

# Effects of a Brief Mindfulness Intervention on College Students' Perceived Stress, Affect, and Trait Mindfulness

## Abstract

College students ( $N = 100$ ) were placed into three groups: Silent Meditation ( $n = 16$ ), Guided Meditation ( $n = 12$ ), No Meditation ( $n = 72$ ). Each experimental group took part in a four-week mindfulness intervention comprised of one session per week. Students perceived stress, affect, and trait mindfulness were measured pre, during, and post-intervention. Results indicate the intervention was effective.

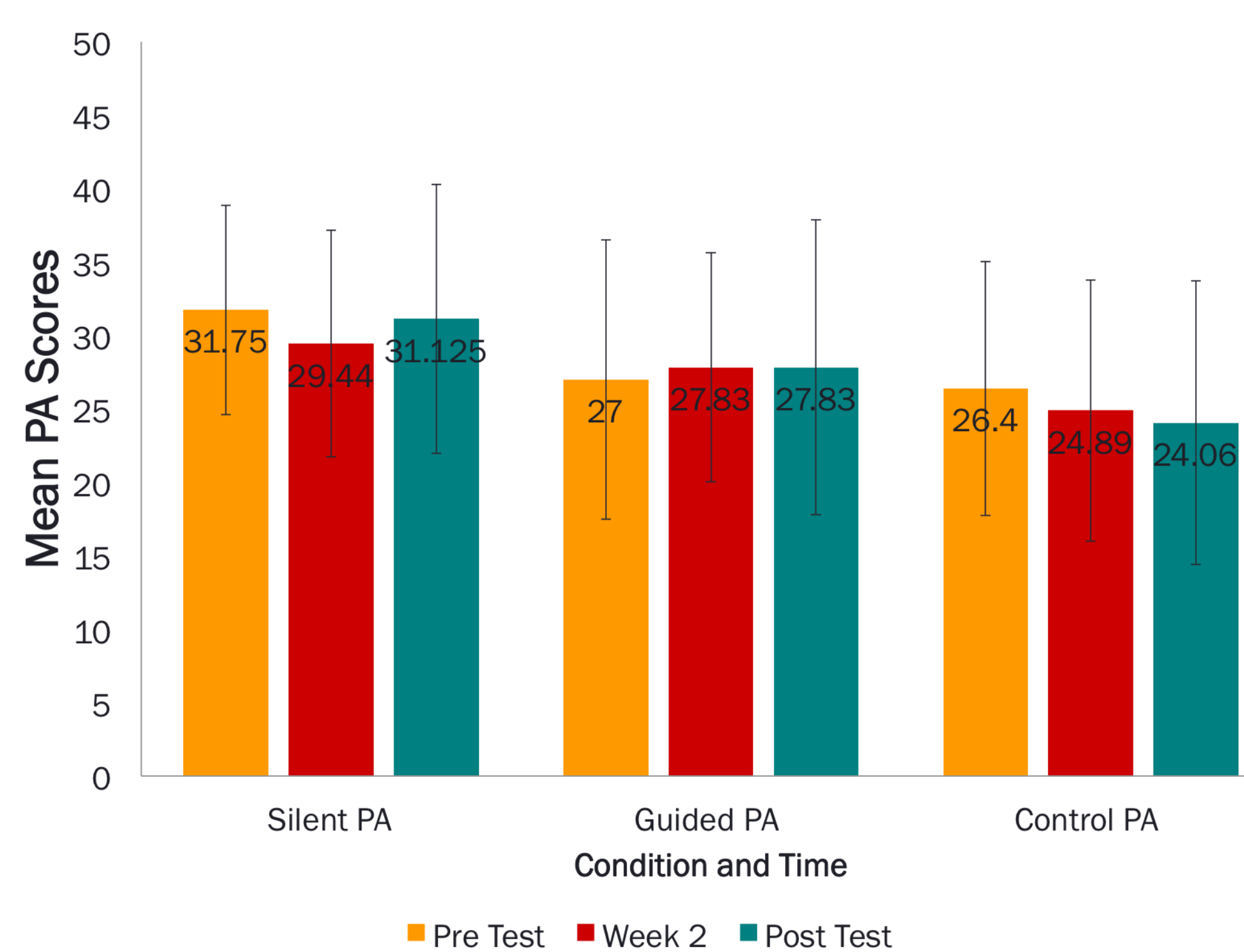
## Introduction

Mindfulness is defined as the intentional, non-judgmental and non-reactive acceptance of one's ongoing thoughts, sensations, emotions, and surroundings (Kabat-Zinn, 1993). Practicing mindfulness regularly has been shown to improve individual's overall well-being, self-worth, self-respect (Kabat-Zinn, 1993) and self-efficacy (Teasdale, 1999). Offering students mindfulness training on campus may be an effective way in helping them improve their college experience and quality of life. Typically, mindfulness interventions are designed to be eight-week programs comprised of an introduction to mindfulness session, weekly two hour meditation sessions, and group discussions (Kabat-Zinn, 2007). Recent research is suggesting that briefer interventions that last only four weeks or less can also help reduce psychological and physiological stress and anxiety while increasing trait mindfulness (Cresswell, Pacilio, Lindsay & Brown, 2014; Lutz, Greischar, Rawlings, Ricard & Davidson, 2004; Manotas et al., 2014).

