

---

Thinking Matters Symposium

2020 Thinking Matters Symposium

---

May 8th, 12:00 AM

## How Stress Affects College Students And How Yoga May Help

Madeline Waugh

*University of Southern Maine, madeline.waugh@maine.edu*

Danielle Miville

*University of Southern Maine*

Follow this and additional works at: <https://digitalcommons.usm.maine.edu/thinking-matters-symposium>

---

Waugh, Madeline and Miville, Danielle, "How Stress Affects College Students And How Yoga May Help" (2020). *Thinking Matters Symposium*. 46.

<https://digitalcommons.usm.maine.edu/thinking-matters-symposium/2020/poster-sessions/46>

This Poster Session is brought to you for free and open access by the Student Scholarship at USM Digital Commons. It has been accepted for inclusion in Thinking Matters Symposium by an authorized administrator of USM Digital Commons. For more information, please contact [jessica.c.hovey@maine.edu](mailto:jessica.c.hovey@maine.edu).

# How Stress Affects College Students – And How Yoga May Help

Madeline Waugh & Danielle Miville, University of Southern Maine; Caroline Shanti, PhD, LCSW, University of Southern Maine

## Abstract

College students often endure high levels of stress while completing their coursework. This can negatively impact their mental and physical health, resulting in problems including high blood pressure, heart disease, anxiety, and depression. Most public universities offer inadequate, inaccessible services to support the needs of their students due to factors including a lack of funding, low space, and staffing issues. Yoga is a practice that involves linking the breath to movement, and previous studies suggest that it can be instrumental in managing stress. This mixed-methods study sought to understand yoga's impact on stress management. Participants were college students (N=8) ages 18-40 years who were recruited using purposive, convenience sampling and enrolled in a bachelor's-level yoga class at the University of Southern Maine during the time of this study. Subjects completed two online questionnaires—a pre-test (N=8) and post-test (N=2)—that consisted of scale and short-answer questions. Data was analyzed using SPSS and thematic analysis. Three major themes were drawn from the data, including how students define stress management, types of stress-management activities, and the benefits of a regular yoga practice. Due to limitations including small sample size, attrition, and poor generalizability, no statistically significant conclusions were drawn. Further research is required to determine the effectiveness of yoga at managing stress. Implications of this pilot study include yoga as a low-cost, alternative method of stress prevention and management for universities to consider implementing on campus.

## Background

One of the most universal experiences for college students is that of stress. Stress, in the right amount, exists to keep people safe (Dana, 2017). However, experiencing chronic stress puts individuals at risk for developing severe physical and mental health problems like heart disease, high blood pressure, a weakened immune system, and anxiety and depression (Varibeygi, Panahi, Sahraei, Johnston & Sahebkar, 2017; Call, Miron, & Orcutt, 2014). Anxiety in particular has become a prominent issue for thousands of college students in the United States. Balon et al. (2015) found that an average of one in six college students is being treated for an anxiety disorder, and research conducted on nearly 500 university students revealed that 86% had high levels of anxiety and nearly 73% reported overall psychological distress (Saleh, Camart, & Romo, 2017).

Unfortunately, most universities do not provide adequate mental health services to address this (Balon, Beresin, Coverdale, Louie, & Roberts, 2015). While colleges have gained some awareness on the increasing frequency and severity of student mental health needs, they still struggle to provide enough resources due to various factors including lack of funding, low space, staffing issues, stigma associated with having a mental illness, and lack of student health insurance (Watkins, Hunt, & Eisenburg, 2011; Falsafi, 2016). Many colleges have yet to address structural problems like understaffing, insufficient funding, and lack of service availability during school vacations (Balon et al., 2015). And when universities do choose to offer increased support, it is often centered around a tragic event (e.g. community member death) and support tapers off as time wears on (Balon et al., 2015). As Balon et al. (2015) put it, colleges tend to approach treatment with a "patchwork" approach—which they describe as solving students' problems in the moment but not addressing their struggles long-term. Campuses would benefit from finding alternative, cost effective methods to help reduce stress and anxiety in students.

