

Bryan Kennedy, BS^{1,3}, Nicole R. DeTore, PhD^{1,2}, Yolanda I. Whitaker, BS¹, Rachel F. Sussman, BS¹, Anne Burke, PhD^{1,2}, Lauren Utter, PhD^{1,2}, Babatunde Aideyan, MA¹, Drew Coman, PhD^{1,2}, Jacqueline Clauss, MD, PhD^{1,2}, Randi M. Schuster, PhD^{1,2*}, Daphne J. Holt, MD, PhD^{1,2,3*} (* Co-senior authors)

¹Department of Psychiatry, Massachusetts General Hospital, Boston, MA; ²Department of Psychiatry, Harvard Medical School, Boston, MA

³Athinoula A. Martinos Center for Biomedical Imaging, Charlestown, MA

Introduction

- **Psychotic experiences (PEs)**, or subclinical psychotic symptoms, occur in 13-17% of children and include experiences such as hallucinations, delusions, and paranoia¹.
- PEs are associated with an elevated risk for developing psychotic and mood disorders¹, yet there is not an evidence-based resilience-enhancing intervention for youths with PEs.
- We piloted an 8-week, group-based resilience-enhancing intervention, with three caregiver/parent sessions, called **Living In Families with our Emotions (LIFE)**.
- LIFE aims to teach youth protective emotion recognition and regulation skills that will bolster their ability to manage stress and difficult emotions.

Methods

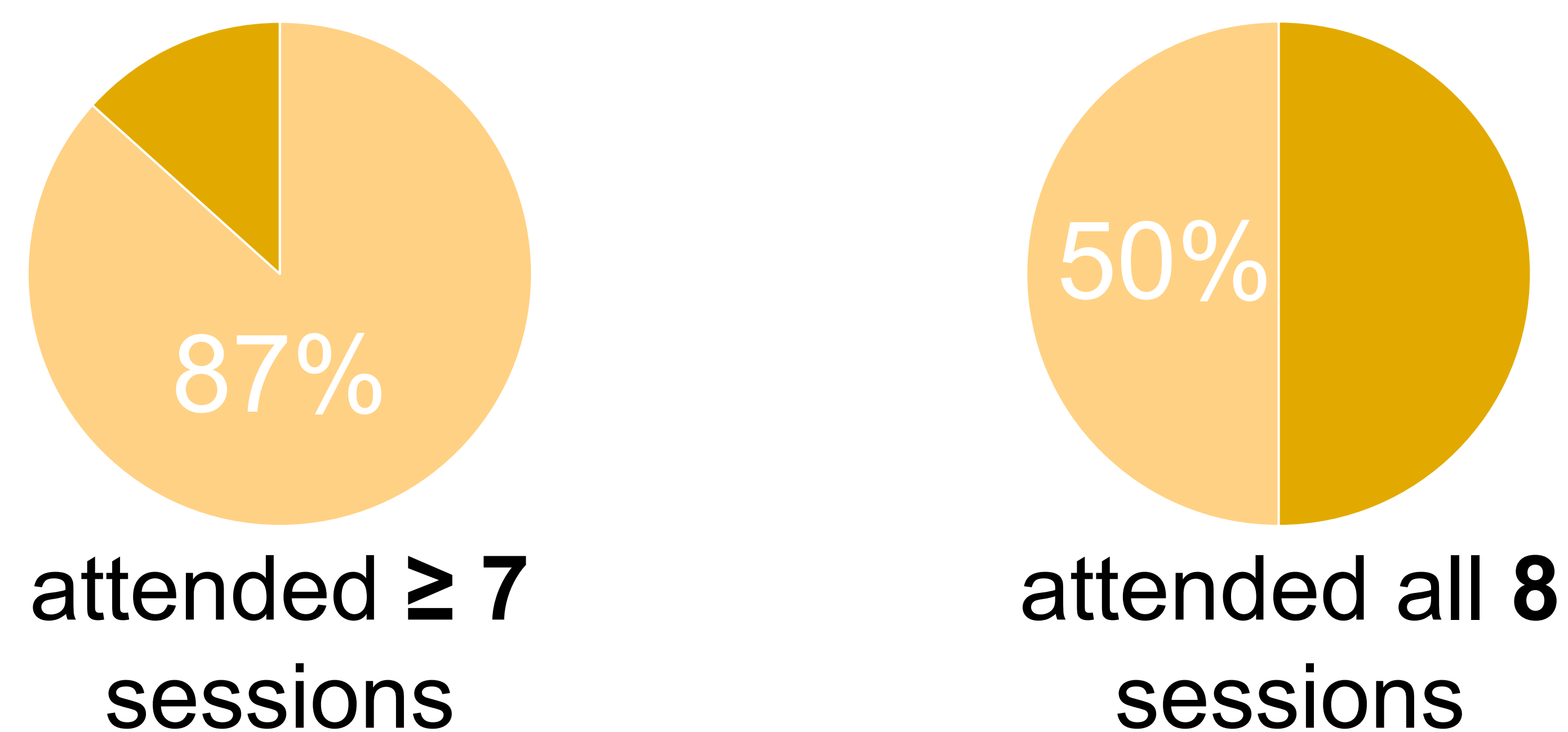
- **Participants:** 30 middle schoolers from the metro Boston area and their parent/caregiver.
- **Screening measure:** Adolescent Psychotic-Like Symptom Screener (APSS)³: a 7- item measure assessing PEs (response options: Yes, definitely; Maybe; No, never).
- **Eligibility:** 1) Aged 11-14; 2) no history of psychiatric diagnosis or treatment; 3) endorsed at least one PE on the APSS denoting experiences of auditory or visual perceptual disturbances or paranoid thinking.
- **Metrics:** Adolescent participants and their caregivers underwent interview-based and self-report assessments of symptoms, as well as task-based assessments of social cognition, at baseline (Pre), following LIFE (Post), and 6 and 12 months later.
- **Clinical Assessments:**
 1. Prodromal Questionnaire, Brief (**PQ-B**) to measure PEs
 2. Concise Health Risk Tracking Scale (**CHRT**) to measure suicidal thinking
 3. Penn Facial Affect Recognition Task: **Emotion Differentiation Accuracy**

