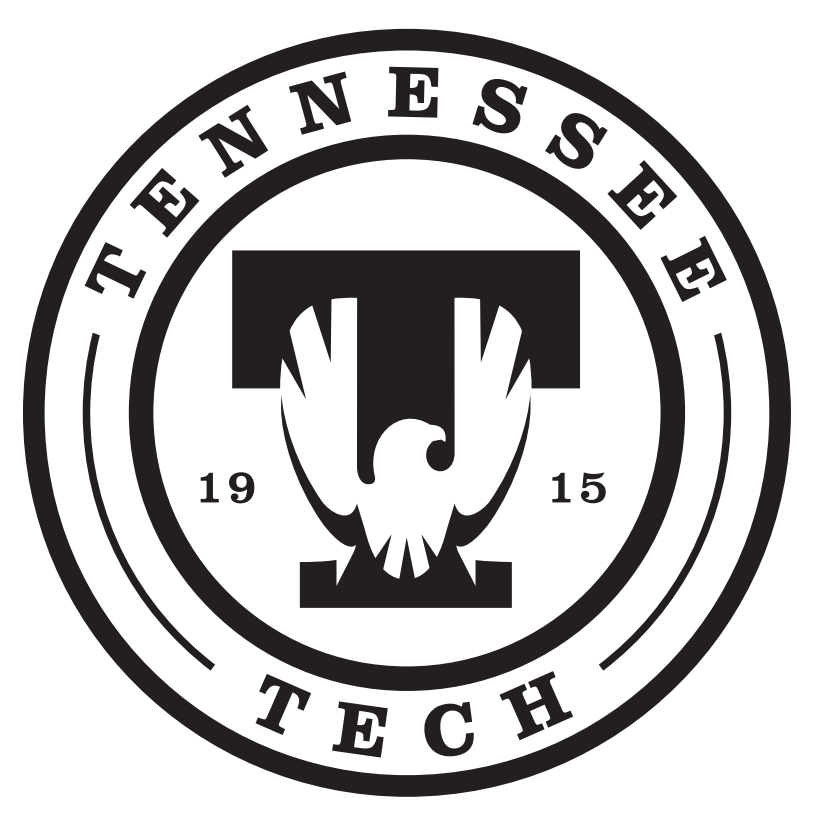


# Mindfulness Meditation and Gender Effects on Anxiety and Self-Efficacy

Bhoomi Patel & Matthew Zagumny, Tennessee Technological University



## INTRODUCTION

College counselors' top three concerns are anxiety, depression, and stress among student clients. [13]

Life satisfaction, self-esteem, optimism, self-efficacy, and psychological distress were the most important contributors to stress among students. [19]

