

Middle East Technical University

Balancing Success: Lifestyle Factors and Academic Performance at METU

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1. Abstract

This study aims to investigate the effects of various life design factors and the psychological situations associated with academic success among Middle East Technical University Bachelor's Degree students. The License is an important term for different reasons. Under the pressure of the academy, the social dynamics, and the effect of social media, affect the students. These factors generally cause an increase in the stress levels and decrease the quality of sleep. The current literature shows that lack of sleep chronically affects neurological functions such as learning, studying, and work. For this case, the investigation clarifies the effects of the happiness levels and CGPA on these variables: the situation of working, sleep time, physical activity, social media habits, and accommodation types on the Bachelor's Degree samples.

The primary data of the investigation were collected from 206 participants. The process of collecting data has combined different methods like face-to-face surveys, the distribution of QR codes in the Metu Campus, and the distribution on social media. The sample has a wider range of students, especially from the second and third classes from different departments. In the survey, the Likert scales for subjective thoughts and multiple-choice questions for objectivity are used in combination. The statistical analyses were implemented using non-parametric tests such as the Wilcoxon Rank Sum, the Kruskal-Wallis, and the multiple regression models, due to the nature of this dataset.

The results of the study show that there is a consistent case in the initial hypothesis, although it predicts a significant difference based on the lifestyle, surprisingly. The statistical tests clarify that there is no significant difference in the CGPA between the working situation(p -value = 0.9206), accommodation type(0.6422), or physical activity (p -value > 0.05). Additionally, a regression model between CGPA and sleep time explains 1.5% of the variation, indicating that sleep time is not a significant factor in academic success. Similarly, between happiness and daily energy levels, the daily activity level and different working situations show consistent cases between these life design profiles.

These results indicate that there is a strong resilience effect among METU students. This case shows that academic success is a priority culture for these METU students, independent of the constraints such as logistics and accommodation, physical activities, and working cases(part-time or full-time). The study is not sufficient to anticipate the academic success of the outer factors. Despite them, the psychological cases are more effective in determining academic success, such as motivation, cognitive resiliency, and discipline. To summarize, the university administration should focus on the approach of prioritizing cognitive psychological resources and academic motivation.

2. Introduction and Literature Review

The human body functions through a complex biological cycle, also known as circadian rhythm, which regulates the essential physical factors such as body temperature, pressure, and metabolic habits. This function is completed with the homeostatic sleep drive in the process of awake of the human to increase the sleep need. During the deep- sleep process, the release of the growing hormones eases to control the immune system and cardiovascular system, and happens the metabolic cleansing in the brain. As a result, the lack of sleep for any reasons hards the essential process, general health, and regulation of feelings and cognitive performance negatively.

2.1. Sleep Patterns and Cognitive-Academic Performance

Although humans have the physiological capacity for several days without rest, this case is a negative thing for the psychology. Sleeping at least 7 hours is recommended for optimal health and cognitive efficiency. Among all university students in the world, lack of sleep is still a problem. The process of university, like the pressures of the academy, changing of the social dynamics, generally leads to a lack of quality of sleep and a decrease in academic success based on these conditions.

The chronic lack of sleep, defined by less than 6 or 7 hours of rest daily, has a direct harmful effect on cognitive factors. Specifically, lack of sleep may be a reason of decreasing reaction and concentration time, weakening of decision-making, and solving problem process. Moreover, sleep is crucial for converting short-term thinking to long-term information. In other words, those who are studying till the morning generally face problems like keeping the information in their minds. Not only cognitive problems, but also the lack of sleep increases anxiety level and irritability. So, these psychological issues affect academic success indirectly.

2.2. Long-Term Health Implications and the Digital Influence

Chronic lack of sleep and, based on this, health problems are beyond academic success. Investigations show that these health issues are more dangerous with increasing of the social media time and social technology. When we consider that CGPA is an important factor of financial consistency in the future, sufficient sleep time is of essential importance for career expectations and long-term psychological well-being.

Social platforms like Instagram, X(Twitter) & WhatsApp, and WhatsApp are connecting the whole world. The complex investigations for social media platforms clarify that there is a strong negative correlation between sleep time and screen time. The blue-light from the digital screens prevents the release of the melatonin hormone. So, this is the reason for initiating the sleep time late. The addiction to social media may lead to digital activities till the night. Hence, this issue may be a reason for decreasing the quality of life.

3. Methodology: Data Description and Sample Questions

The framework of this study is created to determine the overall view of METU students on the academic and psychological aspects. The investigation, as it tends to be an approach with an objective survey, aims to collect the data with wide-spread form and find the quantitative form.

3.1 Survey Administration and Sampling

The primary data of this investigation were collected from an online survey using Google Forms. A hybrid participation strategy was used to increase the range of data. This strategy combines face-to-face surveys and digitally distributed surveys. On the digital side, the link to the survey was shared to reach the students who have the campus-out accommodation on the various social media platforms, just for student groups. Simultaneously, the participants were invited to the survey using the QR code in the printed papers inside the campus of METU.

This sample method was choosed convenience sampling method because the participation is totally voluntary and based on wanting to help us. This approach ensured that a total of 206 reliable responses were recorded in this restricted time. The convenience sampling method is not a technique based on probability rules. The hybrid strategy of investigation helps to reduce the bias of the survey. It ensured to participate the students from different levels and genders and from different departments

3.2 Participants and Demographic Profile

The participants of this study represent a part of the population of the METU Bachelor's Degree students. The sample includes 117 Men (56.8%) & 86 Women(41.7%), and a small percentage of the sample is non-binary.

The sample includes all academic levels of the Bachelor's Degree. The distribution of the sample tends towards the middle of the education range. The second class(n=64) and the third class(n=54) is main part of the sample, with the following classes: first class(n=45) and fourth class (n=26). Also, the wider participation of the investigation from engineering faculty to education sciences does not restrict the study to just one department. This variation aims to examine the effect of different academic areas under different life designs.

3.3 Data Preparation and Cleaning

To protect the integrity of statistical analysis, the row data of the survey is standardized and cleaned properly. One of the hard things about the process is that the two languages of the survey need to combine the data in a single form, both cleaning and preparation, separately.

