



The University of South Carolina

# A Step Toward.... Characterizing Friendships

## And Other Relationships in Autistic Adolescents

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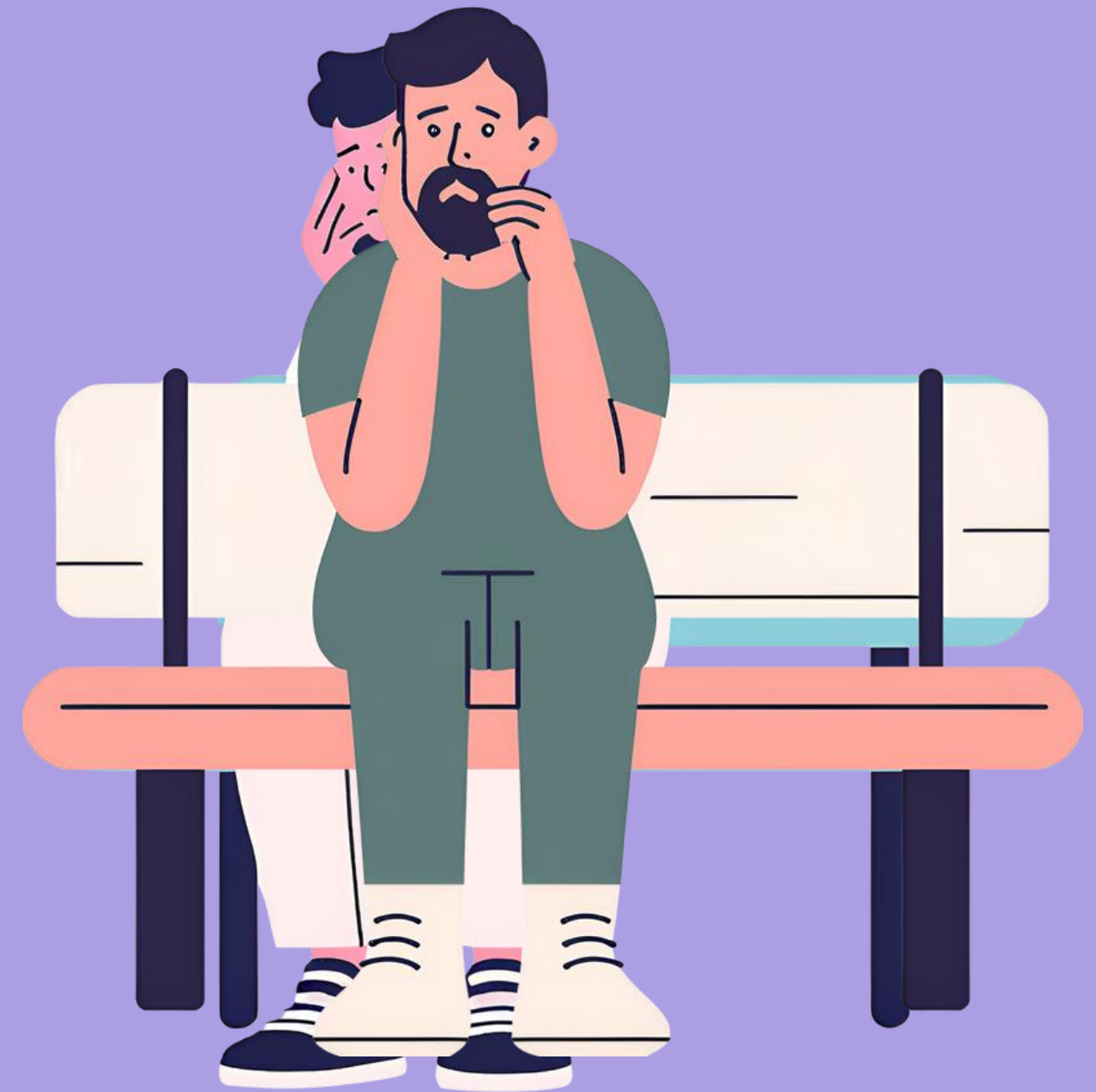
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Social connection is crucial  
for promoting well-being