Demographics

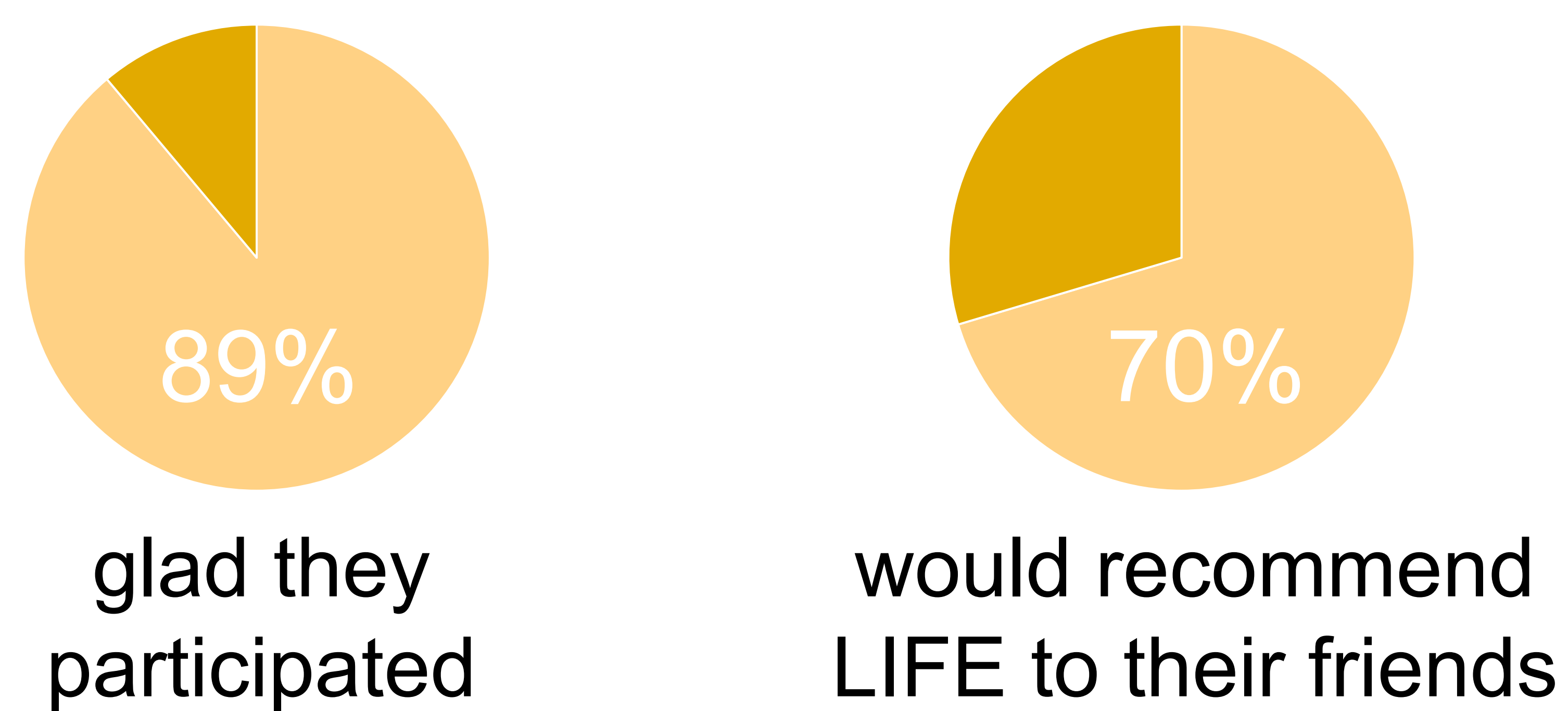
| Mean Age | Sex | Grade | Race |
|-----------------------|---------------------|-----------------------------------------------------------------------------------------|----------------------------|
| 12.1 ± 0.82 years old | 21 Female 9 Male | 6 th Graders: 9 7 th Graders: 15 8 th Graders: 6 | 57% White 43% Non-White |

