults, there is a negative association between negative romantic relationships and academic performance. However, young adults can easily divert their attention to other places, such as romantic relationships, reducing their ability to study and unable to focus on their studies [20]. When students continue to indulge in romantic relationships, it will lead to their inability to manage their time properly [18,19]. This tendency is related to attendance. Some students like to be with others, so they often skip classes and allocate more time to dating [21]. College students who have romantic relationships during school tend to be more stressed than singles because they not only deal with the

pressure of schoolwork, but also with their partners, which leads to anxiety because they cannot control their emotions very well. As a result, they face higher levels of stress [22]. This study found that during this 5-year period, many young adults developed depression due to emotional problems, which also further increases the risk of violent victimization and early sexual behavior [23].

Bad grades are not new for students, it all depends on their hard work and self-discipline to achieve good scores. Also, bad grades often lead to so many unwanted results, and one of them is dropouts. Despite their best efforts, around one third of German students leave their studies before graduating [20], with dropouts predominating during the first two semesters. According to surveys carried out in a medium-sized German institution, not all dropouts are the result of poor academic performance. The three main findings that were found are: first is family, second is partnership, third is friends at university [24]. Parents play an important role in this matter since they are the closest to their children, and when parents constantly show a negative attitude toward their children's education, this can lead to poor academic performance of their children and cause the child to drop out of the school [25]. Secondly, intimate relationships also affect their partner's academic performance in a bad way. While young people's sexual behavior is accepted as a typical stage of growth. Adolescents are susceptible and may perform poorly academically as a result, as they may be less prepared than adults to handle the complex emotional processes involved in sexual intercourse [26]. Lastly, it has also been recognized that student peers might have an impact on their academic success. There is a substantial correlation between student participation and academic performance. A student's academic performance will be negatively impacted if they feel out of place among their peers. However, this sense of belonging is frequently dependent on fundamental traits such as gender, color, academic standing, and political affiliation. This indicates that a student's academic success will be impaired if they do not exhibit any traits in common with their peers or otherwise deviate from them [27]. Is it possible for a romantic relationship to last for a long period of time, e.g. > 3 months or < 3 months, in today's young adult? In the early stages of romantic relationships between young adults, it has been observed that they are particularly desirous or dependent on each other, but after a month or two, their desire for each other gradually decreases [28]. Young people tend to be impulsive and when desire and curiosity end, they become tired of the romantic relationship, which allows them to easily cause conflict with their partner, even to the point of threatening or forcing their partner, eventually leading to the short-lived romantic relationship ending in a breakup [29]. When a romantic relationship ends, one or both of them can suffer greatly, such as low self-esteem, fear of starting a new relationship, or even mental health depression, which can seriously affect the student's academic performance and prevent them from concentrating on their studies [30,31]. If adolescents take their romantic relationships seriously, they will maintain positive energy in the relationship, helping them build confidence and be positive and maintain their romantic relationship [32].

Adolescent sexuality has long been considered a social problem. However, in recent surveys, due to the increasing young age of adolescent sexual behavior, society has identified many issues regarding early sexual behavior and negative effects such as mental health, potential sexually transmitted diseases, unwanted pregnancies, abortions, and premature births [33,34]. Adolescent sexuality is possible as a result of the neglect of sex education of the state and parents, which leads to a certain curiosity and lack of knowledge of sex education among young adults, so they cannot control themselves and be responsible [35]. They may see sex to express love or indulge without caring about moral boundaries [36]. In response to these social issues, experts have explored whether there is an interaction between sexual behavior and academic performance in early adolescence [37]. Sexual behavior during adolescence was found to lead to a decrease in students' attention to academic performance. This result was attributed to the fact that since having a romantic relationship, the unstable mindset tends to shift from focusing on academics to romantic relationships and can spend less time at school and less time studying due to the relationship [37]. This study also found that students who are not sexually active also affect their academic performance, and this study

hypothesized that such students would not need to spend much time in romantic relationships. In an exploration of adolescent sexuality, it was found that female adolescents who engage in sexual activity are more likely than boys to receive a diagnosis of depression because factors of insecurity and unpreparedness for negative consequences cause them to be unable to focus on their studies, which can also require frequent visits to the counseling room and result in lower grades [37]. Finally, it has been observed that early sexual activity in young adults negatively affects student academic achievement and also student interest in learning, resulting in very poor grades. Eventually, they miss class or drop out of school due to negative factors [38]. To counter these risks, parents must monitor and educate their children about 'sex' and warn them about the use of contraceptives to avoid some negative outcomes [38,39].

Cohabitation means that two people live together without any form of legal marriage, and this study calls it premarital cohabitation [40]. Nowadays, cohabitation between romantic partners is accepted as normal and is especially prevalent among modern college students [41]. It is common to see couple's inseparable in schools, returning to their residences together to co-habit after school. This kind of relationship has attracted the attention of society [40,42]. This study has also found in some surveys that cohabitation and academic performance must affect each other [43]. According to studies, female cohabitants have a high probability of experiencing sexual violence and assault, domestic violence, etc., especially cohabiting females may suffer from unavoidable violence, leading to an increased probability of being diagnosed with depression, anxiety disorders, which will reduce their attendance at school and eventually lead to lower academic performance [44]. In Niger, this study found that the risk of cohabitation leads to 92.45% of unwanted pregnancies and due to their inability to manage their pregnancy and schoolwork and exams, these pregnant schoolgirls eventually drop out. [45]. Especially for girls, cohabitation or pregnancy after cohabitation definitely reduces academic performance because students led a wild and frequent sexual life after cohabitation, resulting in less time to miss classes and go to class, which significantly negatively impacts learning [45]. Additionally, cohabiting women may not have enough time to study and go to school because they have to do long hours of housework [43]. They do not have more energy to attend classes and, eventually, these female college students choose to drop out of school [43]. However, adolescent lovers want to be able to co-habit with their romantic partners, and they claim to want to do so due to the lack of on-campus housing and financial hardship [46]. However, they do not recognize that cohabitation can lead to lower grades and degradation. Universities should regularly inform students of the potential dangers of co-habitation while increasing the amount of available housing available. Reducing students' desire for cohabitation also echoes the need for parents to take more interest in their children's lives [47,48].