While many autistic adolescents struggle to form and maintain relationships, several report positive relationships that aid in their well-being





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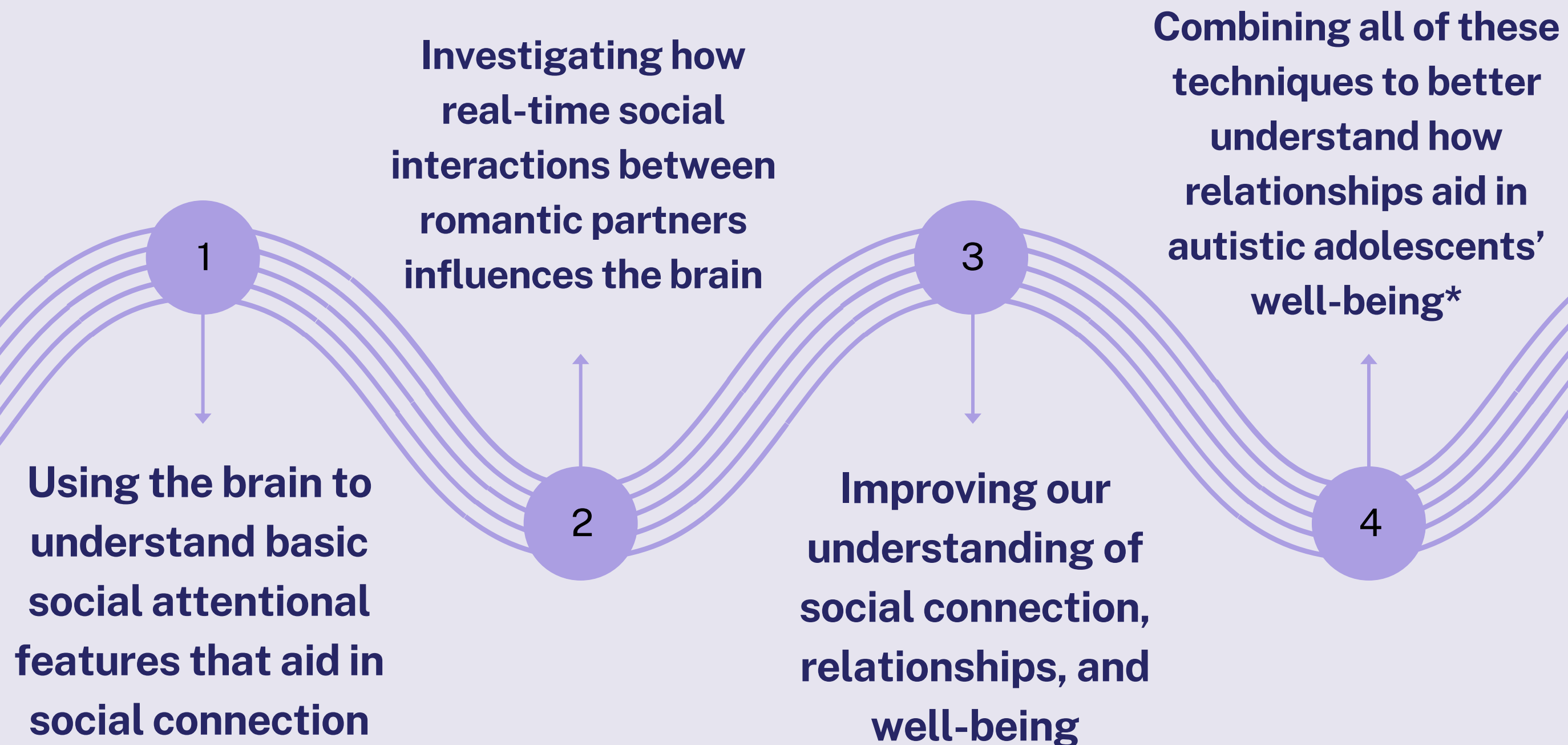
What do these positive relationships look like?

