Reciprocal Relation Between Social Anxiety and Social Functioning in Autistic Adults

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Introduction

- There are high rates of social anxiety in autistic adults, but much is unknown about the relationship between anxiety symptoms and social functioning in autism.[1]
- Few studies have examined the role of social anxiety in response to social skills group treatments for autistic adults.
- TUNE In (Training to Understand and Navigate Emotions and Interactions) is a cognitive-behavioral and mindfulness-based program for autistic adults, consisting of three components aiming to address different aspects of social functioning.
- Results from a randomized control trial (RCT) of TUNE In show that responses to TUNE In are variable across participants.
- Because social anxiety is prevalent in autistic adults, it is possible that participants' anxiety might be a key moderator in responses to TUNE In.

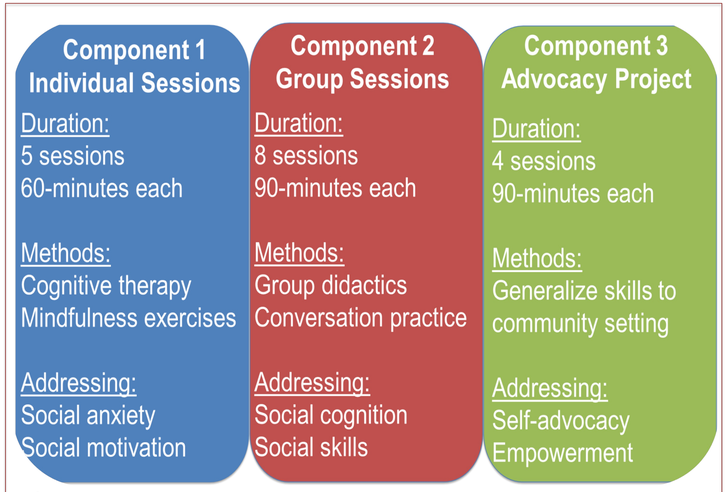

Figure 1. TUNE In structure

Methods

- TUNE In participants were randomized to treatment or control groups, with 20 in each group. There were two cohorts with groups of 3-6 participants each.
- The primary outcome measure for this RCT was the Social Responsiveness Scale, Second Edition for Adults (SRS-2), which is a 65-item questionnaire used to measure social functioning through informant reports (SRS-2 IR) and self-reports (SRS-2 SR).
- Self-reports were given at baseline, after Component 1, after Component 2, and post-treatment. Informant reports were given at baseline and post-treatment.
- The Liebowitz Social Anxiety Scale (LSAS) was used to measure social anxiety in participants at baseline and post-treatment through self-reports.
- Reliable Change Index (RCI) was used to determine which participants were improving reliably in TUNE In.
- Hierarchical linear modeling was used to look at the change in SRS scores over time between the treatment and control groups, with LSAS included as a moderator variable.

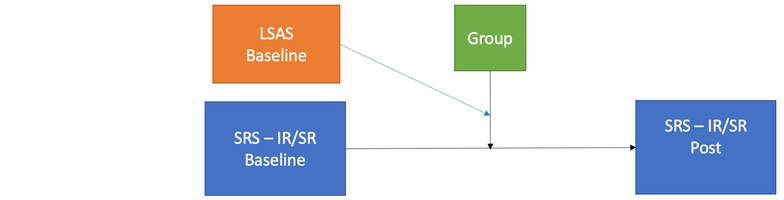

Figure 2. Moderation Model with three-way interaction between SRS baseline and LSAS baseline and group predicting SRS post-treatment

