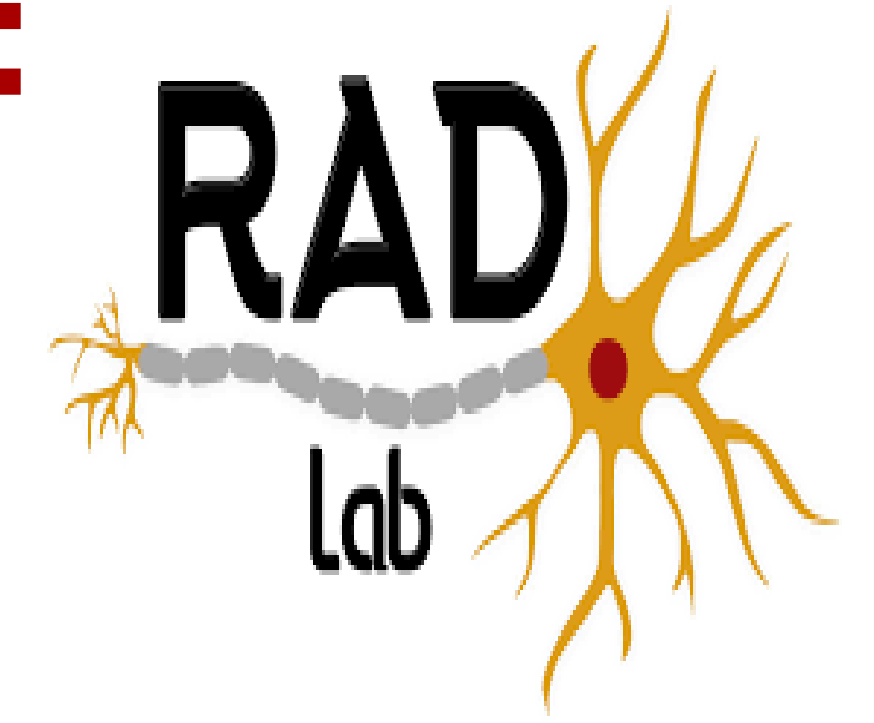


Alexithymia and Self-Injurious Thoughts and Behaviors Among Adolescents: A Three-year Longitudinal Study



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Background

Non-suicidal self-injury (NSSI) and suicidal thoughts & behaviors (STBs) are growing mental health issues in adolescents. Their relationship with problems with understanding one's emotions (alexithymia) and problems regulating impulses within negative emotional context (negative urgency) have been mostly studied cross-sectionally.

The longitudinal design of The Brain Imaging Development of Girls' Emotion and Self Study helps explore the changes in the relationship between alexithymia and NSSI & STBs dynamically over 3 years, and the potential mediating role of negative urgency.

Methods

164 adolescents assigned female at birth, aged 12-16 (Mean = 14.97±1.20), completed the following assessments in the first year (T1), 124 of them in the second (T2), and 95 of them in the third year (T3):

- Toronto Alexithymia Scale (TAS).
- Urgency-Premeditation-Perseverance-Sensation Seeking-Positive Urgency.
- Self-Injurious Thoughts and Behaviors Interview.
- Beck Scale for Suicidal Ideation (BSSI).

Analysis Plan:

- Correlations were applied to explore the relationship between the changes in time in TAS and BSSI scores, and NSSI last-year episodes.
- Structural Equation Modeling (SEM) assessed negative urgency's mediating role in T2.