## Questions

- What is the impact of yoga on undergraduate college student perceived stress levels?
- What do college students know about self-care and stress reduction?

## Methods

- Study participants (N=8) were undergraduate college students from the University of Southern Maine selected using purposive, convenience sampling. Eight students completed the pre-test survey. The second half of the study experienced high rates of participant attrition with only two students completing the second (post-test) survey. The mean age group of study participants was 18-20 years old (SD=.74). Participants came from a variety of majors across the liberal arts and sciences.
- This study utilized two online surveys consisting of multiple choice, true/false, short answer, and Likert scale questions. Survey questions were based off of pre-existing measures including the "Stressometer" (Vohra, Kelling, Varma, Prakash & Khurana, 2019) and International Stress Management Association UK (2013) surveys.
- Examples of these questions include: "Please identify any pros and/or cons you feel come from a regular yoga practice," "How do you define stress management?", and "On an average day, how would you rate your stress level?"
- Results of this mixed-methods study were analyzed using qualitative and quantitative methods. A paired sample t-test was completed using SPSS to analyze the quantitative findings. Qualitative data was understood using thematic analysis.

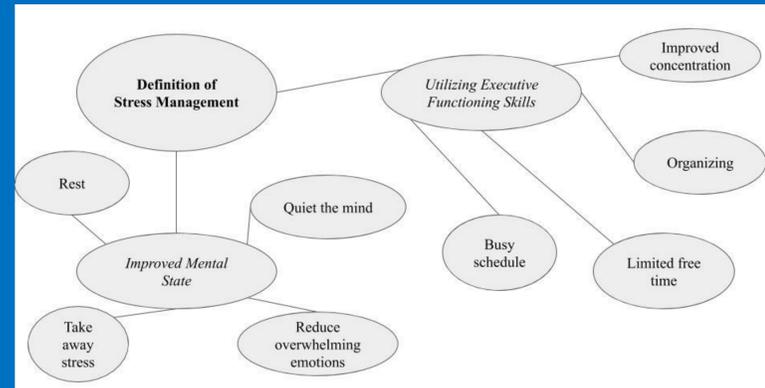


Figure 1. Definition of Stress Management

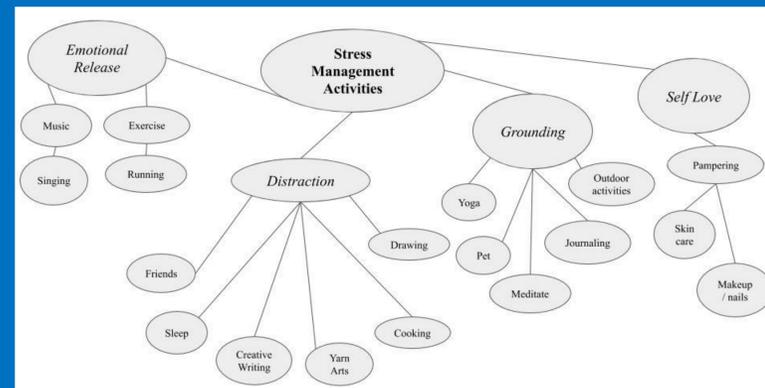


Figure 2. Stress Management Activities

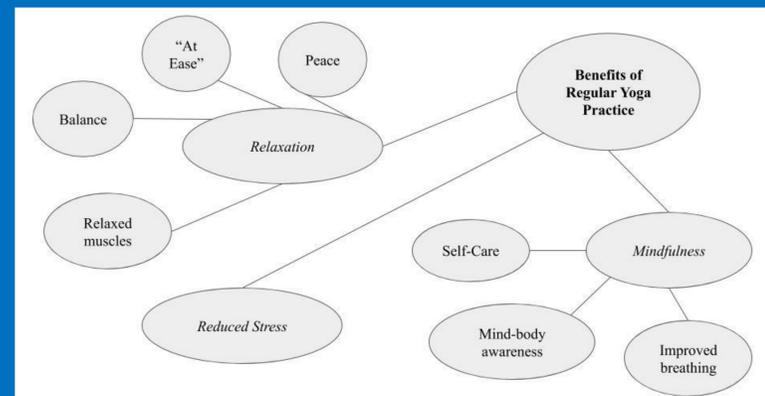


Figure 3. Benefits of a Regular Yoga Practice



## Results

- **Sample demographics:** Average age group of participants was between 18-20 years old. The sample primarily identified as female (87.5%). A majority (87.5%) of participants had previously practiced yoga at some point in their lives, yet over 60% reported rarely practicing yoga and no participant reported engaging in a daily yoga practice.
- All participants identified school a daily stress factor and 50% of participants stated that school assignments increased their stress, making school the most commonly identified stress factor.
- The pretest found that 62.5% of participants rated yoga's effectiveness as a two on a scale of 0-3, indicating that they find yoga to be somewhat effective in stress reduction. 25% found yoga to be very effective.