Results

LIFE Attendance



LIFE Feedback



Symptom Reduction

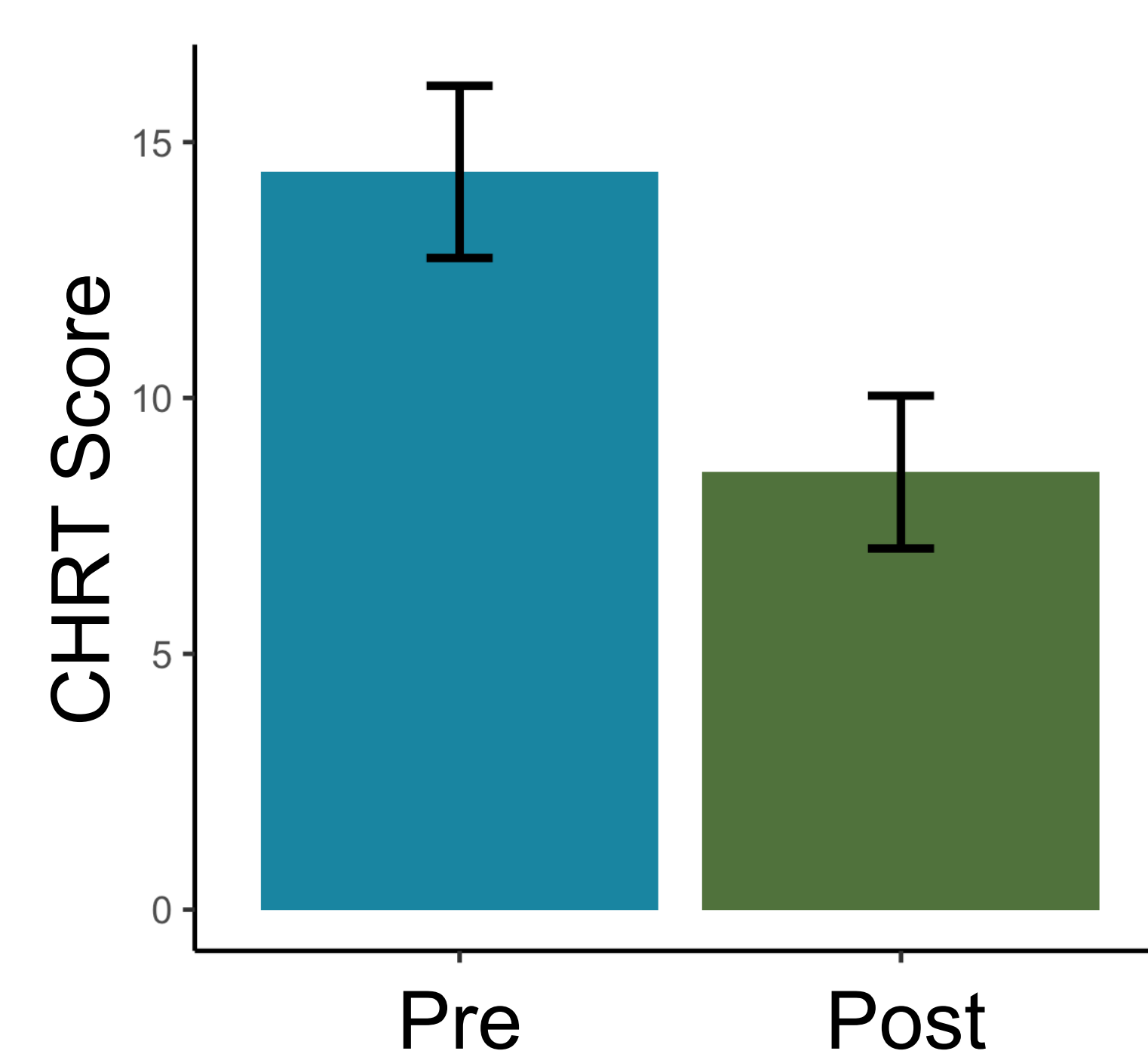


Figure 1. Changes in suicidal thinking

Overall suicidal thinking decreased significantly ($t = 4.82, p = 0.00005$) between assessments before and after LIFE intervention

