The Soundtrack of Perception: Boosting Emotion Recognition Through Personalized Music

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Introduction

- Music influences emotion & attention
Favorite music: mood, relaxation, focus
Personalized music
→ stronger emotional response (reward areas)
Generic music
→ hinders ability in emotion recognition
Study: *personalized* vs. *generic playlist*
→ mood & facial emotion recognition

Methods

Participants: (N = 19): M age = 23.4; 15 female, 4 male)
- Each created personalized playlist (4–5 favorite songs)
Mood Assessment: PANAS pre/post each session (20 emotions, 5-point scale)
Sessions:
 Day 1 – Own "Liked" playlist
 Day 2 – "Yoked Other" playlist
Emotion Recognition Task:
During music: identify facial emotions (e.g., joy, fear, sadness)
 → Reaction time & accuracy recorded

Hypothesis

Positive Affect	Negative Affect
H0: No difference in PA pre vs. post personalized music	**H0**: No difference in NA pre vs. post personalized music
H1: PA higher post personalized music	**H1**: NA lower post personalized music

ERT Accuracy

H0: No difference in emotion recognition accuracy between own and yoked playlist
H1: Higher emotion recognition accuracy in own playlist

Results

Positive Affect Change

Increased positive affect post music

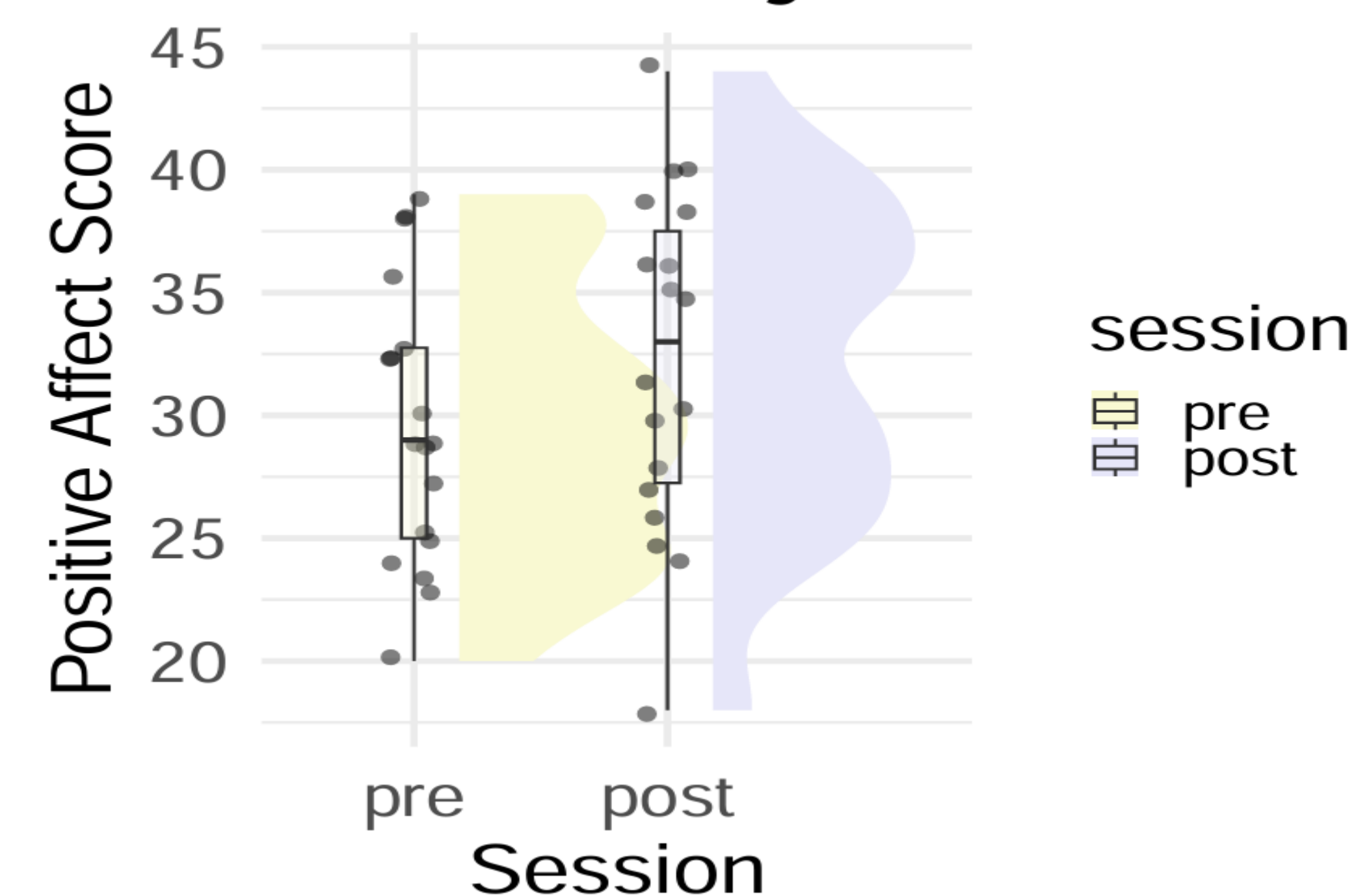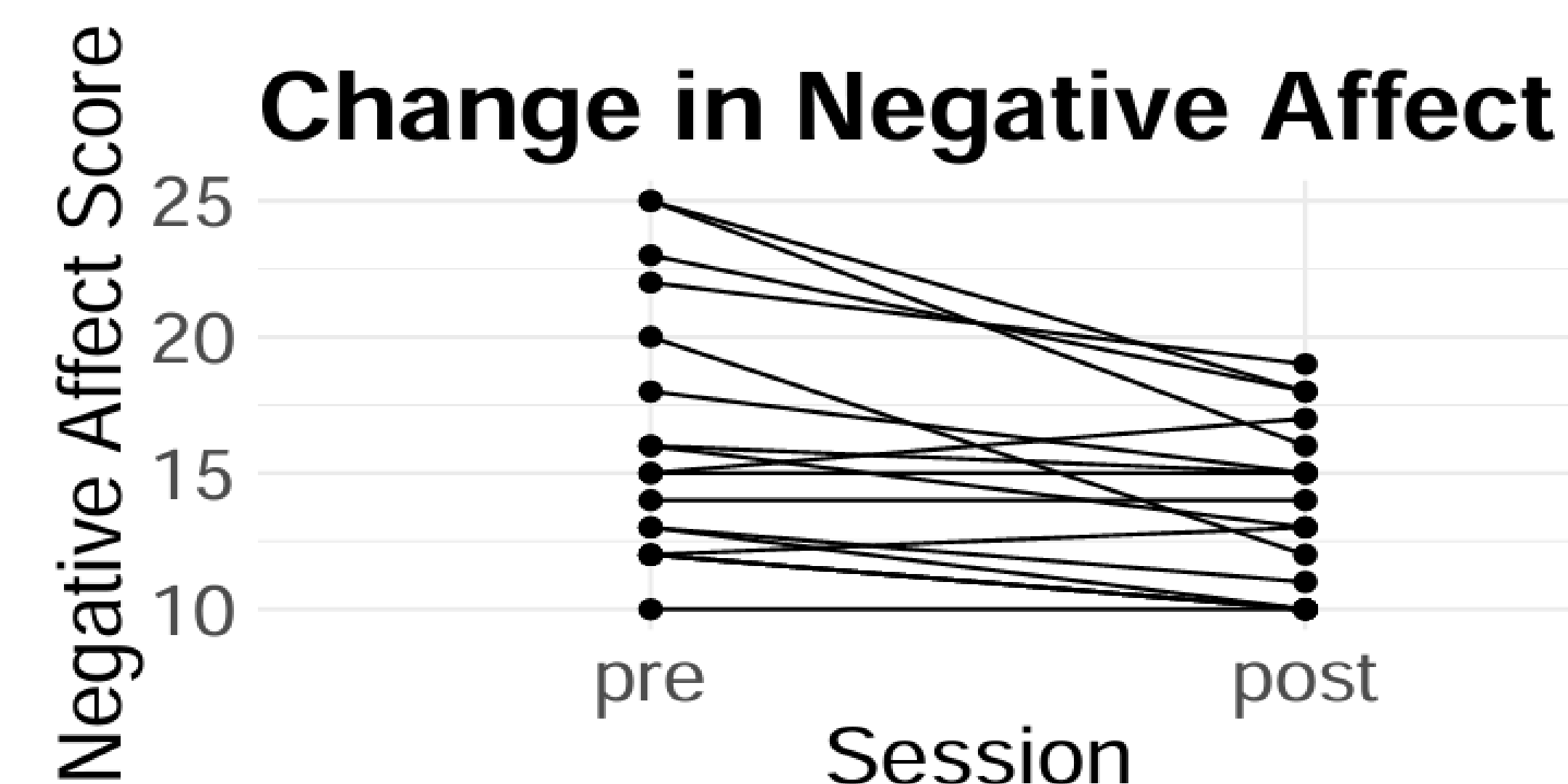Change in Positive Affect
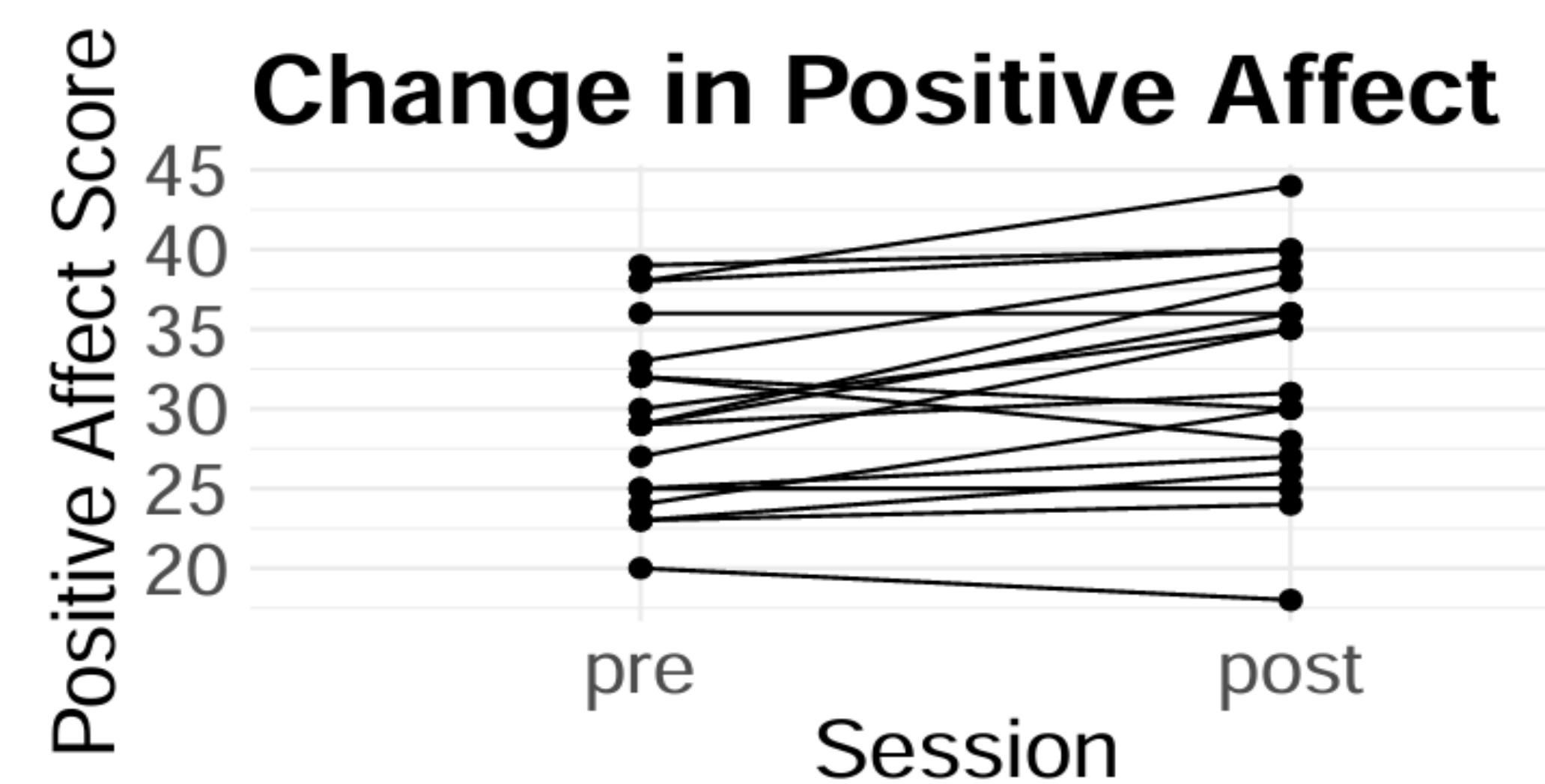
Increased mean (+2.78)
p = 0.0056 → significant difference

