

Long-Term Stress Vulnerability in Young People With Psychotic Experience

Walton-Ball, E.^{1*}, Carey, E.², O'Regan-Murphy, G.¹, Nic Uidhir, A.¹, Cannon, M.².

1. Royal College of Surgeon Ireland

2. Department of Psychiatry, Royal College of Surgeons

* Presenting author: Erin Walton-Ball, Student at RCSI in Senior Cycle Medicine (Year 3)

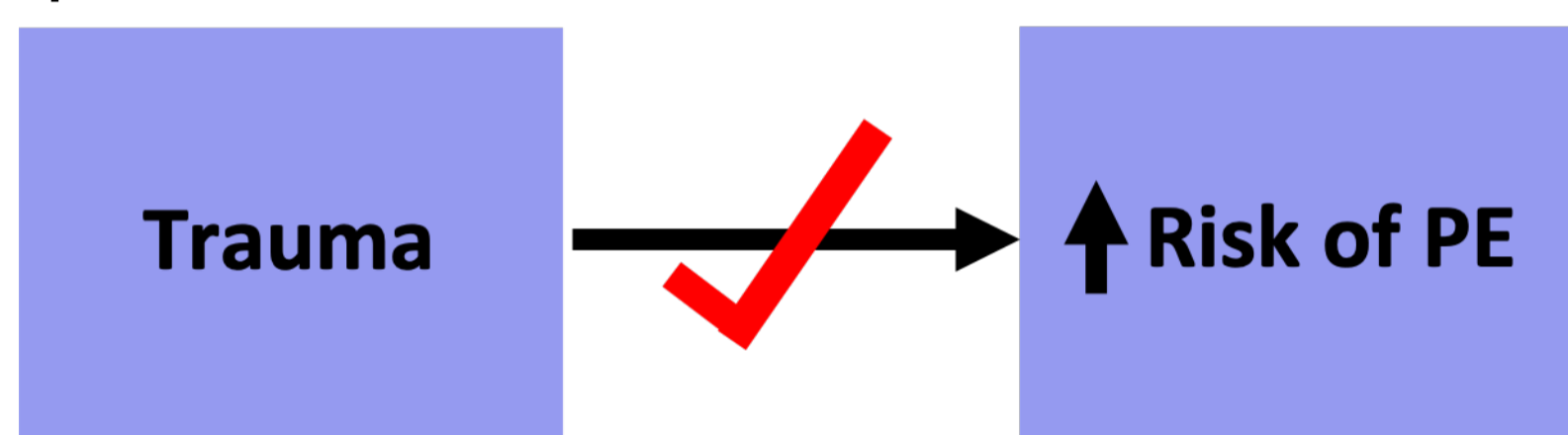
BACKGROUND

Childhood Psychotic Experience (PE)

- Subclinical psychotic experiences occur substantially in the general population, with the highest rates reported in children at up to 17% in 9-12 year olds¹. Having a PE in childhood implies greater risk of psychotic^{2,3} and non-psychotic psychopathology later in life⁴.

