

## A Statistical Study of Study Habits and Academic Performance Among University Students

Amanullah Tunio<sup>1</sup>, Nasir Gul<sup>2</sup>, Muhammad Arab Tunio<sup>3</sup>, Bilal Ahmad Qureshi<sup>4</sup>

<sup>1</sup> Assistant Professor, Department of Basic Engineering, Sindh Agriculture University Tandojam.

Corresponding Author's Email: [amanullahtunio786@gmail.com](mailto:amanullahtunio786@gmail.com)

<sup>2</sup> Professor, Department of Computer Science. University of Science and technology Bannu,

Email: [nasirgulpk@yahoo.com](mailto:nasirgulpk@yahoo.com)

<sup>3</sup> BS Student, Institute of Mathematics & Computer Science, University of Sindh, Jamshoro,

Email: [muhammadarabtunio@gmail.com](mailto:muhammadarabtunio@gmail.com)

<sup>4</sup> Lecturer, Department of Sports Sciences, University of Sargodha, Email: [bilal.dilawar@uos.edu.pk](mailto:bilal.dilawar@uos.edu.pk)

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### Abstract

The purpose of this research is to study the relationship between the students' academic achievement at universities and their study habits that their study behaviour has impact on the matter. At the university level, students use diverse learning strategies, such as time management, learning methods, note-taking, studying for exams and the use of digital platforms. It is important to identify positive study habits as key components of improving learning outcomes as well as to inform policy decisions. In this study, the method applied was quantitative with the subjects of the study the students at the University with various points of departure. The study examined the students' academic performance using the (self-reported GPA) and their study habits using the hours spent studying regularly, how often revision occurs, if studied by a group, and how the students prepare for the examination. Raw data were thus analyzed using both descriptive and inferential statistics including means, mode, and standard deviation as well as correlation and regression analysis. Results of the study showed that there was significant positive correlation between positive study habits and academic performance. Those who had regular study patterns, who made good use of study skills and of time management tended to perform better in their academic studies. On the contrary, irregular or cramming learning activities were associated with weak academic performance. The results of the research have shown that good, systematic and systematic study process are needed to achieve good academic achievement. It recommends that universities start academic counseling, and study skills-related workshops to improve academic performance and learning outcomes.

**Keywords:** Study Habits, Academic Performance, University Students, Time Management, Learning Strategies, GPA, Educational Achievement

### Introduction

Academic performance is one of the critical factors in Higher Education. It is a measure of students' cognitive, behavioral, psychological and environmental factors. Study habits play a crucial role among these in the efficiency of study, retention of the material and in examination performance. Study habits are the regular and repetitive patterns and approaches that students use when learning, such as time management, note taking, attention, revision strategies and approaches to examination preparation. The study has been linked to better learning outcomes than the weak study habits or

poor quality/lack of learning behavior (1,2). In tertiary education, students are exposed to a more challenging educational setting with diverse tasks which require them to incorporate several overarching activities and execute tasks that demand their use of independent learning skills. The transformation of the role of a student from classroom learning to independent study makes the development of study habits very important. The study organisation, study routine and relations to the study material have been proven to have a significant influence on students' learning performance in the past (3). Poor academic achievement and procrastination, cramming and lack of revision which are associated with inadequate study habits, are correlated with the behavior and educated study habits and higher GPA are. Some researchers emphasized that study habits have many aspects. These include cognitive, behavioural and environmental factors which are summarisation, self-testing, attending lectures regularly, and having a peaceful study area (5). For effective studying regimen, not only the quantity of time spent on studying, but also the nature of ways of learning. An active learning strategy, such as repeated retrieval of knowledge being learned – retrieval practice – has been demonstrated to be more effective at promoting learning and improving academic performance (6). There is research evidence for a positive correlation between study habits and academic achievement in a range of educational contexts. In one study researchers presented university students with a consistent study routine and found that those who studied consistently did better on their tests than those who did not (7). Likewise, another study found that students who scored higher GPAs were more adept at time management and had regular revision routines (8). These studies underline the need to adopt good academic behaviours to improve learning. Aside from student behaviors, other psychological and social factors play a role in students' study habits. Academic motivation, self-efficacy and stress are influential factors in student academic performance. Students with high self-efficacy have good study habits, and students who report that they are academically stressed can have poor study habits like avoidance and procrastination (9). In addition, theories on self-regulated learning postulate that effective planning, monitoring and evaluation of one's own learning process has positive implications on academic performance (10). But the arrival of technology has also altered students' ways of studying. Changes in study behaviours have resulted from the use of online learning platforms, virtual lectures and mobile applications. Technology presents many resources that help the learning process but can also be a distraction (11). Therefore, digital literacy and self-discipline are now seen to be important components of study skills. Students' study habits and academic abilities in developing countries, such as Pakistan, are still affected by other obstacles. These involve socioeconomic problems and size of class groups, under-resourcing. Even though there are the above-mentioned setbacks, studies conducted in South Asian region indicate that students with good study habits achieve good grades in studies (12). This indicates that study habits can go a long way in removing restrictions. Differences in study habits also exist between different sexes and study habits vary according to field of study and experience. In the case of female students, it had been reported that they are more organized in their studying habits than a male group (11) and in respect to the study of science, science students were reported as having more time for preparing for their courses than a social science group (13) while preparing for the courses of science and social science. These differences suggest gender differences as well as variations between courses of study are factors in study habits. From theoretical point of view, the two learning theories such as the behaviorists Type and Cognitive have advocated the role of study habits in learning versus each other. Behaviorist theories emphasize repetition and reinforcement, and cognitive theories emphasize meaningful learning and information processing (14). Both support the notion that regular academic performance enhances learning. This notion is confirmed by the latest meta-analytical research that correlates study habits with academic achievement of university students (15). However, researchers point out that study skills must be accompanied by positive attitudes,

