

Physical Activity and Mental Health During the COVID-19 Pandemic

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BACKGROUND

- Physical exercise (PE) is known to increase positive health outcomes with mental health (MH)¹
- COVID-19 Pandemic increased stress and anxiety
- Not a lot of research was done in college aged-students and their effects with pandemic

OBJECTIVE



To determine the relationship between increased physical activity and increased mental health in college students (18-25 years old) during the COVID-19 pandemic.

METHODS

- Anonymous cross-sectional survey created:
- PHQ-9 & DSM-5 for MH
- Created own questions for PE
- Participant eligibility
- Current college student
- 18-25 years old
- Recruited participants through social media advertising
- Used SPSS to analyze strength, direction and significant

- correlations
- Continuous variables
- Mental health
- Physical exercise

In the past two months, how often do you... *

	1=Never	2=Rarely	3=Occasionally	4=Frequently	5=Always
Exercise (within the past month)? Includes gym work, taking a walk (15+ mins), or exercising at home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Play sports?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participate in cardiovascular exercises like running, hiking, bicycling, swimming, etc.?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do mind-body exercises like Yoga and Pilates?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Each answer assigned a #: MH: 0-3 PE: 1-5

Purpose of this: Average surveyor's score to find correlation

Used SPSS to calculate analysis using Spearman Correlation

- From the last two months, how vigorous was your activity level? *
- I do not exercise, I live a very sedentary lifestyle
 - Light- household chores, 15-minute walks, >25 minute jogs
 - Moderate- 25+ minute jogs,
 - Intense- 50+ minute jogs, team sports, heavy lifting,