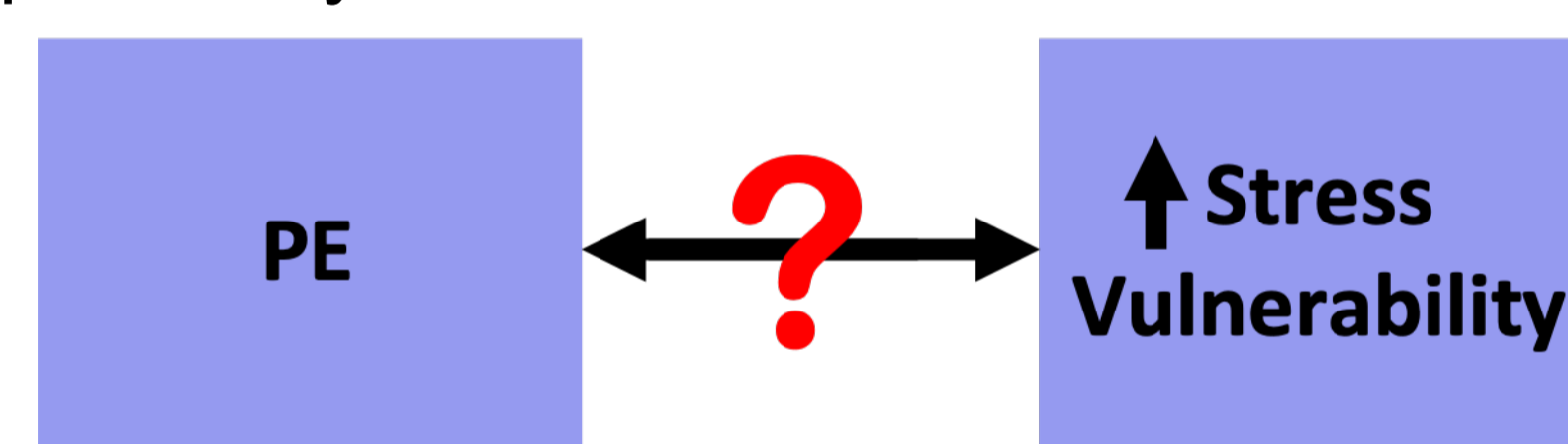
PE and Adversity

- Traumatic experiences, especially physical abuse, sexual abuse, bullying and emotional neglect increase the risk for psychotic experience⁵.



PE and Stress

- Children with antecedents for schizophrenia experience stress dissimilarly to their peers in the school environment⁶. Little research exists on how children with PE experience stress, specifically after PE and into their adulthood.