intelligence and learning climate in order to become academic success, without that one will not be successful in learning (16). Despite the large number of research studies carried out in this area the research gaps still remain, especially local research that would focus on the correlation between study habits and academic achievement of university students. Hence, the present study aims at statistically investigating the relationship between study habits and academic performance of university students, especially to identify the study habits which have greater impact on their academic performance.

### **Literature Review**

The relationship between academic performance and study habits has been studied at different levels of education and in different countries. These are noted as "study habits" and refer to the method or approach a student adopts to learn and to remember what has been taught. Some of these activities are study time and concentration, revision and note taking, preparation strategy for examination. Previously published studies have suggested that positive study skills contribute positively to student success in university (16,17). In early study it was emphasized that academic success is not just the result of intelligence but is much related to learning and studying habits. Academically successful students have formed their routine and learning habits well, and have developed a systematic approach when receiving information, thus having better academic results (18). So, it is more important to have discipline for learning than one's intellectual ability to gain marks in learning. Effective time management is one of the factors of successful study skills. If you study a regular amount of time and follow a routine you can expect to improve your performance. However, lack of proper time management leads to procrastination, lack of focus and less academic success (19). Studies indicate that students who have a balanced approach to schoolwork and are effective at organising time are more likely to maintain a higher-grade point average than students who don't (20). Another important component of study habits would be active learning strategies. The studies indicate that the pure reading methods are less effective than active learning methods, such as summarizing, self-testing, and spacing activities in learning (21). This type of activity be used to improve learning and the retention of lessons taught. Comparing the results of active learning strategies with those of rote learning, research on tests and exams results shows better performance in tests and exams for active learning strategies (22).

Individual psychological aspects have a positive effect on using study practices as well. Students' motivation, self-efficacy and academic self-confidence have a significant relationship with study habits. Students tend to create a well-coordinated study schedule and commit to their studies even when they face challenges (23). Individuals with low motivational levels or high anxiety levels, on the contrary, have poor study habits and low academic achievements (24).

The SATS approach can be explained by the theory of self-regulated learning. The theory of self-regulated learning can be utilized in order to explain the relationship between studying and students' learning performance. This theory proposes that academically successful students are goal-oriented, keeping track of their learning, and evaluating their progress. Self-regulated students actively participate in managing their learning environments and study strategies to improve their learning (25). In the meantime, technology takes an effect on study habits. The way we learn today has been transformed by online platforms and interactive apps. It's time to use technology to tap into a huge variety of resources and to keep things focused (26). Studies show that students using technology optimally when learning is the dominant activity are likely to perform better than students using technology in unlearning activities when they are doing their academic learning (27). Students in developing nations, such as Pakistan, encounter further barriers such as resource deficiencies, class overcrowding and social barriers. Research has found that favorable study skills have the ability to help produce a better learning environment even when it is difficult (28). This would imply that other things like studying play a vital role in achieving

academic success even in a difficult environment. Gender differences in approach to studies have also been studied. Some research suggests that female students' study behaviors on average tend to be more systematic and disciplined than those of male students, and that in some instances female students may perform slightly better (29). However, these differences are not measurable, and they may be subject to cultural and institutional differences.