How can we leverage these relationships to increase well-being in the autistic adolescent population?



# The B-RAD Lab Pipeline

For Understanding Relationships in Autistic Adolescents



*\*Near future*

# Using the brain to understand basic social attentional features that aid in social connection



22 adults  
18-35 years old



**Participant's friend**



**AI-generated stranger**



**Celebrity lookalike  
(determined by AI)**



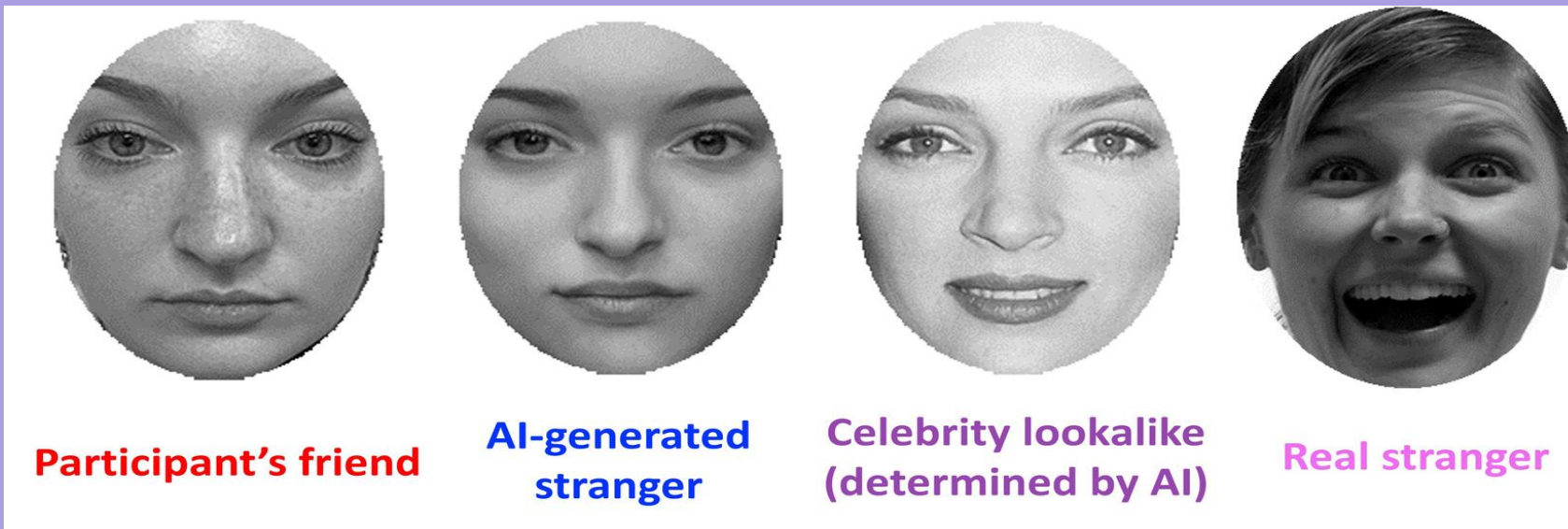
**Real stranger**



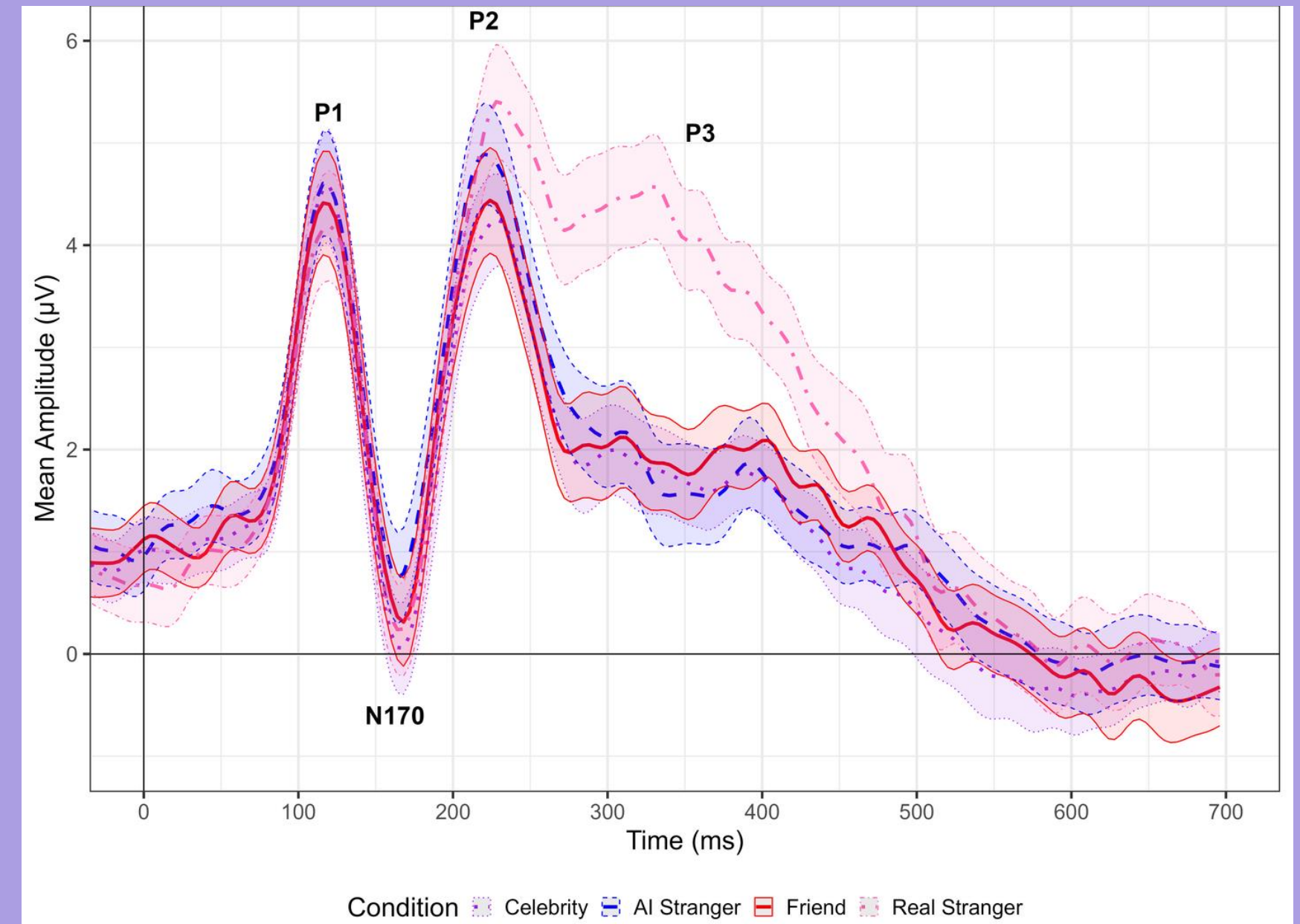
# Using the brain to understand basic social attentional features that aid in social connection



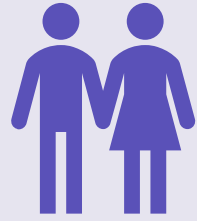
22 adults  
18-35 years old



The brain responds differently to familiarity and might be able to distinguish between AI generated faces.