RESULTS

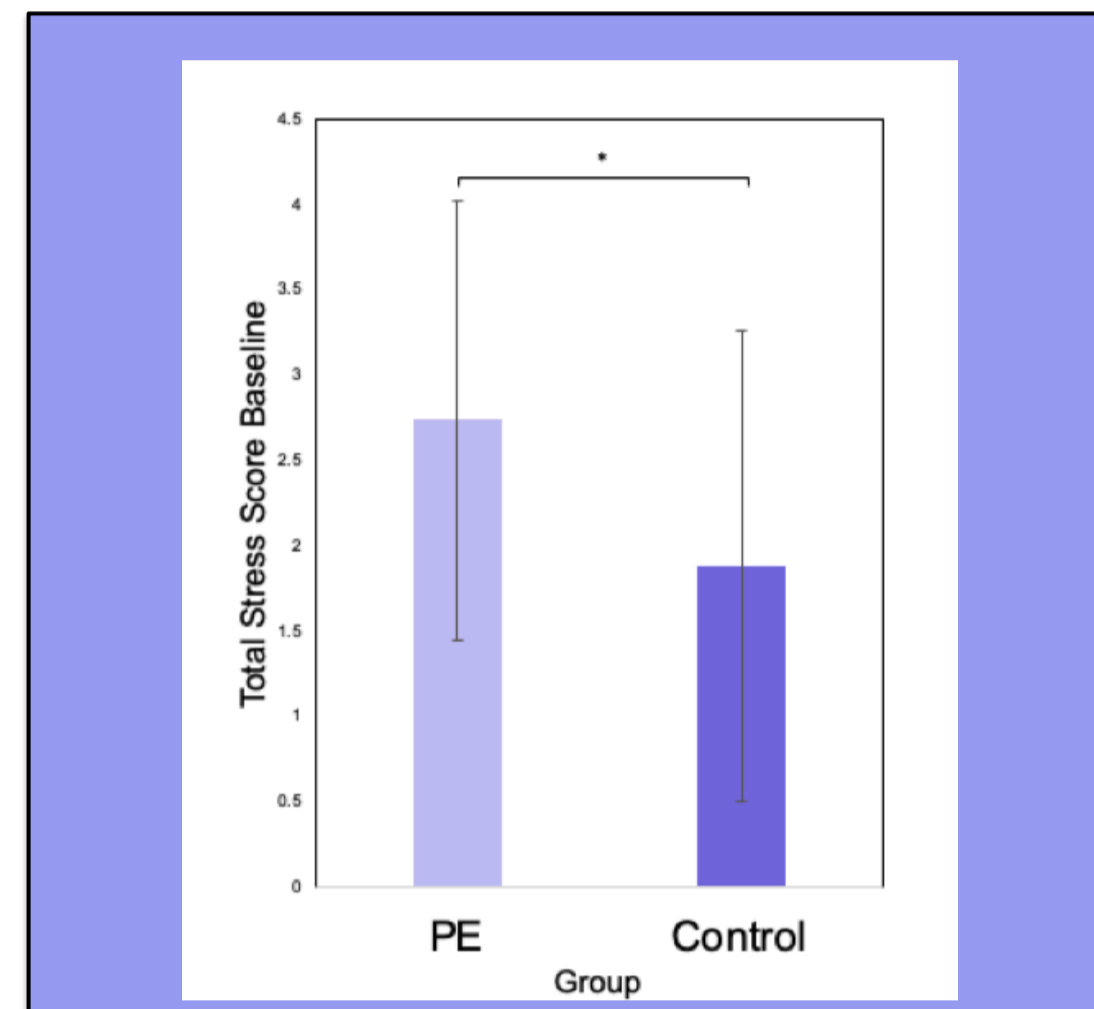


Figure 1. CSTE total stress measure reported at baseline time-point. Asterisk indicates significant difference between PE and control groups, $F(1,99) = 5.531, p = 0.021$.