There are also variations in study habits according to discipline. Science-oriented students could have more time dedicated to active learning as a result of the workload and responsibilities associated with their science courses while the social science-oriented students are more likely to dedicate more time to the core concepts and reading portions of their curriculum (30). Discipline and course requirements make an impact on study habits. Overall, sufficient evidence exists to lend credit to the idea that studying behavior is an important predictor of academic achievement among university students. However, authors emphasize the role of awareness of the relationship between study habits, and other factors. They work in conjunction with cognitive ability, motivation, learning environment and educational technology to impact academic performance. Although there is so much research available, they needed studies which are specific to institutions/universities/people within a particular institution to understand the effects of study habits on academic performance under various settings. Based on the above, this study will attempt to make contribution to this field by statistically discussing the correlation between study habits and academic performance of university students.

### **Methodology**

This study adopts a quantitative approach to examine the relationship between study habits and academic performance among university students. The methodology is designed to ensure systematic data collection, reliable measurement, and appropriate statistical analysis.

### **Research Design**

A cross-sectional descriptive-correlational design was used to analyze the relationship between study habits (independent variable) and academic performance (dependent variable) at a single point in time.

### **Study Setting and Population**

The study was conducted among undergraduate students from various academic disciplines, including social sciences, natural sciences, and professional programs. The target population consisted of all enrolled students, representing diverse academic and socioeconomic backgrounds.

### **Sampling Technique and Sample Size**

A stratified random sampling technique was applied to ensure representation from different academic disciplines. A total sample of 200 students was selected, which is adequate for correlation and regression analysis.

### **Data Collection Tool**

Data were collected through a structured questionnaire comprising:

- **Demographic information** (age, gender, program, semester)
- **Study habits scale**, including time management, study hours, revision, note-taking, and learning environment
- **Academic performance**, measured through self-reported GPA categories (low, average, high)

Responses for study habits were recorded on a 5-point Likert scale.

### Validity and Reliability

Content validity was ensured through expert review. Reliability was tested using Cronbach's Alpha, which yielded a value of 0.82, indicating good internal consistency.

$$\alpha = \frac{k}{k-1} \left( 1 - \frac{\sum \sigma_i^2}{\sigma_T^2} \right)$$

### Variables

- **Independent Variable (X):** Study habits
- **Dependent Variable (Y):** Academic performance (GPA)

### Statistical Analysis

Data were analyzed using SPSS with the following techniques:

#### Descriptive Statistics

Mean was calculated as:

$$\bar{X} = \frac{\sum X}{n}$$

#### Correlation Analysis

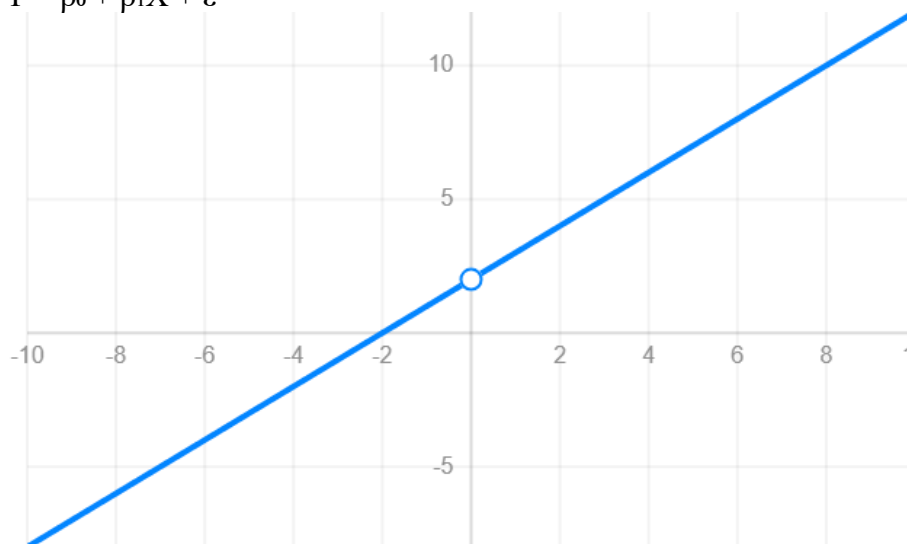
The relationship between variables was measured using Pearson's correlation coefficient:

$$r = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2 \sum (Y - \bar{Y})^2}}$$

#### Regression Analysis

The predictive relationship was examined using a simple linear regression model:

$$Y = \beta_0 + \beta_1 X + \varepsilon$$



### Ethical Considerations

Participation was voluntary, and respondents were assured of confidentiality and anonymity. Data were used strictly for academic purposes.