Using data that was gathered in 2001 within the KwaZulu-Natal region, located in South Africa, this working project evaluates the factors that contribute to female student pregnancy, as well as the chance of college and subsequent re-enrollment among pregnant students [49]. Research data from birth history, education history, and pregnancy data are used to better identify female students who became pregnant while enrolled in school. This study found that future studies will benefit from examining causal linkages between earlier school experiences and eventual school attendance given the higher levels of female student involvement in sub-Saharan Africa. Children of color come from disadvantaged families often. The social and economic situations in which many of the students travel to school are well known to predict these poor results [50]. According to a study on the causes of secondary school dropout among girls in Bayelsa state, Nigeria, 74% of cases of school dropout were due to pregnancy. Kenya discovered that girls' dropout was most frequently claimed to be due to pregnancy. According to research on education in Zambia, it was quite unlikely that these girls would return to school after becoming pregnant. Most pregnant dropouts come from underdeveloped areas or have low levels of education. As a result, a person's educational background will influence his or her ideas. A cross-sectional study approach was used to collect data for this study from the 2014 Ghana Demographic and Health Survey. The prevalence of unintended pregnancies was computed,

and certified pregnancy will affect student grades. Students' grades will be impacted by the certified pregnancy rate, which was calculated to be high [51]. Although it is obvious that early pregnancy and marriage contribute significantly to school dropout, there are a variety of study boundaries, a dearth of reliable and comparable national data, and a strong correlation between school dropout and

socioeconomic inequality, as well as unfavorable gender norms [52]. In industrialized, developing and undeveloped nations alike, pregnancy among young adults has long been a social, economic, and academic problem. One in three pregnancies worldwide originates in underdeveloped areas such as sub-Saharan Africa. Due to the limited education of the youth, the high rate of leaving school before completion, the poor health conditions, and poverty prevalent in that area. Many additional factors might affect a child's academic success, and there is some data that suggests young adult women may be more likely to have children who struggle academically. Young mothers may experience a range of difficulties that might make it difficult for them to maintain a nurturing home environment for their children, which is one reason for the association between young motherhood and academic underachievement in children. They may be less educated themselves, have fewer financial resources, and be more susceptible to mental health problems. Young mothers may find it more difficult to provide the kind of secure and supportive home environment that is linked to academic performance due to all these reasons [53].

In conclusion, there are several variables that can affect the association between romantic relationships and academic achievement, including co-habitation, relationship status, sex in the partnership, and pregnancy. This study needs to properly manage the research methodologies and sample strategies of this study, collect data on a variety of variables, and apply appropriate statistical techniques to evaluate the data from this study to make sure that these prospective measurement parameters are appropriately evaluated in this study investigations. To discover viable interventions, the conceptual framework of this study will be based on comprehending the relationship between these determinants and academic achievement.

TABLE 1 Covariates of academic performance from previous studies

Covariate category	Detail Variables	Previous studies
Relationship Status	Relationship status Romantic relationship Long-term romantic	[19] [20] [30]
Sex	Early sexual	[33]
	Sexual Intercourse	[34]
	Premarital Sexual	[36]
Cohabitation	Cohabitation	[40]
	Negative effects of cohabitation	[45]
	Cohabitation, unwanted pregnancy	[46]
Pregnancy	Pregnancy-related school dropout	[50]
	Unintended Pregnancy	[52]

2.1 Conceptual framework

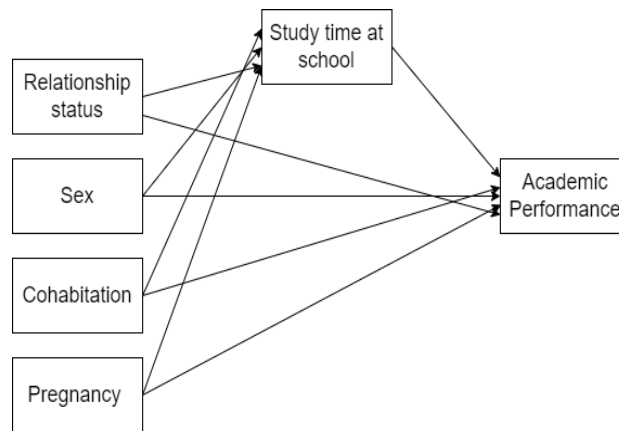


FIGURE 1. Conceptual framework of this research study

Hypothesis:

H1: Relationship current correlates negatively with academic performance.

H2: Study time at school mediates the relationship between Relationship Current and academic performance.

H3: Relationship \geq 3 months correlates positively with academic performance.

H4: Study time at school mediates the relationship between Relationship \geq 3 months and academic performance.

H5: Sex correlates negatively with academic performance.

H6: Study time at school mediates the relationship between Sex and academic performance.

H7: Cohabitation correlates negatively with Academic Performance.

H8: Study time at school mediates the relationship between Cohabitation and academic performance.

H9: Pregnancy correlates negatively with Academic Performance.

H10: Study time at school mediates the relationship between Pregnancy and Academic Performance.

3.0 RESEARCH METHODOLOGY

Inter-university Consortium for Political and Social Research (ICPSR) is one of the leading international consortiums that provide more than 250,000 files of datasets for social sciences research. The public use samples are free for researchers to download and perform data cleaning, curation, and analysis for research in social and behavior sciences. There are a total of 5821 responses for the questionnaire of the whole cross-sectional dataset. The first questionnaire got 3269 cases, while the second questionnaire got 2552 cases. In the current investigation, a specific data set ICPSR 21600, National Longitudinal Investigation of Adolescent to Adult Health (1994-2018), is used in Wave I of the in-school survey. Grades 7 through 12 received a Wave I school survey in 1994-1995; 15,000 Wave I participants received a Wave II home survey in 1996. The home reciprocal data collection of 15,170 young adults (aged 18 to 26) and their spouses (2001-2002) was carried out in three waves. The final two rounds of home interviews, conducted in 2008-2009 and 2016-2018, respectively, were the fourth and fifth waves.