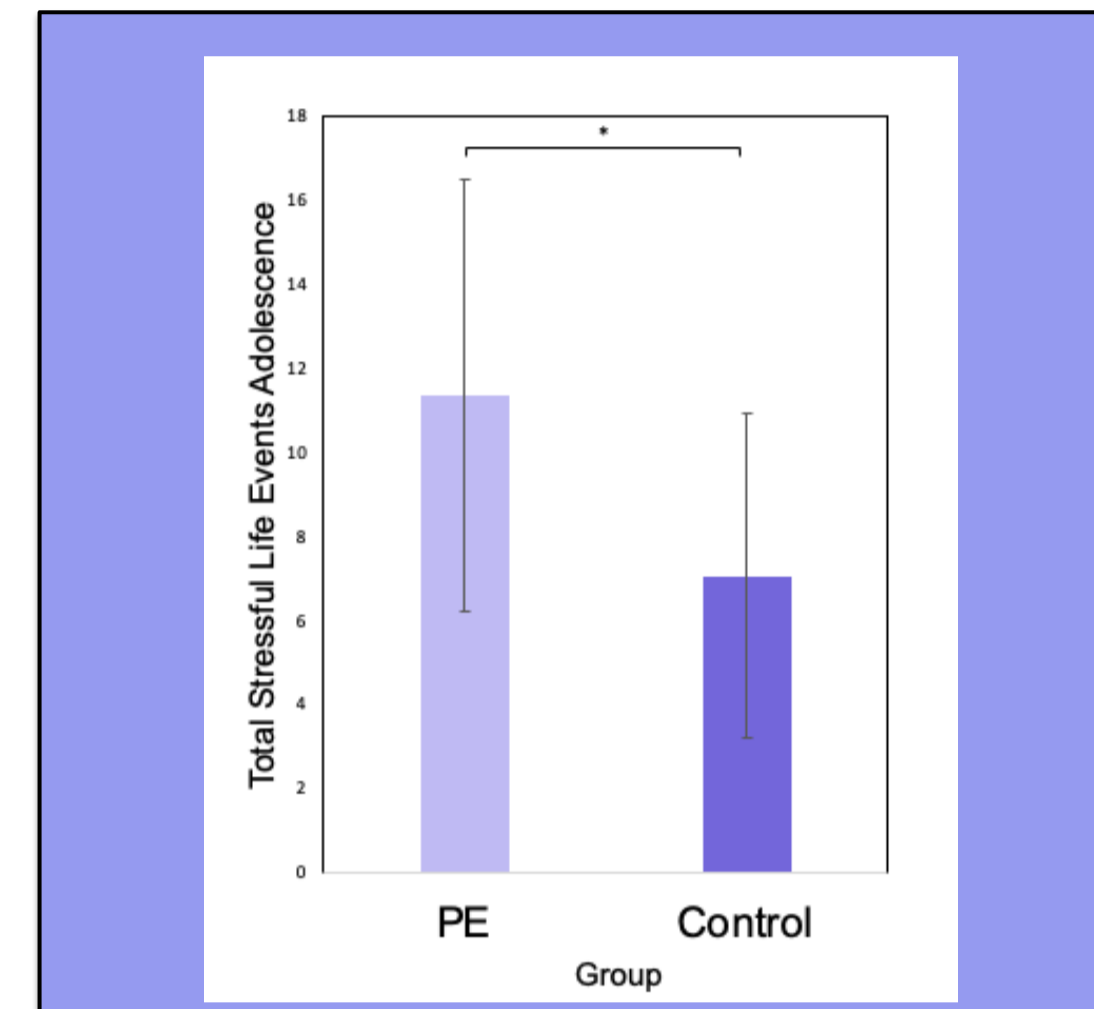


Figure 2. Total stressful life events reported on the SLEs occurring during adolescence (age 13-19) in the PE and control group. PE group reported significantly more events, $F(1,93) = 16.407, p < 0.001$