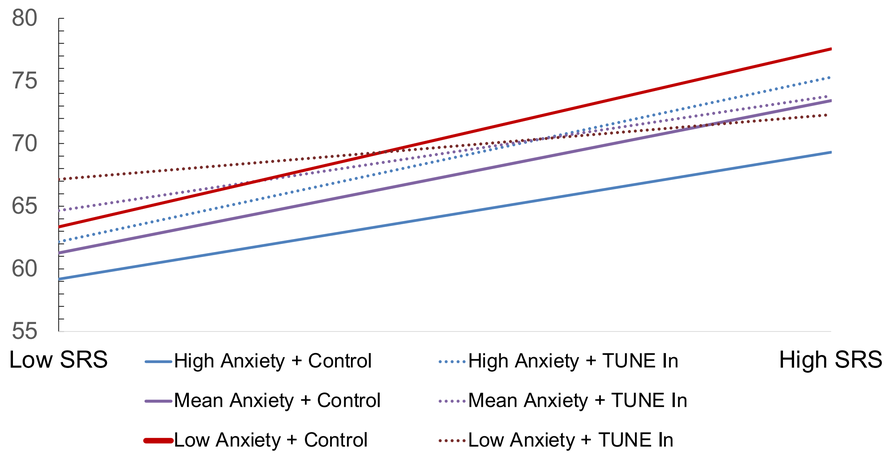

Figure 3. Three-way interaction between baseline SRS, baseline LSAS, and treatment group in predicting post-treatment SRS scores

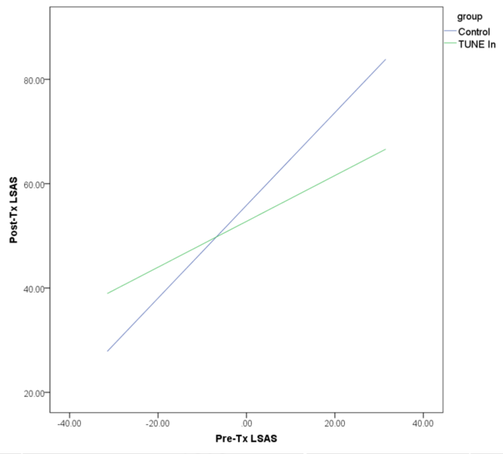

Figure 4. Baseline and post-treatment LSAS scores for treatment and control group

Self - Report				Informant - Report			
Treatment		Control		Treatment		Control	
Anxiety Present							
no reliable change reliably improved reliably improved no reliable change no reliable change reliably improved reliably improved no reliable change reliably improved no reliable change no reliable change	45%	no reliable change no reliable change no reliable change no reliable change no reliable change no reliable change no reliable change no reliable change no reliable change reliably improved no reliable change	9%	reliably improved no reliable change no reliable change reliably improved no reliable change no reliable change reliably improved reliably improved no reliable change	44% 0%	no reliable change no reliable change no reliable change no reliable change no reliable change no reliable change reliably deteriorated reliably deteriorated reliably improved no reliable change	9% 18%
No Anxiety Present							
reliably improved no reliable change no reliable change no reliable change no reliable change no reliable change no reliable change	15%	reliably improved reliably improved no reliable change no reliable change no reliable change no reliable change no reliable change	30%	reliably improved reliably improved no reliable change reliably deteriorated	50% 25%	reliably improved reliably improved reliably deteriorated reliably deteriorated reliably deteriorated	40% 60%

Table 1. Anxiety as a moderator in reliable change results to TUNE In

Results

- There was a high percentage of reliable improvement in SRS-2 in the treatment group for participants with anxiety present at baseline compared to control participants with anxiety present, both in the SRS-2 IR (44% for treatment group vs. 9% for control group), as well in the SRS-2 SR (45% vs 9%) (Table 1).
- For participants without anxiety at baseline, reliable improvement results were similar between the treatment and control groups in informant-reports and in self-reports (Table 1).
- The effect of group (TUNE In vs Control) was only significant at high baseline anxiety in predicting change in SRS-2 SR scores (Figures 3 and 4).
- However, in SRS-2 IR scores, TUNE In participants with low anxiety improved over time (b= -2.52, p < .001) while control participants with moderate or mild anxiety worsened over time (both b> .92, both p < .04).

Discussion

- Overall, these results show that anxiety is a key moderator in participants' responses to TUNE In as indicated by reliable change scores.
- TUNE In is most effective for participants with any baseline anxiety, and especially effective for those with high baseline anxiety.
- These results suggest that social anxiety may play a larger role in social functioning.
- Programs like TUNE In, as a result, may enhance social functioning through addressing and reducing social anxiety.
- Future directions could include examination of the interplay between social anxiety and social functioning in outcomes and well-being for autistic adults.

Acknowledgements

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References

1. Zaboski, B. A., & Storch, E. A. (2018). Comorbid autism spectrum disorder and anxiety disorders: A brief review. *Future Neurology, 13*(1), 31–37. https://doi.org/10.2217/fnl-2017-0030