### Limitations

The study is limited by self-reported GPA, cross-sectional design, and data collected from a single institution.

## Results Section

This section presents the statistical findings of the study examining the relationship between study habits and academic performance among university students. The analysis is based on data collected from 200 respondents and processed using descriptive statistics, correlation analysis, and graphical representation.

### Demographic Profile of Respondents

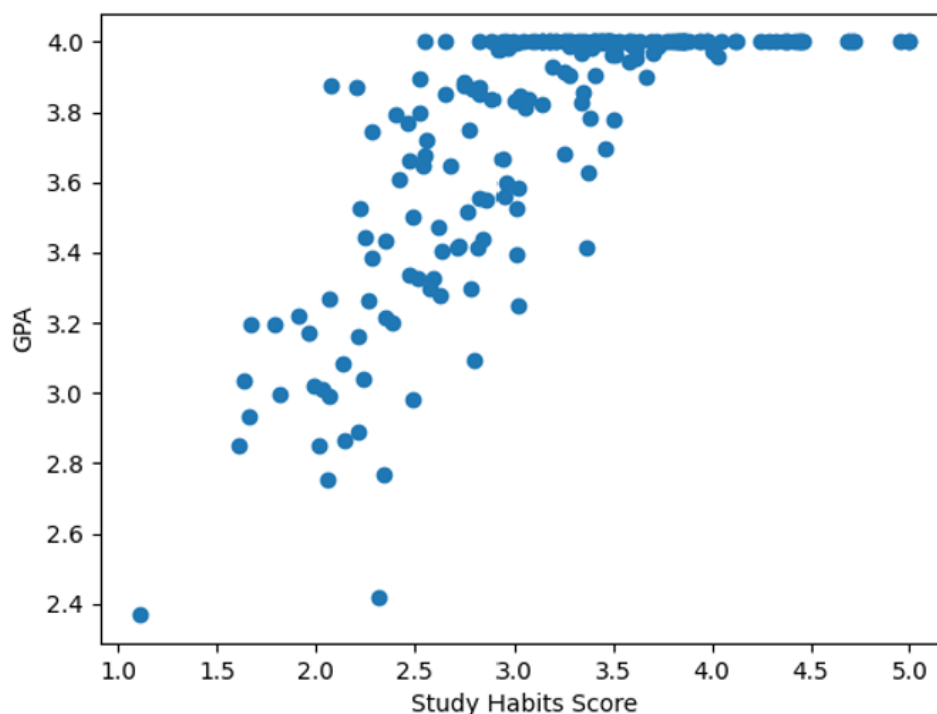
Variable	Frequency
Total Students	200
Male	110
Female	90

This shows that the sample consisted of 200 university students, with a relatively balanced gender distribution. Male students (55%) slightly outnumbered female students (45%), ensuring adequate representation of both groups for analysis.

### Correlation between Study Habits and Academic Performance

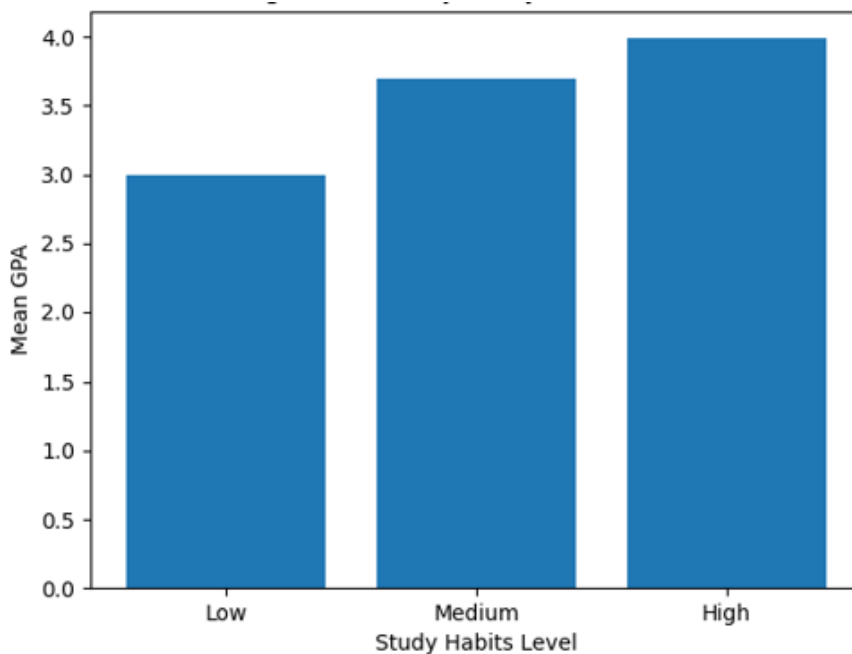
Variables	Study Habits	GPA
Study Habits	<b>1.000</b>	<b>0.747</b>
GPA	<b>0.747</b>	<b>1.000</b>