# Investigating how real-time social interactions between romantic partners influences the brain



15 romantic partners  
22-40 years old



Yes Gaze, Yes Hands



No Gaze, Yes Hands



Yes Gaze, No Hands



No Gaze, No Hands







# Investigating how real-time social interactions between romantic partners influences the brain

  
15 romantic partners  
22-40 years old

  
Yes Gaze, Yes Hands

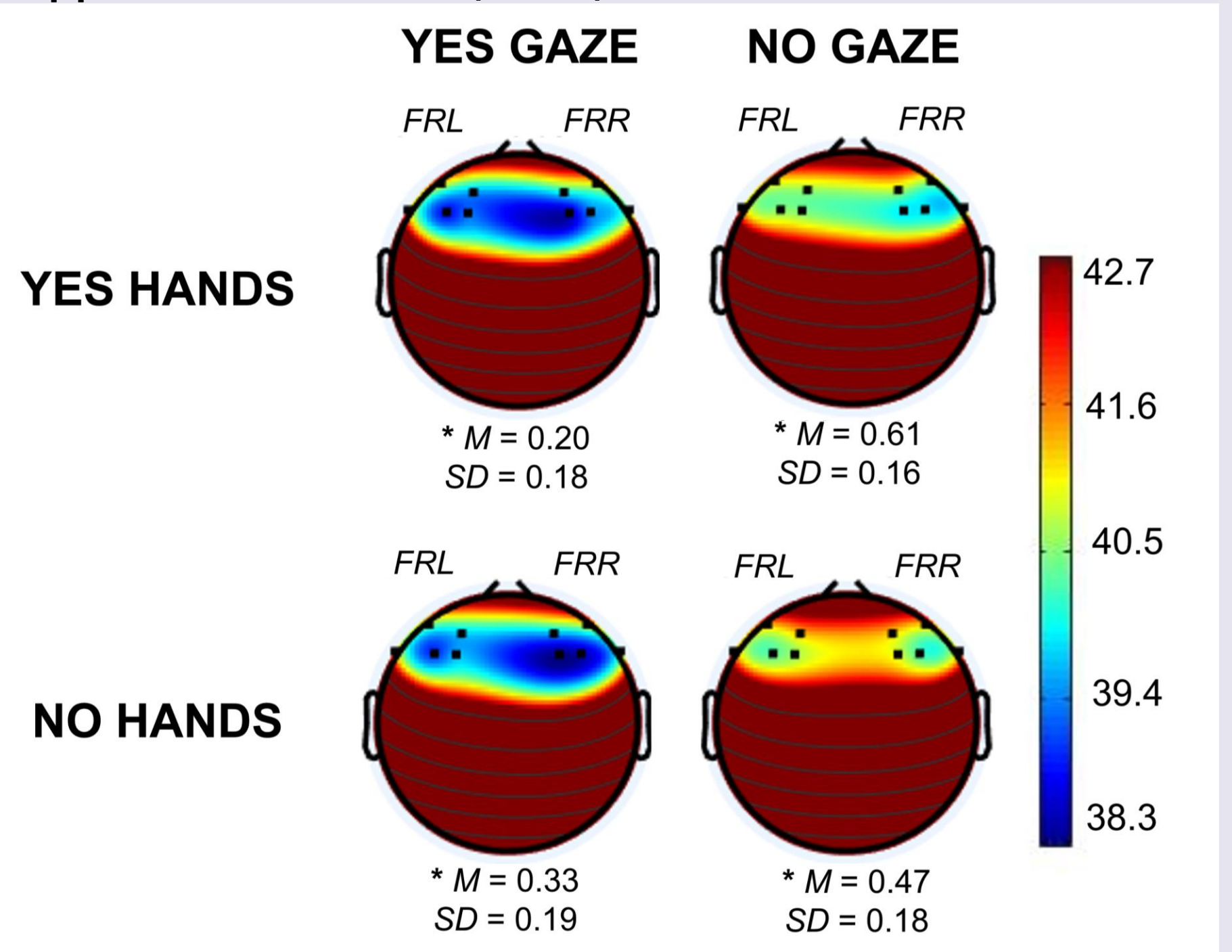
  
No Gaze, Yes Hands

  
Yes Gaze, No Hands

  
No Gaze, No Hands



\*Approach: FRL > FRR ( $M > 0$ ).