In this study, this study used SPSS to merge the data sets of two elderly people (DS 9 - household data, DS11 - household questionnaire, 16 - public use education data, and 17 - public use graduation

data) and to clean the data sets. which are merged by using SPSS and the dataset already cleaned. 264 variables are shown when we merged the data and 13 variables (TABLE 2) of it we choose to use in our research. The main dependent variable was cumulative GPA (CGPA) for all years, which was correlated with 12 independent variables. These 12 variables included five main categories: pregnancy in a relationship in one case, cohabitation in four cases, sex in a relationship in four cases, relationship status in two cases and schooling in two cases. The process described in Figure 2 is used to process the combined datasets. If there are more than 10 variables after combining the data, the variables with more than 30% missing values will be eliminated. After data cleansing, there are 3269 cases in total. For example, the mean value will be used to replace the missing value for the variable GPA and the value "0" will be used to indicate that the variable has never been adopted. The Inter-University Consortium for Political and Social Research web pages hosts original datasets.

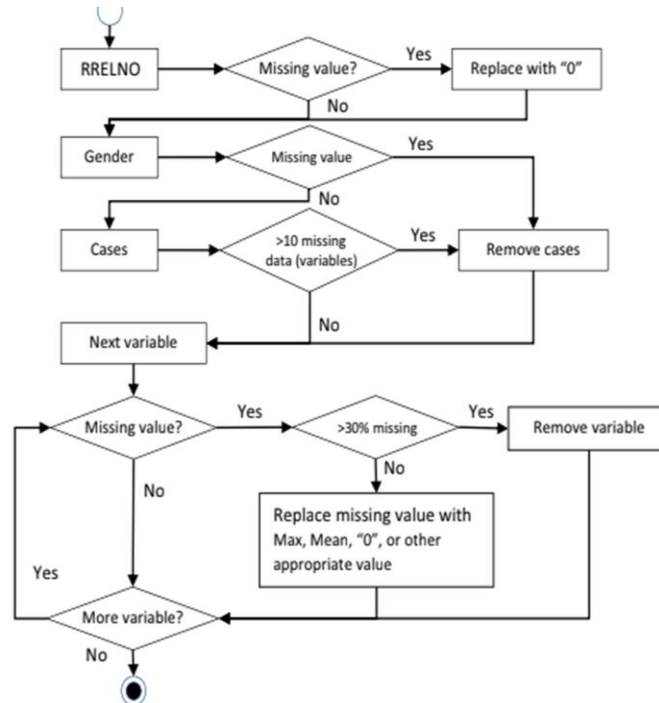


Figure 2 Data Cleaning and transformation process adopted from Ting et al., 2024 [15].

Table 2 Thirteen variables taken from ICPSR dataset

Category	Variable ID	Variable Label	Questionnaire question /item
Independent Variables			
Relationship status	H3TR1	S17Q1 Relationship current?	Are you currently involved in a sexual or romantic relationship with {INITIALS}?
	H3TR2	S17Q2 Relationship >= 3 months?	Has your relationship with {INITIALS} lasted for at least three months in total? If a relationship began, ended, and began again, count both periods in the relationship to

			calculate its length. Do not count the time when the relationship seemed to have ended.
Sex	H3TR3	S17Q3 Sex of partner	Have you had sexual relations with {INITIALS}? By "sexual relations" this study mean vaginal intercourse (a man inserts his penis into a woman's vagina), oral sex (a person puts his or her mouth on another person's sex organs), or anal sex (a man inserts his penis into his partner's anus or asshole).
	H3TR8	S17Q8 Sex in relationship?	How long had you been in a sexual relationship with <PARTNER> when the two of you began to live together?
	H3RD17A	S19Q17Sex Pre-Co-hab Number	How long had you been in a sexual relationship with <PARTNER> when the two of you began to live together?
	H3SE1	S16Q1 Ever have sex	Have you ever had vaginal intercourse?(Vaginal intercourse is when a man inserts his penis into a woman's vagina.)
Cohabitation	H3TR11	S17Q11 Cohabitation in relationship	This study'd like to know if you and {INITIALS} currently live together, or lived together at some time in the past. Please select the sentence below that best

			describes your relationship.
	H3RD13	S19Q13 Pre-marital cohabitation?	Did you and <PARTNER> ever live together in the same residence as romantic or sexual partners before you married?
	H3MR8	S14Q8Ever cohabitated w/someone	Have you ever lived with someone in a marriage-like relationship for one month or more?
	H3MR13_A	S14Q13 Still living w/cohab	Are you still living together?
Pregnancy	H3TR9	S17Q19 Pregnancy in Relationship	Please indicate whether your relationship with {INITIALS} included a pregnancy.
Mediator			
Study time at school	H3DA42	S33Q42 Avg hrs/wk seated at school	On average, how many hours a week at school do you spend sitting (for example, reading, attending class, or using a computer)?
Dependent Variables			
Academic performance	EAOGPAC	Cumulative GPA across all yrs	Overall GPA for all courses taken in each year (EAOGPA1-6) and cumulatively (EAOGPAC).

After the data set was transformed, preterm cohabitation, relationship status, attendance at school, and sex were analyzed by SPSS bivariate analysis (Pearson correlation) as shown in Figures 2. The earlier work's bivariate analysis method is used here, and the result table only contains the pertinent variables. According to Pearson's correlation analysis, the results are sorted. IBM SPSS 24.0, the PROCESS 4.0 macro program for mediation analysis, and AMOS version 24 for confirmatory factor analysis were used in the data analysis. First, we used confirmatory factor analysis and maximum likelihood estimation methods in the AMOS program to confirm the factorial validity of romantic relationships in cognitive tests. Subsequently, we determined the correlations and descriptive statistics between the different indicators. To explore indirect effects in the mediation model, we used macro PROCESS and bootstrap method using 5000 bootstrap resamples. Significant indirect effects were represented by confidence intervals that did not contain zero (mediation).