- **Defining Stress Management:** Two themes were identified regarding stress management definitions: 'improved mental state' and 'utilizing executive functioning skills' (Figure 1). Participants described an *improved mental state* as a "reduction in overwhelming/intense emotions" and having a "quiet mind". Some felt that managing stress allows one to have "a more positive attitude" following mindful breathing. Additionally, though participants did not explicitly write executive functioning in their definitions of stress management, many provided examples of ways *utilizing executive functioning skills* can aid in relieving stress. Participants noted that stress management can be achieved by "organizing all of [one's] plans", "concentrating", "managing priorities" and "focusing on one thing at a time."
- **Stress Management Activities:** Participants who completed the pre-test survey were asked to list activities that aid in reducing stress. Four major themes were found: distraction, emotional release, self-love, and grounding activities (Figure 2). *Distractions* appeared to be the most common type described, with 87.5% listing at least one. A majority of distractions involved creating something, whether it be through "creative writing", yarn arts (e.g. "knitting", "cross-stitching"), "cooking", or "drawing". *Emotional release* activities allow one to safely channel their emotions into an action. An example of this is "exercise" or "running"; activities noted by 50% of participants. There were a variety of *self-love* activities that 25% listed as preferred coping skills, ranging from "pampering" to "skin care". Other activities included doing one's "makeup" and painting one's "nails". Half of participants listed *grounding* activities as a preferred form of self-care, including "outdoor activities", "journaling", "being with [one's] pet", "yoga" and "meditation".
- **Benefits of a Regular Yoga Practice:** *Relaxation* was one of the more common perceived benefits of a regular yoga practice, with 50% of participants noting this effect. Relaxation was described as one's "body [feeling] more comfortable and relaxed" and having feelings of "peace, quiet, [and] clarity". A second perceived benefit of a regular yoga practice was *reduced stress*, though ratings of yoga's effectiveness were mixed. Two participants (25%) reported that practicing yoga allowed them to feel "less stressed". However, one participant shared that yoga had increased their stress because the practice "took time out of [their] day that could be better spent doing" stress-inducing assignments. A third reported benefit of a regular yoga practice was increased *mindfulness*. Nearly a third (37.5%) of participants reported experiencing forms of mindfulness following yoga practice. One participant shared "practicing yoga regularly [lowers] my stress, and it allows me to become more in tune with my mind and body. Being more in tune with my mind and body can enable me to better manage my stress levels."

