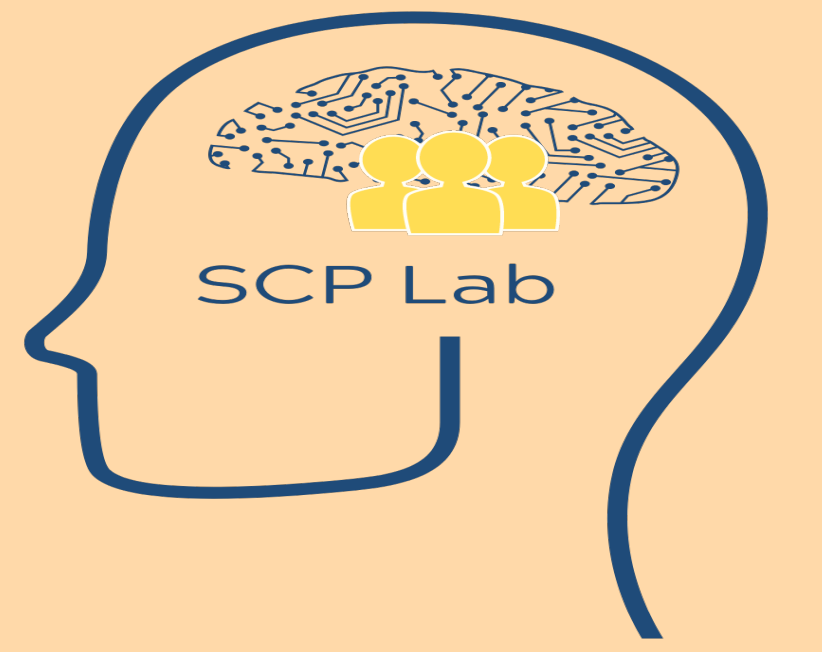




Introduction

- Social anhedonia, or the inability to experience social pleasure, is commonly observed in schizophrenia-spectrum disorders (SSDs), but its etiology remains unknown.
- Recent literature¹ argues that while in-the-moment pleasure experiences are intact in SSDs, anticipatory pleasure experiences may be disrupted; a phenomenon which may contribute to social anhedonia.
- Though extant studies have connected anticipatory pleasure deficits to social anhedonia, no work has examined social affective forecasting (SAF) accuracy², or the difference between anticipatory and consummatory emotion ratings for social interactions, using experiential sampling data in individuals with SSDs.
- Thus, here we use experience sampling methodologies to examine whether group differences moderate the relationship between SAF accuracy and social anhedonia.

Methods

- 44 healthy adults (40.81 years $\pm$ 12.9 years; sex at birth: 26 F, 18 M) and 33 patients with schizophrenia or schizoaffective disorder (43.84 $\pm$ 12.07 years; sex at birth: 16 F, 17 M) were included in current analyses.
- Participants completed 8 daily diary entries, indicating 13 anticipatory emotions for future social interactions, and after the interactions, 13 consummatory emotions for those same interactions.
- Three SAF variables were calculated: a positive SAF accuracy variable, a negative SAF accuracy variable, and an overall SAF accuracy variable. The positive and negative SAF accuracy variables reflected the absolute difference in anticipatory and consummatory ratings for positive and negative emotions, respectively, for each interaction reported. A final, overall SAF accuracy variable was calculated by averaging the positive SAF and negative SAF variables (higher scores = higher social affective forecasting accuracy).
- Social anhedonia was measured using the Revised Social Anhedonia Scale (RSAS).

Poorer accuracy in predicting negative emotions and overall emotions is related to social anhedonia.