The Pearson correlation analysis indicates a strong positive relationship ( $r = 0.747$ ) between study habits and academic performance. This suggests that students with better study habits tend to achieve higher academic results. The relationship is statistically meaningful and supports the hypothesis that disciplined learning behavior improves academic outcomes.



*Figure 1 Scatter Plot (Study Habits vs GPA)*

This scatter plot shows a clear positive relationship between study habits and GPA. As study habit scores increase, academic performance also improves. The upward trend indicates that students with better study routines tend to achieve higher grades



*Figure 2 GPA by Study Habits Level*

This bar chart illustrates that students with high study habits have the highest average GPA, followed by medium and low groups. It confirms that disciplined study behavior is strongly associated with better academic performance.

### **Discussion**

The aim of this study was to find the correlation between study habits and student performance in the University. The findings of the study revealed the significant positive correlation of study habits and GPA which indicated that the students with good study habits tend to be able to perform well academically. This finding is in line with earlier studies where there is a strong association between good study habits and academic achievement with higher education students (31,32). The strong correlation coefficient ( $r = 0.747$ ) in the present study supports a strong correlation between each of the variables. This is similar to earlier research results that found other types of structured homework had a positive correlation with academic success (33). This implies that students with good study habits such as timetabled study, time management and involvement in learning the content of the course generally have better academic outcomes (34).

Time management was another highly important factor affecting student performance. The students that set aside time every day for study and were able to provide a structured regular schedule had a significantly higher value of GPA than the student with the irregular study schedules. Results were consistent with other research indicating that time management is a key factor to students' academic success, as it reduces the effects of procrastination and helps to maximize learning (35). If the students don't have time management, they tend to cram and this adversely affects the performance of the students. Advantage of learning strategies e.g. summarization, quizzing and regular study is also demonstrated in this research. They support medi-term memory enhancement and understanding. Another Spanish study was conducted

recently which showed a correlation between students' grades in tests and their study habits (36). This further confirms the premise that “quality study” not “quantity study” is the way to improve either academic performance or outcomes. Psychological factors are also a source of effects on study behaviors: motivation and self-regulation. Dysfunctional study habits are more likely to be found among the low motivated students, while high motivated students are more likely to have a regular study habit. This result corresponds well with the theory on SRL that emphasizes that the student must plan and regulate his/her learning process to achieve better academic performance (37). Furthermore, these findings are substantiated by research in various countries, which revealed that study habits were related to achievement. For example, studies in university cites with good study habits and regular study habits did better than students who had poor study habits (38). This suggests that processes of studying are correlated with the achievement of students in any context. Here, technology was also present in learning. Technology can facilitate learning potential as well as be a distraction. Another recent study also indicated that excessive browsing on nonacademic subjects on the Internet causes the deterioration of academic performance of students (39). Thus, tech discipline is important to avoid distractions and leverage technology to support student learning outcomes. The study examined no differences between gender and other activities; however, women seem to show higher degrees of academic discipline when compared to men and this can result in their better academic performance in some instances (40). Besides this, study habits may also differ among the different fields of study with science majors having more intense study than their social science counterparts (41). To sum up briefly, this finding overwhelmingly agrees with the hypothesis that study habits are important factors in the achievement of good academic success. The findings are consistent with the previous studies and thus support the findings that good study skills are critical determinants of academic achievement. It is important to note, however, that academic performance is a more complex phenomenon, which depends on a variety of factors such as cognitive abilities, learning environment, mental health and social support. In fact, other factors, such as class attendance, peer pressure, and personality have been proven to have a significant role in academic achievement as well (42).