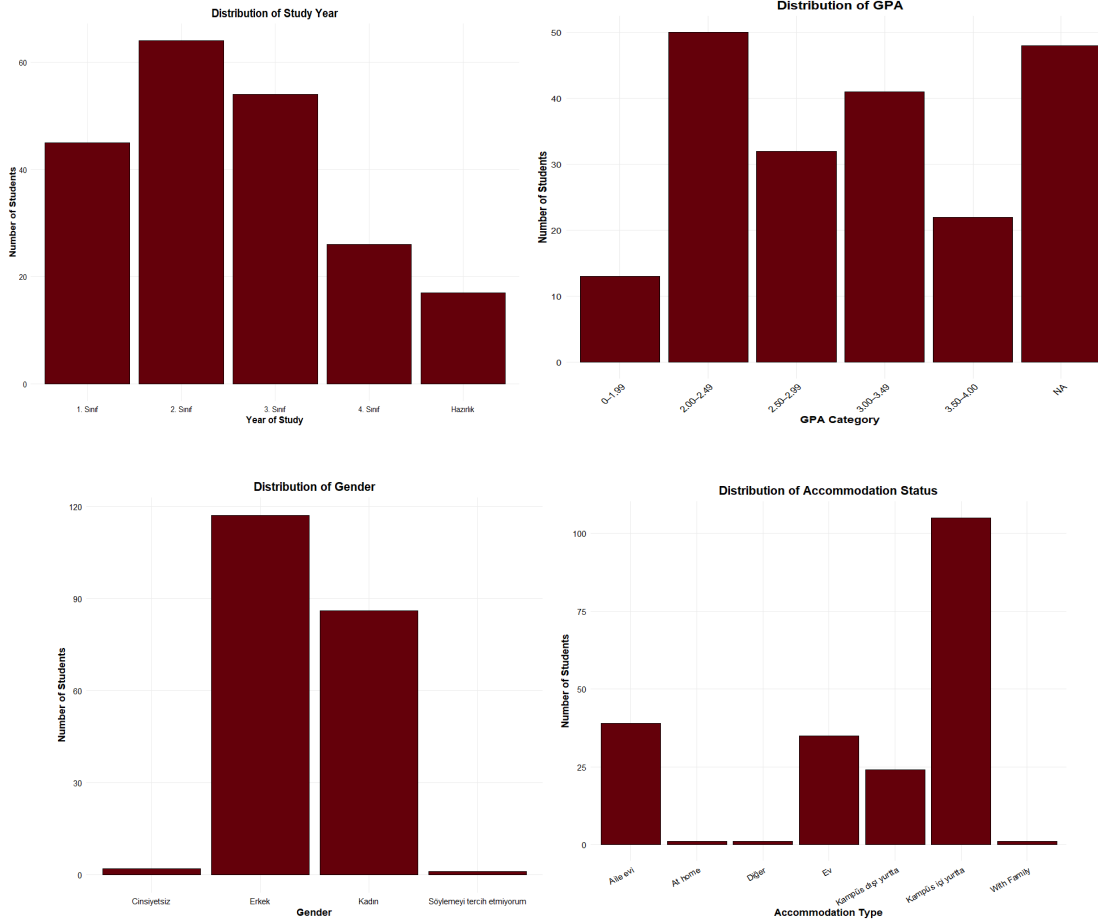
Moreover, the data has examined the logic of inconsistencies and outliers. The dataset does not include a missing value in the genders, stress levels, and accommodation types since the Google Forms provided that questions of these categories were compulsory. The meaningless responses (like over 24 hours of sleep time) were deleted from the analysis manually. This preparation process guarantees that the Wilcoxon and Kruskal-Wallis Tests have been used under high-quality conditions and a consistent data set.

3.4 Research Instrument and Operationalization

The survey method was designed to become the essential theme that provides a measurable form of academic success, life design constraints, and psychological cases. The questions were categorized like that :

- Questions aim for knowledge such as “Academic Year,” “Department,” and “Grade Point Average (GPA).” GPA data were collected using particular intervals(e.g., 2.50–2.99, 3.00–3.49) to prioritize student privacy and converted to the midpoints of these intervals for constructing statistical models.
- This section includes categorical items such as “Accommodation Status” (e.g., Campus Dormitory, Off-Campus, Family Home) and “Employment Status” (employed and unemployed).
- Psychological Cases: Subjective perspectives were measured using 1-5 Likert scales to determine “Daily Stress Levels,” “Overall Happiness,” and “Daily Energy Levels.” This scaling allowed for the measurement of differences in students, and this case provides a means to facilitate a non-parametric test of comparisons between groups.

- Different questions were used to check “Daily Screen Time,” “Purpose of Social Media Use,” and “Exercise Frequency.” These data formed the database for investigating the effect of technology use and physical activity.



3.5 Non-response Rate

It is important to evaluate how representative and reliable the data is. There are two types of non-response. One type is unit non-response. Another type is item non-response. The recruitment process for this study used a multi-channel approach, including social media distribution and on-campus collecting by QR code scanning. It is estimated that these reach approximately 800 to 1000 undergraduate students at METU. 206 valid responses were recorded. The unit response rate is estimated to be between 20.6% and 25.75%. So, the unit non-response rate is approximately between 74.25% and 79.4%. It is common for voluntary online surveys to have a low response rate.

It needs a cautious interpretation because of the self-selection bias. It is possible that students with a higher interest in study themes were more willing to participate. This voluntary nature of the sample is a standard limitation in survey research where participation is not mandatory. Regarding item non-response, the survey was configured with mandatory fields for all primary variables on the Google Forms platform, resulting in an item non-response rate of 0%. This ensured that there were no missing values for critical variables such as gender, accommodation status, or stress levels. However, internal data missingness was observed in two specific structural contexts:

- **Conditional Missingness (Sports Frequency):** The question regarding the specific frequency of exercise (days per week) contained 101 missing values. This was a planned outcome of the survey's "skip logic," as the 108 participants who initially stated they do not engage in regular sports activities were not required to answer the frequency follow-up. Therefore, these values represent structural missingness rather than participant omission.
- **Not Applicable Responses (GPA):** While the response rate for the GPA item was 100%, 45 participants (21.8% of the sample) selected the "NA" or "No GPA / Prep or 1st Year" category. These responses were primarily from preparatory school and first-year students who had not yet completed a formal grading cycle at the university. In the subsequent analysis, these are treated as a valid "Not Applicable" category rather than missing data.

3.6 Data Description

The final dataset analyzed in this study consisted of 206 individual responses, each consisting of 32 variables that capture a view of the METU student experience. The variables are categorized into four primary domains: demographic profiles, academic performance, lifestyle habits, and psychological well-being. The data includes a mix of categorical, ordinal (Likert-scale), and interval-based measures.

Demographic and Academic Framework: The variables include gender, birth year, and academic department, which provide the context for the sample's diversity. Academic standing is measured through the "Year of Study" (ranging from Preparatory to Senior) and "Cumulative GPA." Notably, GPA was collected as categorical intervals (e.g., 2.50–2.99), which were converted into midpoints for statistical modeling.

Sleep and Lifestyle Indicators: A major part of the dataset focuses on sleep patterns and logistical constraints. This includes "Accommodation Status" (categorical), "Employment Status" (working vs. not working), and "Daily Sleep Duration." Sleep quality is further determined through self-reported "Sleep Regularity" and "Bedtime" ranges. Additionally, physical habits such as "Sports Activity," "Weekly Exercise Frequency," "Caffeine Intake," and smoking/alcohol consumption patterns provide an inclusive view of the students' physical health behaviors.