4.0 RESULTS

A. Descriptive statistics and Pearson Correlation

The descriptive statistics and the correlations between the measurements are shown in Table 3. Relationship Current was significantly negatively correlated with academic performance from study time at school ($r=-0.055$, $p<0.05$); sex was significantly negatively correlated with academic performance ($r=-0.198$, $p<0.001$); cohabitation was significantly negatively correlated with academic performance ($r=0.245$, $p<0.001$); and pregnancy was significantly negatively correlated with academic performance ($r=0.219$, $p<0.000$). While there was a substantial positive correlation between academic achievement and "relationship \geq 3 months" ($r=0.063$, $p<0.01$). The cumulative GPA for the entire year was substantially correlated with the present relationship in this study, a relationship lasting more than three months, sex, cohabitation, and pregnancy, as shown in Table III. As a result, this study supports the following hypotheses: H1, H3, H5, H7 and H9.

Table 3. Scale Means, Standard Deviations, Reliability Coefficients, and correlations

Variable	M	SD	AP	STAS	RC	R3	SEX	COHAB
AP	2.561	0.816						
STAS	69	15	0.098					
RC	13.81	5.590	***	-				
R3	4	0	0.055	0.033	0.187			
SEX	0.37	0.482	*	0.009	***	0.074		
COHAB	0.90	0.299	0.063	-	0.248	***	0.447	
AB	4.312	2.127	**	0.001	***	0.117	***	
PRE	5	91	0.198	5	0.201	***	0.237	0.378
	1.227	1.302	***	-	***	0.134	***	***
	4	81	0.245	0.052	0.272	***		
	0.24	0.428	***	**	***			
			0.219	-				
			***	0.043				

Note: M=Median, SD=Standard Deviations; AP=Academic Performance; STAS=avg hrs/wrk seated at school; RC=RelationshipCurrent; R3=Relationship>3months; SEX=Sex; COHAB=Cohabitation; PRE=pregnancy; * p < 0.05; ** p < 0.01, ***p <0.001.

B. Mediation analysis

This study conducted mediation studies (see Table IV) to determine whether study time at school is a major mediator of the relationships between romantic relationships and academic achievement (i.e. cumulative GPA across all years). The results show that the study time at school mediates the relationship between cohabitation and academic performance (indirect effect = -0.0028, 95% CI = [-0.0055, -0.0007]), the study time at school did mediate the relationship between pregnancy and academic performance (indirect effect = -0.0073, 95% CI = [-0.0154, 0.0007]). Consequently, hypotheses H8 and H10 were supported. Instead, study time at school did not mediate the relationship between Relationship Current and academic performance (indirect effect = -0.0055, 95% CI = [-0.0129, 0.0016]), study time at school did not mediate the relationship between relationship > 3 months and academic performance (indirect effect = 0.0024, 95% CI = [-0.0129, 0.0016]), study time at school did not mediate the relationship between Sex and academic performance (indirect effect = -0.0006, 95% CI = [-0.0022, 0.0010]). Therefore, these results did not support hypotheses H2, H4, and H6.

Table 4 Unstandardized direct and indirect effects for mediation analyzing.

Predator	Mediator	Dependent Variable	Direct Effect	Indirect Effect (95%CI)
RC	STAS	AP	-0.0892*	-0.0055 (-0.0129, 0.0016)
R3	STAS	AP	0.1706*	0.0024 (-0.007, 0.0123)
SEX	STAS	AP	-0.0801*	-0.0006 (-0.0022, 0.0010)
COHAB	STAS	AP	-0.1522*	-0.0028 (-0.0055, -0.0007)
PRE	STAS	AP	-0.4097*	-0.0073 (-0.0154, -0.0007)

Note: RC=RelationshipCurrent; R3=Relationship>=3months; SEX=Sex; COHAB=Cohabitation; PRE=prenancy; STAS=avg hrs/wrk seated at school; AP=Academic Performance; Results from 5000 bootstrap samples; 95% confidence interval with bias correction for indirect effects. * $p < 0.05$.

5.0 DISCUSSION

When this study ran the mediator with the relationship state category, it was rejected; however, this study separated the independent variables in the relationship state and it was accepted. Based on the results of Table 3, the significant for the negative correlation (-0.055) between 'relationship current' and academic performance is significant ($p < 0.05$) and therefore H1 is accepted. This might be due to the Academic performance can decline because of a romantic relationship. Young adults who are experiencing a romantic relationship have more negative emotions than single students. Because they are insecure or in a sensitive period, they are more likely to have conflicts with their romantic partners, leading to an increase in negative emotions and increased stress, which may prevent young adults from focusing on their studies, they will not perform well in class or even miss class because of the romantic relationship after shifting their study focus to other or dropping out of school, which eventually leads to lower academic performance. Second, the end of a romantic relationship can affect young adults' mindset and can cause young adults to lose confidence in themselves or even diagnose depression, which ends up hurting their academic performance [18]. Second, when this study ran the mediator with the relationship state category, it was rejected, however, this study separated the iv in the relationship state and it was accepted. Based on the result of Table 3, the significant, for the positive correlation (0.063) of 'relationship>3=months' and academic performance is significant ($p < 0.01$) and therefore H3 is accepted. This might be due to unfortunately, there are no articles or studies to support the results, probably due to short-term relationship research being widely emphasized. As long-term romantic relationships are not well researched, there are no studies showing that more than or equal to 3 months of a romantic relationship will help improve performance. Perhaps there are other factors that influence these two variables, so this study was unable to find a suitable article to prove this hypothesis. Then, based on