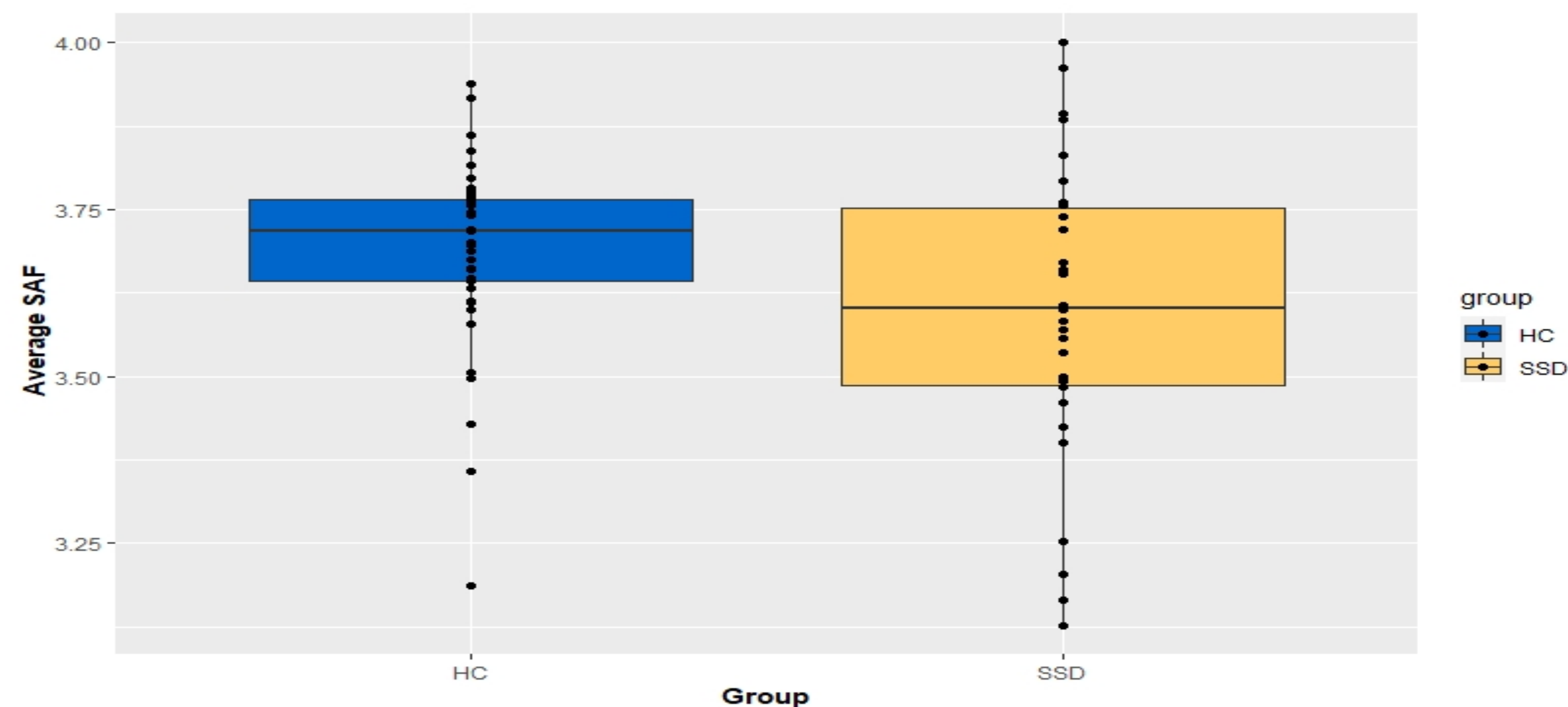


Figure 1. demonstrates that our SSD group was associated with lower overall SAF accuracy ($b = -0.09$ (S.E. 0.04), $t(70) = -2.09$, $p = 0.04$).