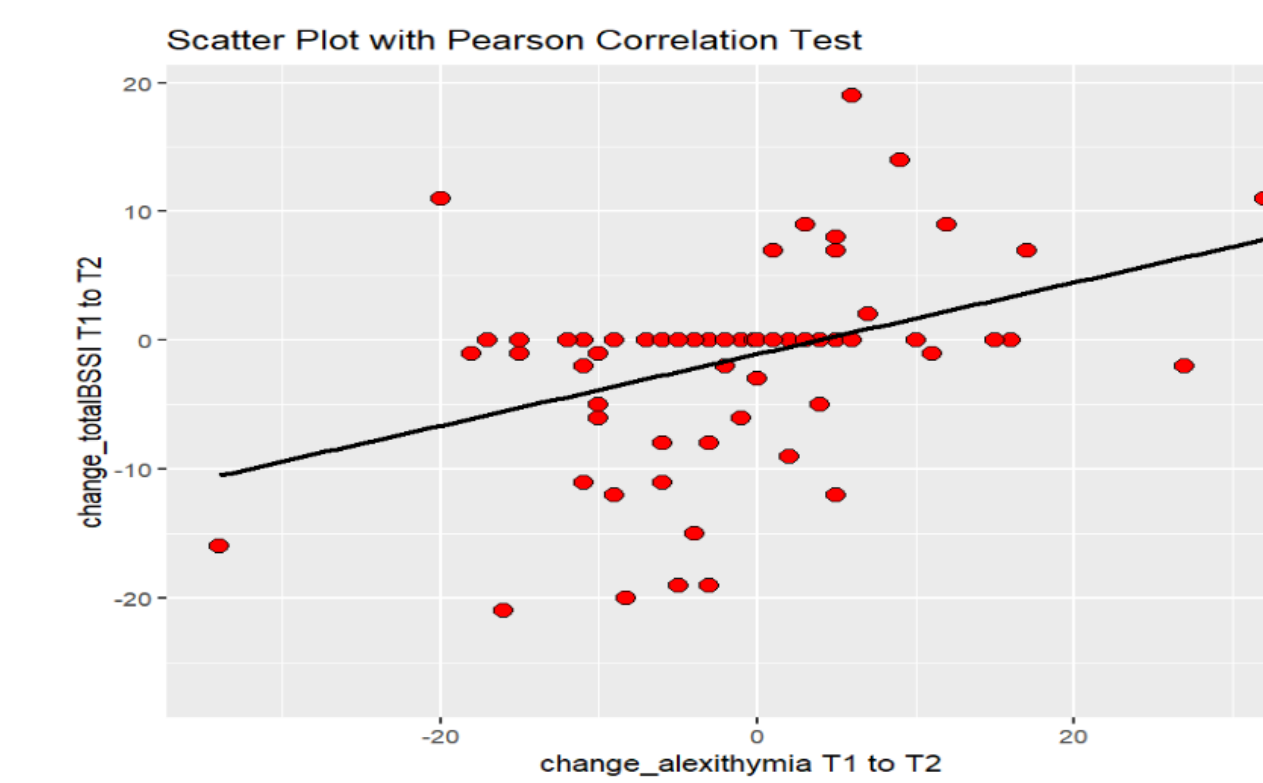
Results

Adolescents showed declining total TAS scores over time (Fig. 1).

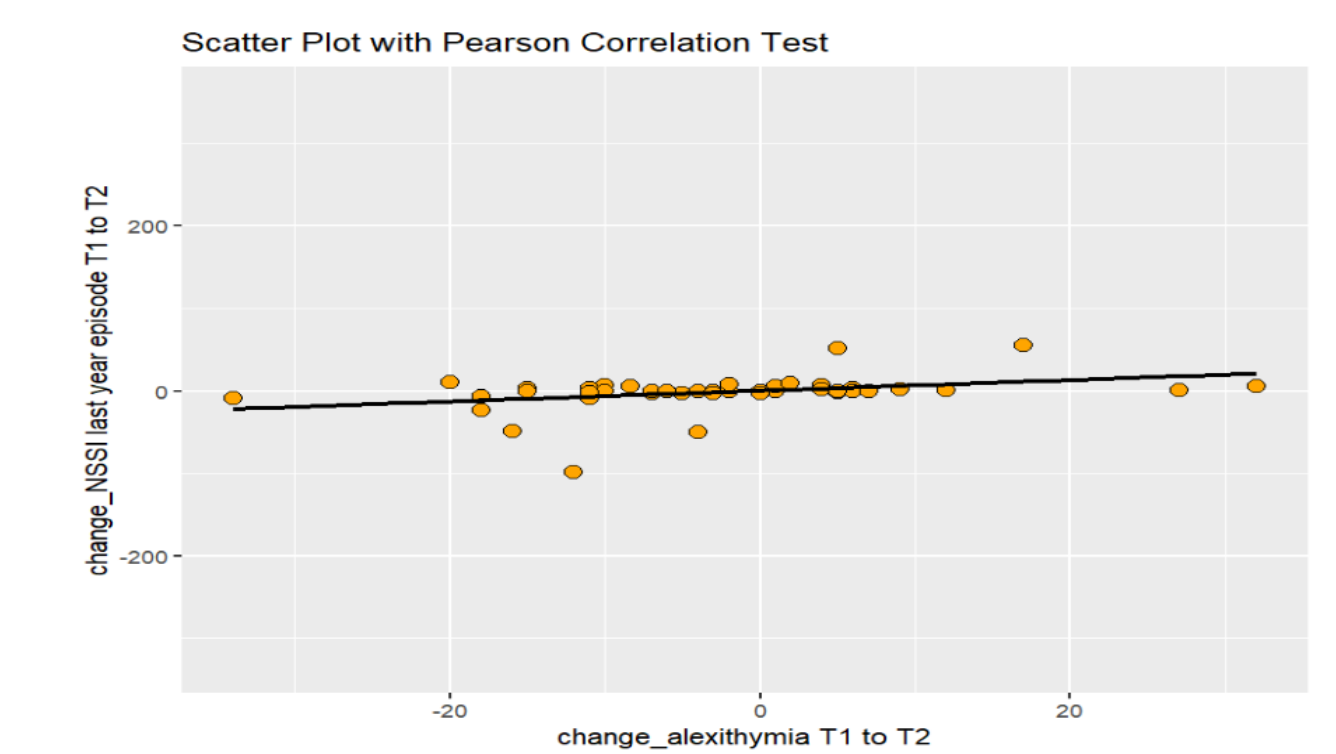
The changes in the total TAS score, BSSI scores, and NSSI last-year episodes from T1 to T2 were significantly positively correlated. No significant correlation was found between them from T2 to T3 (Fig. 2).