the result of Table III, the significant, for the negative correlation (-0.198) of 'relationship current' and academic performance is significant ($p < 0.001$) and therefore H5 is accepted. This could be due to when young adults have sex with romantic partners, they may experience mood swings such as anxiety, fear, and guilt and may be less focused on their studies. Additionally, students are at greater risk of having sex, which can pose risks such as sexually transmitted diseases and pregnancy. When these risks occur, young adults are not equipped to cope with them and end up dropping out of school, resulting in lower academic performance [39]. Next, based on the result of Table III, the significant, for the negative correlation (-0.245) of cohabitation and academic performance, is significant ($p < 0.001$) and therefore H7 is accepted. This might be due to the fact that cohabitation has too many risks for students, the first is that cohabitation can lead to unwanted pregnancy and students are likely to have uncontrolled sex after cohabitation, which can affect academic performance. The second is sexually transmitted diseases. When students find out they are pregnant or diagnosed with a sexually transmitted disease, they are unable to cope with these things, causing them to be unable to focus on their studies and they all end up dropping out of school. The third is that women can have frequent arguments with their partners, leading to severe negative emotions, stress, and an inability to focus on their studies, which can seriously affect their academic performance. This study also found that after cohabitation, young adults will shift their time from studying to having fun during cohabitation, and students will be unmotivated to study, which will eventually affect their academic performance. Therefore, cohabitation can have a negative impact on student academic performance [44,46]. Lastly, based on the result of Table 1, the significant for the negative correlation (-0.219) of pregnancy and academic performance is significant ($p < 0.001$) and therefore H9 is accepted. This might be due to several factors, including physical and emotional changes, increased stress, and fatigue can negatively impact a student's academic performance. Pregnancy can lead to physical conditions such as fatigue and vomiting, which may make pregnant students keep up with their studies. Unplanned pregnancy may lead to emotional anxiety and a tendency to lack control, which can lead to decreased academic focus and poor test scores. Pregnancy can also result in missed school days and decreased concentration and motivation, which may lead to lower grades and academic achievement. Furthermore, socioeconomic difficulties that may affect academic performance, such as lack of funds, inadequate support from family and friends, and greater social stigma, may be particularly associated with adolescent pregnancy [53,54].

Based on the mediation analysis performed in Table 4, the indirect effect of the mediating effects of study time at school on the negative correlation between the 'relationship current' and academic performance is -0.0055, 95% CI = (-0.0130,0.0016). This could be due to young people wanting to find their sense of belonging in a relationship, so they will spend more time with their peers developing their interpersonal skills. As they get to know more and more intellectuals, they improve their self-worth to make themselves attractive and actively study to improve their academic performance so that they can better express themselves. Make yourself welcome in romantic relationships. Therefore, romantic relationships can also lead young adults go to school to study harder, improve themselves and improve their academic performance [18]. Therefore, study time at school does not mediate the relationship between relationship current and academic performance, and hence H2 is rejected. Second, based on the mediation analysis performed in Table IV, the indirect effect of the mediating effects of study time at school on the positive correlation between 'Relationship ≥ 3 months' and academic performance is 0.0024, 95% CI = (-0.0069,0.0120). This could be due to H4 expressing a relationship between the romantic relationship ≥ 3 months and academic performance, while the mediator is studying time at school. This suggests that students in long-term relationships have good time management and therefore do not affect their academic performance. To fully understand the association between "relationship ≥ 3 months" and study time and performance, additional research is required. This is because there might be other factors that contribute to the difference between students in long-term relationships and students in short-term relationships. The study time in the school mediates the relationship between 'Relationship ≥ 3 months' and academic performance, therefore H4 is rejected. Third, based on the mediation analysis

performed in Table 4, the indirect effect of the mediating effects of study time at school on the negative correlation between sex and academic performance is -0.0006 , 95% CI = $(-0.0022, 0.0010)$. Unfortunately, there are no articles or studies to support this result, probably because the research is not well-regarded. But this might be because being sexually active can release hormones such as oxytocin and dopamine, which can positively affect mood and motivation, thus improving academic performance and positively affecting study time at school. Therefore, study time at school does not mediate the relationship between sex and academic performance, so H6 is rejected. Next, based on the mediation analysis performed in Table IV, the indirect effect of the mediating effects of study time at school on the negative correlation between cohabitation and academic performance is -0.0028 , 95% CI = $(-0.0055, -0.0007)$. This may be due to When students live with their partners, they may have to manage additional responsibilities such as housework, childcare and financial obligations, which are very time consuming because these activities take away from study time, so these romantic relationships cannot attend school regularly and may have a negative impact on academic performance [43]. When students live together, they often do not have extra time to go to school because they have to raise their children after pregnancy and delivery, spend a lot of time in the hospital for health check-ups, and cooperate with treatment when they are diagnosed with sexually transmitted diseases. So, this study can find that students who live together cannot control their study time and, finally, it affects their academic performance [44]. Therefore, the time spent in school mediates the relationship between cohabitation and academic performance, therefore accepting H8. Finally, based on the mediation analysis performed in Table 4, the indirect effect of the mediating effects of study time at school on the negative correlation between pregnancy and academic performance is -0.0073 , 95% CI = $(-0.0154, -0.0007)$. This might be when a student is in a current relationship and becomes pregnant while in a relationship, they are unable to attend school due to certain factors such as maternity testing, time off work due to negative symptoms of pregnancy, depression, etc., all of which can lead to less time for school and a possible decrease in academic performance. In addition, pregnancy can easily cause emotional distress and anxiety, or bad comments from others, which can prevent students from focusing on academic performance and reduce the amount of time spent at school, ultimately affecting their grades [53]. Therefore, time at school and mediating the relationship between pregnancy and academic performance, therefore, H10 is accepted.

6.0 CONCLUSION

In conclusion, there is a complicated relationship between having a love partner and doing well at school, and this relationship is modified by a number of variables. One of these variables is the person's status in a relationship, as people in committed relationships often have unique experiences from single people. For example, studies have shown that single students typically outperform students in relationships in terms of academic performance. However, this relationship is not always simple and can change depending on other elements, such as the nature of the relationship. Sexual behavior is another element that may have an impact on the link between academic success and romantic success. As was already noted, having sex can affect academic achievement in both positive and negative ways, depending on the quality and aspects like study time. Another element that may affect the link between romantic relationships and academic success is cohabitation. According to studies, cohabiting couples typically perform less academically than those who do not cohabit because they may encounter particular difficulties such as financial stress, lack of privacy, and arguments over household duties.