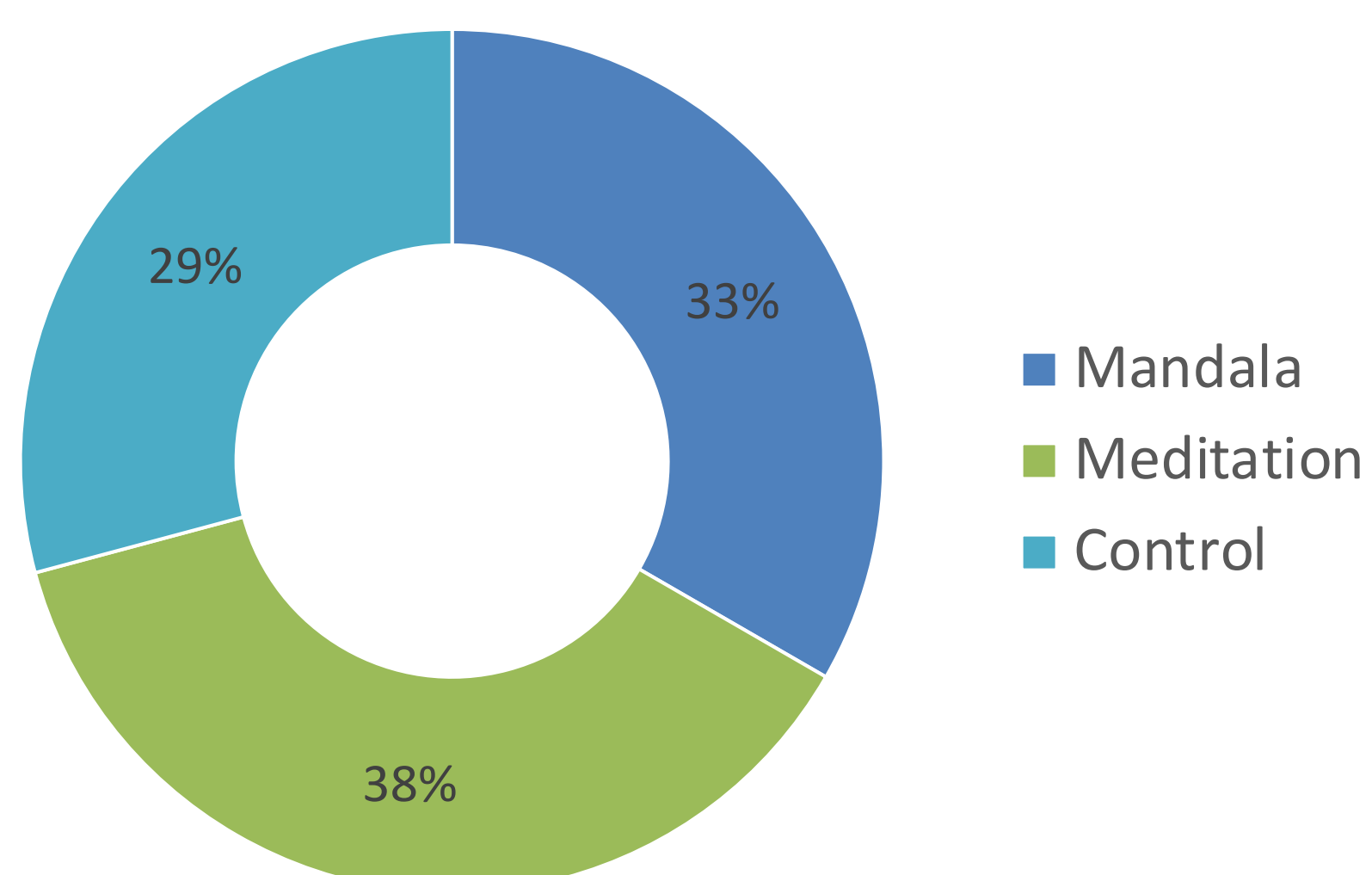
The general relationship of mindfulness activities and mental health has been well established. [7, 8, 20, 23]

**Mindfulness** is awareness that arises through paying attention, on purpose, in the present moment, non-judgmentally. [24]

Current study