### **Conclusion**

In this study, a cross-sectional study was conducted with the researchers' hypothesis that study habits relate to academic performance among university students, which was investigated by using a quantitative approach. The result of the analysis indicates that there is a significant positive correlation between study habits and academic achievement where the students who demonstrate effective and efficient study habits are more likely to achieve a higher GPA. The correlation results support this, showing that good study habits such as good use of time, revision and organization are important in improving academic outcomes for students and that they are also engaged with their learning in the subject. The regression and descriptive analysis also revealed that besides the positive relationship between study habits and academic achievement, study habits can be used as a predictor of students' success in university. Pupils with more consistent and positive discipline were more successful than those who had erratic and poor habits. This indicates the need for learning structures that will help improve the achievement of the university. Study habits are important indicators of student success, and it is important to view study habits as one of the potential areas to develop in the field of education. Academic Counselling, workshops and student support in higher education institutions should be addressed to promoting study habits. Promoting students' awareness of effective learning strategies will lead to better academic performance. The results of the study, however, are limited because of the cross-sectional study design and reliance on self-reported academic achievement, which might lead to bias. Complementing the findings will be the help of longitudinal studies with objective achievement data. Additionally, the context of the existing context of motivation, psychological health and learning environment may also

develop a significant effect on academic performance and should be further examined. To conclude, improving the study skills of university students is important to achieve academic success and can contribute significantly to the quality education outcome and success of students in a university setting by promoting appropriate skills in this respect.

## References

- [1] Rabia M, Mubarak N, Tallat H, Nasir W. A study on study habits and academic performance of students. *Int J Asian Soc Sci.* 2017;7(10):891–897. <https://doi.org/10.18488/journal.1.2017.710.891.897>
- [2] Lone RA. Study habits and academic performance among students: systematic review. 2021. <https://doi.org/10.31305/rrijm.2021.v06.i05.019>
- [3] Gamero-Burón C. Study habits and academic performance in university students. 2024. <https://doi.org/10.19083/ridu.2024.1826>
- [4] Bibi A, Naseer N, Habib Z. Study habits and academic achievement. 2020. [https://doi.org/10.31703/gesr.2020\(V-III\).12](https://doi.org/10.31703/gesr.2020(V-III).12)
- [5] Maheswari A, Kavitha T. Study habits and academic performance impact. 2026. <https://doi.org/10.51244/IJRSI.2026.130200141>
- [6] Pilcher JJ, Huffcutt AI. Effects of sleep deprivation on performance. *Sleep.* 1996;19(4):318–326. <https://doi.org/10.1093/sleep/19.4.318>
- [7] Hershner SD, Chervin RD. Causes and consequences of sleepiness among college students. *Nat Sci Sleep.* 2014;6:73–84. <https://doi.org/10.2147/NSS.S62907>
- [8] Walker MP. *Why we sleep.* Scribner; 2017. <https://doi.org/10.1037/e517402013-001>
- [9] Khanna L, Singh SN, Alam M. Psychological factors affecting academic performance. 2018. <https://doi.org/10.5455/ijmhs.201806032>
- [10] Zhao Z, Ren P, Yang Q. Student self-management and academic achievement. 2024. <https://doi.org/10.48550/arXiv.2404.11029>
- [11] Sheshadri A, Gitinabard N, et al. Predicting student performance using online study habits. 2019. <https://doi.org/10.48550/arXiv.1904.07331>
- [12] Cao Y, et al. Orderliness predicts academic performance. 2017. <https://doi.org/10.48550/arXiv.1704.04103>
- [13] Bibi A et al. Study habits and academic achievement correlational study. 2020. [https://doi.org/10.31703/gesr.2020\(V-III\).12](https://doi.org/10.31703/gesr.2020(V-III).12)
- [14] Walker M. Cognitive importance of sleep in learning. 2017. <https://doi.org/10.1037/e517402013-001>
- [15] Biswas T. Review of study habits and academic achievement in university students. 2025. <https://doi.org/10.1007/s11162-025-09711>
- [16] Rabia M, Mubarak N, Tallat H, Nasir W. A study on study habits and academic performance of students. *Int J Asian Soc Sci.* 2017;7(10):891–897. <https://doi.org/10.18488/journal.1.2017.710.891.897>
- [17] Bibi A, Naseer N, Habib Z. Study habits and academic achievement among students. 2020. [https://doi.org/10.31703/gesr.2020\(V-III\).12](https://doi.org/10.31703/gesr.2020(V-III).12)
- [18] Lone RA. Study habits and academic performance: systematic review. 2021. <https://doi.org/10.31305/rrijm.2021.v06.i05.019>
- [19] Maheswari A, Kavitha T. Study habits and academic performance impact. 2026. <https://doi.org/10.51244/IJRSI.2026.130200141>
- [20] Gamero-Burón C. Study habits and academic performance in university students. 2024. <https://doi.org/10.19083/ridu.2024.1826>
- [21] Walker MP. *Why we sleep.* Scribner; 2017. <https://doi.org/10.1037/e517402013-001>

