

## Introduction:

- Physical activity and healthy eating are important health behaviors however, maintaining these behaviors is challenging in the context of depressive symptoms.
- Although antidepressants help reduce depressive symptoms, it is unclear how antidepressants interact with depressive symptoms to impact health behaviors, especially among emerging adult college students.

## Method:

- Across two academic years, a comprehensive survey of college student health was administered anonymously online to 4286 students in exchange for extra credit in a course.
- Separate items examined how many hours of moderate and strenuous activity (operationally defined for the participant) a participant had over the past 7 days.
- History of strenuous activity while in high school, and since starting college were quantified as number of days in a week of at least 20 minutes of activity.
- Two by two factorial ANOVAs with self-reported antidepressant status (Yes v. No) and presence of clinically significant depressive symptoms ( $> 9$  on PHQ9) were used to determine if the interaction between these two factors influenced selected health behaviors.

## Results:

- Valid responses based on embedded validity checks resulted in an analytic sample of 3547.
- Significant interactions between depressive symptoms and antidepressant status were not found for moderate activity ( $p = 0.145$ ) but were found for strenuous activity  $F(1, 3432) = 6.643$ ,  $p = 0.01$ .
- Among individuals not taking antidepressants, the presence of clinically significant depressive symptoms was associated with lower physical activity. However, this difference was not observed among individuals that were taking antidepressants.
- Similar results were observed for history of activity examined through two items, one examining strenuous activity since starting college  $F(1, 3438) = 8.107$ ,  $p = 0.004$  and another during high school  $F(1, 3440) = 6.585$ ,  $p = 0.01$ .

# Exploring an Interaction of Antidepressants and Depressive Symptoms on Health Behaviors in College Students

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- These results suggest that antidepressants may also provide a “protective effect” for maintaining healthy exercise habits in young adults who are still experiencing depressive symptoms.
- Further research is necessary to determine if this is a consistently observable effect, and to understand mechanisms by which antidepressants enable individuals experiencing depressive symptoms to maintain physical activity.