



# Effectiveness of an Interactive Approach to Improving Mental Health Literacy in Young Adults

Matthew Hansen BS, Arqam Husain BS, Jordan Molina BA MS, Alex Ramirez BS, Jessica Tan BS, Julia Yee BA, Jennifer Mendez PhD

Wayne State University School of Medicine

WAYNE STATE UNIVERSITY

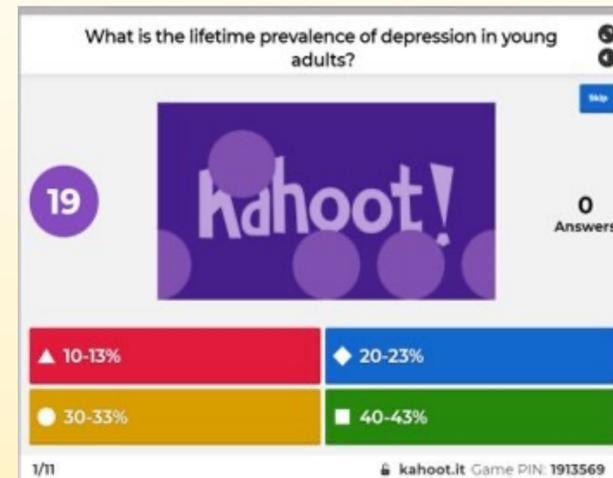
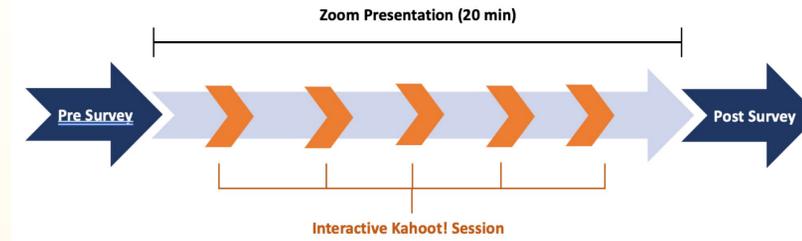
## Introduction

The prevalence of anxiety and depression (AD) among young adults in the United States has been steadily growing, with notable increases since the start of the COVID-19 pandemic<sup>1,2</sup>. AD disorders are some of the most common mental disorders in the US<sup>1</sup>. However, a large portion of the population with symptoms diagnosable for AD do not reach out for help, often from a lack of information regarding symptoms and/or appropriate resources for treatment<sup>3,4,5</sup>. Studies show that successful efforts to fill such knowledge gaps among patient populations via didactic or passive-outreach can be significantly improved upon with the usage of interactive modalities<sup>6</sup>. Therefore, we aim to evaluate the efficacy of a virtual, interactive educational presentation on AD to a target population of young adults (ages 19-35), compared with a traditional, didactic presentation.

## Methods

- Participants attended a virtual presentation on the features of Anxiety and Depression (definitions, risk factors, resources, etc.).
- Participants are divided into two groups: one with only the presentation and one with an interactive component.
  - Interactive Component: Evenly spaced throughout the presentation, students participated in a brief interactive trivia game (Kahoot!) to increase engagement and to reinforce the topics presented.
- Kahoot! is an online platform oriented around multiple choice and true/false questions in a competitive game-show style.
- A bivariate analysis with a paired t-test compared pre- and post-lesson participant confidence ratings on the subject.
- A P value < 0.05 indicated significance.
- Survey was conducted via online Qualtrics and consisted of 4 statements graded on a 5-point Likert scale.