## Current Study Hypotheses

The current investigation was designed to examine how a brief mindfulness intervention affects students perceived stress, affect, and trait mindfulness. We predicted that students who participated in the silent and guided meditations would report decreased stress, decreased negative affect, and increased trait mindfulness, while students in the control group would remain stable over the four-week intervention.

Figure 1. Mean Positive Affect Score by Condition and Time.



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Anthony M. Carrone and Terry F. Pettijohn II  
Department of Psychology, Coastal Carolina University



amcarron@coastal.edu, pettijohn@coastal.edu

## Method

### Participants

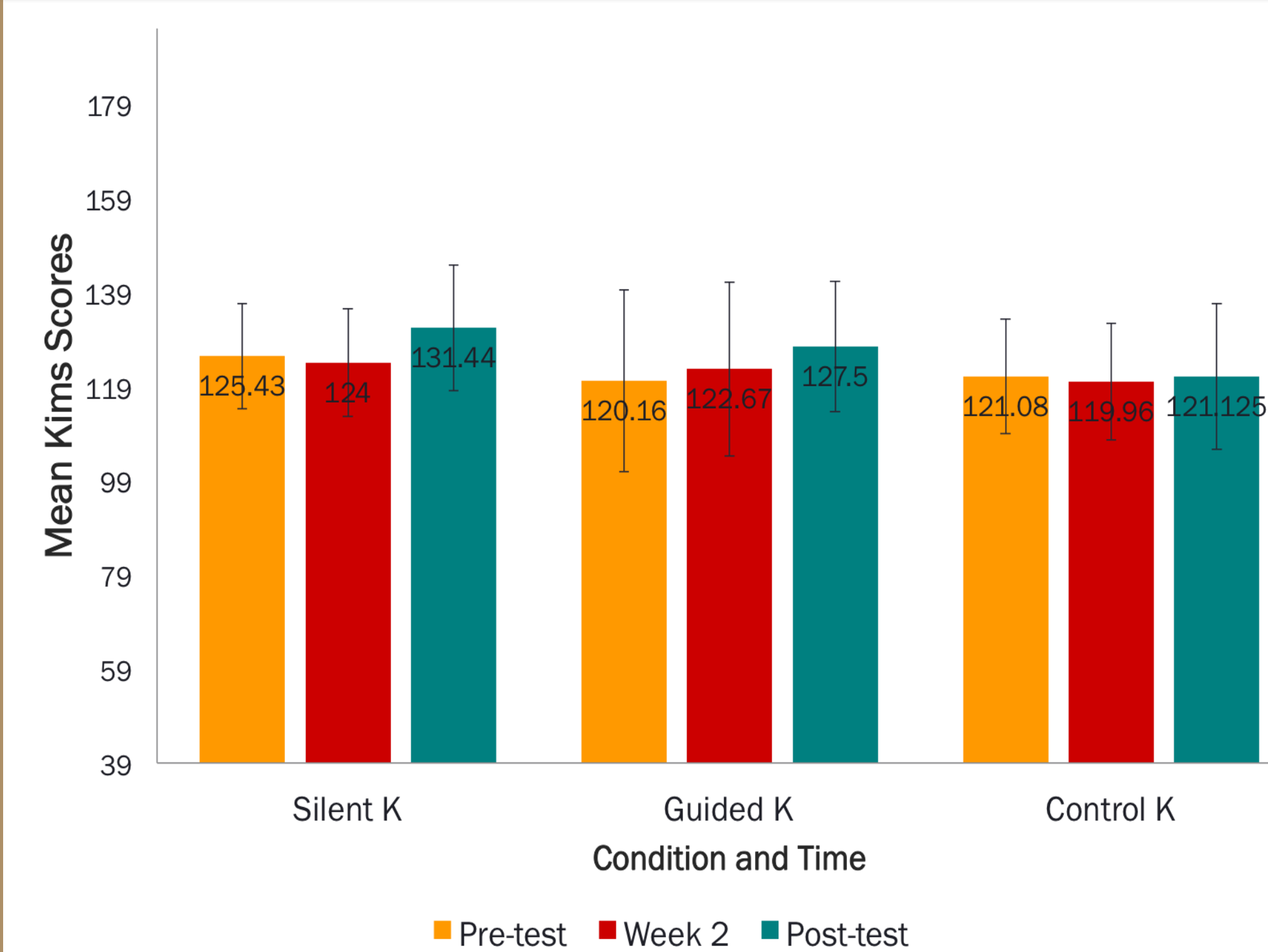
College students ( $N = 100$ ) from a medium sized public university in the Southeastern United States participated in our study. A variety of majors were represented in our sample. Of the participants, 70% were women and 30% were men. The racial distribution of the sample included 63% Caucasian, 27% African-American, 2% Hispanic/Latino, 2% Asian, and 6% "other." Participants received extra credit for study participation.