## Conclusion & Future Directions

- This study demonstrated that undergraduate college students endure varying levels of stress while working toward degrees. While it was not possible to collect statistically-significant information on yoga's impact on student stress levels, researchers were able to identify factors that increase stress in college students, gain an understanding of students' awareness of stress management, and learn what stress reduction techniques or services they utilize in times of anxiety or stress.
- Study limitations include small sample size, poor completion rates, attrition, poor generalizability, and lack of statistical significance. These limitations are similar to previous studies on yoga and stress, which included small sample sizes, subject inability to perform yoga asanas independently, and yoga studied on its own without being compared against mindfulness, equine therapy, etc. (Keshavan, Rao & Rao, 2013; Call, Miron, & Orcutt, 2014; Falsafi, 2016; Morgan, 2017). While there are a variety of reasons why these limitations occurred, one hypothesis is the COVID-19 epidemic. The university where this study took place closed after Spring Break (the week the second survey was administered) and transitioned all classes to online. It is likely that students had difficulty accessing or completing the second survey amidst the sudden changes, stress, and trauma that occurred with COVID-19 and the transition to online schooling.
- Future research should begin with a large sample pool to increase the likelihood of obtaining statistically significant and generalizable data. Offering the survey in person—for example, after a yoga class—as opposed to online may increase participation rates. It may also be beneficial to offer incentives, whether it be monetary or in the form of extra class credit, to increase participation rates. Additionally, it would be important to recruit from a pool that includes male-identifying individuals.
- Yoga could be considered a viable option for stress management. In addition to its accessibility and immediate effects, yoga may function as a therapeutic option for individuals afraid to seek medical treatment for their mental health conditions like stress or anxiety (Falsafi, 2016). Yoga may also be a practical, low-cost complementary therapy option. Mental health professionals may look into prescribing yoga as a form of treatment for patients exhibiting signs of high stress and anxiety alongside typical treatment of psychotherapy, medication, etc.
- Universities may want to educate their students on the different types and efficacy of coping skills (e.g. distractions versus grounding), especially considering the rise of substance use (e.g. vaping, binge drinking) in young adults (American Addiction Centers, 2020). Additionally, universities could look into providing students with alternative, low-cost methods of preventing and reducing stress. Offering a yoga class on campus—either at the school's recreation center, in a classroom, or online—is one way that schools can tackle the issue of mental illness on campus. Universities may also look into providing yoga along with pre-existing student support groups, and advertising community resources for mindfulness practices like yoga and meditation.

## Acknowledgements

Thank you to the professors and students who supported and participated in this pilot research study. Additional thanks go to Caroline Shanti for her encouragement and guidance throughout the research process.

## References

American Addiction Centers. (2020, January 15). Binge drinking on college campuses. Retrieved April 12, 2020 from <https://www.addictioncenter.com/college/binge-drinking/>

Balon, R., Beresin, E., Coverdale, J., Louie, A., & Roberts, L. (2015). College mental health: A vulnerable population in an environment with systemic deficiencies. *Academic Psychiatry, 39*(5), 495-497; Call, D., Miron, L., & Orcutt, H. (2014). Effectiveness of brief mindfulness techniques in reducing symptoms of anxiety and stress. *Mindfulness, 5*(1), 65B-66B; Dana, D. (2018). The polyvagal theory in therapy: Engaging the rhythm of regulation. New York: W. Norton & Company; Falsafi, N. (2016). A randomized controlled trial of mindfulness versus yoga: Effects on depression and/or anxiety in college students. *Journal of the American Psychiatric Nurses Association, 21*(6), 483-497; International Stress Management Association UK. (2013). Stress questionnaire. Retrieved November 15, 2020, from <https://www.istma.org.uk/wp-content/uploads/2013/08/ISTMA-Stress-Questionnaire.pdf>

Saleh, D., Camart, N., & Romo, L. (2017). Predictors of stress in college students. *Frontiers in Psychology, 8*(19), 1-8; Vohra, S., Kelling, A. S., Varma, M. M., Prakash, A., & Khurana, D. (2019). Measuring reliability and validity of "Stressometer": A computer-based mass screening and assessment tool for evaluation of stress level and sources of stressors. *Indian journal of psychiatry, 61*(3), 295-299; Watkins, D., Hunt, J., & Eisenburg, D. (2011). Increased demand for mental health services on college campuses: Perspectives from administrators. *Qualitative Social Work, 11*(3), 319-337; Varibeygi, H., Panahi, Y., Sahraei, H., Johnston, T.P. & Sahebkar, A. (2017). The impact of stress on body function: A review. *EXCL Journal, 16*, 1057-1072.