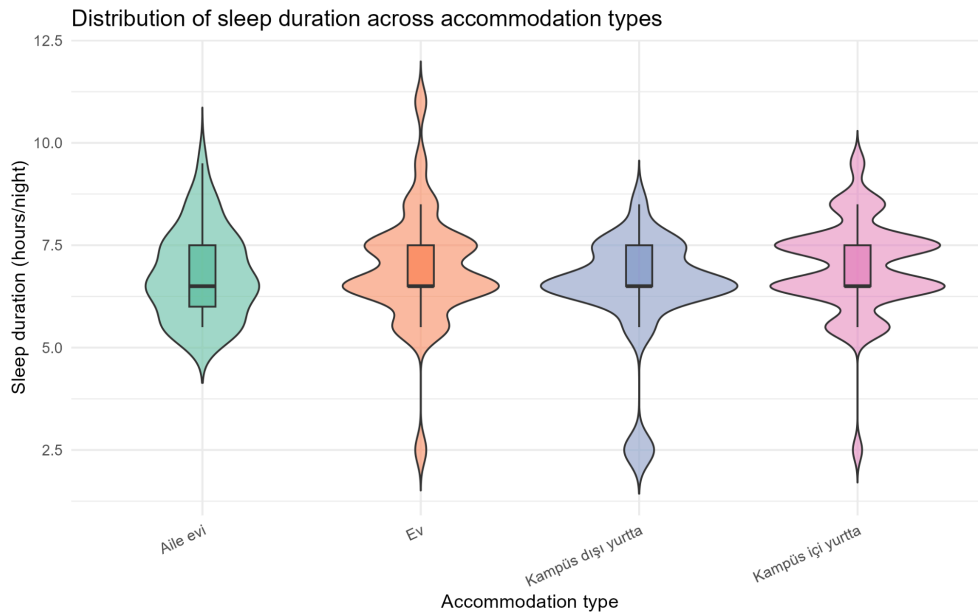
Psychological Well-being and Digital Habits: Subjective experiences are collected using 1-5 Likert scales to ensure consistency and facilitate non-parametric testing. These include "Daily Stress Level," "General Happiness Score," "Daily Energy Level," and "Class Focus Score." Digital influence is tracked through "Daily Screen Time" and "Screen Usage Before Sleep," alongside qualitative indicators like "Most Used Social Media Platform" and "Purpose of Usage."

Stress Dynamics and Social Media Impact: To understand the durability of the student body, the dataset includes specialized measures of stress triggers, such as "Exam Stress Increase" and "Exam Sleep Change." The effect of technology on mental health is measured using variables such as "Social Media Sleep Impact," "Study Impact Score," "Post-Usage Stress," and "Stress-Induced Usage Increase." These scale-based measures help show how technology use is related to well-being and study performance.

4. Accommodation Status, Sleep Patterns, and Academic Success

The living environment of a university student is traditionally viewed as a primary determinant. It can affect daily routines. It can affect health behaviors. It can affect academic efficiency. At METU, students can have a wide array of options to select from where to stay. It can range from on-campus dormitories to private off-campus apartments and family homes. This provides how these diverse accommodation types correlate with students' sleep patterns and their cumulative academic performance (GPA).

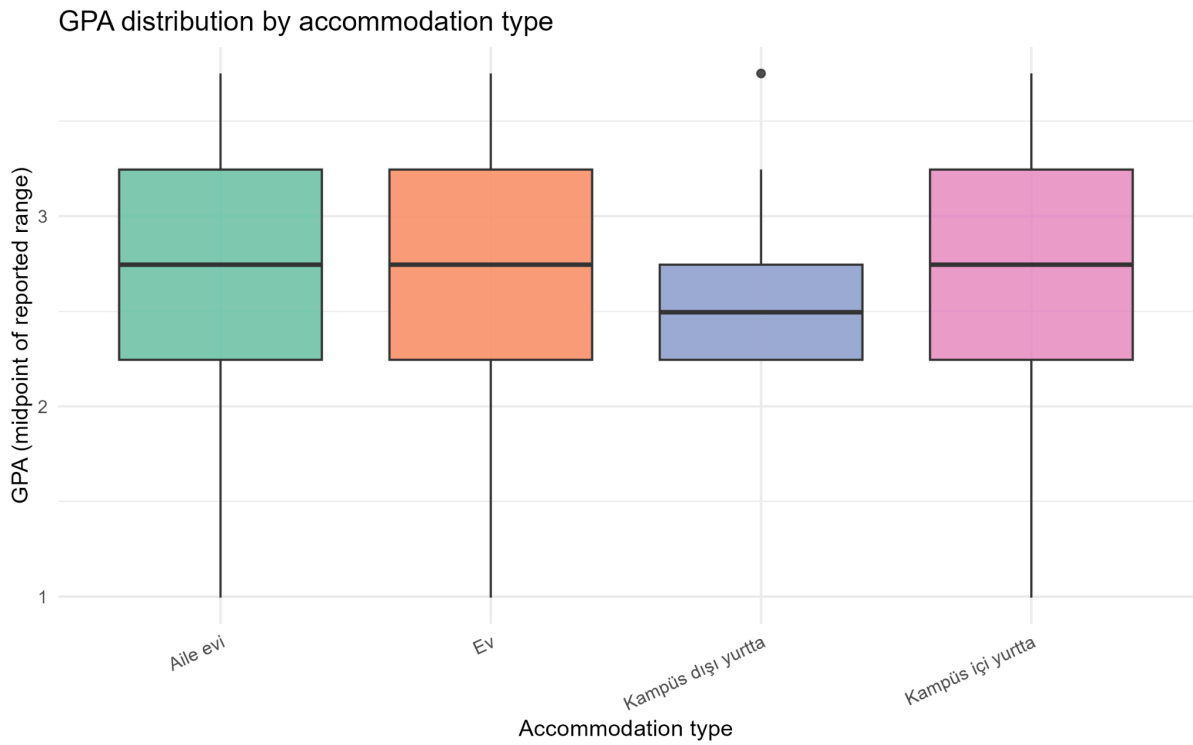
4.1 Accommodation and Daily Sleep Patterns



Violin plots showing the distribution of nightly sleep hours across different accommodation categories.(Figure 5)

Figure 5 presents the distribution of nightly sleep hours across four accommodation categories: on-campus dormitories, family homes, off-campus private houses, and off-campus dormitories. The descriptive statistics reveal variations in sleep quantity; students staying in on-campus dormitories reported the highest mean sleep duration (6.95 ± 1.14 hours), in off-campus dormitories reported the lowest (6.42 ± 1.38 hours). A Kruskal-Wallis test was performed to determine the statistical significance of these observed differences. The p-value is 0.3364, suggesting that accommodation type does not significantly influence sleep duration. When we look at the variances in the violin plot, students living with their families show lower variance, while those living in student houses and dormitories have higher variance. This means that students living at home tend to have more regular sleep patterns, whereas the sleep schedules of others are more variable.

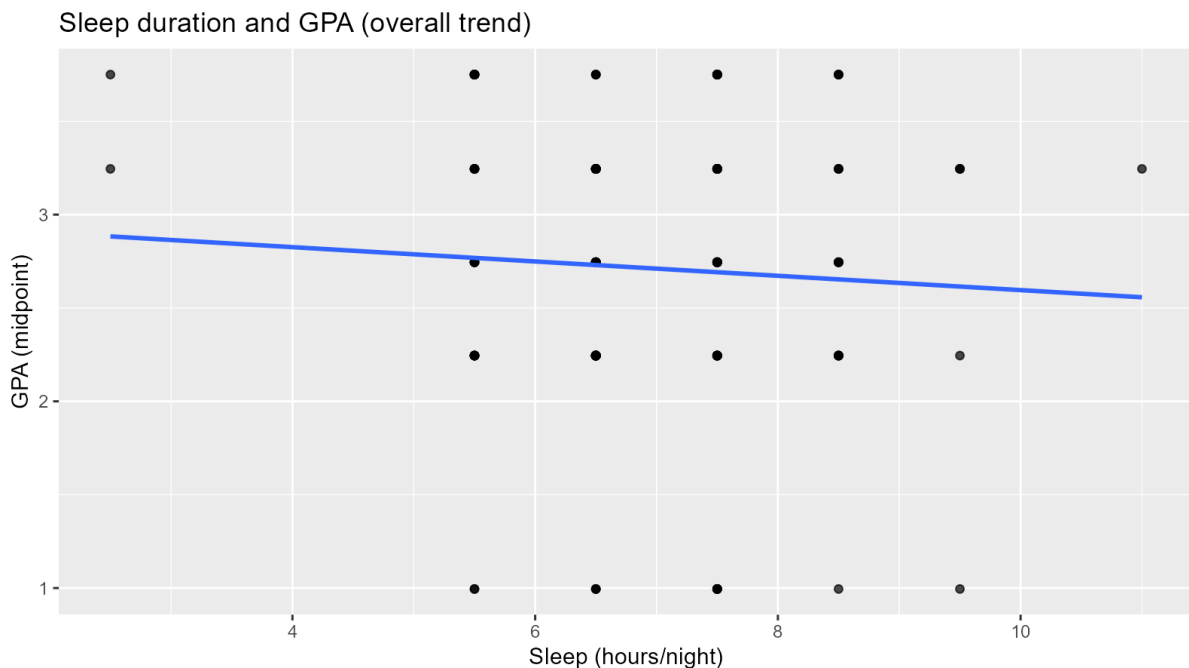
4.2 Academic Performance (GPA) and Living Conditions



