

The Influence of Anxiety on Social Preferences in Adolescents: Exploring Group Size and Duration Choices

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Background

- Anxiety is an evolutionary adaptation that helps humans cope with environmental stressors and social situations (Bateson et al., 2011; Memelstein, 2022).
- Individuals who prefer smaller social groups or less time with others may experience heightened anxiety due to the stress of social interactions and perceived rejection (Chen et al., 2024).

Objective

- There is a greater need to understand social decisions related to quantity, such as time spent with others or preferred group size, as these decisions can significantly impact feelings of belonging, loneliness, and social satisfaction.
- Specifically, we hypothesized that adolescents who preferred smaller groups or shorter durations of social interaction would report higher anxiety scores.

Methods

- 24 adolescents (ages 12-17, Table) completed a "FortuneTeller" task (Figure 1)
- After completing 80 decisions, participants choices were grouped into four main archetypes:

High Social Quantity ↑ Group Size ↑ Duration	Low Social Quantity ↓ Group Size ↓ Duration
Group Size Preference ↑ Group Size ↓ Duration	Duration Preference ↓ Group Size ↑ Duration

Anxiety Measure

- Generalized Anxiety Disorder-7 (GAD-7) asks questions regarding anxiety levels and measures the severity of generalized anxiety disorder

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Example of a **Duration Constraint** trial where participants decide on **group size**

Go to the **beach**
8 hours

2 friends

10 friends

Example of a **Group Size Constraint** trial where participants decide on **duration**

Go to the **beach**
3 friends

7 hours

10 minutes

Figure 1. "Fortune Teller" Task

Participants were given an activity, shown a constraint (either group size or duration), and then made choices that were either large or small quantity.

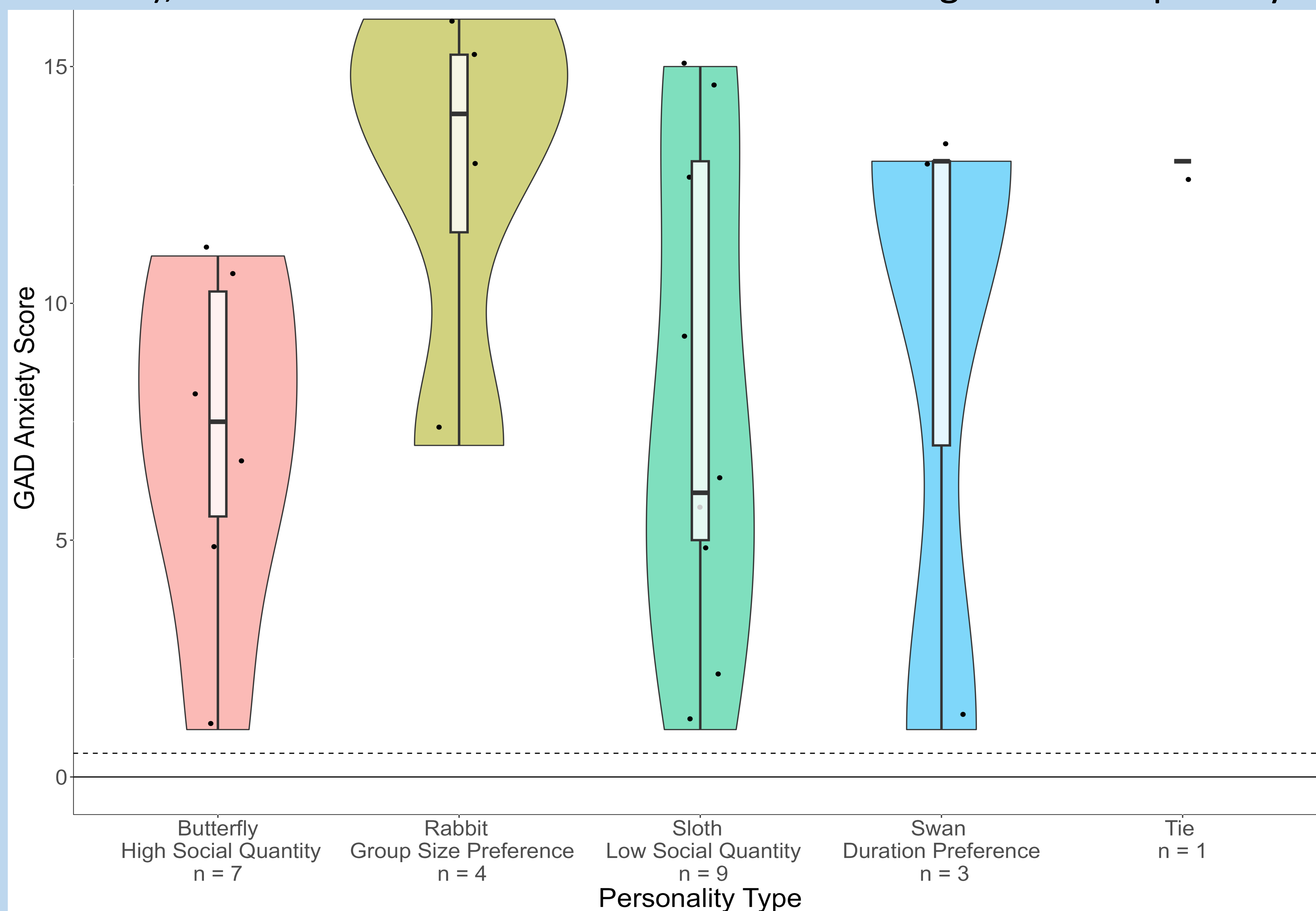


Figure 2. Relationship between Personality Type and Anxiety Levels

Violin plots comparing personality type belonging with GAD-7 anxiety scores. One-Way ANOVA indicated that personality type did not predict anxiety level, $F(4,18) = 1.03, p = .42$.

Adolescents n=24	
Age M (SD); Range	14.3 (1.55); 12-17
Sex	Female: 50%, Male: 50%
Race	White: 83.3%, Black: 12.5%, Mixed: 4.2%
Hispanic/Latino	Yes: 17%, No: 83.3%

Table 1. Study Demographics

MAIN TAKEAWAY

While we found no statistically significant differences in anxiety scores between high social and low social preference groups, we observed an unexpected trend in which **participants who preferred larger group sizes had the highest median anxiety scores**. Future studies should explore this trend, aiming to include a larger sample size and incorporate self-reported social anxiety measures alongside generalized anxiety. By further investigating how anxiety influences social quantity decisions, we can deepen our understanding of the developing social brain.

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