### Materials & Procedure

Four separate surveys, listed below, were used in this study. Participants received each survey three times throughout the four weeks. Surveys were completed the first week before meditation, the second week after meditation, and the fourth week after meditation. The control group received the surveys during the same weeks as the experimental groups. Guided meditations were led by Jon Kabat-Zinn's guided meditation practices and lasted 15-30 minutes. Participants' age, sex, race and marital status were collected on a demographic questionnaire during the first session.

- The School Stress Survey (SSI; Siperstein & Wenz-Gross, 1997)
- College Student Stress Scale (CSS; Feldt, 2008)
- Kentucky Inventory of Mindfulness Skills (KIMS; Baer, Smith & Allen, 2004)
- Positive and Negative Affect Schedule (PANAS; Watson, Clark & Tellegen, 1988)
- The Mindful Way through Depression (Williams, Teasdale, Segal & Kabat-Zinn, 2007)

Figure 2. Mean KIMS Score by Condition and Time.



## Results

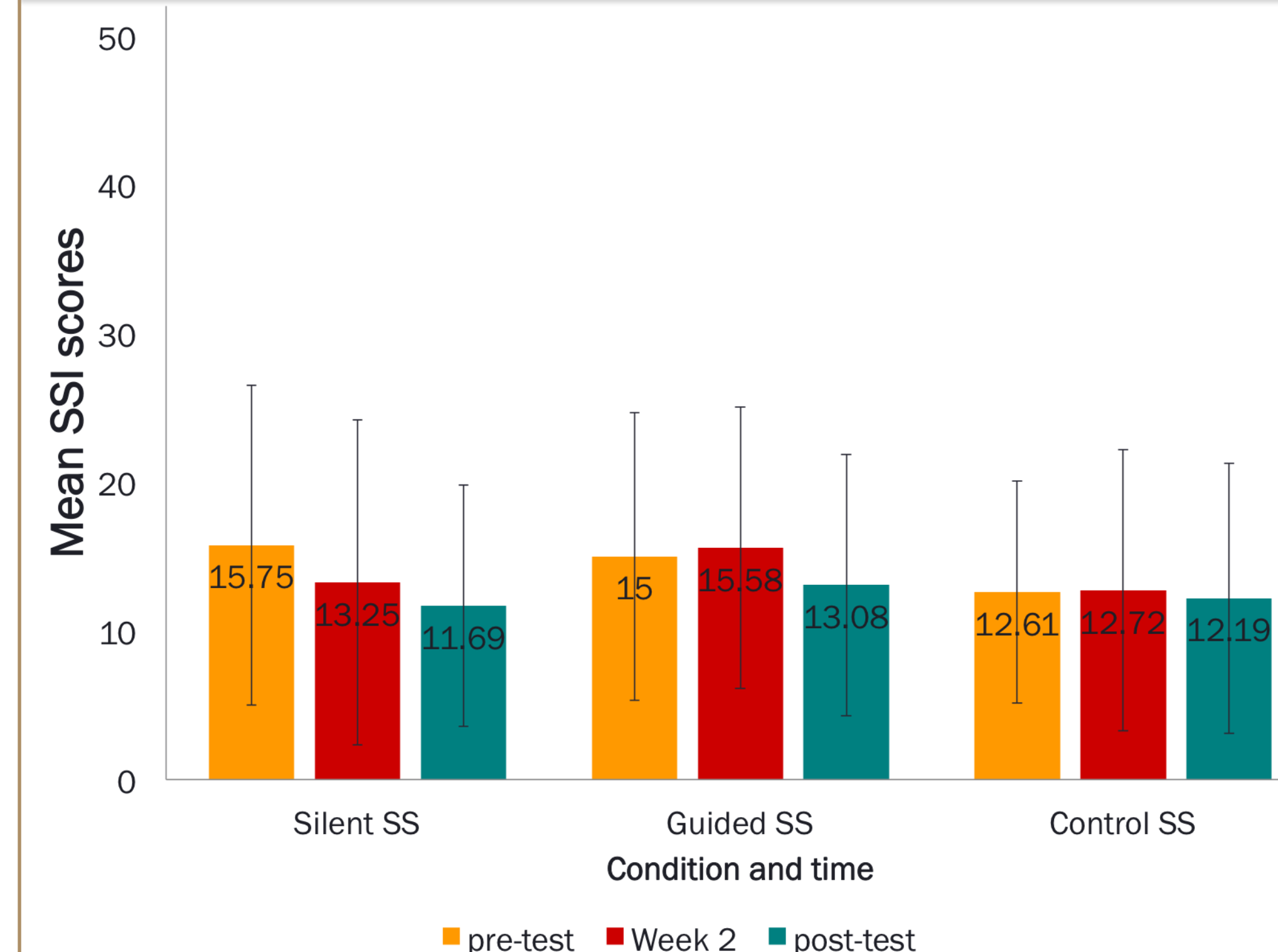
A repeated measures ANOVA identified differences over time in the silent meditation group's SSI,  $F(1, 13) = 7.06, p = .01$ , CSS  $F(1, 13) = 9.62, p < .001$ , KIMS  $F(1, 13) = 9.07, p < .001$ , and Negative Affect  $F(1, 13) = 11.22, p < .001$ . The silent group's mean scores on the SSI decreased each week with a significant difference ( $p = .05$ ) between the first week ( $M = 15.75, SD = 10.74$ ) and fourth week ( $M = 11.68, SD = 8.12$ ). The silent group's CSS mean scores also decreased each week with a significant difference ( $p = .02$ ) found between the first and fourth week ( $M = 26.50, SD = 9.12$ ). Negative affect scores on the PANAS decreased significantly from the first week ( $M = 17.18, SD = 7.18$ ) to the second week ( $M = 11.93, SD = 2.35$ ),  $p = .02$ , and first to the fourth week ( $M = 11.87, SD = 2.09$ ),  $p = .01$ , within the silent meditation group. Finally, there was a significant difference ( $p = .02$ ) in the KIMS of the silent group between the first week ( $M = 125.43, SD = 11.19$ ) and fourth week ( $M = 131.43, SD = 13.36$ ).