SEM revealed that negative urgency at T2 significantly mediated the relationship only between alexithymia at T1 and BSSI at T3 (Fig.3).

Fig. 2: Correlations between changes in TAS score /BSSI score and TAS/NSSI last-year episodes from T1 to T2.



TAS/BSSI ($r = 0.4$, $p = 0.00026$)



TAS/NSSI last-year episode ($r = 0.35$, $p = 0.016$)

Fig. 1: Box plot showing a decrease in the mean of TAS total score across time points

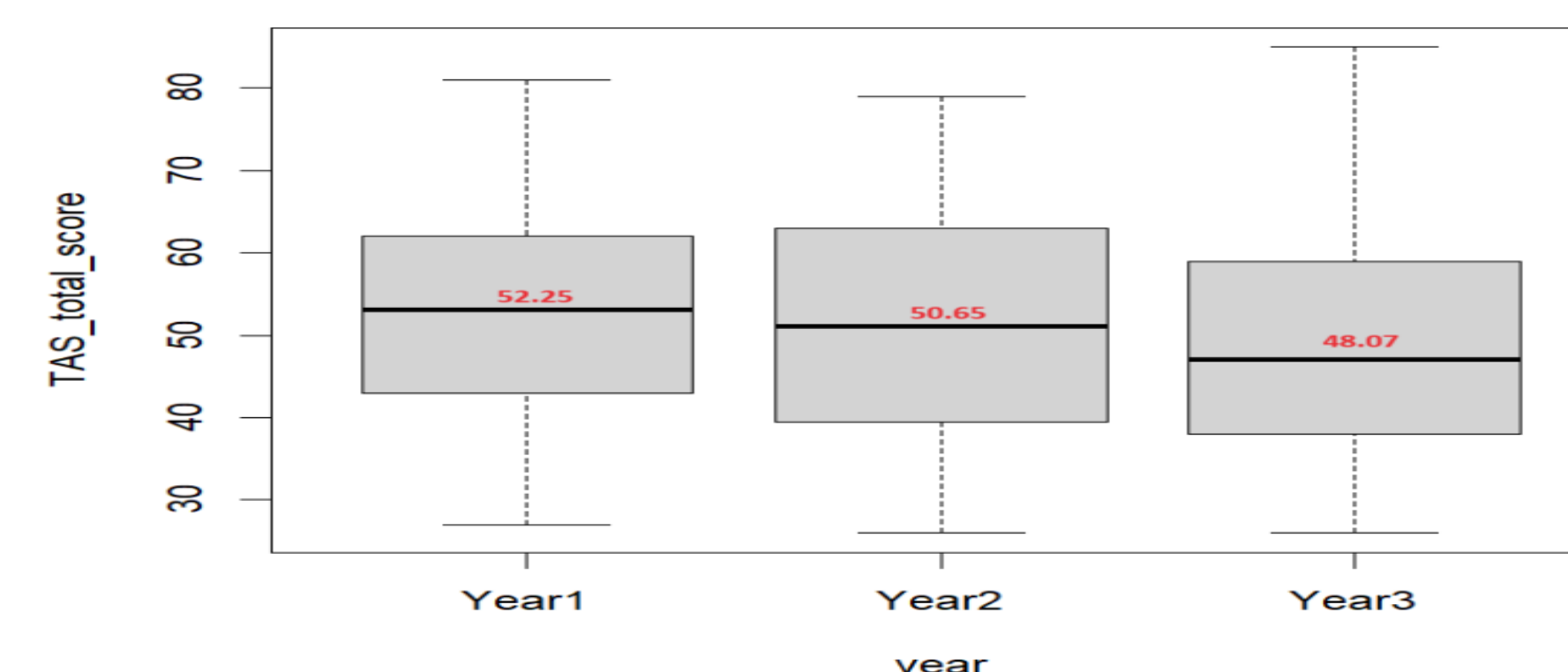