It is important for students to put their academic objectives first and seek out support when they are having problems in their romantic relationships. This may involve speaking with a counselor, getting guidance from a reliable mentor, or making use of university resources such as academic tutoring or mental health services. Universities must establish a welcoming climate that emphasizes the value of academic success while also acknowledging the influence of social relationships on mental health and well-being. This involves giving students the tools and encouragement they need to deal with the

challenges of romantic relationships and strike a healthy balance between their personal and academic lives. Universities can help students excel in both academics and relationships by addressing the connection between the two. This entails realizing that every learner is different and that there is no one method that works for everyone. In addition to tools and assistance, this entails helping students retain their concentration on their academic goals while navigating the difficulties of love relationships.

A key component of student success is striking a balance between social relationships and academic goals. Students need to be extremely self-aware and disciplined to maintain this equilibrium. Students must be able to identify how their love relationships and social bonds affect their academic achievement and make the necessary modifications. While it is crucial for colleges to give students tools and help to deal with the difficulties of romantic relationships, it is ultimately the students' obligation to strike a good balance between their social and academic objectives. They must set priorities for their academic objectives and, as necessary, seek support and resources including academic advising, counseling, and time management strategies. For students, creating a friendly environment might be advantageous. This means surrounding students with people who are supportive of their academic objectives and who can offer emotional support during stressful or challenging situations. It could also involve prioritizing academic obligations while participating in extracurricular activities that promote social contact. In conclusion, balancing social relationships and academic goals is essential for student achievement. To ensure that their love relationships and social ties do not adversely affect their academic achievement, students must be self-aware and disciplined in how they are managed. Universities can help students by offering resources and assistance, but in the end, it is the students who are responsible for their own success.

REFERENCES

- . B. U. Krisnamurthi and L. Hanum, "The Effectiveness of Online Group Cognitive and Behavioral Therapy on Self-Esteem and Forgiveness in Young Adult Women after Romantic Relationship Break Up," *Proceedings of the International Conference on Psychological Studies (ICPSYCHE 2020)*, 2021, doi: <https://doi.org/10.2991/assehr.k.210423.006>.
- A. Iyekolo, "Factors Responsible for Cohabitation among Youth as Perceived by Students of the University of Ilorin, Nigeria," *Canadian Journal of Family and Youth / Le Journal Canadien de Famille et de la Jeunesse*, vol. 13, no. 2, pp. 44–63, Apr. 2021, doi: [10.29173/cjfy29670](https://doi.org/10.29173/cjfy29670).
- A. Muise, C. Harasymchuk, L. C. Day, C. Bacev-Giles, J. Gere, and E. A. Impett, "Broadening your horizons: Self-expanding activities promote desire and satisfaction in established romantic relationships.," *Journal of Personality and Social Psychology*, vol. 116, no. 2, pp. 237–258, Feb. 2019, doi: <https://doi.org/10.1037/pspi0000148>.
- A. Onoyase, "Cohabitation Among University Students in Oyo State, South West Nigeria; Causes and Consequences: Implications for Counselling," *Journal of Education and Learning*, vol. 9, no. 2, p. 140, Feb. 2020, doi: <https://doi.org/10.5539/jel.v9n2p140>.
- Adewale Ojo, "The effects of cohabitation on academic performance of the students in tertiary institutions in Nigeria," *International Journal of Sociology and Anthropology Research*, vol. 5, no. 2, pp. 10–15, 2019,
- C. Julian, "Prevalence of Cohabitation Among Unmarried Older Adults," Bowling Green, OH, May 2022. doi: [10.25035/ncfmr/fp-22-10](https://doi.org/10.25035/ncfmr/fp-22-10).
- D. Lanari, L. Mangiavacchi, and M. Pasqualini, "Adolescent sexual behaviour and academic performance of Italian students," *Genus*, vol. 76, no. 1, Dec. 2020, doi: [10.1186/s41118-020-00093-4](https://doi.org/10.1186/s41118-020-00093-4).
- D. Lanari, L. Mangiavacchi, and M. Pasqualini, "Adolescent sexual behaviour and academic performance of Italian students," *Genus*, vol. 76, no. 1, p. 21, Dec. 2020, doi: [10.1186/s41118-020-00093-4](https://doi.org/10.1186/s41118-020-00093-4).
- Demography*, vol. 57, no. 3, pp. 799–819, Jun. 2020, doi: [10.1007/s13524-020-00881-9](https://doi.org/10.1007/s13524-020-00881-9).

