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## Effects of Meditation on Heart Rate and Blood Pressure: A Mindfulness-based Study

Selen Razon, Kathleen B. Pickard, Donald A. McCown, Melissa A. Reed. West Chester University, West Chester, PA

Today average college student experiences more than average stress (American College Health Association, 2015). Stress is known to contribute to high blood pressure (BP), anxiety, weight gain, and depression (Cassel, 2017). While the effectiveness of a number of stress management techniques have been investigated across different samples, scant research has tested the usefulness of these approaches within a college-aged population (Coiro et al., 2017). **PURPOSE:** The purpose of this study was to determine the effects of a mindfulness-based stress management intervention on resting heart rate (HR) and BP in college aged participants. **METHODS:** A total of twenty-eight (17 female and 11 male) participants ( $M_{age} = 22.25$ ,  $SD = 1.76$ ) were included in this study. The mindfulness intervention took place over the course of six weeks. At the first and last day of the intervention, resting HR and BP were measured before and after the mindful meditation practice. **RESULTS:** Paired sample t tests indicated a significant ( $p = .000$ ) decrease in HR from pre-meditation ( $M_{HR} = 64.93$ ,  $SD = 10.32$ ) to post meditation ( $M_{HR} = 52.96$ ,  $SD = 7.72$ ) on the first day of the intervention. On the last day of the intervention, analyses indicated a significant decrease in HR from pre-meditation ( $M_{HR} = 68.57$ ,  $SD = 8.56$ ) to post-meditation ( $M_{HR} = 63.68$ ,  $SD = 8.41$ ). Resting systolic and diastolic blood pressure also showed a significant decrease from pre-meditation ( $M_{SBP} = 118.14$ ,  $SD = 11.18$ ;  $M_{DBP} = 71.64$ ,  $SD = 10.44$ ) to post-meditation ( $M_{SBP} = 112.00$ ,  $SD = 11.39$ ;  $M_{DBP} = 65.50$ ,  $SD = 8.36$ ) on the first day and from pre-meditation ( $M_{SBP} = 118.14$ ,  $SD = 11.18$ ;  $M_{DBP} = 69.29$ ,  $SD = 8.68$ ) to post meditation ( $M_{SBP} = 110.32$ ,  $SD = 9.46$ ;  $M_{DBP} = 67.43$ ,  $SD = 7.81$ ) on the last day of the intervention. **CONCLUSIONS:** Present finding seem to suggest that the mindfulness based intervention had an overall positive effect on resting physiological measurements in this population. To the extent that college students are facing great levels of stress, mindfulness-based stress reduction techniques can facilitate physiological responses to stress thereby potentially reducing risks of stress-related conditions in this sample.