examined if participating in a coloring activity increases academic self-efficacy, and decreases academic stress and anxiety more than the mindful-based breathing exercise among undergraduates.

## METHOD

Percentage of Participants



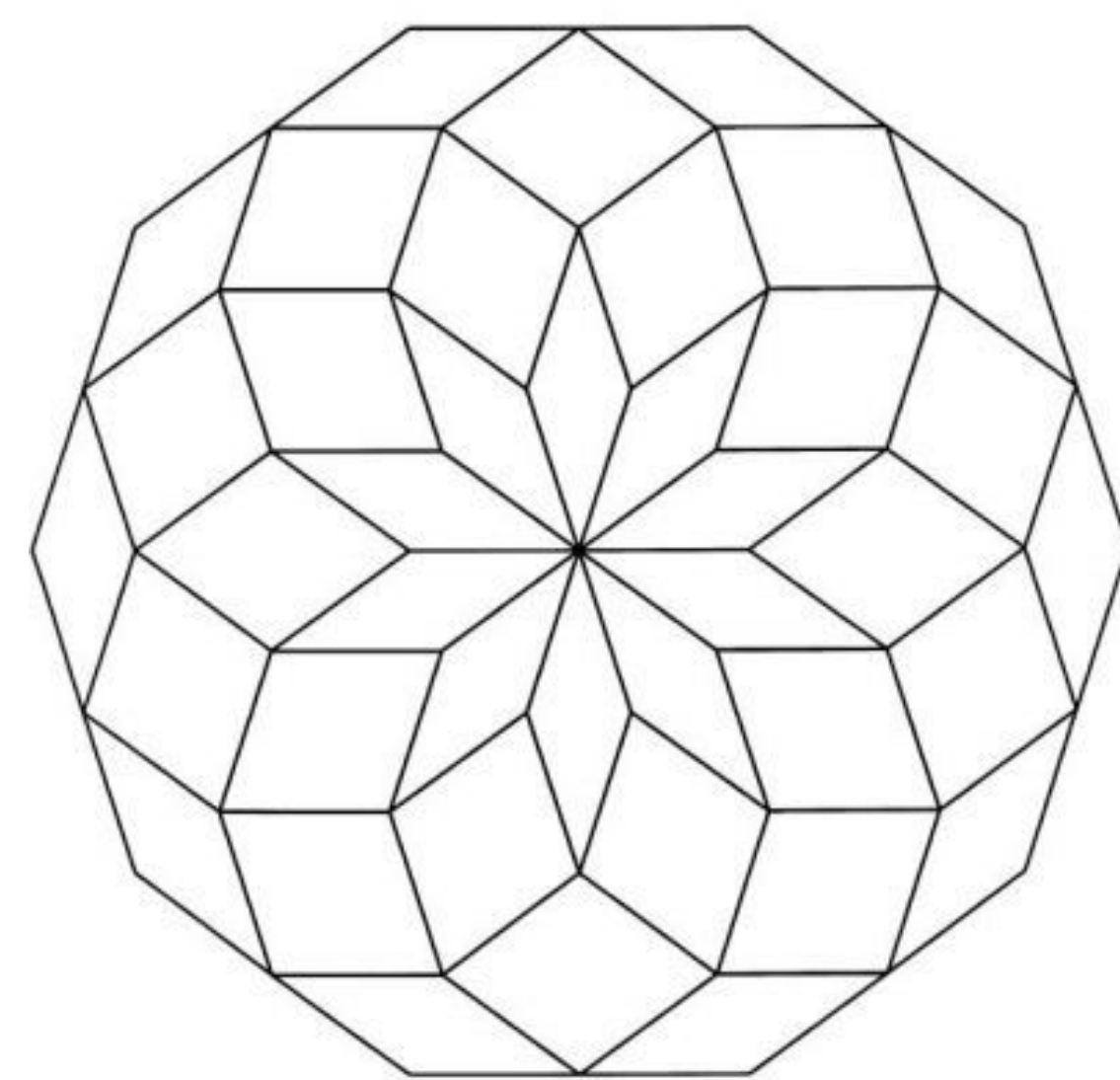
### Participants:

- Tennessee Tech University undergraduates
- 18 or older
- Free from auditory or visual impairments
- Recruited through emails
- N = 23 (8 males & 15 females)

## METHOD CONTINUED

### Materials:

- Art Condition
  - Pre-designed mandala
  - Color pencils
- Meditation Condition
  - Audio-guided mindful activity
- Stopwatch
- Scales & Forms
  - Informed consent
  - State Anxiety Inventory (STAI)<sub>[15]</sub>
  - Academic stress (AS) & self-efficacy (ASE)<sub>[25]</sub>
  - General Self-Efficacy (GSE)<sub>[22]</sub>
  - Demographics
  - Debrief



### Procedure:

1. Informed Consent
2. Pre-test measures (GSE, STAI, AS, & ASE)
3. Activity (10 min)
4. Post test measures (STAI, AS, & ASE) and demographics
5. Debrief

## RESULTS

### Significant:

- Interaction between gender and state anxiety pre-post test [ $F(1, 16) = 4.52, MS_E = .05, p = .049$ ].
- Interaction between state anxiety and general self-efficacy [ $F(1, 19) = 5.84, MS_E = 1.18, p = .026$ ].

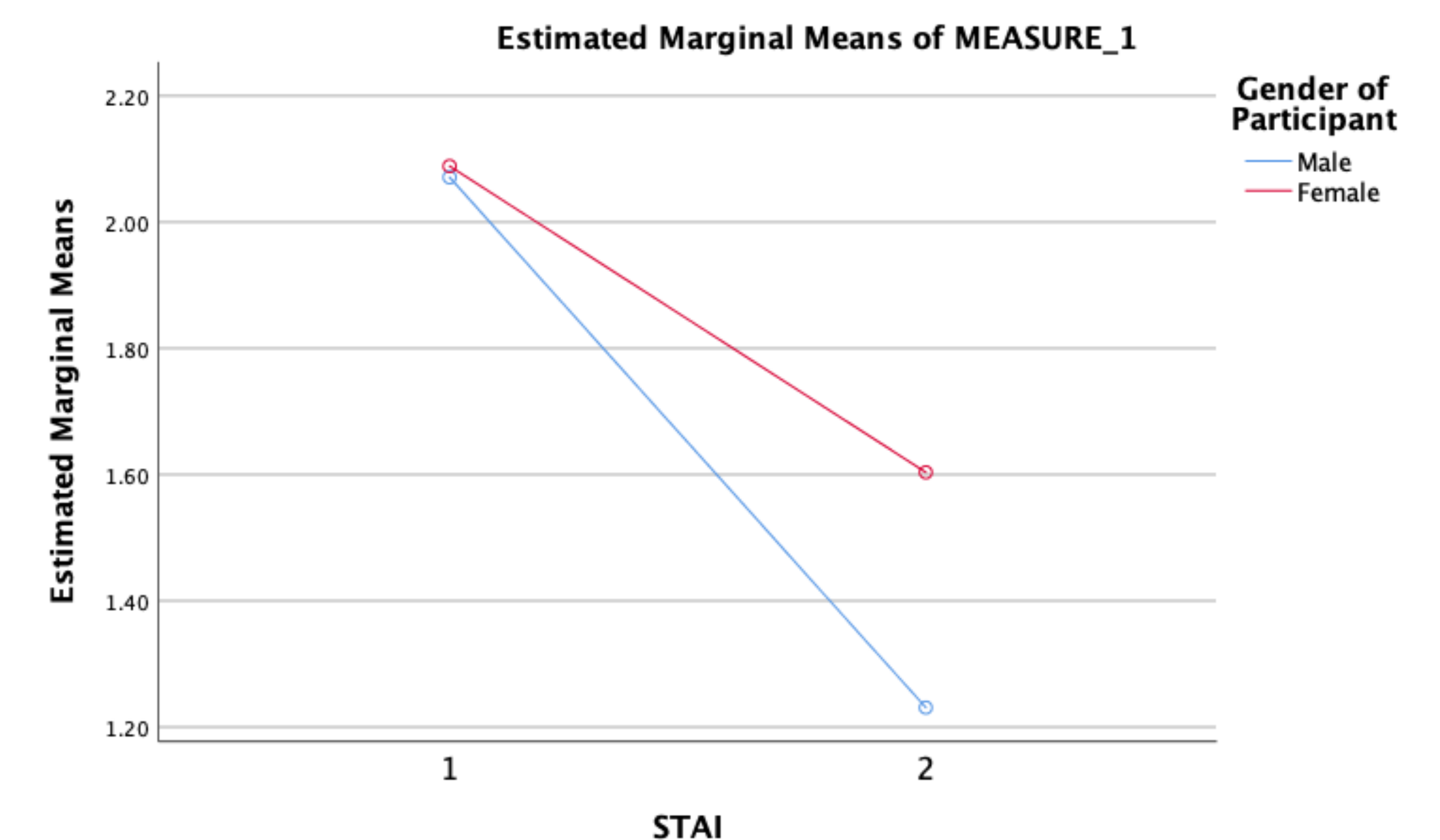
### Not Significant:

- State anxiety and the mindfulness treatment condition [ $F(2, 19) = .06, MS_E = 1.18, p = .95$ ]
- Academic stress and mindfulness activities [ $F(2, 19) = .18, MS_E = 7.13, p = .84$ ]
- Academic self-efficacy and mindfulness conditions [ $F(2, 19) = .41, MS_E = 5.78, p = .67$ ]

## DISCUSSION

The preliminary results indicate that the mindfulness activities had **similar effects** on state anxiety, academic stress, and academic self-efficacy.

State anxiety was reduced in males more than in females for both coloring and breathing exercise.



Covariates appearing in the model are evaluated at the following values: Age of Participant = 20.75, General Self-Efficacy average for participant = 3.1950

Future research: larger sample size, longer duration of mindfulness activities, samples from different universities