- E. A. Kassahun, A. A. Gelagay, A. A. Muche, A. A. Dessie, and B. A. Kassie, "Factors associated with early sexual initiation among preparatory and high school youths in Woldia town, northeast Ethiopia: a cross-sectional study," *BMC Public Health*, vol. 19, no. 1, p. 378, Dec. 2019, doi: 10.1186/s12889-019-6682-8.
- E. Gbaa, D. Gbaden, I. Gbakaan, and I. Gbatse, "Article title: Perception Of Premarital Sexual Relationship Among Students In Tertiary Institutions: A Case Study Of," *ScienceOpen Preprints*, 2022, doi: 10.14293/S2199-1006.1.SOR-PPUOAUC.v1.
- G. Y. Lee and D. Y. Lee, "The Sexual Risk Behaviors of Middle School Students According to School Nurse Placement Levels in Korea," *Asian Nurs Res (Korean Soc Nurs Sci)*, vol. 14, no. 4, pp. 212–220, Oct. 2020, doi: 10.1016/j.anr.2020.08.001.
- Green, R. MacLean, and K. Charles, "Female Narcissism: Assessment, Aetiology, and Behavioural Manifestations," *Psychol Rep*, vol. 125, no. 6, pp. 2833–2864, Dec. 2022, doi: 10.1177/003329412111027322.
- H. S. Aliero, B. U. Aliero, and H. Abdullahi, "Afropolitan Journals 24 Relationship Between Parental Attitudes to Education and Academic Performance of Secondary School Students in Sokoto Metropolis, Sokoto, Nigeria: Implication for Counseling," *African Journal of Humanities & Contemporary Education Research*, vol. 4, no. 1, 2022.
- Honghao, Y. Po, and Y. Tianyu, "The influence of adolescents' romantic relationship on individual development: Evidence from China," *International Journal of Chinese Education*, vol. 10, no. 3, Sep. 2021, doi: 10.1177/22125868211070036.
- Horowitz, N. Graf, G. Livingston, K. Parker, and T. Ardit, "Marriage and Cohabitation in the US," *Washington, DC: Pew Research Center*.
- I. Nurmala, E. Citra, A. Ahiyanasari, E. Wulandari, and Pertiwi, "Premarital Sex Behavior Among Adolescent: The Influence of Subjective Norms and Perceived Behavioral Control Toward Attitudes of High School Student.," *Malaysian Journal of Medicine and Health Sciences*, vol. 15, no. 3, 2019.
- J. Birchall, "Early marriage, pregnancy and girl child school dropout Question," *Knowledge, Evidence and Learning for Development*, 2(7), pp. 1-15, 2018.
- J. H. Yeo, H. Park, and E.-Y. Kim, "Predictors of the Timing of Sexual Intercourse Initiation among Adolescents in South Korea," *Journal of Community Health*, vol. 44, no. 3, pp. 580–586, Jan. 2019, doi: <https://doi.org/10.1007/s10900-018-00605-6>.
- J. Li, X. Han, W. Wang, G. Sun, and Z. Cheng, "How social support influences university students' academic achievement and emotional exhaustion: The mediating role of self-esteem," *Learn Individ Differ*, vol. 61, pp. 120–126, Jan. 2018, doi: 10.1016/J.LINDIF.2017.11.016.
- J. P. Allen, R. K. Narr, J. Kansky, and D. E. Szwedo, "Adolescent Peer Relationship Qualities as Predictors of Long-Term Romantic Life Satisfaction," *Child Development*, vol. 91, no. 1, pp. 327–340, Jan. 2019, doi: <https://doi.org/10.1111/cdev.13193>.
- J. Roksa and P. Kinsley, "The Role of Family Support in Facilitating Academic Success of Low-Income Students," *Res High Educ*, vol. 60, no. 4, pp. 415–436, Jun. 2019, doi: 10.1007/s11162-018-9517-z.
- J. Yu, Y. Wang, X. Tang, Y. Wu, X. Tang, and J. Huang, "Impact of Family Cohesion and Adaptability on Academic Burnout of Chinese College Students: Serial Mediation of Peer Support and Positive Psychological Capital," *Front Psychol*, vol. 12, Dec. 2021, doi: 10.3389/fpsyg.2021.767616.
- J. Zimmer-Gembeck and M. Helfand, "Ten years of longitudinal research on U.S. adolescent sexual behavior: Developmental correlates of sexual intercourse, and the importance of age, gender and ethnic background," *Developmental Review*, vol. 28, no. 2, pp. 153–224, Jun. 2008, doi: 10.1016/j.dr.2007.06.001.
- L. E. Joyce, "School, Family, and Community Partnerships: preparing educators and improving schools. Routledge.," 2018.
- L. Morsy and R. Rothstein, "Toxic stress and children's outcomes African American children growing up poor are at greater risk of disrupted physiological functioning and depressed academic achievement Report," 2019.