Box plots showing the distribution of GPA across different accommodation categories.(Figure 6)

The relationship between a student's living environment and their academic achievement is further examined in Figure 6. The data show that students living in off-campus houses reported the highest mean GPA (2.80), while students residing in family homes reported the lowest (2.60). This small difference may suggest that having more independence and fewer family-related distractions in a private house can help students develop better study habits. The Kruskal-Wallis test rejected this assumption. The p-value was 0.6422. Academic success is statistically independent of a student's place of residence. Whether a student lives with family or in a campus dorm, their GPA is very similar. GPA data were available for 161 out of 206 students (78%). The missing data come from preparatory and first-year students who do not yet have official transcripts. The similar GPA results across all living types show that METU students strongly focus on academic success and adjust their study habits to their living conditions.

4.3 The Interaction Between Sleep, GPA, and Environment



Scatter plot with a linear regression line illustrating the relationship between daily sleep duration and GPA. (Figure 7)

To better understand how these variables affect GPA, a multiple linear regression model was used to examine the relationship between sleep duration and GPA (Figure 7). The results show two important points. First, sleep duration was not a significant predictor of GPA ($p = 0.328$), meaning that sleeping more does not necessarily result in higher grades. Second, the model explained only 1.5% of the variation in GPA ($R^2 = 0.0152$), and the overall result was not statistically significant ($p = 0.6668$). This indicates that sleep duration and living conditions are not major factors in academic performance. These findings suggest a “resilience effect” among students. Even with different sleep habits and living environments, students are able to maintain similar academic performance by adapting their study behaviors. This pattern is also visible in Figure 7, where the regression line is almost flat across all accommodation types, showing that student success is influenced more by other factors rather than external living conditions.

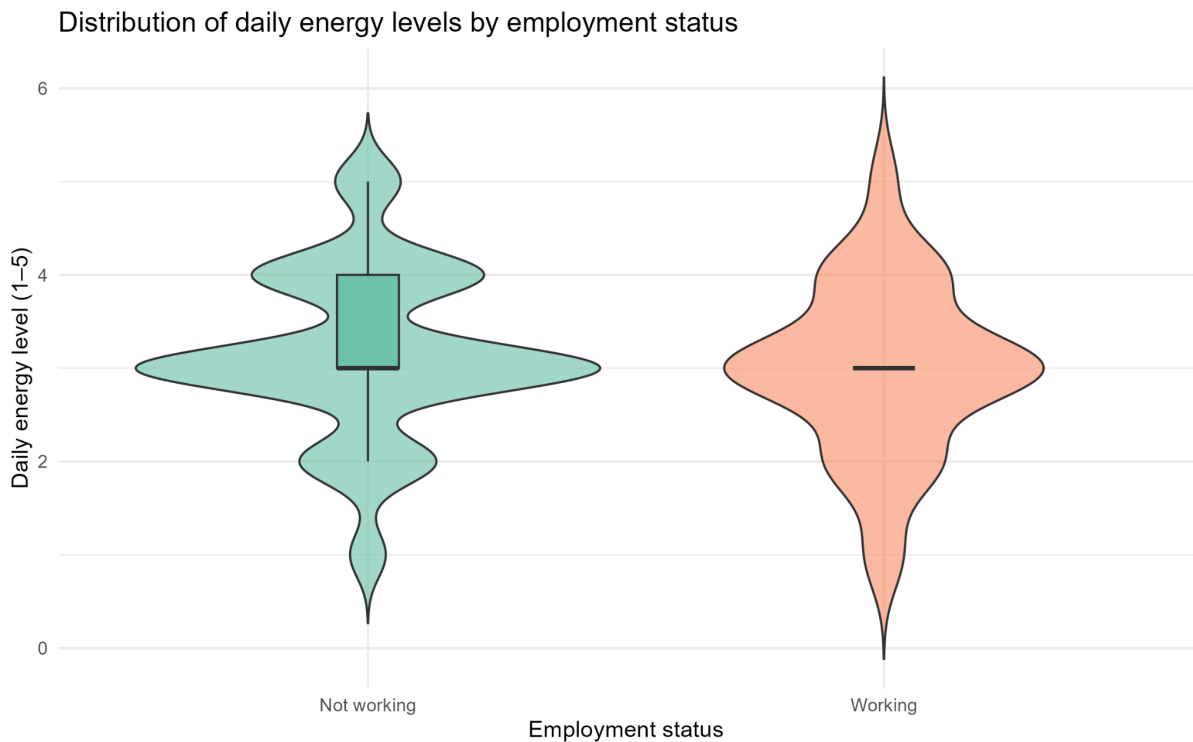
4.4 Interpretation of Findings

The combined results of the two questions show that the METU undergraduate experience is very similar in terms of academic outcomes. The absence of statistically significant differences ($p > 0.05$ in all tests) suggests that the university's strong academic culture creates a leveling effect among students. METU students appear to be highly adaptable. For example, although students living in off-campus dorms sleep slightly less, this does not lead to lower academic performance. These findings question the common idea that some living conditions, such as living with family, automatically provide an academic advantage because of greater stability. The results show that success is mainly influenced by personal factors. These factors include self-discipline, motivation, and study habits. Living location and convenience do not have a strong effect. This reflects a culture of self-management in which students adjust their lifestyles to meet high academic expectations. It should also be noted that, since this analysis is based on GPA-related responses, students with higher academic performance may have been more likely to participate in the survey. In addition, the widely discussed issue of GPA inflation in universities in recent years may have influenced the overall GPA distribution, potentially reducing observable differences between groups.

5. Employment Status, Daily Energy Levels, and Academic Performance

Paid employment during undergraduate years has increased in recent years. This trend is largely driven by economic pressures, as well as the increasing competitiveness of the job market, which motivates students to gain early work experience, develop professional skills, and expand their networks through part-time employment. While working can provide financial independence and valuable career opportunities, there is a concern that balancing work and academic responsibilities may negatively affect students' academic performance or lead to physical and mental exhaustion. This section examines these concerns. It analyzes the relationship between employment status, self-reported energy levels, and cumulative GPA.