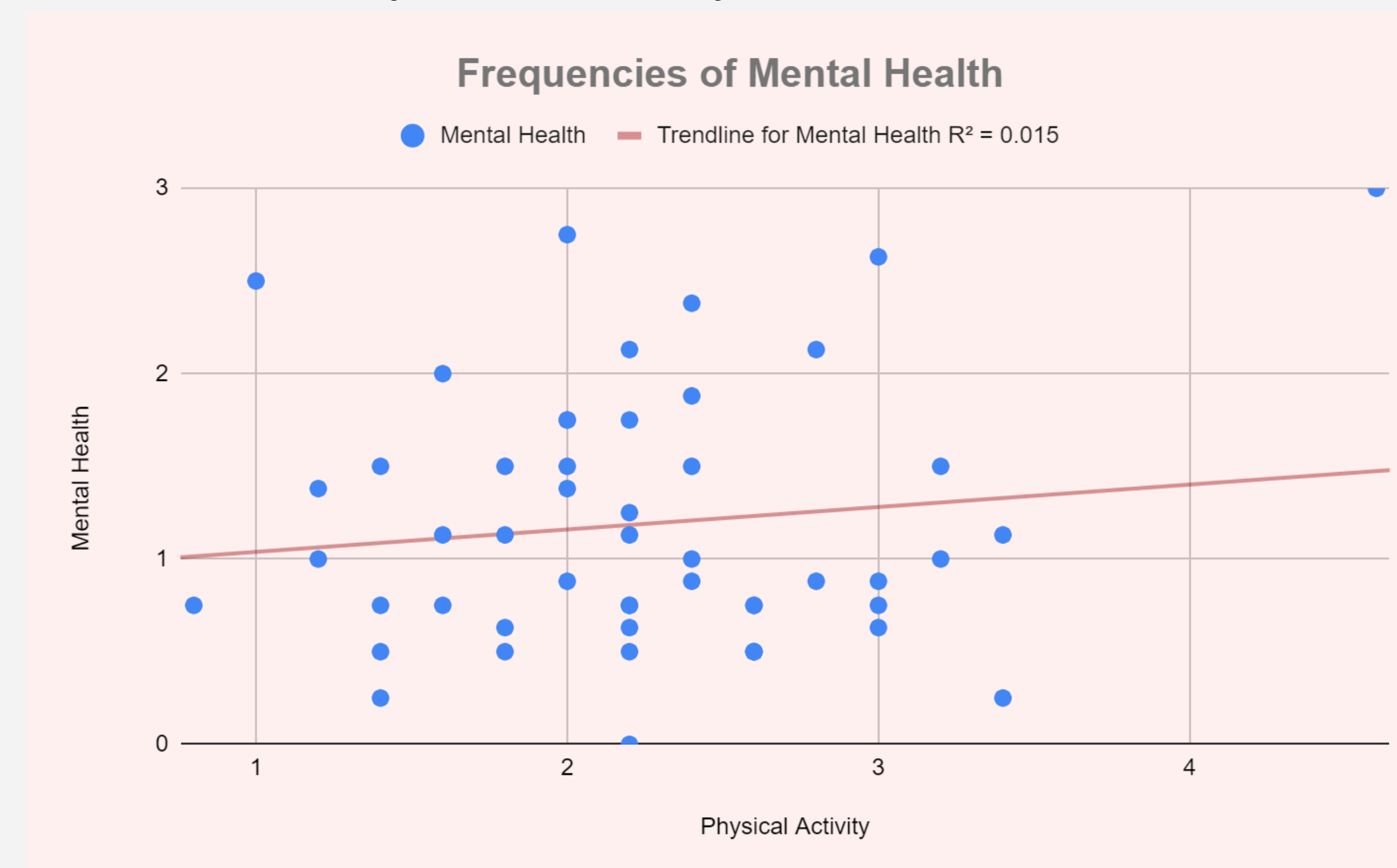
RESULTS

The Pearson Correlation (r^2) resulted as 0.122. The p-value = 0.395 where $p \leq 0.05$ is statistically significant. Therefore, the analysis was **not** statistically significant.

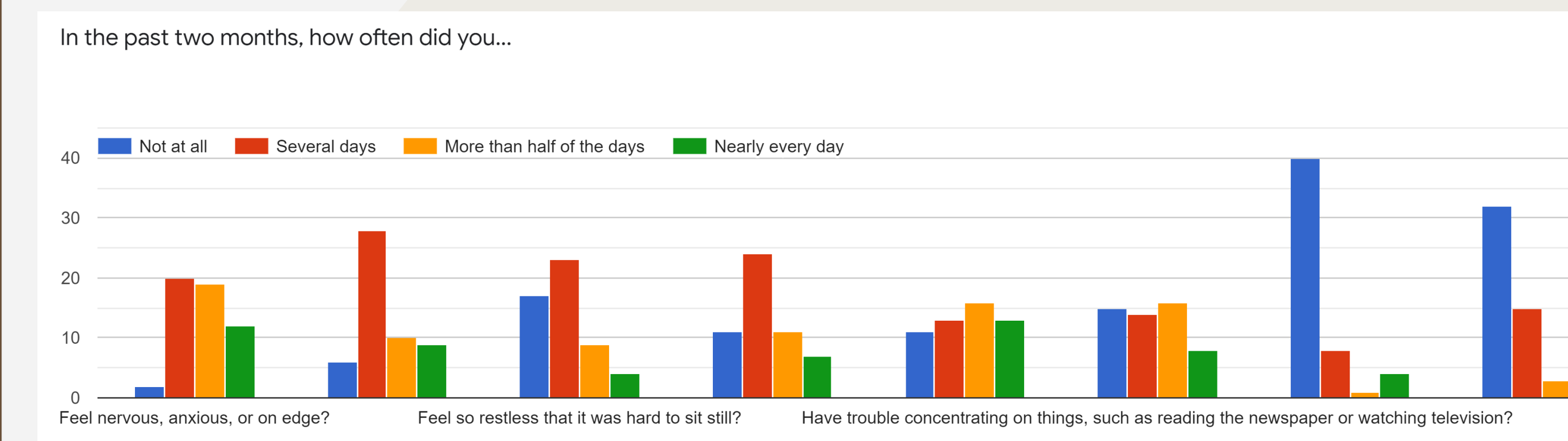
Figure 1: Correlation analysis between physical activity and mental health