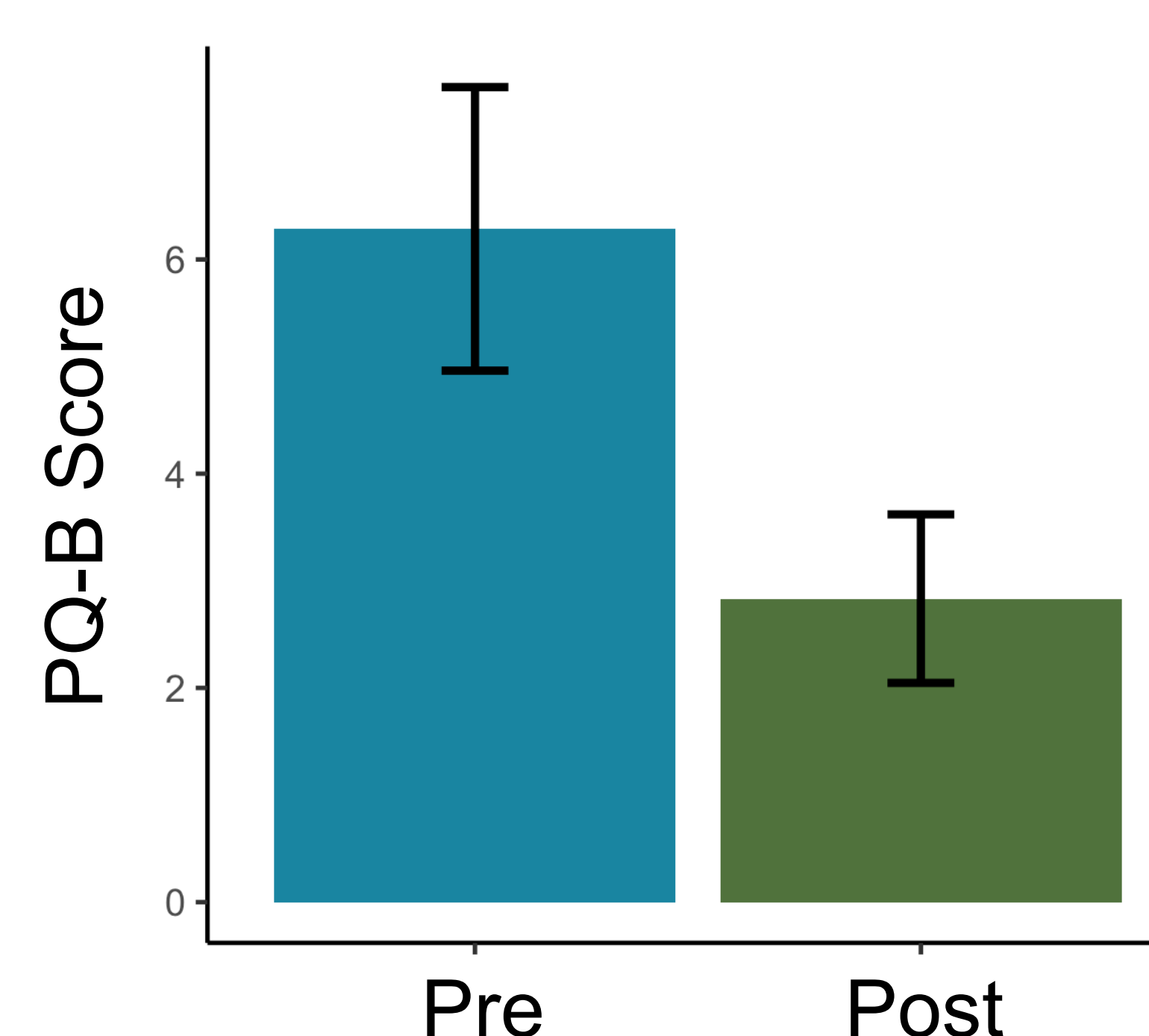


Figure 2. Changes in PEs

Psychotic experiences (PEs) also decreased significantly ($t = 2.75, p = 0.02$) between assessments before and after LIFE intervention

Results (cont.)