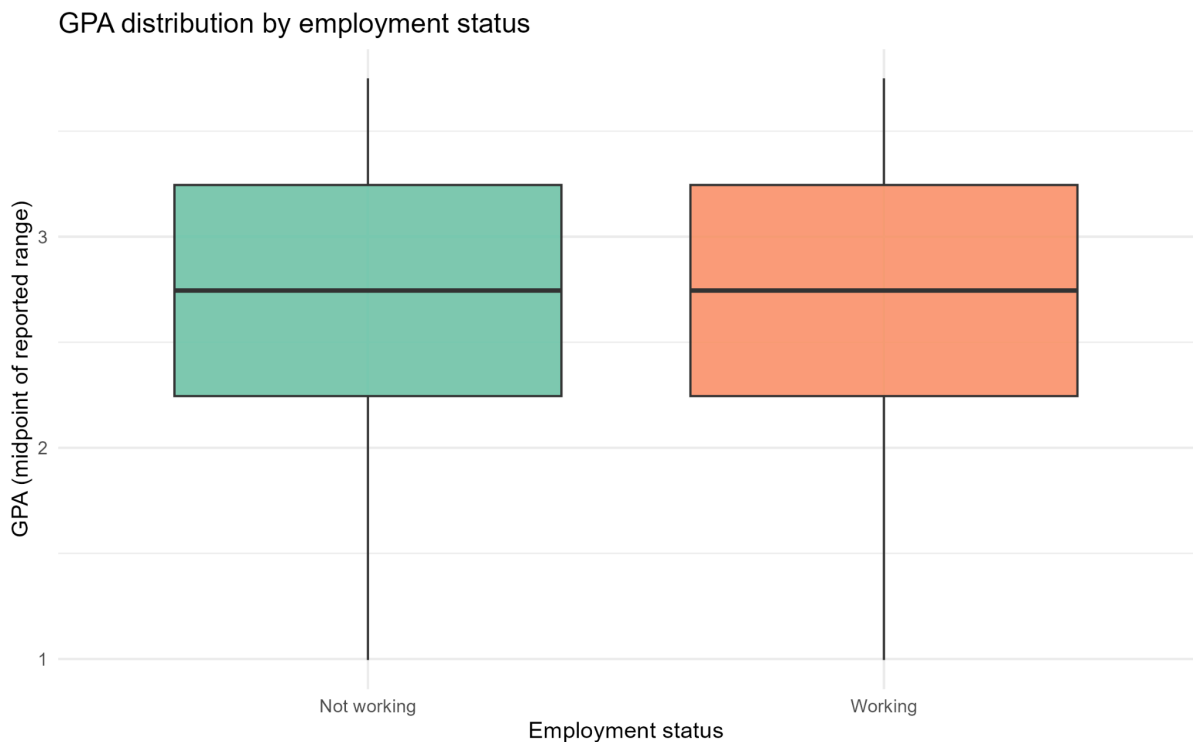
5.1 Distribution of Daily Energy Levels by Employment Status



Violin plots showing the distribution of daily energy levels across different employment statuses (working vs. not working).
(Figure 8)

Figure 8 presents the distribution of self-reported daily energy levels, measured on a 1–5 scale, for both employed and non-employed students. Descriptive statistics indicate that students who are not working reported a slightly higher mean energy level (3.17 ± 0.89) compared to their working peers (2.98 ± 0.90). Despite the intuitive assumption that balancing a job with a demanding METU curriculum would lead to significant fatigue, a Wilcoxon rank sum test concluded a p-value of 0.2225. This result indicates that there is no statistically significant difference in daily energy between the two groups.

5.2 Academic Performance (GPA) by Employment Status



Box plots showing the distribution of academic performance (GPA) based on employment status. (Figure 9)

The academic performance comparison visualized with box plots in Figure 9 presents a striking picture of grade stability among students with different work statuses. The two distributions are remarkably similar; the median GPA value is nearly identical for both groups at 2.74. While the average GPA of non-working students is 2.73, working students closely follow this value with an average of 2.68. Statistical tests also confirm this visual observation and, with a p-value of 0.9206, show that there is no evidence of a systematic academic disadvantage for students who work during their studies. This finding challenges the view that student employment inevitably harms academic performance. On the contrary, it shows that working METU students are able to effectively balance their academic and professional lives. It should also be noted that GPA data were available for 161 of the 206 participants; the remaining 45 missing responses were largely due to preparatory or first-year students who did not yet have an official academic average, reflecting a structural rather than random deficiency.

5.3 Interpreting energy and GPA together

When energy levels are evaluated alongside GPA, a more nuanced picture emerges regarding students' adjustment processes. Working students report slightly lower energy levels, although they are statistically comparable; however, this perceived slight decrease in physical vitality does not lead to a decline in academic output.

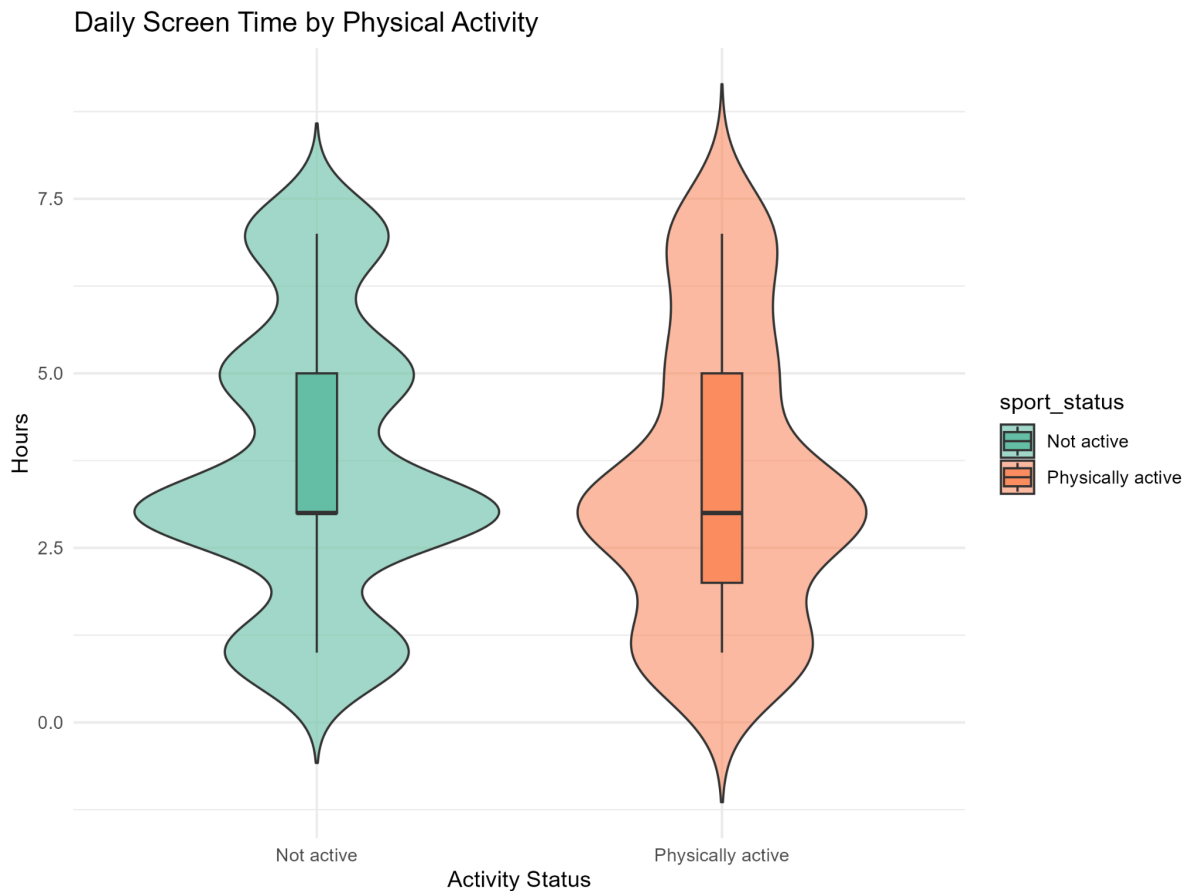
This situation can be explained by the concept of “compensatory behaviors.” Students faced with the additional time constraints of working are likely to acquire more advanced time management skills and prioritize their coursework with greater intensity than students who have more “free” time. Furthermore, the absence of significant differences suggests that METU students only choose to work if they believe they can maintain their academic performance, pointing to a kind of self-selection mechanism that preserves the university's high academic standards.