		MEAN_PHYS	MEAN_MENT
MEAN_PHYS	Pearson Correlation	1	.122
	Sig. (2-tailed)		.395
	N	51	51
MEAN_MENT	Pearson Correlation	.122	1
	Sig. (2-tailed)	.395	
	N	51	51

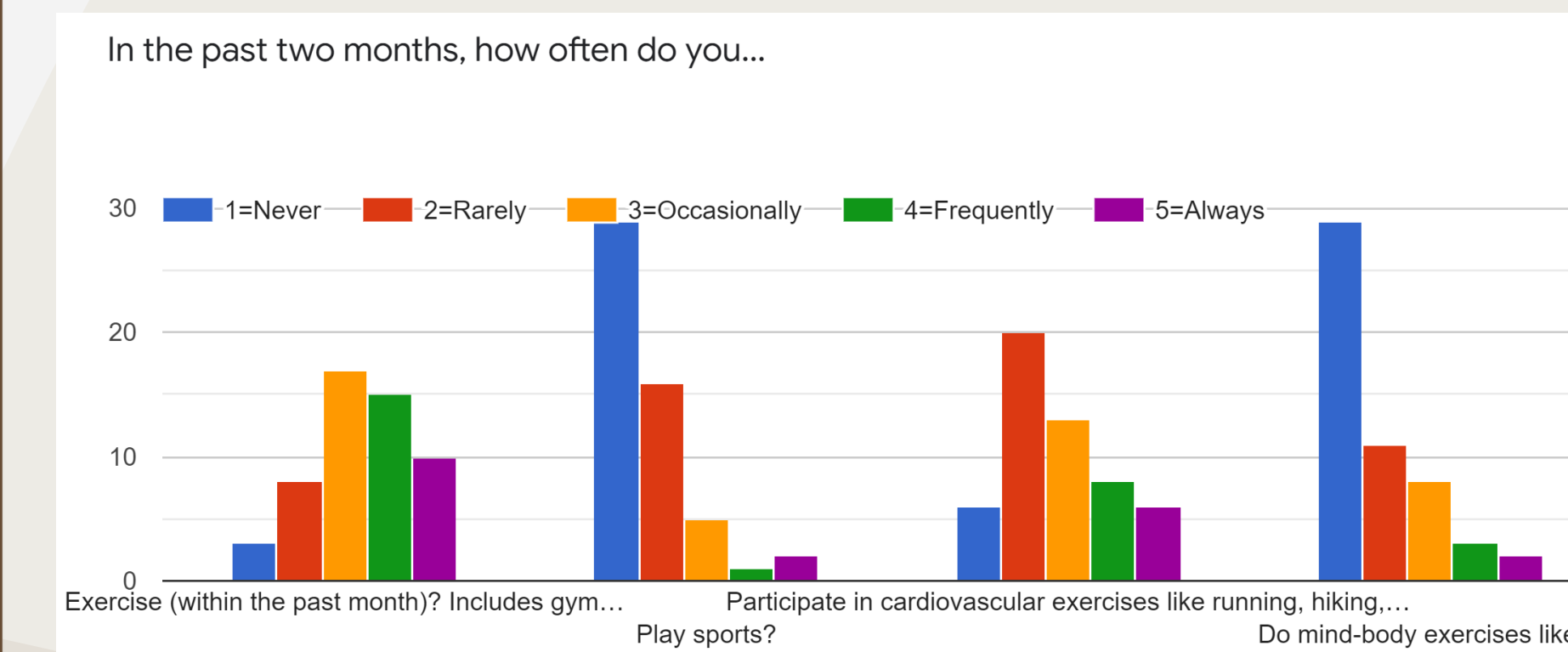
Figure 2: Frequencies of Mental Health in relation to Physical Activity