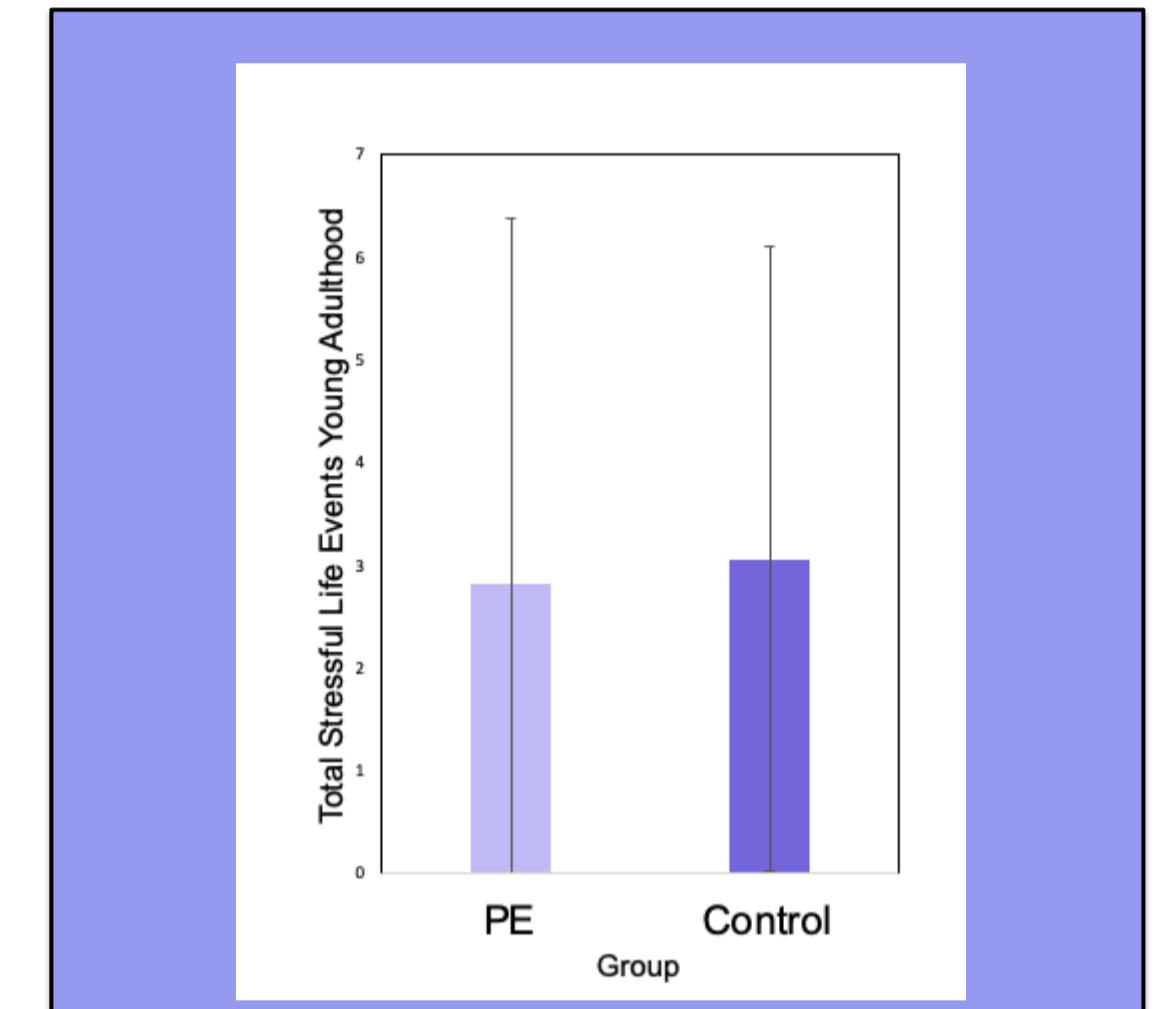


Figure 3. Total stressful life events reported on the SLEs occurring during adulthood (age 20+) in the PE and control group. No significant difference between groups was found, $F(1,93) = 0.064, p = .801$.