These findings serve as a warning against overly simplistic approaches to student labor; work can be integrated into a stable and productive university life where students can effectively balance their professional goals with their academic imperatives, rather than being an obstacle.

6. Physical Activity, Screen Time, and Academic Performance

Regular physical activity is recognized as one of the fundamental elements of student health, particularly in academically demanding environments such as Middle East Technical University (METU). While exercise is generally associated with improved mood and cognitive performance, contemporary student life is characterized by intense digital interaction. Therefore, the balance between physical activity and screen time is an important factor affecting both emotional well-being and academic outcomes. This section examines the relationships between physical activity status, daily screen time, subjective happiness, and grade point average (GPA).

6.1 Distribution of daily screen time and happiness by physical activity status

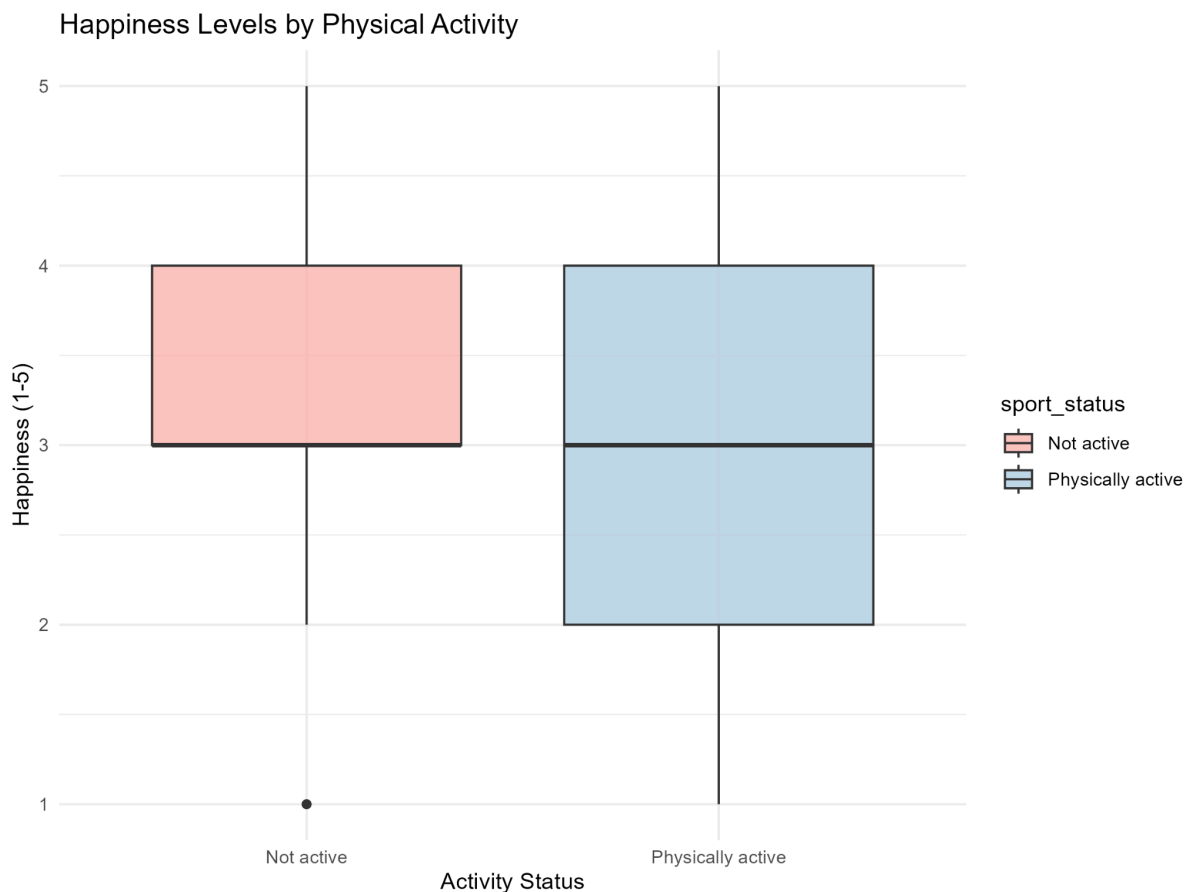


Violin plots illustrating the distribution of daily screen time across physical activity status groups.(Figure1)

The interaction between sedentary digital habits and active lifestyles is visualized in Figure 1. The violin plots show that physically inactive students exhibit a wider distribution in their daily screen time and a higher concentration in the upper quartiles. This suggests that a sedentary lifestyle is often associated with prolonged digital interaction and that screen-based entertainment can emerge as a primary leisure activity. In contrast, physically active students exhibit a more centered and limited distribution. This finding indicates that students who exercise regularly are naturally better able to regulate their screen use; possible reasons include the time demands of physical training and the substitution of active habits for time allocated to digital activities.

The relationship between exercise and emotional well-being was examined using the happiness scores shown in Figure 2. Interestingly, despite the physiological benefits commonly attributed to exercise, the happiness scores of the active and inactive groups largely overlap. The median values are almost the same,