LIFE Skills

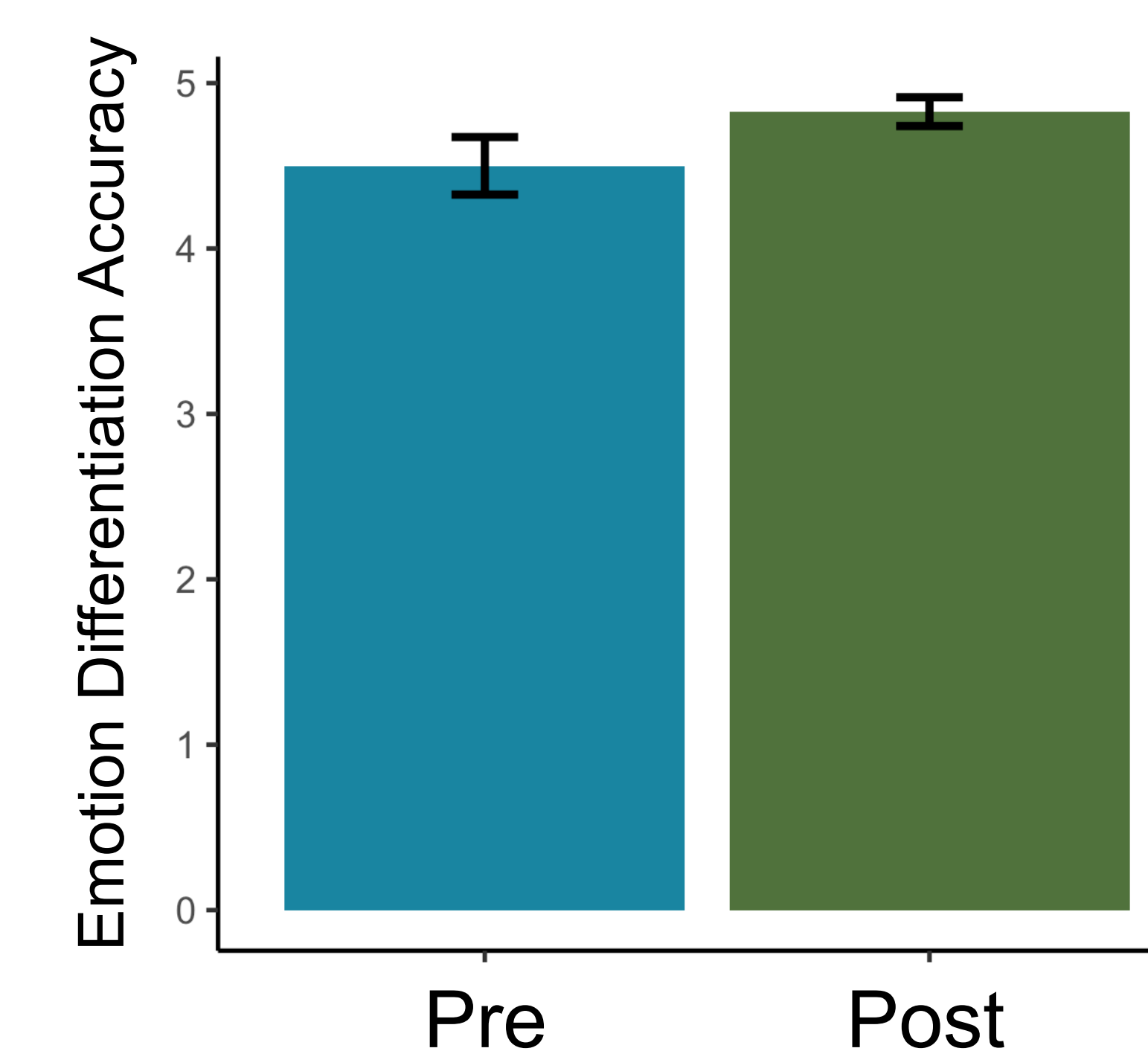


Figure 3. Changes in emotion differentiation accuracy

Emotion differentiation accuracy measured via a computer task increased ($t = -2.31, p = 0.04$) between assessments before and after LIFE intervention.

Conclusions

- These findings suggest that LIFE is feasible, acceptable, and may reduce symptoms of psychopathology in at-risk adolescents.
- Early interventions, like LIFE, may reduce the rate of onset or severity of serious mental illnesses in this vulnerable population.

Future Steps

- A randomized control trial is needed to measure the efficacy of this intervention for reducing the severity of PEs and other symptoms.

References

1. Kelleher I, Connor D, Clarke MC, Devlin N, Harley M, Cannon M. Prevalence of psychotic symptoms in childhood and adolescence: a systematic review and meta-analysis of population-based studies. *Psychol Med.* 2012;42(9):1857-1863. doi:10.1017/S0033291711002960
2. Yung A. R., & Lin A. (2016, June). Psychotic experiences and their significance. *World psychiatry : official journal of the World Psychiatric Association (WPA)*. Retrieved November 14, 2022, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4911755/
3. Kelleher I, Harley M, Murtagh A, Cannon M. Are Screening Instruments Valid for Psychotic-Like Experiences? A Validation Study of Screening Questions for Psychotic-Like Experiences Using In-Depth Clinical Interview. *Schizophr Bull.* 2011;37(2):362-369. doi:10.1093/schbul/sbp057

Contact

For more information or questions, please contact Bryan Kennedy (bkennedy7@mgh.harvard.edu) or the principal investigators: Randi M. Schuster, PhD (rschuster@mgh.harvard.edu) and Daphne J. Holt, MD PhD (dholt@mgh.harvard.edu)