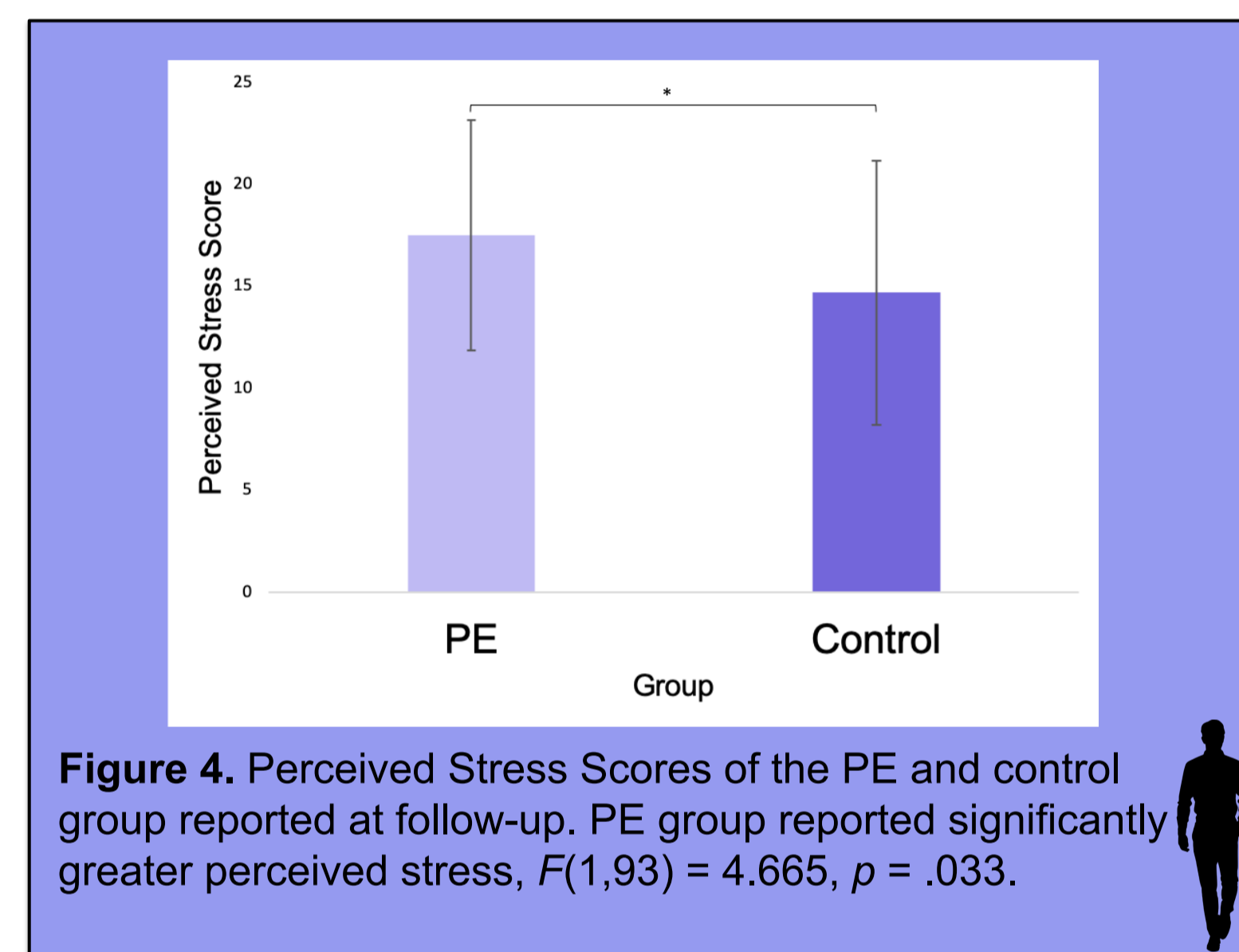


Figure 4. Perceived Stress Scores of the PE and control group reported at follow-up. PE group reported significantly greater perceived stress, $F(1,93) = 4.665, p = .033$.