Study protocol was approved by WSU IRB Committee Protocol #IRB-21-08-3906



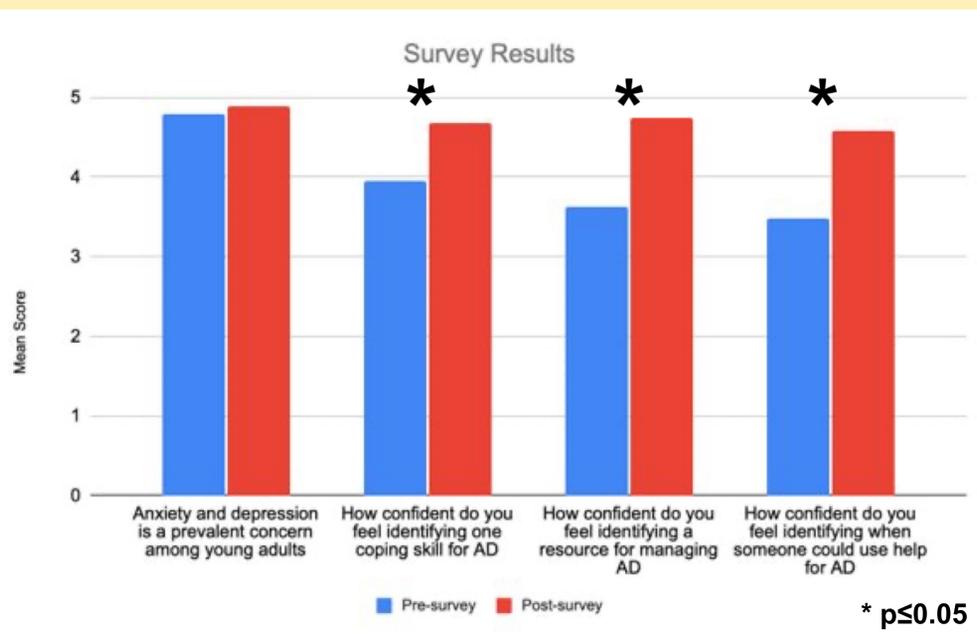
## Conclusion

- Interactive Kahoot! learning style creates a low-stakes competitive environment that improves student-engagement and attention to the content presented.
- The data presented compares only changes in outcome measures before and after the interactive presentation. Longitudinal analysis will be conducted within a year.
- Future plans are to conduct a virtual presentation without the interspersed trivia game as a control to compare the efficacy of an interactive approach with a non-interactive approach on learning outcomes.
- Future research should aim to understand the effectiveness of interactive modalities on other educational topics and its possible impact on course performance.

## Purpose

- We aim to increase the public health literacy<sup>7</sup> of AD through direct educational engagement designed to teach participants how to:
  - Distinguish normal levels of AD from clinical symptoms
  - Identify atypical symptoms of AD
  - Practice effective coping methods.
  - Investigate the impact of an interactive teaching-style over a passive teaching-style in a young adult population when covering the topic of mental health

## Outcomes



## Results

- No significance was found for the pre- and post-survey questions for question (1) (0.11, p=0.16).
- The differences in pre- and post-survey confidence ratings were significant for questions 2-4.
  - 2) 0.74, p=0.0009
  - 3) 1.11, p=0.0004
  - 4) 1.11, p=0.00007

"My competitive side is making me stay super focused LOL."  
-Study Participant

## References

1. Twenge, J. M., & Joiner, T. E. (2020). U.S. Census Bureau-assessed prevalence of anxiety and depressive symptoms in 2019 and during the 2020 COVID-19 pandemic. *Depression and anxiety*, 37(10), 954–956. <https://doi.org/10.1002/da.23077>
2. Czeisler ME, Lane RI, Petrosky E, et al. Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic — United States, June 24–30, 2020. *MMWR Morb Mortal Wkly Rep* 2020;69:1049–1057. DOI: <http://dx.doi.org/10.15585/mmwr.mm6932a1external.icon>.
3. Roness, A. (01/2005). "Help-seeking behaviour in patients with anxiety disorder and depression". *Actapsychiatrica Scandinavica* (0001-690X), 111 (1), p. 51. <https://doi.org/10.1111/j.1600-0447.2004.00433>
4. Zvolensky, M. J., Garey, L., & Bakhshae, J. (2017). Disparities in Anxiety and its Disorders. *Journal of anxiety disorders*, 48, 1–5. <https://doi.org/proxy.lib.wayne.edu/10.1016/j.janxdis.2017.05.004>
5. Kim M. (2014). Racial/Ethnic disparities in depression and its theoretical perspectives. *The Psychiatric quarterly*, 85(1), 1–8. <https://doi.org/proxy.lib.wayne.edu/10.1007/s1126-013-9265-3>
6. Kumar, N., Bostow, D., Schapira, D., et al. (2009). Efficacy of interactive, automated program instruction in nutrition education for cancer prevention. *Journal of Cancer Education*, 8(3), 203–211. <https://www.tandfonline.com/doi/abs/10.1080/08858199309528230>
7. "What Is Health Literacy?" *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 19 May 2021. [www.cdc.gov/healthliteracy/learn/index.html](http://www.cdc.gov/healthliteracy/learn/index.html).