Positive Affect by Session

Negative Affect Change

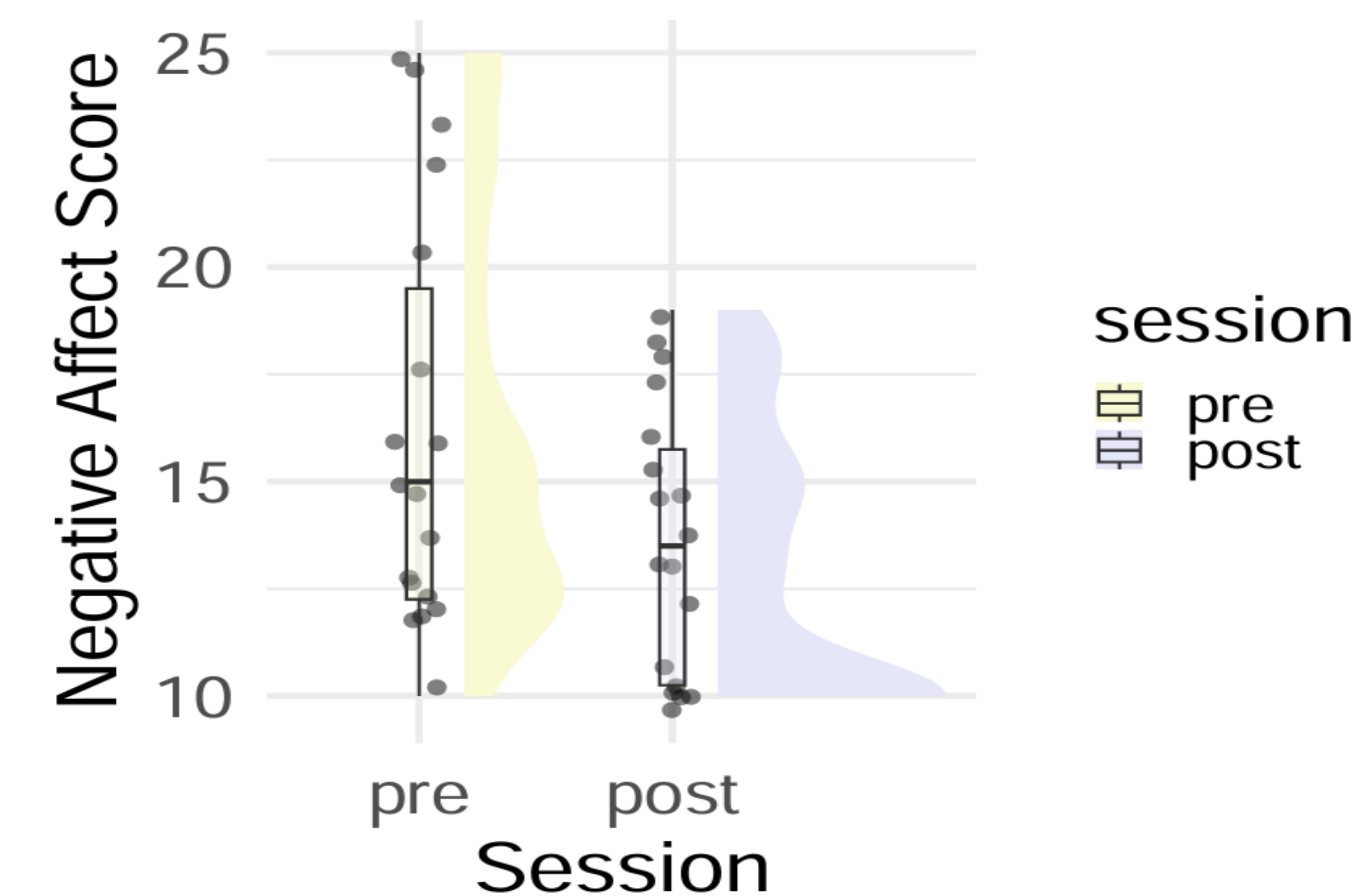**Decreased negative affect post music**

Change in Negative Affect

Decreased mean (-2.61)
p = 0.0019 → significant difference

Negative Affect by Session

Accuracy in ERT per session

p = 0.505 → no significant difference

Boxplot Accurary in ERT per session
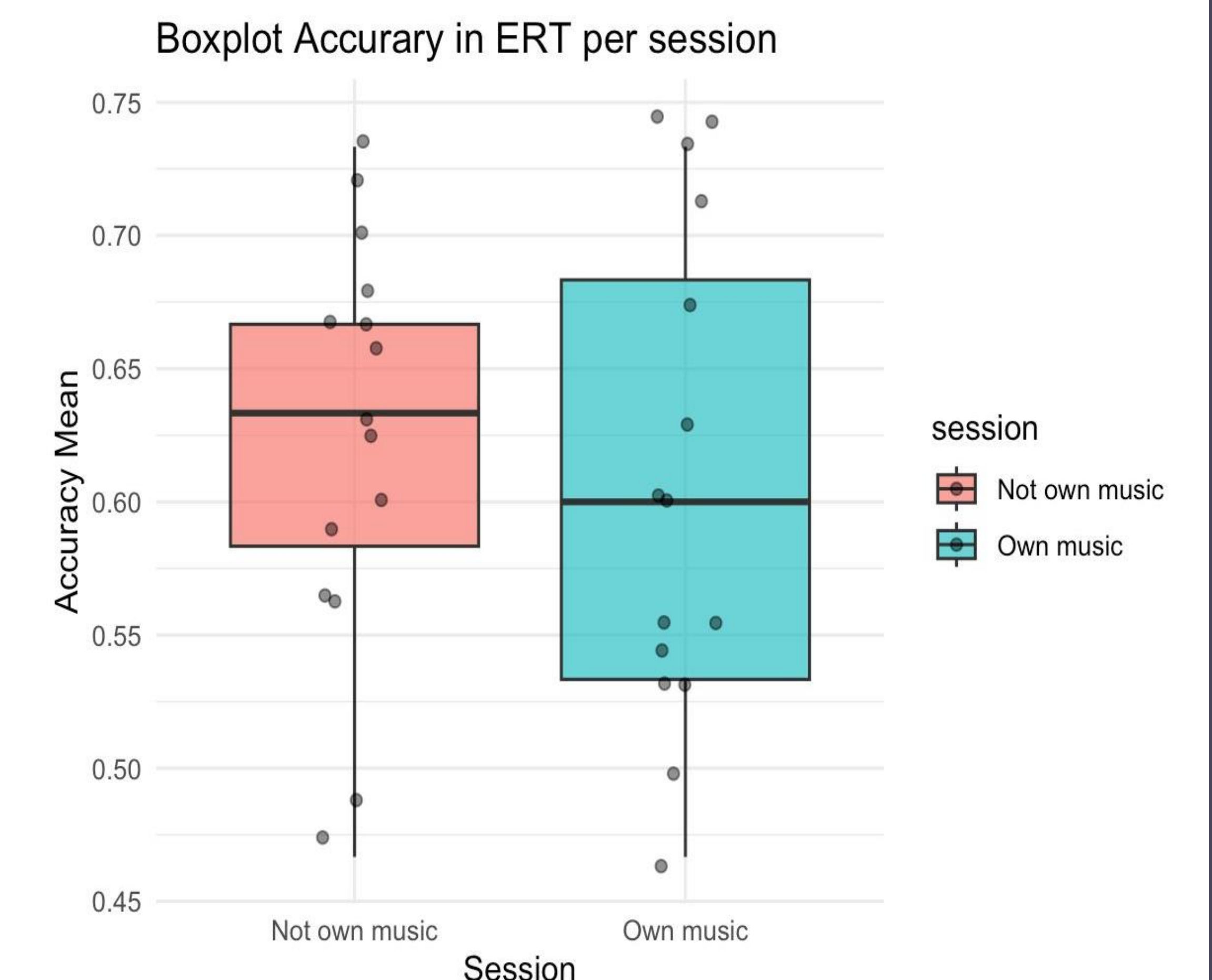
Discussion

Significant effect of preferred music on mood but not emotion recognition.
Possible Explanations
• Small effect size + sample size (n = 18)
 → limited statistical power
• Measurement Limitations: Some participants did not listen to the full playlist
• High individual variability
• Emotion recognition task may have lacked sensitivity

For future research:
- Larger sample size
- Differentiation between music types
- Analyze reaction times

References

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