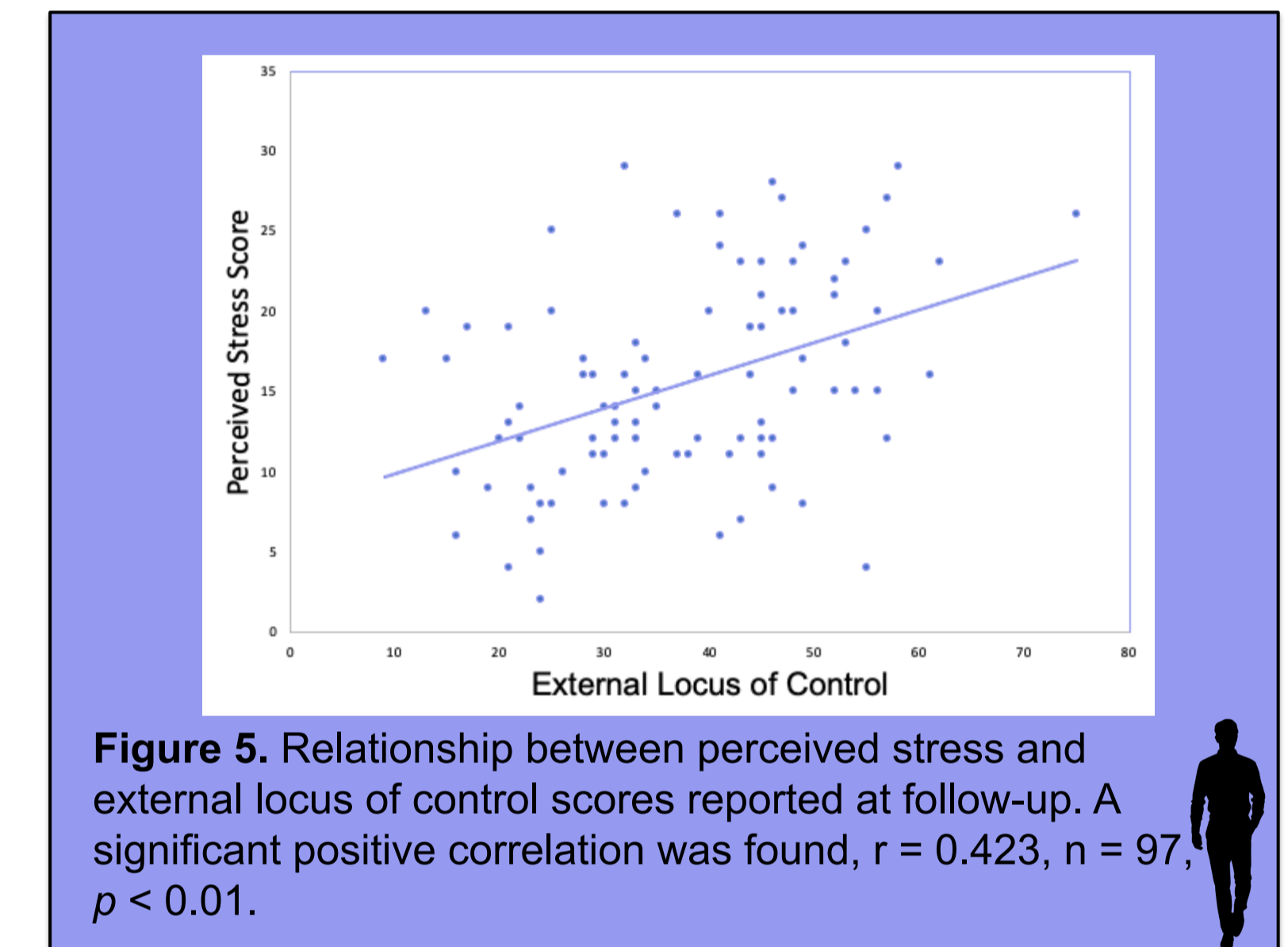


Figure 5. Relationship between perceived stress and external locus of control scores reported at follow-up. A significant positive correlation was found, $r = 0.423, n = 97, p < 0.01$.

AIMS

- Establish whether young people with childhood PE experience increased rates of adverse events in childhood, increased frequencies of stressful events in adolescence and adulthood, and how they perceive stress in comparison to those without childhood PE.

METHODS

- Parent Study: Adolescent Brain Development**
 - Approved by the Beaumont Hospital medical ethics committee.

BASELINE:

Measures	Sample Characteristics
<ul style="list-style-type: none"> Assessed for PE (K-SADS) Childhood Stressful and Traumatic Events Measure (CSTE) <ul style="list-style-type: none"> Total Stress Score Separation Loss Death Experiences Victimization Score 	N = 103, Control = 72, PE = 31 Age: 11-14, M = 11.72 Gender: M = 50, F = 53

~10 years

FOLLOW-UP:

Measures	Sample Characteristics
<ul style="list-style-type: none"> Psychopathology assessment with SCID-V Perceived Stress Scale (PSS) Stressful Life Events Questionnaire (SLEs) with age of experience reported Levenson Multidimensional Locus of Control 	N = 98, Control = 67, Childhood PE = 31 New PE = 5 5 with new PE excluded Age: 19-25, M = 20.95 Gender: M = 47, F = 51

Statistics:

Performed using SPSS version 24.

Baseline Analysis: ANCOVAs were used to assess for group differences on the CSTE measures while controlling for gender.