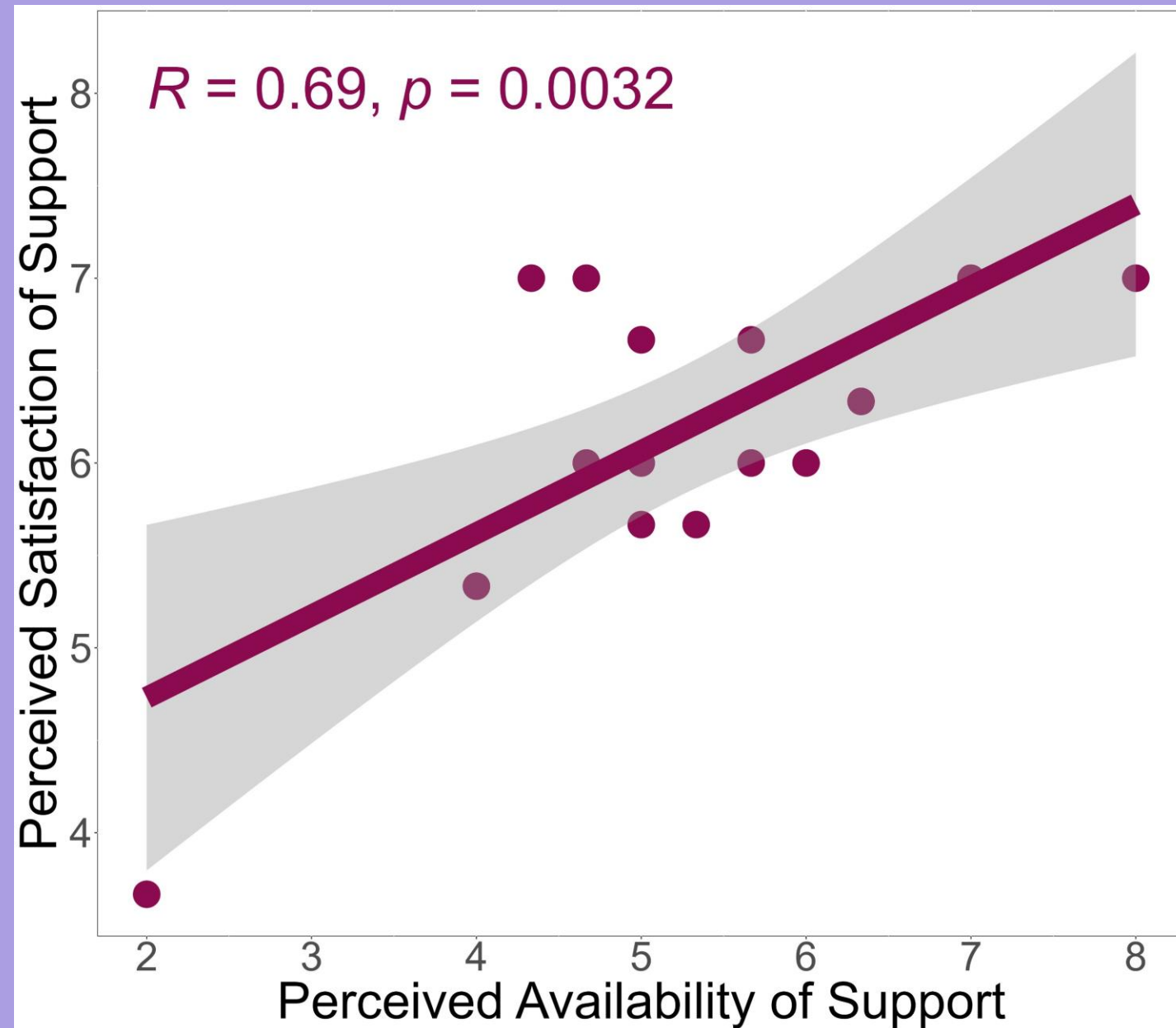


Neural signatures of approach vary based on non-verbal communication.