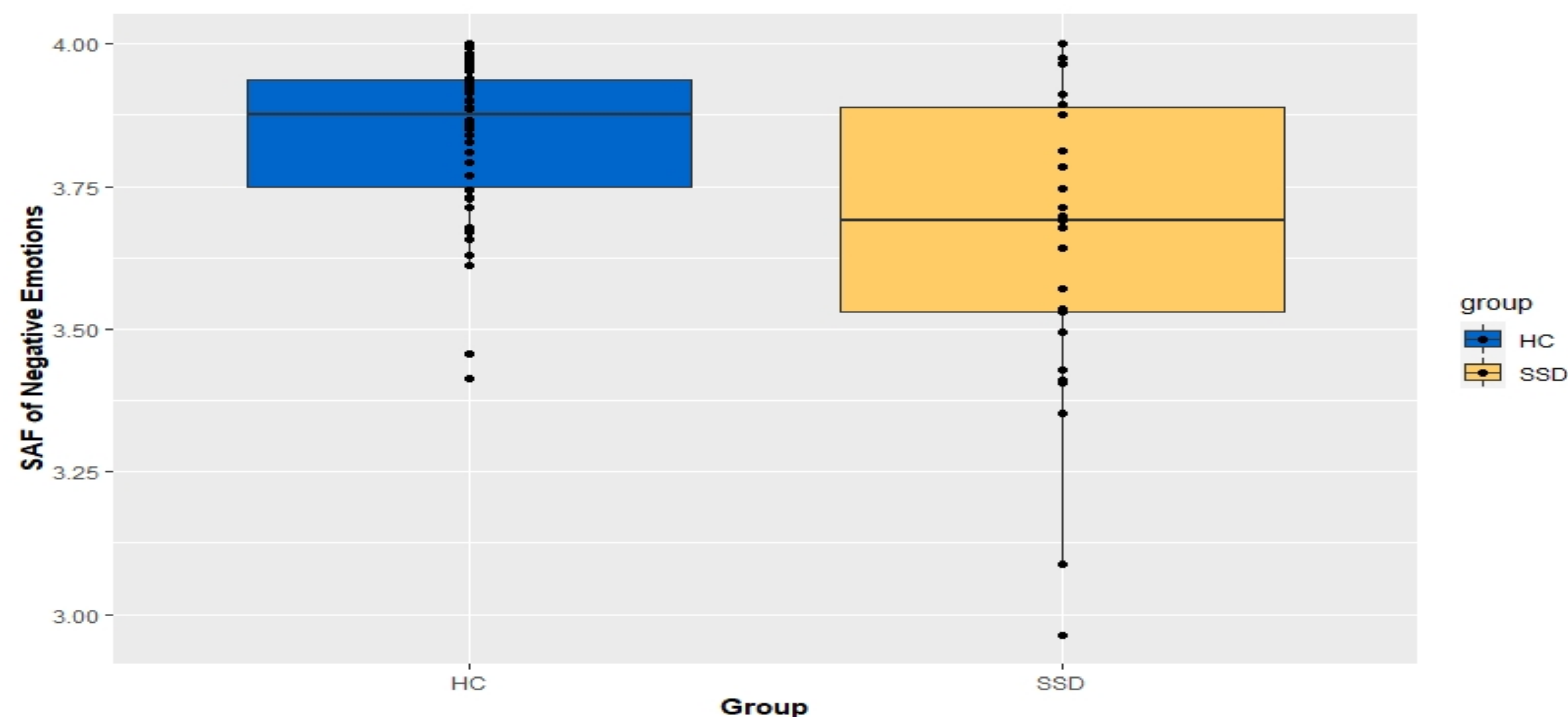


Figure 2. demonstrates that our SSD group was associated with lower SAF accuracy of negative emotions ($b = -0.17$ (S.E. 0.05), $t(70) = -3.70$, $p < 0.001$).

Table 1. LME model relationships between SAF variables and RSAS Total

Relationship between:	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
SAF average & RSAS Total	-0.01	0.005	-2.39	0.02*
SAF of positive emotions & RSAS Total	-0.008	0.007	-1.12	0.27
SAF of negative emotions & RSAS Total	-0.02	0.006	-2.98	0.004*

Results

- The difference in RSAS Total scores between groups was trending towards significance $t(54) = -1.98$, $p = 0.05$, $d = -0.49$, 95 % CI [-0.99 - 0]).
- Using a series of multilevel linear mixed-effects (LME) models, we found that the SSD group, compared to HCs, had significantly lower overall SAF accuracy and negative SAF accuracy, but not positive SAF accuracy (**Fig 1 & 2**).
- We found that overall SAF accuracy and negative SAF accuracy, but not positive SAF accuracy, are significantly related to RSAS Total scores (**Table. 1**). However, group did not moderate these relationships ($p > 0.05$).

Conclusions

- Taken together, this is the first study to investigate anticipatory pleasure deficits in SSDs by examining the discrepancy between anticipatory and consummatory emotion ratings collected from daily diary data.
- Our results suggest that individuals with SSDs are significantly worse at predicting their overall emotions and their negative emotions when thinking about future social interactions, compared to HCs.
- We find evidence to suggest that social affective forecasting ability may serve as a target for interventions (i.e., prospection training of future social interactions) aimed at alleviating social anhedonia.

References

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