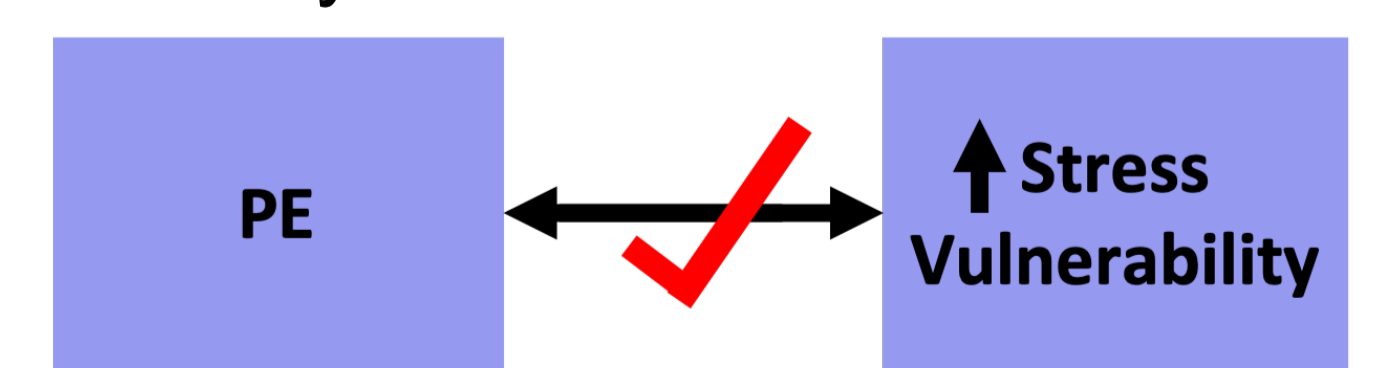
Follow-Up Analysis: ANCOVAs were used to assess for group differences on the PSS, SLEs and LoC scores. SLEs experience frequency was analyzed in the age groups of adolescence (13-19 inclusive) and adulthood (20+). Correlation analysis of PSS and LoC scores were performed with Pearson's coefficient.

DISCUSSION

- Young people with childhood PE had greater total stress scores in childhood implying greater numbers of adverse events, consistent with previous research⁵.
- Those with childhood PE experienced a greater amount of stressful events in their adolescence but not in young adulthood.
- Despite having similar exposure to stress in adulthood, the PE group reported increased perceived stress, which indicates feelings of uncontrollability and predictability over stressful events.
- The correlation between perceived stress and external locus of control provides a mechanism for why this perceived stress is occurring, as an external locus implies the belief that one does not have any influence or control over their life.
- External loci of control and increased PSS have also been identified in other subthreshold groups⁷.

CONCLUSION

- Conjointly, the results suggest that young people with childhood psychotic experience undergo stress dissimilarly to their peers. In childhood and adolescence, differences occur in event frequency. Despite attenuation of this difference by young adulthood, those with childhood PE continue to hold increased perceptions of stress.
- While it is not likely that PE directly leads to increased stress, it is possible that those with childhood PE represent a group of individuals with greater susceptibility to stress.
- With a thoroughly established link between psychopathology and stress, and as those with childhood PE are at increased risk for psychopathology, interventions to prevent future transition may be warranted.



REFERENCES

- Kelleher, I., Connor, D., Clarke, M. C., Devlin, N., Harley, M., & Cannon, M. (2012a). Psychological medicine, 42(9), 1857-1863.
- Poulton, R., Caspi, A., Moffitt, T. E., Cannon, M., Murray, R., & Harrington, H. (2000). Archives of general psychiatry, 57(11), 1053-1058.
- Roy, M., & Gingras, N. (2001). Evidence-Based Mental Health, 4(3), 95-95. doi:10.1136/ebmh.4.3.95
- Kelleher, I., Keeley, H., Corcoran, P., Lynch, F., Fitzpatrick, C., Devlin, N., ... & Arseneault, L. (2012b). The British Journal of Psychiatry, 201(1), 26-32.
- Croft, J., Heron, J., Teufel, C., Cannon, M., Wolke, D., Thompson, A., ... Zammit, S. (2019). JAMA Psychiatry, 76(1), 79. doi:10.1001/jamapsychiatry.2018.3155
- Cullen, A. E., Fisher, H. L., Roberts, R. E., Pariente, C. M., & Laurens, K. R. (2014). British Journal of Psychiatry, 204(5), 354-360. doi:10.1192/bjp.bp.113.127001
- Millman, Z. B., Weintraub, M. J., Bentley, E., Devylder, J. E., Mittal, V. A., Pitts, S. C., ... Schifflman, J. (2017). Schizophrenia Research, 184, 39-44. doi:10.1016/j.schres.2016.12.006

ACKNOWLEDGEMENTS

- Funding for this project was provided to Prof. Mary Cannon by European Research Council IHEAR project.
- Funding to the student was provided by RCSI Undergraduate Research Summer School Student Fund.
- Previously presented at the RAMI student conference in Oct. 2019