

Background

University life can be demanding for students due to academic loads, complex relationships, and financial burdens. Previous research indicates that regular participation in physical activity and/or self-defense (S-D) courses positively impacts emotional states such as anxiety [1, 2]. Additionally, greater physical activity has been associated with a better quality of life [3]. Self-defense classes have been shown to improve self-efficacy, self-esteem, and reduce fear around sexual assault in women [2], but S-D courses for university students have been assessed to a lesser extent. Furthermore, while the effects of Brazilian Jiu-Jitsu (BJJ) on mental health and classroom behavior in children have been studied [4], no research to our knowledge has examined its impact on university students. Therefore, physical activity courses focused on BJJ or S-D may serve as viable interventions to enhance overall student health.

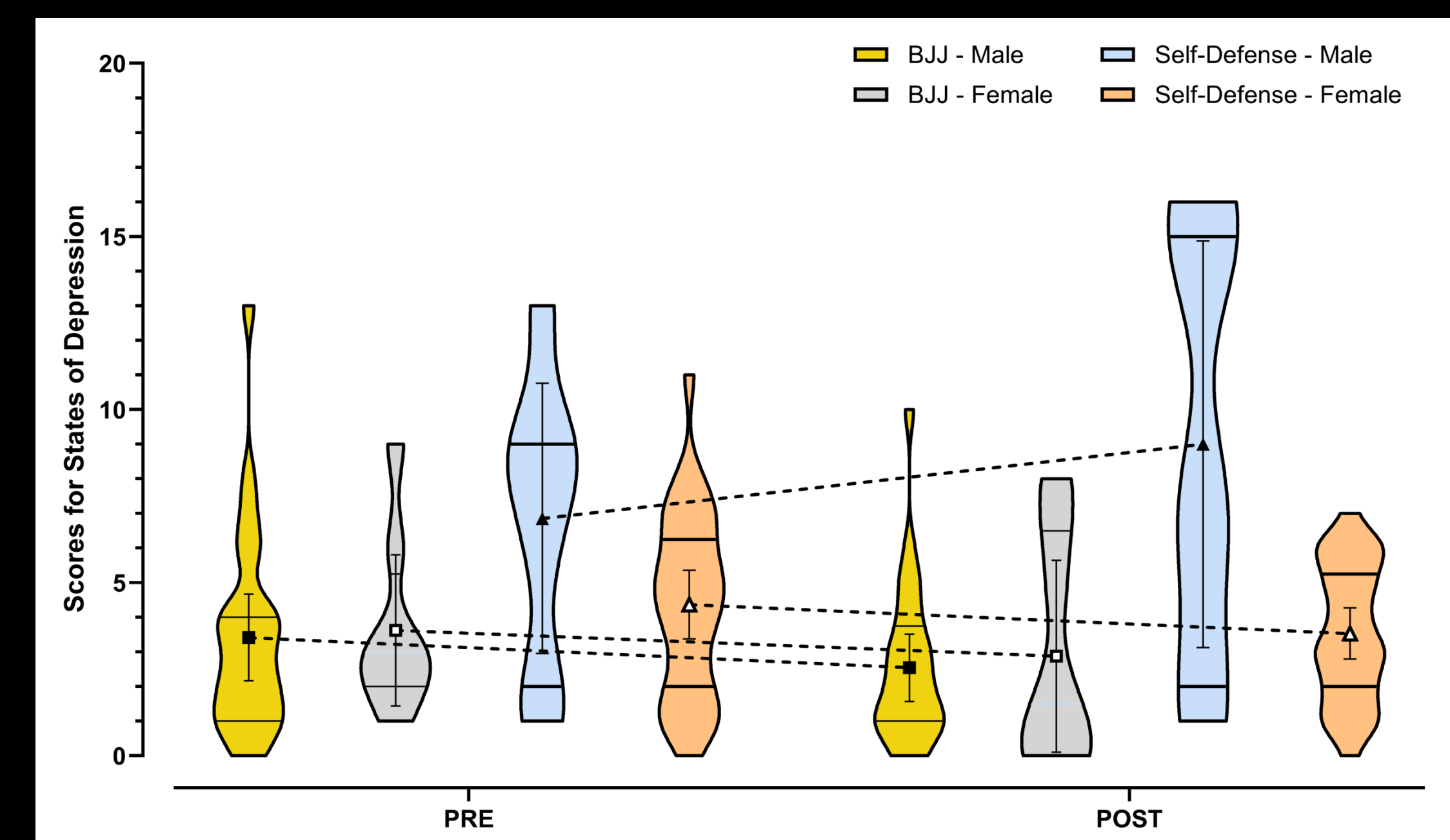
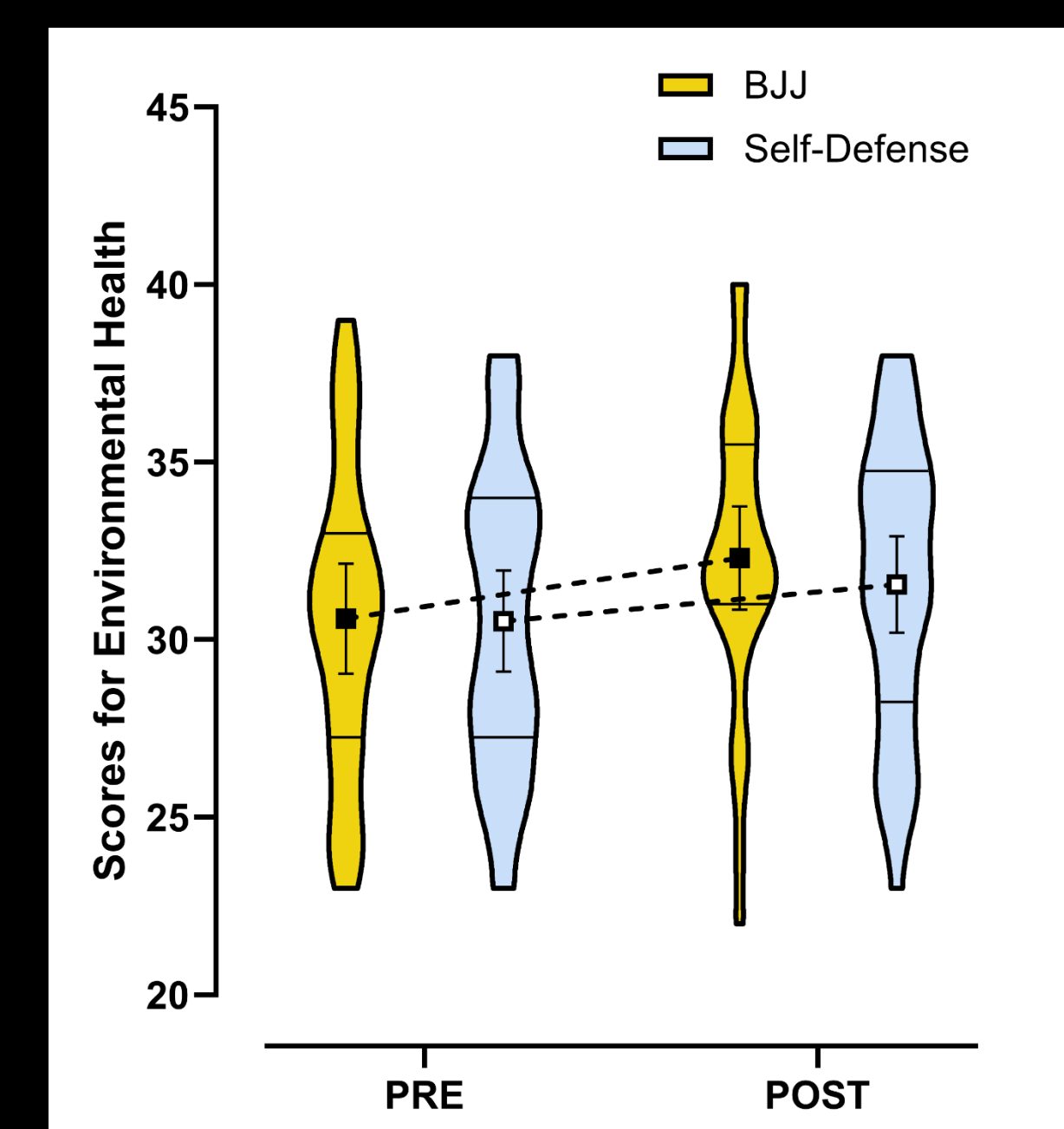
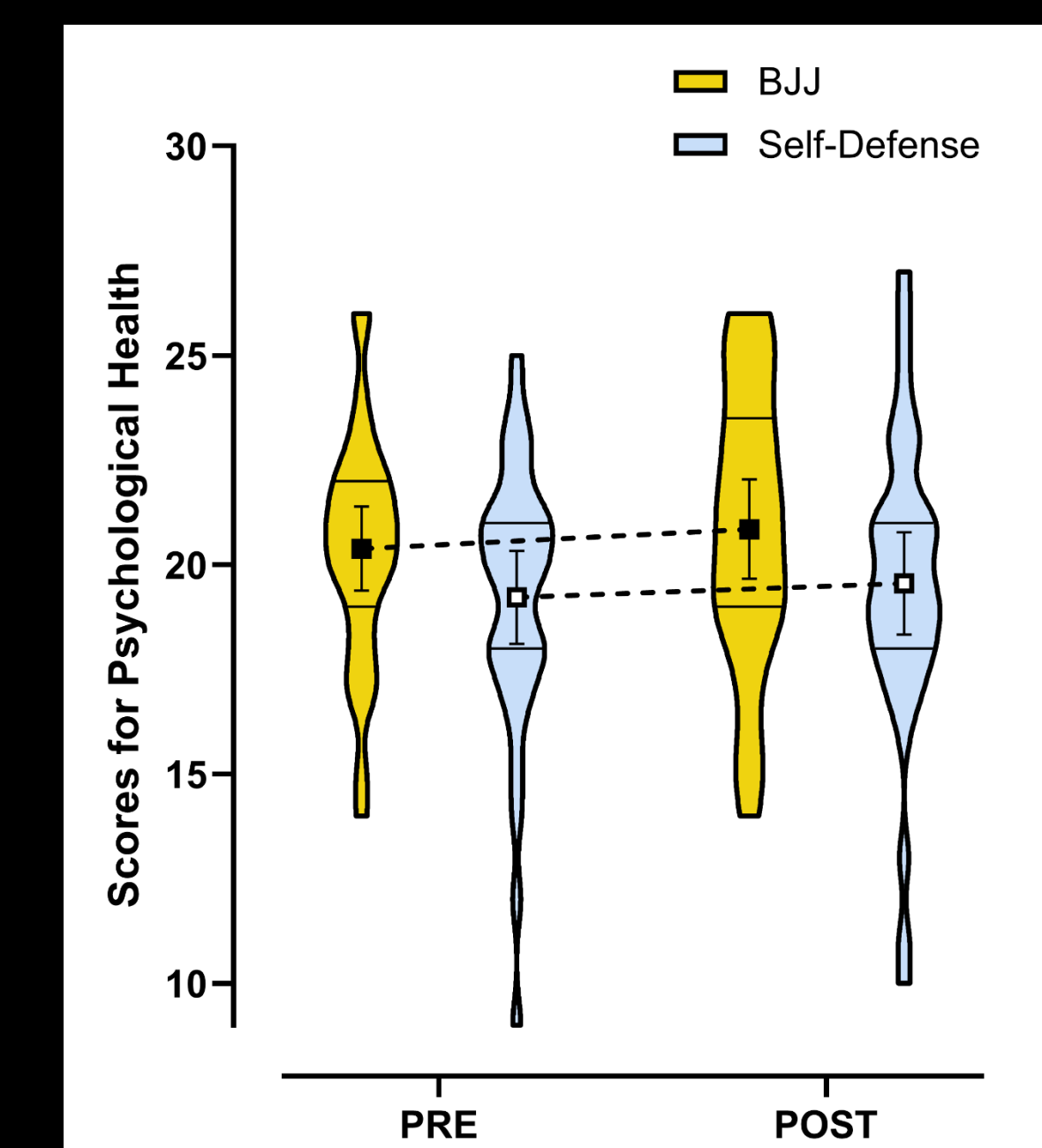
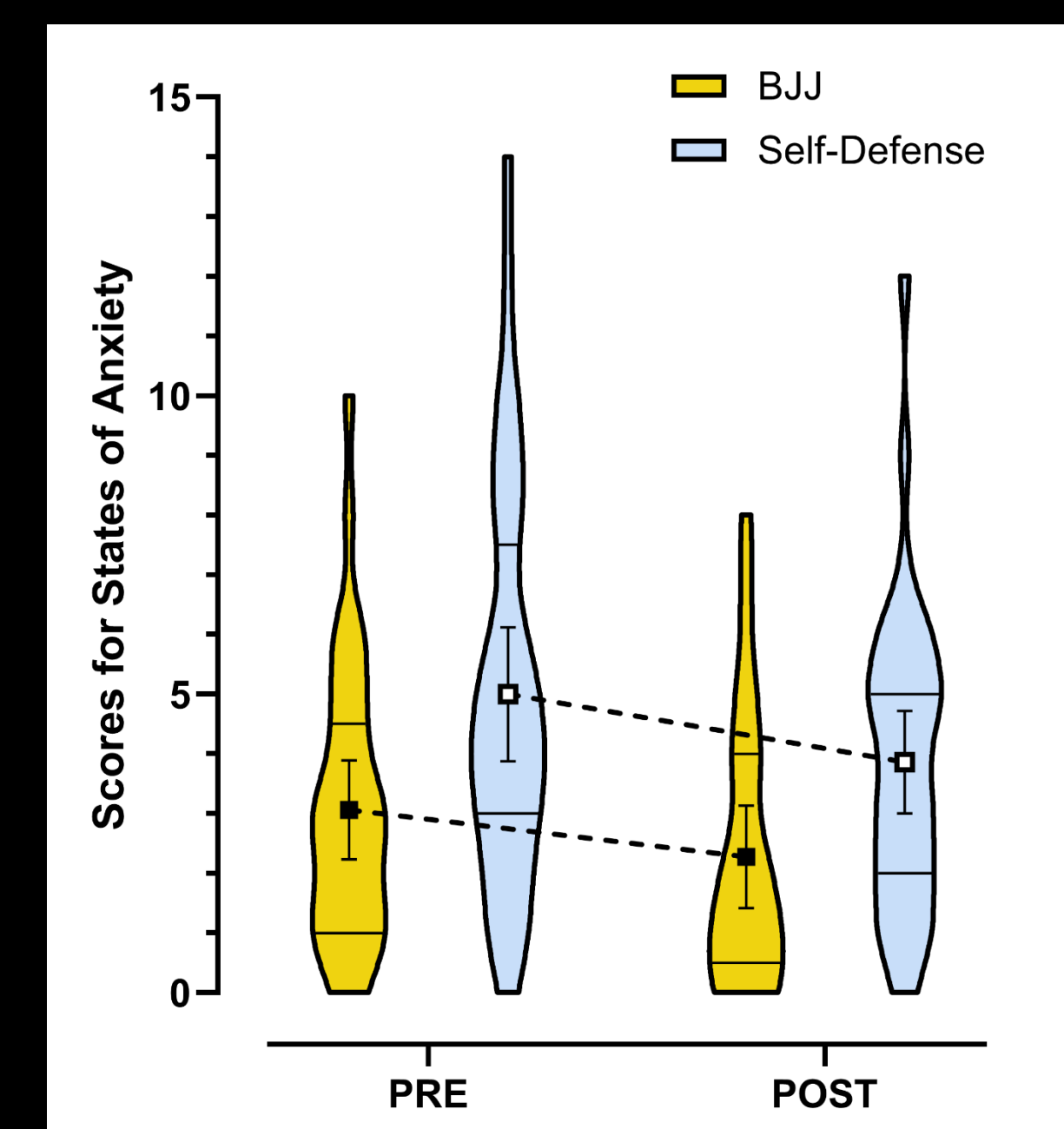
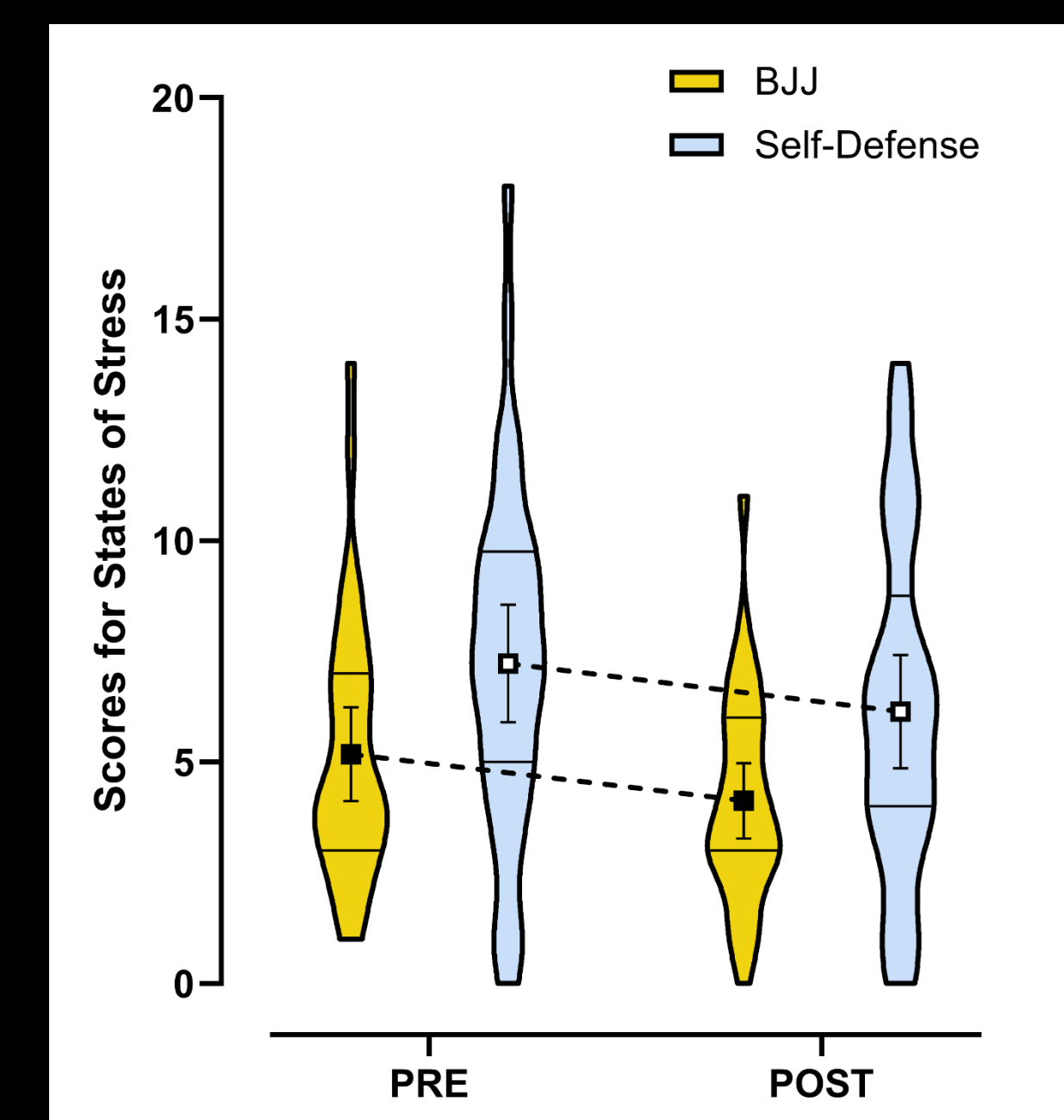
Purpose