- [22] Hershner SD, Chervin RD. Sleep and academic performance. *Nat Sci Sleep*. 2014;6:73–84. <https://doi.org/10.2147/NSS.S62907>
- [23] Khanna L, Singh SN, Alam M. Psychological factors and academic performance. 2018. <https://doi.org/10.5455/ijmhs.201806032>
- [24] Zhao Z, Ren P, Yang Q. Student self-management and academic achievement. 2024. <https://doi.org/10.48550/arXiv.2404.11029>
- [25] Sheshadri A, Gitinabard N, et al. Predicting student performance using study habits. 2019. <https://doi.org/10.48550/arXiv.1904.07331>
- [26] Cao Y, et al. Orderliness and academic performance. 2017. <https://doi.org/10.48550/arXiv.1704.04103>
- [27] Pilcher JJ, Huffcutt AI. Effects of sleep deprivation on performance. *Sleep*. 1996;19(4):318–326. <https://doi.org/10.1093/sleep/19.4.318>
- [28] Biswas T. Study habits and academic achievement review. 2025. <https://doi.org/10.1007/s11162-025-09711>
- [29] Bibi A et al. Gender differences in study habits. 2020. [https://doi.org/10.31703/gesr.2020\(V-III\).12](https://doi.org/10.31703/gesr.2020(V-III).12)
- [30] Walker M. Cognitive importance of sleep in learning. 2017. <https://doi.org/10.1037/e517402013-001>
- [31] Rabia M, Mubarak N, Tallat H, Nasir W. Study habits and academic performance of students. *Int J Asian Soc Sci*. 2017;7(10):891–897. <https://doi.org/10.18488/journal.1.2017.710.891.897> (ResearchGate)
- [32] Chilca ML. Study habits and academic performance among university students. *Propósitos Representations*. 2017;5(1):71–127. <https://doi.org/10.20511/pyr2017.v5n1.145> (Directory of Open Access Journals)
- [33] Ahiatrogah PD, Deku P, Dramanu BY. Relationship between study habits and academic performance. *J Educ Dev Pract*. 2008. <https://doi.org/10.47963/jedp.v2i.944> (journal.ucc.edu.gh)
- [34] Gamero-Burón C. Study habits and academic performance. *Rev Digit Investig Docencia Univ*. 2024. <https://doi.org/10.19083/ridu.2024.1826> (revistas.upc.edu.pe)
- [35] Maheswari A, Kavitha T. Study habits and academic performance impact. 2026. <https://doi.org/10.51244/IJRSI.2026.130200141> (RSIS International)
- [36] Rabia M et al. Association between study habits and performance. 2017. <https://doi.org/10.18488/journal.1.2017.710.891.897> (ResearchGate)
- [37] Sheshadri A et al. Predicting student performance based on study behavior. 2019. <https://doi.org/10.48550/arXiv.1904.07331> (arxiv.org)
- [38] Kassarnig V et al. Academic performance and behavioral patterns. 2017. <https://doi.org/10.48550/arXiv.1706.09245> (arxiv.org)
- [39] Hazelhurst S et al. Web usage and academic performance. 2011. <https://doi.org/10.48550/arXiv.1110.6267> (arxiv.org)
- [40] Kasyoka A. Self-esteem, study habits and academic performance. 2023. <https://doi.org/10.47604/ajep.1995> (iprjb.org)
- [41] Singh B, Pal Y. Study habits and academic stress. 2025. <https://doi.org/10.69980/redvet.v25i2.2088> (veterinaria.org)
- [42] Ghulam M. Study behavior and academic performance. 2013. <https://doi.org/10.20533/licej.2040.2589.2013.0133> (ResearchGate)