**Report**

Student Lifestyle on the Basis of Their GPA

**Introduction**

The lifestyle of students has significant impact on their performances. Study hours, sleeping duration, social lives, extracurricular activity participation, and physical exercise exert strong influences on whether the students can manage to balance their time effectively and score balanced grades academically. The purpose of this research is to explore the relationships between the above factors with the students' Grade Point Average (GPA) using statistical tools like Jamovi and mini tab and finding techniques such as correlation analysis, Linear Regression and regression analysis. The research investigates concerns about how study time, sleep time, extracurricular activities, and socializing affect GPA. It also investigates compromises students make between their studies and daily activities, and explores time allocation patterns among these various aspects of lifestyle.

**Dataset Description**

The dataset used in this study has several lifestyle variables that impact academic performance. It shows the amount of time students spend studying, sleeping, on extracurricular activities, socializing, and exercising. It also records each student's GPA to measure their academic performance. The independent variables in this study is study hours, sleep hours, extracurricular activity hours, social hours, and exercise hours, while the dependent variable is the GPA.

**Analysis & Discussion**

Descriptive analysis shows that students study for a mean of 7.48 hours per day, with study time ranging from 5 to 10 hours. Students sleep for a mean of 7.5 hours per night, while their extracurricular activity participation is a mean of 1.99 hours per day. Socializing occupies a mean of 2.7 hours per day, with some students socializing a lot while others socialize very less. Exercise patterns are very different, with students averaging 4.33 hours of physical activity each day. The observed that the average GPA is 3.12, showing that most students have good grades.  
  
The histogram analysis shows the individual patterns of student activity. Study time is at 7 to 8 hours per day, but sleeping time is 5 to 10 hours. Social time is also mixed, with some students engaging in socialization too much while others socialize very low. Similarly, exercise and extracurricular time is highly varied among students. The GPA distribution is normal, and values are clustered around the mean GPA of 3.12.  
  
The correlation table reveals that the study hours bear a very high positive relationship with GPA as 0.734. But the study hours have a negative relationship with social hours as -0.138. The exercise time shows a negative relationship with the study time as -0.488, revealing that students with more exercise time have less study time. A negative correlation of -0.194 also exists between social time and sleep time, with physical activity having a moderate negative correlation with GPA at -0.341.  
  
Linear regression analysis shows that for each additional hour of studying, GPA increases by 0.154 Instead extracurricular hours have a very small negative effect on GPA (-0.0075), sleep hours show a very less negative effect (-0.0045), and social hours show a very small positive effect (0.0013). The regression model further suggests that 54.1% of the GPAs change is caused by these lifestyle factors, so other external influences also have their say in determining academic performance.  
  
The findings show that how study time is utilized has a significant effect on GPA improvement. Social life and extracurricular activities have a minor effect on GPAs, but thorough exercise participation leads to reduced available study time and thus lower GPAs. Proper time allocation by the students is encouraged in a attempt to optimize academic and well-being performance.

**Conclusion**

Overall, this study shows that hours of study are the key factors in determining GPA. Sleep, social life, and extracurricular activity have relatively less impact on the performance of the students. excessive time for exercise correlates with poor GPA outcomes, perhaps due to a reduction in the amount of time spent studying. In order to improve GPA, students need to give more value to routine studies while adjusting the other lifestyle factors appropriately.

**References**

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