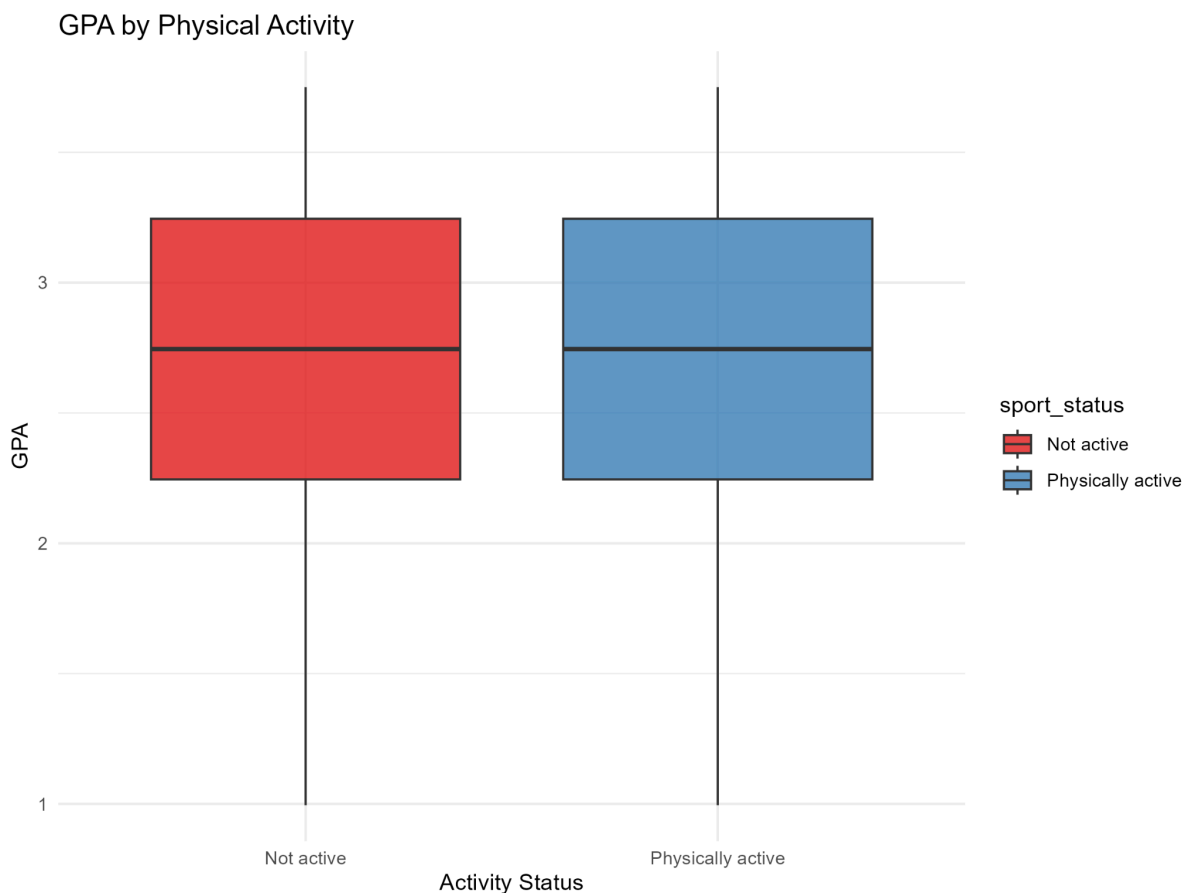
and the interquartile ranges show a similar pattern as well. The Wilcoxon rank sum test confirmed this visual similarity and yielded a result of $p\text{-value} = 0.9099$. This high $p\text{-value}$ indicates that there is no statistically significant difference in happiness levels based solely on physical activity. This suggests that for METU students, happiness is a multidimensional construct shaped by social support, academic satisfaction, and individual psychological factors rather than physical habits alone.



Box plots comparing the distribution of happiness levels between physically active and non-active students. (Figure 2)

Figure 2 shows the distribution of happiness levels measured via self-report using a Likert scale ranging from 1 to 5. The happiness scores of physically active and inactive students largely overlap. The median values of both groups are nearly identical, and the interquartile ranges also exhibit a similar pattern. This visual similarity is also supported by the Wilcoxon rank sum test ($p = 0.9099$); this high $p\text{-value}$ indicates that there is no statistically significant difference between the two groups in terms of happiness levels. This finding suggests that university students' happiness depends not only on physical activity but on a more complex set of social and psychological factors.

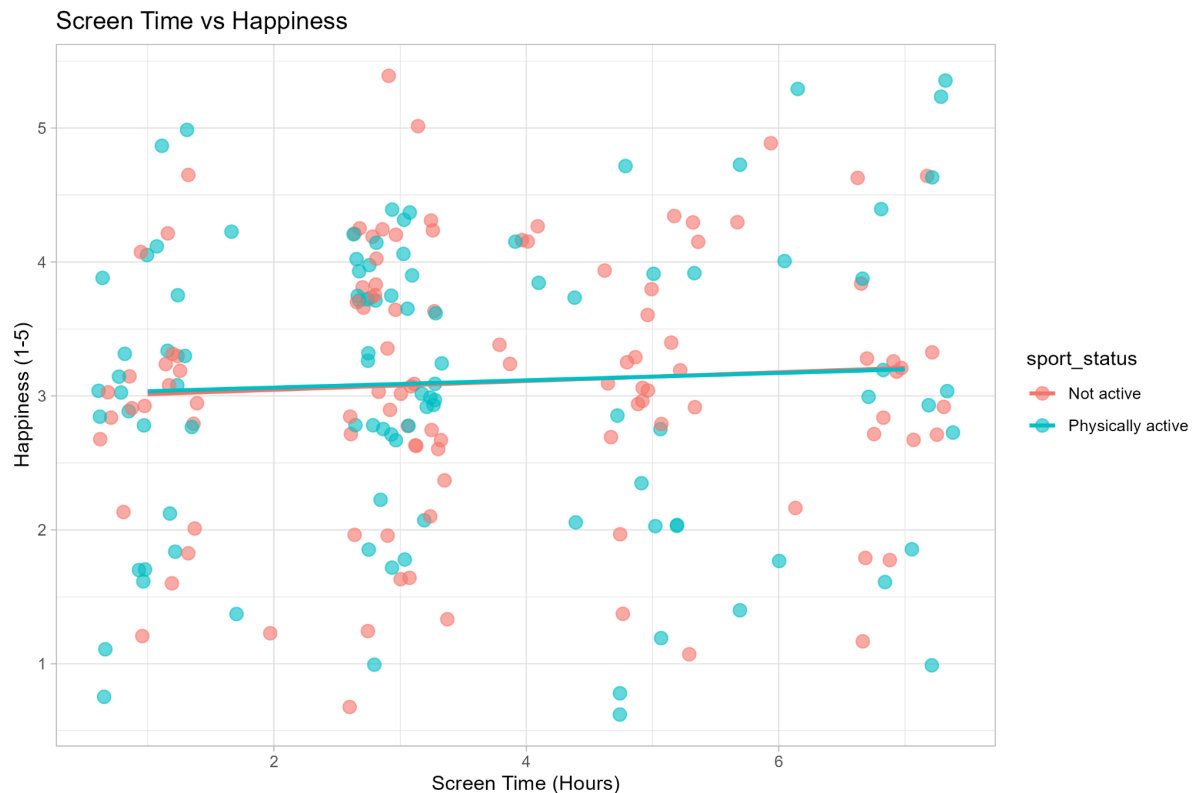
6.2 Academic performance by physical activity status



A common concern in higher education is that intensive extracurricular activities, such as sports, may weaken academic focus. Figure 3 addresses this concern by comparing the median GPA values of physically active and inactive students. The distributions are remarkably consistent between the two groups; the median values and the spread of grades do not indicate any disadvantage for physically active students.

This finding challenges the view that time spent on sports has a negative impact on academic performance. On the contrary, it suggests that active students are able to successfully balance their extracurricular obligations thanks to the discipline and effective time management skills gained through regular training. As mentioned in previous sections, GPA data is available for 161 of the 206 participants; the remaining 45 “NA” responses belong to preparatory or first-year students who have not yet received an official transcript. This structural deficiency does not affect the validity of the comparison and demonstrates that academic success is maintained independently of physical activity levels.

6.3 The relationship between screen time and happiness



To examine the impact of digital habits in greater detail, Figure 4 presents the relationship between daily screen time, classified according to physical activity status, and happiness levels in a scatter plot. The relatively horizontal regression lines drawn for physically active and inactive groups indicate a weak or negligible correlation between time spent on digital devices and subjective happiness.

Although some studies associate excessive screen time with lower levels of well-being, the METU sample demonstrates a high level of digital resilience. Students are able to maintain similar levels of happiness regardless of their physical activity levels and despite differences in their levels of digital use. This finding reinforces the view that the nature and purpose of use (e.g., social connection or information gathering) may be more decisive than quantity in determining the effect of screen time on mental health.