To assess the potential impact of participation in a semester-long BJJ or S-D course on the emotional states of anxiety, depression, stress, and factors of quality of life of university students.

Methods

- Sixty-nine university students enrolled in either a BJJ (n=33; 24 males, 9 females) or S-D (n=36; 6 males, 30 females) course voluntarily completed a survey at the beginning (PRE) and end (POST) of the Fall 2023 semester.
- Identical surveys were distributed via Qualtrics, consisting of the Depression Anxiety and Stress Scale questionnaire (DASS-21) and the World Health Organization Quality of Life Brief Version questionnaire (WHOQOL-BREF).
- DASS-21 measures emotional states of depression, anxiety, and stress.
- WHOQOL-BREF assesses physical health, psychological health, social relationships, environmental health, and overall quality of life.
- Scores from DASS-21 and WHOQOL-BREF were compared between the beginning and end of the course.

Brazilian Jiu-Jitsu and Self-Defense courses for university students may improve measures of stress, anxiety, psychological health, and environmental health.



Results

- A significant ($p < 0.05$) time \times class \times sex interaction was observed for depression scores.
- Male S-D scores at POST were higher than all other PRE and POST comparison groups ($p < 0.05$).
- Significant ($p < 0.05$) main effects of class and sex were observed for depression scores, with S-D showing higher scores (+2.527) than BJJ, and males showing higher scores (+1.556) than females.
- Significant ($p < 0.05$) main effects of time were observed, with decreases in stress (-1.024) and anxiety (-0.832) scores from PRE to POST, and increases in psychological (+0.796) and environmental health (+1.412) scores from PRE to POST.
- A significant ($p < 0.05$) main effect of class was observed, with BJJ showing higher scores for physical (+1.792) and psychological (+1.923) health compared to S-D.

Conclusion

Participation in a semester-long BJJ or S-D course may help decrease anxiety and stress and improve psychological and environmental health. Despite differences in male and female participation in each class, sex did not influence the beneficial changes observed in anxiety, stress, psychological, and environmental health. These improvements from PRE to POST were consistent across both courses, indicating potential benefits from either BJJ or S-D.

Practical Application

Offering BJJ or S-D courses can be beneficial interventions to enhance overall student wellness in a university setting.

References

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4. Bueno, J. C. B., Andreato, L. V., Silva, R. B., & Andrade, A. (2023). Effects of a school-based Brazilian jiu-jitsu programme on mental health and classroom behaviour of children from Abu Dhabi: a randomised trial. *International Journal of Sport and Exercise Psychology*, 21(6), 1091-1106.