

Testing the Association Between Hours Spent on Work During COVID-19 and Increased Mental Health Problems

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Introduction

- Work has been determined as a social determinant of health¹. However, hours worked as a social determinant of health is still unclear.
- Prior studies indicated that extended hours spent working before COVID-19 increased mental health problems in those who worked in a job in the United States.
- There are limited studies that test the association between hours worked after COVID-19 and mental health problems in Richmond, VA.

Study Aim

- To explore whether there is an association between the number of hours spent working and increased mental health problems.
- We hypothesize that a decrease in hours spent working since the COVID-19 pandemic is associated with increased mental health problems.

Methods

Study Sample

- Richmond-area adults 18 and older participating in the RVA COVID Needs Assessment Survey²
- Collected in May to October 2021 (N=234)

Measures

- “Increase in mental health problems or symptoms” Treated as a binary variable, coded as no (0) or yes (1)
- “RIGHT NOW, how many hours per week do you work?” Treated as a continuous variable

Statistical Analyses

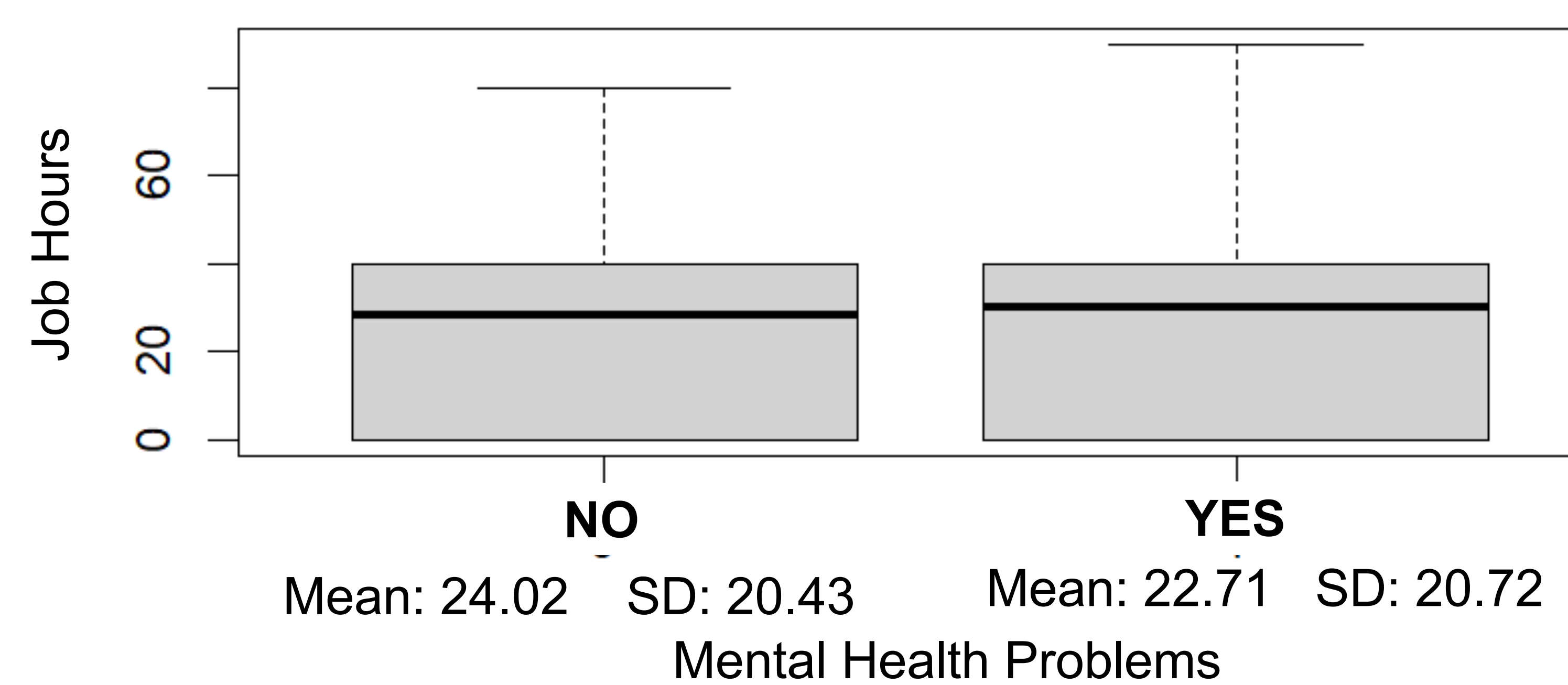
- A t-test was conducted to test the association between variables
- All data cleaning and data analysis was conducted in R version 4.0.3.

Results

Table 1. Summary Statistics

	N	%
Gender		
Female	149	69.8
Male	68	30.2
Race		
White	38	16.9
Black/Other	187	83.1
Education		
None	4	1.71
Less than High School	38	16.2
High School Graduate or GED	56	23.9
Some College (no degree)	52	22.2
Vocational Training	12	5.13
College Graduate	72	30.8
Increased Mental Health Problems Since COVID-19		
Yes	124	52.8
No	111	47.2
	Mean	SD
Job Hours Worked After COVID-19	22.9	20.5

Figure 1. Association Between Job Hours and Increased Mental Health Problems



T-test results:

$$t = -0.41285, df = 163.09, p\text{-value} = 0.6803$$

Discussion

- Our hypothesis was rejected as the evidence from our results do not support the association between both variables.
- A nonsignificant association between job hours after COVID-19 and increased mental health problems was detected
- The absence of an association was inconsistent with prior studies conducted before COVID-19
- A limitation of this analysis was all aspects of employment weren't considered.
- Future studies should consider alternative job measures such as job status

Conclusion

- There was a nonsignificant association between job hours after COVID-19 and increased mental health problems.
- The inconsistency in results may be due to study design. Prior studies only included participants with jobs while our dataset also included people without jobs

References

¹“Work as a Key Social Determinant of Health: The Case for Including Work in All Health Data Collections.” *Centers for Disease Control and Prevention*, blogs.cdc.gov/niosh-science-blog/2023/02/16/sdoh/. Accessed 24 July 2023.

²Liu, Angela C, et al. “The Association between Loneliness with Increased Mental Health Problems and Substance Use during the COVID-19 Pandemic in Richmond, Virginia.” *JMU Scholarly Commons*, commons.lib.jmu.edu/vjph/vol6/iss1/8/. Accessed 21 July 2023.

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