6.4 Interpreting physical activity, well-being, and GPA

The synthesis of findings obtained under Theme 3 indicates a fairly balanced and accommodating dynamic within the student population. Although physical activity appears to regulate or displace screen time to some extent, it does not seem to lead to any observable difference in cumulative GPA or overall happiness levels (p-value

= 0.9099). These results point to an inherent resilience in METU students; regardless of whether they are physically active or not, students are able to cope with the pressures of university life with similar academic and psychological outcomes.

Rather than framing physical activity as an absolute prerequisite for success or happiness, these findings emphasize the importance of the individual subject. Students can integrate lifestyle choices into their daily routines in a way that preserves their long-term academic and psychological well-being. This suggests that success in a modern, digitally integrated campus environment is the product of a multidimensional self-regulation process rather than a single lifestyle factor.

7. Extra Analysis: An Integrative Synthesis of Student Well-being and Success

The earlier sections examined lifestyle factors such as physical activity, employment, and accommodation in isolation. This integrative analysis evaluates the broader patterns emerging across the entire dataset of 206 METU students. Across all themes, the main finding is that academic performance and life satisfaction stay very stable. Regardless of varying external lifestyle constraints.

7.1 The Resilience of Academic Performance

Across the three primary themes of this study, statistical tests consistently yielded nonsignificant p-values regarding cumulative GPA:

- **Employment Status:** $p = 0.920$
- **Physical Activity:** $p > 0.05$
- **Accommodation Type:** $p\text{-value} = 0.6422$

Results stay nonsignificant. This points to strong academic resilience among METU students. Whether a student is balancing a part-time job, residing in a family home versus a campus dormitory, or dedicating time to regular sports, their cumulative GPA remains unaffected. This points to a shared student culture where academic success is not optional. Students may use strong strategies like strict time planning, clear priorities, or study groups so their personal choices don't hurt their grades.

7.2 The Well-being Paradox

A similar stability showed up in mental health measures. Happiness did not change with physical activity ($p = 0.9099$). Working students also did not show a clear drop in energy ($p = 0.2225$). This may show student life feels more similar than different. Even with different routines, METU students seem to stay around a moderate well-being level.

This "well-being paradox" may indicate that the intense pressures of a hard academic curriculum act as a leveling factor for the student body. Heavy coursework and high expectations may shape stress in a similar way for many students. This could be bigger than any positive effect of sports or any fatigue from having a job. In that case, happiness and energy may not change much. They may be driven by other factors we did not include (friend support or department satisfaction).

7.3 Predictor Importance and the Missing Link

The technical depth of the analysis is further clarified by the regression models, where R^2 values remained consistently low. This explains less than 3% of the total variance in GPA. Confirms that lifestyle variables alone are poor predictors of academic success within this population. In other words, one cannot accurately predict a student's GPA simply by knowing their sleep duration, their place of residence, or their employment status.

This result suggests the "missing link" for METU student success is more about internal factors than daily limits. Things like motivation, prior prep, and grit may matter more than the physical setting or daily schedule.

7.4 Conclusion of Synthesis: An Adaptive Student Body

In summary, this integrative synthesis reveals that the METU undergraduate population is a highly adaptive and stable group. The results show no major compromise. METU students seem to balance a complex routine while staying focused on academic priorities. For university administrators and policymakers, these results suggest that students are not necessarily struggling to manage these lifestyle choices. They are successfully integrating them into a demanding university experience. This shows the necessity of focusing support on internal psychological resources and academic tools, as the students already demonstrate a remarkable capacity to navigate external logistical challenges.

8. Conclusion and Discussion

This study provides an integrated examination of the relationships between lifestyle habits, mental health, and academic performance for undergraduate students at Middle East Technical University (METU). By combining different factors like sleep patterns, employment status, physical activity, and social media usage, the research offers a general overview of how daily behaviors affect the student experience in a demanding academic environment.

8.1 Summary of Key Findings

The most significant revelation of this research is the lack of a statistical association between external lifestyle constraints and academic performance. Surprisingly, there was no significant GPA difference by employment status ($p = 0.9206$), accommodation type ($p = 0.6422$), or physical activity ($p > 0.05$). Also, happiness and daily energy stayed very similar across student groups. For example, active and not active students did not differ in happiness ($p = 0.9099$). These results suggest METU students keep a consistent academic and mental baseline, even with their work or other responsibilities.

8.2 Interpretation and Theoretical Implications

No significant effect of employment or sleep duration on GPA suggests strong academic resilience among students. This can be explained by compensatory behavior. Students may protect their academics by using their time better and making the most of what they have. Happiness and energy scores were also similar. This suggests the tough academic culture may shape well-being more than personal lifestyle choices. The consistently low R^2 values in the regression models further confirm that academic success is affected by internal factors such as motivation and grit rather than external environmental conditions.

8.3 Limitations and Future Research

The study offers helpful insights, but it relies on one-time, self-reported measures. Using midpoints for GPA and sleep duration was needed for analysis, but it may miss individual differences. Future research could follow students over time to track how these relationships shift during the whole program. Additionally, using objective measures such as phone logs for screen time and university records for GPA could improve accuracy.

8.4 Final Remarks

Overall, this study shows the value of a holistic view of student success in higher education. These results imply students handle complex life demands while keeping their academic performance steady. For policymakers and university administrators, these results highlight the need to focus on psychological support and academic resources, since students already show a strong ability to handle the practical challenges of university life.

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10. APPENDIX

language_preference: The language preference of the student.

gender: The gender of the student.

birth_year: The birth year of the student.

department_name: The academic department where the student is enrolled.

gpa: The Grade Point Average (GPA) midpoint of the interval of the student.

accommodation_status: The accommodation type of the student

study_year: The current academic year of the student.

employment_status: Indicates whether the student is working while studying.

sleep_duration: The average daily sleep duration of the student.

bedtime: The typical time range when the student goes to sleep.

sleep_regularity_score: The self-reported regularity of the student's sleep cycle (Scale: 1-5).

screen_time_before_sleep: The duration of screen usage immediately before sleeping.

daily_stress_level: The self-perceived daily stress level of the student (Scale: 1-5).

exam_sleep_change: The change in sleep duration during exam periods.

daily_screen_time: The average daily screen time of the student excluding study/work activities.

most_used_platform: The social media platform most frequently used by the student.

social_media_purpose: The primary reason for the student's social media usage.

social_media_sleep_impact: The perceived level of impact social media has on the student's sleep (Scale: 1-5).

study_impact_score: The perceived level of reduction in studying due to social media usage (Scale: 1-5).

post_usage_stress: The perceived increase in stress levels after social media usage (Scale: 1-5).

content_motivation_score: The level of motivation the student derives from social media content (Scale: 1-5).

stress_usage_increase: The level of increase in social media usage when the student feels stressed (Scale: 1-5).

exam_stress_increase: The level of increase in stress during exam periods (Scale: 1-5). **sports_activity:** Indicates if the student engages in regular sports activities. **sports_frequency:** The average number of days the student exercises per week. **caffeine_intake:** The daily average caffeine consumption of the student. **smoking_habit:** The frequency of smoking habits of the student. **alcohol_habit:** The frequency of alcohol consumption of the student. **class_focus_score:** The self-assessment of the student's focus and participation in class (Scale: 1-5). **productivity_improvement:** The perceived improvement in productivity or life quality when reducing social media use (Scale: 1-5). **energy_level:** The self-rated daily energy level of the student (Scale: 1-5). **happiness_score:** The self-rated general happiness level of the student (Scale: 1-5)