Repeated measures ANOVAs also found differences over time in the control group's negative affect  $F(1, 69) = 12.63, p = .001$ . Participants in the control group reported a significant increase ( $p = .01$ ) in negative affect between the second week ( $M = 13.44, SD = 3.90$ ) and fourth week ( $M = 15.43, SD = 6.46$ ) of the intervention. Although no significant differences were reported within the guided meditation group, mean scores in several of the domains indicated a possible effect.

A one-way ANOVA was conducted to determine if there were differences in each dependent variable between groups each week. Significant differences were found in the final week of the intervention in positive affect  $F(2, 97) = 3.88, p = .02$ , and mindfulness  $F(2, 97) = 3.56, p = .03$ . The silent meditation group ( $M = 31.12, SD = 9.15$ ) reported higher positive affect scores than the control group ( $M = 24.05, SD = 9.66$ ),  $p = .02$ . The silent group ( $M = 131.43, SD = 13.36$ ) also scored higher on the KIMS than the control group ( $M = 121.12, SD = 15.5$ ),  $p = .03$ .

See Figures 1, 2, 3, and 4 for results.

Figure 3. Mean SSI Score by Condition and Time.



## Discussion

These results are exciting because they agree with recent research concluding that brief mindfulness interventions help decrease perceived stress and negative affect (Cresswell et al., 2014; Lutz et al., 2004; Manotas et al., 2014). These results do not devalue the typical eight-week MBSR programs, but rather support them and suggest they are affecting participants quickly for their intended purposes. Also, the results suggest that a formal introduction session to mindfulness meditation is not necessary. For example, most MBSR programs involve an initial introduction to mindfulness meditation before the beginning of the intervention. Although these sessions are helpful, they may not be required. The results of this study suggest that short meditations lasting 15 to 30 minutes can be effective in relieving stress and increasing personal awareness. This is important for college students and those who have busy life styles, as well as others that could possibly benefit from a similar program. Offering shorter, less intense interventions may attract people who are not experienced meditators or people who are experienced but do not have the time to devote to lengthy interventions. A mindfulness meditation class may be an appropriate and effective addition to the Physically Active Living Skills (PALS) course options at Coastal Carolina University. Students may benefit just as much from a meditation course as they would from yoga, martial arts, or other classes.

## Selected References

- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science And Practice, 10*(2), 144-156. doi:10.1093/clipsy/bpg016
- Kabat-Zinn, J. (1993). Mindfulness meditation: Health benefits of an ancient Buddhist practice. In D. Goleman & J. Gurin (Eds.), *Mind/body medicine*, 259-275.
- Manotas, M., Segura, C., Eraso, M., Oggins, J., & McGovern, K. (2014). Association of brief mindfulness training with reductions in perceived stress and distress in Colombian health care professionals. *International Journal of Stress Management, 21*(2), 207-225. doi:10.1037/a0035150

Figure 4. Mean Negative Affect Score by Condition and Time.