## REFERENCES

1. Ahmed Z. & Julius S. (2015). Academic performance, resilience, depression, anxiety and stress among women college students. *Indian Journal of Positive Psychology*, 6, 4, 367-370.
2. Bhujade, V. (2017). Depression, anxiety and academic stress among college students: A brief review. *Indian Journal of Health and Wellbeing*, 8, 7, 748-751.
3. Brown, Warren K., Ryan, Richard M., Davidoff, John F. (2003). The Benefits of Being Present: Mindfulness and Its Role in Psychological Well-Being. *Journal of Personality and Social Psychology*, 84, 4, 822-848.
4. Carsley D, Heath N. L., & Fajnerova S. (2015). Effectiveness of a classroom mindfulness coloring activity for test anxiety in children. *Journal of Applied School Psychology*, 31, 3, 239-255. doi: 10.1080/15377903.2015.1056925.
5. Carsley D & Heath N. L. (2018). Effectiveness of mindfulness-based colouring for test anxiety in adolescents. *School Psychology International*, 39, 3, 251-272. doi: 10.1177/014304318773523.
6. Greater Good Science Center (2020). Mindfulness Defined. Retrieved from <https://greatergood.berkeley.edu/topic/mindfulness/definition>
7. Hacking, S., Secker, J., Spandler, H., Kent, L., Shenton, J. (2018). Evaluating the impact of participatory art projects for people with mental health needs. *Health & Social Care in the Community*, 26, 6, 638-648. doi: 10.1111/hsc.12654-2524.2008.00789.x.
8. Irwin, P., Vidourek, King, Keith, & Nabors. (2014). A Retrospective study of the effects of art-making on the well-being and levels of stress of pediatric patients suffering from chronic disease. *ProQuest Dissertations and Theses*.
9. Jones-Berry S. (2017). Student drop-out rates put profession at further risk. *Nursing standard [Royal College of Nursing [Great Britain]]*: 1987, 32, 2, 12. doi: 10.7748/ns.32.2.12.s13.
10. Kabat-Zinn, J. (2016). *YouTube*. Retrieved from <https://www.youtube.com/watch?v=SkAMaC2XUUI>
11. Kaimal, G., & Ray, K. (2017). Free art-making in an art therapy open studio: Changes in affect and self-efficacy. *Arts & Health*, 9, 2, 154-166.
12. Kennedy B. & Resnick P. (2015). Mindfulness and physical activity. *American Journal of Lifestyle Medicine*, 9, 3, 221-223. doi: 10.1177/1559827614564546.
13. LeViness P., Bershad C., Gorman K., Braun L., & Murray T. (2018). Association for University and College Counseling Center Directors Annual Survey - Public Version 2018. *Association for University and College Counseling Center Directors*. Retrieved from <https://www.aucccd.org/assets/documents/Survey2018%20AUCCCD%20Survey-Public-June%202012-FINAL.pdf>
14. Lexico Dictionaries. (2019). Definition of Art. *Oxford*. Retrieved from <https://www.lexico.com/en/definition/art>
15. Marteau, Theresa M., & Bekker, M. (1992). The development of a six-item short-form of the state scale of the Spielberger State-Trait Anxiety Inventory (STAI). *British Journal of Psychology*, 83, 301-306.
16. Nanda, U., Eisen, S., Zadeh, R. S., & Owen, D. (2010). Effect on visual art on patient anxiety and agitation in a mental health facility and implications for the business case. *Psychiatric and Mental Health Nursing*, 26, 5, 386-393.
17. Pinterest. (n.d.). Retrieved from <https://www.pinterest.com/pin/460282024388097929/?nc=1>
18. Ratanasiripong P., Suerdik K., Prince J., & Hayashino D. (2012). Biofeedback and counseling for stress and anxiety among college students. *Journal of College Student Development*, 53, 5, 742-749. doi: 10.1353/csd.2012.0070.
19. Saleh D., Camart N., & Romo L. (2017). Predictors of stress in college students (report). *Frontiers in Psychology*, 8, doi: 10.3389/fpsyg.2017.00109.
20. Sandmirre, D.A., Gorham, S.R., Rankin N.E., & Grimm, D.R. (2012). The influence of art making on anxiety: A pilot study. *Art Therapy*, 29, 2, 68-73. doi:10.1080/07421656.2012.683748.
21. Sandmirre, D. A., Rankin, N. E., Gorham, S. R., Eggleston, D. T., French, C.A., Lodge, E.E., Grimm, D.R. (2016). Psychological and autonomic effects of art making in college-aged students. *Anxiety, Stress, & Coping*, 29, 5, 1-25. doi: 10.1080/10615806.2015.1076798.
22. Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy Scale. *Measures in health psychology: A user's portfolio*. Causal and control beliefs, 35-37. Windsor, UK: NFER-NELSON.
23. Schwindl, J., McCay E., Beanlands H., Martin L., Martin J., & Binder M. (2017). Mindfulness practice as a teaching-learning strategy in higher education: A qualitative exploratory pilot study. *Nurse Education Today*, 50, 52-56.
24. Willkens B, Perrotta G, Cras P, & Cools N. (2018). Into the moment: Does mindfulness affect biological pathways in multiple sclerosis? (report) (brief article). *Frontiers in Behavioral Neuroscience*, 12, doi: 10.3389/fnbeh.2018.00103.
25. Zagumny, M.J., McPeak, K., and Burton, L. (2014). Academic self-efficacy, academic stress, and cultural values in an international learning community. Presentation at the 122nd Annual Convention of the American Psychological Association, Washington, DC, August 7-10, 2014.
26. Zajacova, A., Lynch S. M., & Espenshade, T. J. (2005). Self-efficacy, stress, and academic success in college. *Research in Higher Education*, 46(6), 677-706. doi: 10.1007/s11162-004-4139-z.

### Acknowledgments:

The Counseling Center, Josh Edmonds, Andrew Smith