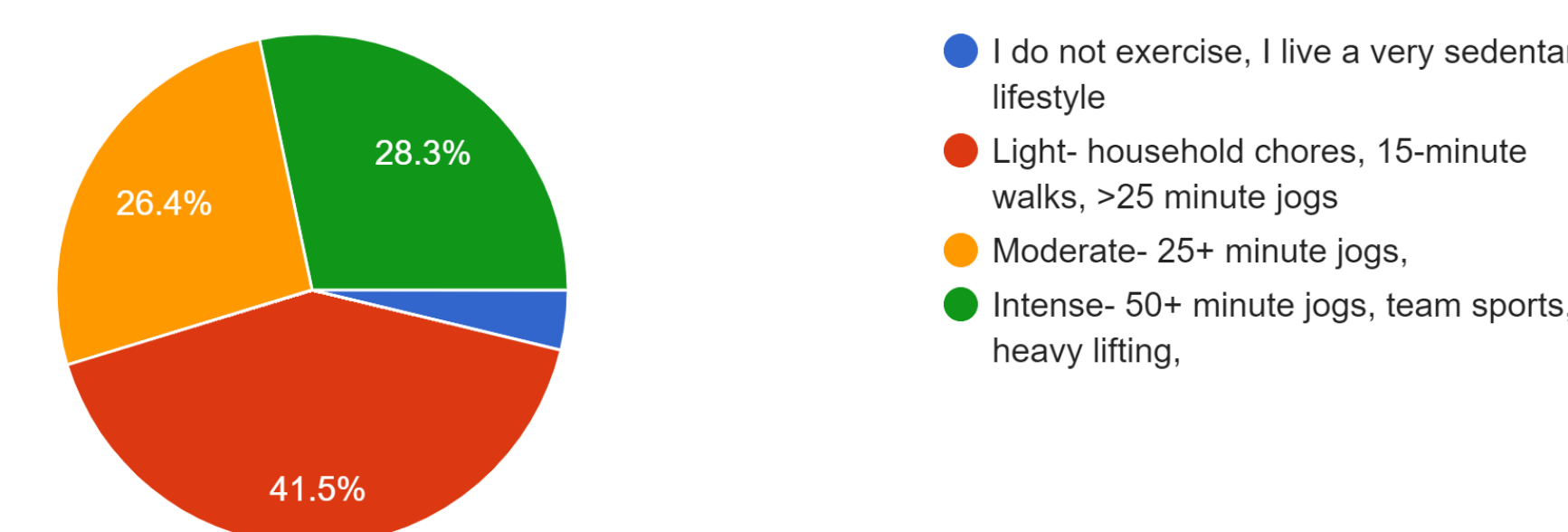
Results of Mental Health Section



Results of Exercise Section



From the last two months, how vigorous was your activity level? 53 responses



CONCLUSIONS

- There was no significant correlation between physical activity and mental health. Although the correlation analysis shows a **positive trend**, it is not statistically significant enough to prove that physical activity had a positive effect on mental health during the COVID-19 pandemic.
- Our findings tell us that even though people were actively engaging in physical activity, their mental health status was still poor. This could have been due to several reasons: feelings of isolation, hopelessness, anxiety and sadness that emerged from the pandemic could have contributed to our findings.
- Based on the 95% confidence interval, we can conclude that our **hypothesis is not supported by our findings**. Increased physical activity is not associated with increased levels of mental health during the COVID-19 pandemic.
- Therefore, we **reject** our hypothesis.

NEXT STEPS

- Suggestions for future directions include conducting a research study of the same modality but applied to both the 26-44 age group and the middle aged (ages 45-60) population for comparison.
- Universities could adopt more leniency with academic changes throughout the school system and implement programs to help increase mental health outcomes.

ACKNOWLEDGEMENTS

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REFERENCES

¹Mikkelsen, K., Stojanovska, L., Polenakovic, M., et. al., Exercise and mental health, Maturitas, pp. 48-56. doi.org/10.1016/j.maturitas.2017.09.003
²Curtain, M. (2020, August 10). *Exercise & Mental Health*. Allsports Physiotherapy & Sports Medicine. Retrieved May 26, 2022, from https://www.allsportsphysio.com.au/2020/05/exercise-mental-health/