



جامعة مصر للمعلوماتية
EGYPT UNIVERSITY
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Egypt University of Informatics
Computer and Information Systems
Data Analysis Course

Analysing the Impact of Sports on College GPA Among College Students

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Introduction

This report examines the impact of sports participation on college GPA. By analyzing collected data, we aim to uncover insights into how engaging in sports activities influences academic performance among college students. Join us as we explore the correlation between sports involvement and GPA, offering valuable perspectives on the intersection of athletics and academia.

Research Question

Hypothesis

Population of Interest:

College students

Sampling Method:

The survey was distributed to college students using Google Forms, providing broad access to the target population. While not fully randomized, this approach allowed for wide participation and diverse responses.

Bias Identification:

Efforts were made to reduce bias associated with self-selection by distributing the survey widely across college departments and organizations. Additionally, survey questions were neutral and unbiased to minimize the influence of respondents' opinions on sports participation.

Survey Questions:

Gender

Age

Major

Academic Year

Do you participate in any sports or physical activities regularly?

What is your current GPA?

On average, how many hours per week do you spend studying?

Do you believe sports participation positively impacts academic performance?

Online survey link: <https://forms.gle/fo7F6Ly6XpKSoqbq8>.

Number of samples collected: 30.

Analysis:

Mean GPA: 2.892333333333333

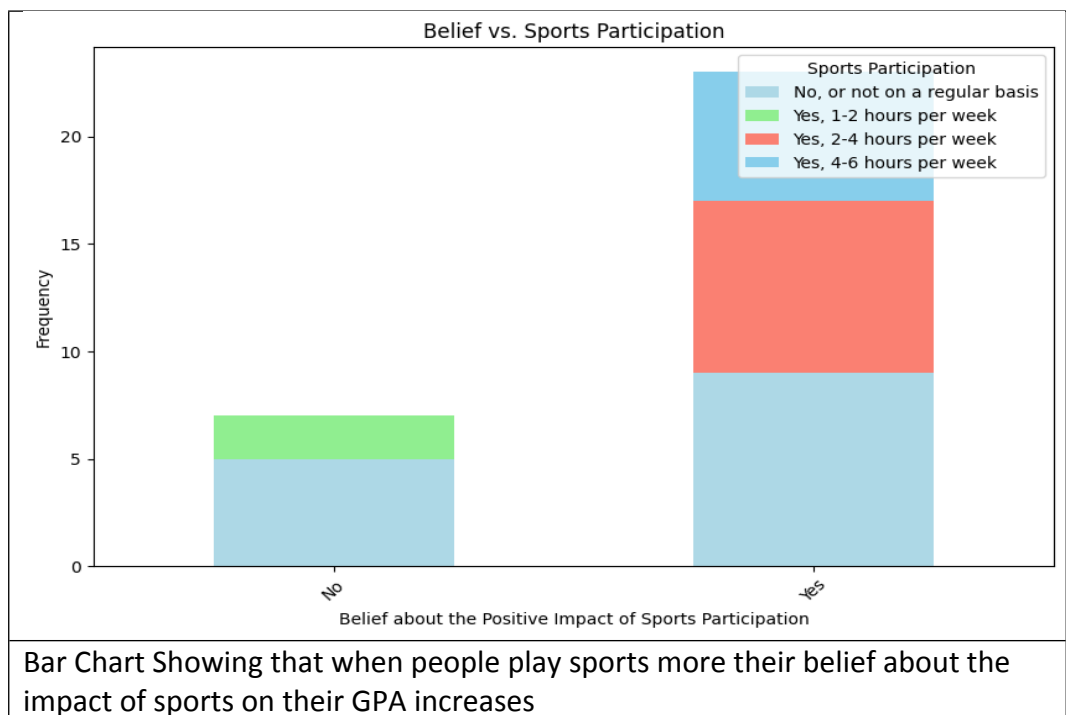
Median GPA: 3.0

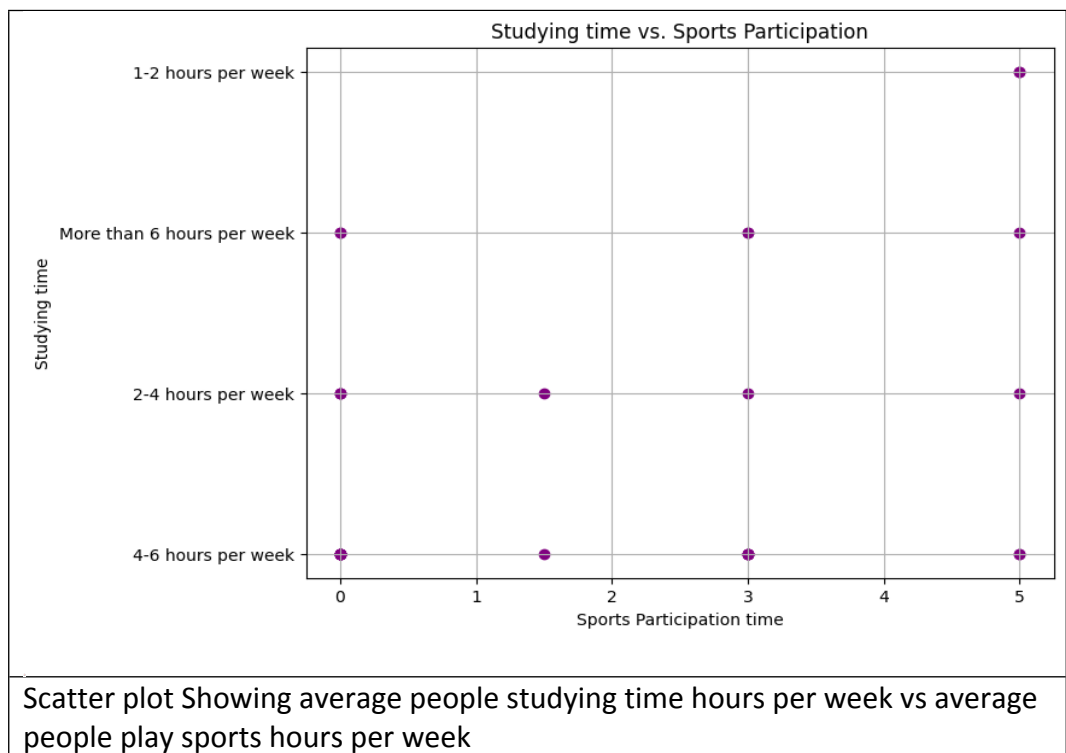
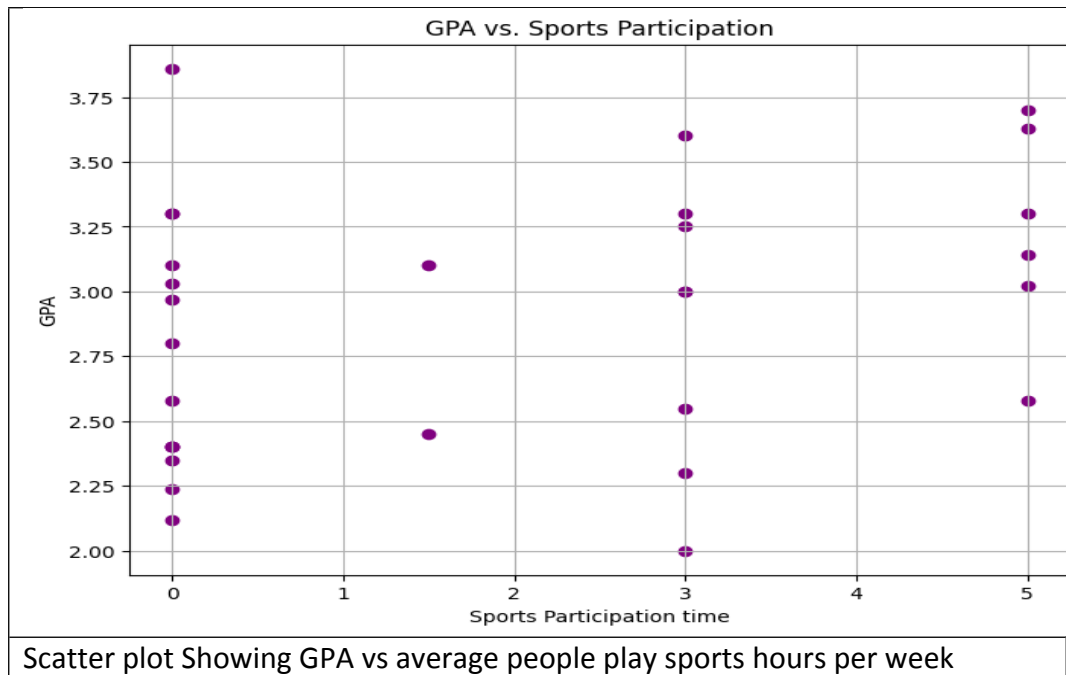
Mode GPA: 3.3

Mean Sports Participation: 1.9

Median Sports Participation: 1.5

Mode Sports Participation: 0.0





Conclusion

The scatter plot analysis revealed no clear linear trend between sports participation and GPA. While some cases hinted at a potential correlation, no consistent pattern emerged across the dataset. As such, the analysis did not provide sufficient evidence to confirm or refute the hypothesis regarding the impact of sports participation on college GPA. Further research with a broader and more diverse sample may be needed to explore this relationship in greater detail.

Any potential issues

1. Self-Selection Bias: The use of Google Forms for survey distribution may have resulted in self-selection bias, as individuals with stronger opinions or experiences may have been more inclined to respond, potentially skewing the results.
2. Limited Sample Diversity: The survey sample may lack diversity due to recruitment methods, potentially affecting the generalizability of the findings to the broader college student population.
3. Response Bias: Respondents may have provided biased or inaccurate information due to factors such as social desirability bias or recall bias, leading to potential inaccuracies in the data.