- L. Widman, R. Evans, H. Javidi, and S. Choukas-Bradley, "Assessment of Parent-Based Interventions for Adolescent Sexual Health," *JAMA Pediatr*, vol. 173, no. 9, p. 866, Sep. 2019, doi: 10.1001/jamapediatrics.2019.2324.
- M. C. Jobson, "Emotional Maturity among adolescents and its importance," *Indian Journal of Mental Health*, vol. 7, no. 1, p. 35, Feb. 2020, doi: <https://doi.org/10.30877/ijmh.7.1.2020.35-41>.
- M. Gómez-López, C. Viejo, and R. Ortega-Ruiz, "Well-being and romantic relationships: A systematic review in adolescence and emerging adulthood," *International Journal of Environmental Research and Public Health*, vol. 16, no. 13. MDPI AG, Jul. 01, 2019. doi: 10.3390/ijerph16132415.
- M. Iida and A. Shapiro, "Mindfulness and Daily Negative Mood Variation in Romantic Relationships," *Mindfulness*, vol. 10, no. 5, pp. 933–942, Nov. 2018, doi: <https://doi.org/10.1007/s12671-018-1056-3>.
- M. J. Grant and K. Hallman, "Pregnancy-related school dropout and prior school performance in South Africa," *Journal of population studies*, Jan. 2006, doi: <https://doi.org/10.31899/pgy2.1042>.
- M. Khesht-Masjedi et al., "The relationship between gender, age, anxiety, depression, and academic achievement among teenagers," *J Family Med Prim Care*, vol. 8, no. 3, p. 799, 2019, doi: 10.4103/jfmpc.jfmpc_103_18.
- M. U. Kalu, N. H. Ejiogu, C. N. Chukwukadibia, and E. C. Nleonu. "Socia-economic and Health Effects of Cohabitation Among Off Campus Students in Nigeria Tertiary Institutions: A Case Study of Federal Polytechnic Nekede Owerri, Imo State." *Journal of Research in Humanities and Social Science*, vol. 9, no. 3, pp. 14-18, 2021.
- M. Verhallen, R. J. Renken, J.-B. C. Marsman, and G. J. ter Horst, "Romantic relationship breakup: An experimental model to study effects of stress on depression (-like) symptoms," *PLoS One*, vol. 14, no. 5, p. e0217320, May 2019, doi: 10.1371/journal.pone.0217320.
- M.-T. Wang, N. Kiuru, J. L. Degol, and K. Salmela-Aro, "Friends, academic achievement, and school engagement during adolescence: A social network approach to peer influence and selection effects," *Learn Instr*, vol. 58, pp. 148–160, Dec. 2018, doi: 10.1016/j.learninstruc.2018.06.003.
- O. F.O. and A. T.E., "Prevalence and Factors Responsible for Cohabitation among Undergraduates of Adekunle Ajasin University, Ondo State, Nigeria," *American Journal of Educational Research*, vol. 5, no. 6, pp. 650–654, Aug. 2017, doi: <https://doi.org/10.12691/education-5-6-10>.
- P. E. Sejati and R. T. Mufida, "The Effect of Sex Education on Premarital Sex Among Adolescents; Literature Review," *Journal for Quality in Public Health*, vol. 5, no. 1, pp. 363–366, Nov. 2021, doi: 10.30994/jqph.v5i1.280.
- P. H. Niolon et al., "An RCT of Dating Matters: Effects on Teen Dating Violence and Relationship Behaviors," *Am J Prev Med*, vol. 57, no. 1, pp. 13–23, Jul. 2019, doi: 10.1016/j.amepre.2019.02.022.
- P. Karki et al., "Influence of relationship status on the academic performance of students from selected college of Gangtok, Sikkim", doi: 10.24941/ijcr.32868.11.2018.
- R. B. Shrestha, "Premarital Sexual Behaviour and its Impact on Health among Adolescents," *Journal of Health Promotion*, vol. 7, pp. 43–52, Sep. 2019, doi: 10.3126/jhp.v7i0.25496.
- S. A. Lazarus, S. Choukas-Bradley, J. E. Beeney, A. L. Byrd, V. Vine, and S. D. Stepp, "Too Much Too Soon?: Borderline Personality Disorder Symptoms and Romantic Relationships in Adolescent Girls," *J Abnorm Child Psychol*, vol. 47, no. 12, pp. 1995–2005, Dec. 2019, doi: 10.1007/s10802-019-00570-1.
- S. H. Nyarko, "Unintended Pregnancy among Pregnant Women in Ghana: Prevalence and Predictors," *Journal of Pregnancy*, vol. 2019, pp. 1–8, Jan. 2019, doi: <https://doi.org/10.1155/2019/2920491>.
- S. I. Quiroz, T. Ha, A. A. Rogers, and J. Sasser, "Associations Between Adolescents' Antisocial Behavior, Conflict Management Styles, and Romantic Relationship Breakup: An Observational Study," *Journal of Research on Adolescence*, vol. 33, no. 1, pp. 216–229, Mar. 2023, doi: 10.1111/jora.12799.

- S. Mathewos and A. Mekuria, "Teenage Pregnancy and Its Associated Factors among School Adolescents of Arba Minch Town, Southern Ethiopia," *Ethiopian Journal of Health Sciences*, vol. 28, no. 3, p. 287, May 2019, doi: <https://doi.org/10.4314/ejhs.v28i3.6>.
- S. Onimajesin, A. A. Atiku, and A. S. Ajayi, "Globalization, sexual exploration, and cohabiting culture among undergraduate students of university of Ilorin, Nigeria Cahart-four factor model View project." *Jurnal Manajemen Bisnis (JMB)*, 33(2).
- S.-W. Gan, M.-S. Cheah, K.-L. Chen, and L.-X. Wong, "The Effects of Parental and Peer Attachment on University Adjustment among First-Year Undergraduate Students," Aug. 2019, doi: <https://doi.org/10.2991/iciap-18.2019.58>.
- Saka-Olokungboye, N., Ehinola, E. H., Ilugbami, J. O., & Olateru-Olagbegi, O. "The Effects of Male and Female Cohabitation on Academic Performance of Nigeria Tertiary Institutions Students: A Case of Rufus Giwa Polytechnic, Owo, Ondo State, Nigeria," *International Journal of Education, Learning and Development*, vol. 10, no. 1, pp. 44–61, Jan. 2022.
- T. A. Flake, C. Barros, L. B. Schraiber, and P. R. Menezes, "Violência por parceiro íntimo entre estudantes de duas universidades do estado de São Paulo, Brasil," *Revista Brasileira de Epidemiologia*, vol. 16, no. 4, pp. 801–816, Dec. 2013, doi: 10.1590/S1415-790X2013000400001.
- T. Baalman, A. Brömmelhaus, J. Hülsemann, M. Feldhaus, and K. Speck, "The Impact of Parents, Intimate Relationships, and Friends on Students' Dropout Intentions," *Journal of College Student Retention: Research, Theory & Practice*, p. 152102512211333, Nov. 2022, doi: <https://doi.org/10.1177/15210251221133374>.
- T. NIC, L. S. Motolla, R. S. Lebelo, S. Khumalo and M. R. Mabunda, "How close relationships in higher education impact students' lives: friendships and romantic relationships," Proceedings of International congress on social sciences, China to Adriatic, pp. 16-25.
- T. T. Ting, S. C. Lee, M. C. Wee and J. K. Chaw, "Romantic relationship patterns, detailed covariates, and impacts on education: A study on young adults in the US using ICPSR dataset," *Global Social Welfare*, vol. 11, no. 2, pp. 151-163, 2024, doi:10.1007/s40609-022-00254-7
- T.-O. Addah Temple, K. Odunjo-Saka Adewole, and F. Dare Azeez, "The Role of Peer Influence and Tertiary Institution Type on Attitude Towards Cohabitation Among Adolescents in Nigeria," *Open Journal for Anthropological Studies*, vol. 5, no. 1, pp. 29–36, Jul. 2021, doi: 10.32591/coas.ojas.0501.03029t.
- U. Kasagga and S. Nakijoba, "Effect of Romantic Relationship on Undergraduate Students' Academic Performance: A Case Study of Islamic University in Uganda."
- U. Kasagga and S. Nakijoba, "Effect of Romantic Relationship on Undergraduate Students' Academic Performance: A Case Study of Islamic University in Uganda."
- W. D. Manning, "Young Adulthood Relationships in an Era of Uncertainty: A Case for Cohabitation,"