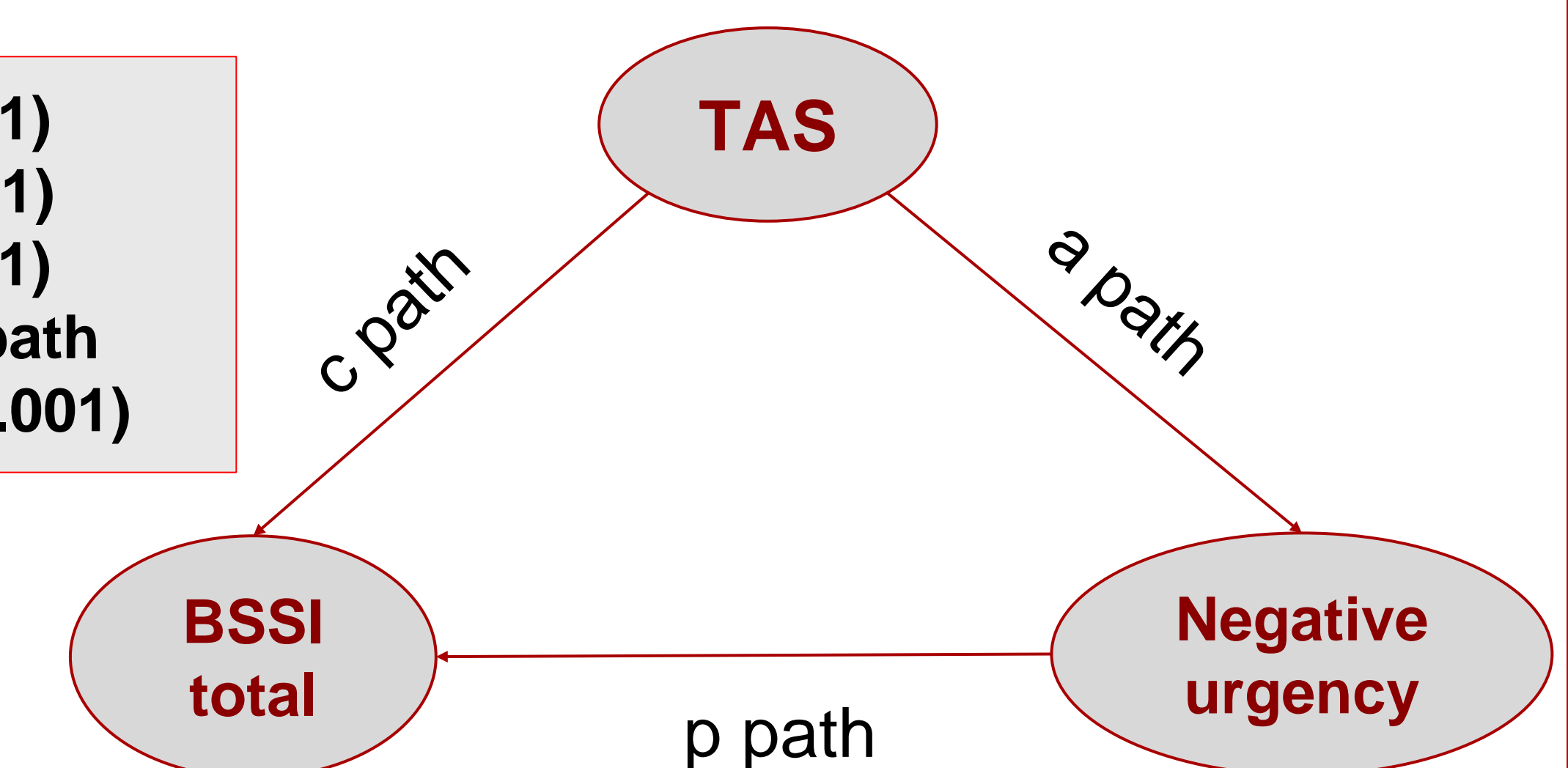


Fig. 3: SEM for mediation pathway

a path ($p < 0.001$)
b path ($p < 0.001$)
c path ($p = 0.171$)
a*b mediation path ($\beta = 0.152$, $p = 0.001$)



Conclusion

This study underscores dynamic changes in alexithymia and its relationship between NSSI and BSSI over time, emphasizing the mediating role of negative urgency. Interventions targeting adaptive emotion-regulating strategies could help adolescents recover from self-harm.