# Improving our understanding of how social connection, relationships, and well-being are related



16 adults  
18-35 years old



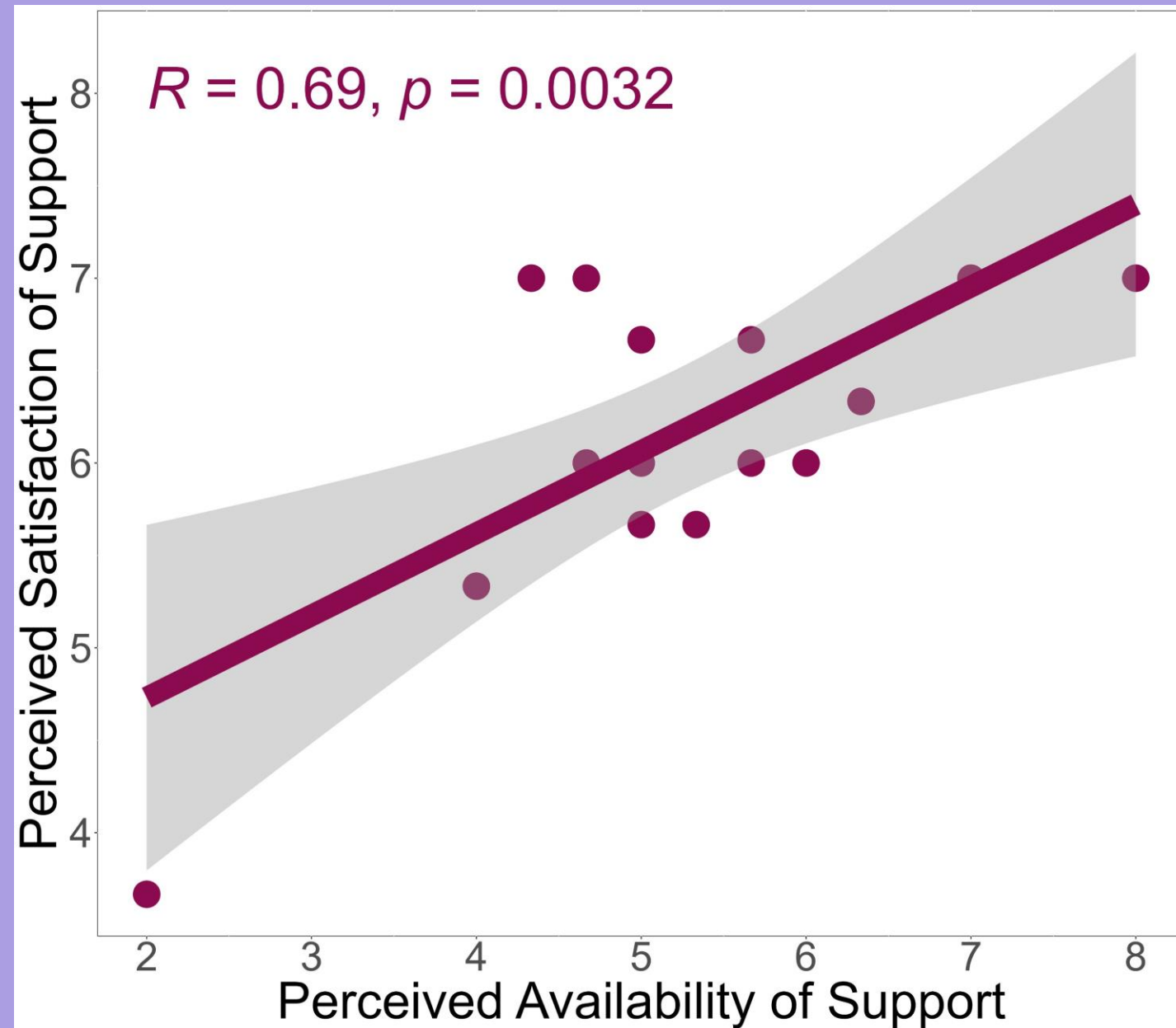
More available social support is related to greater feelings of satisfaction in that social support.



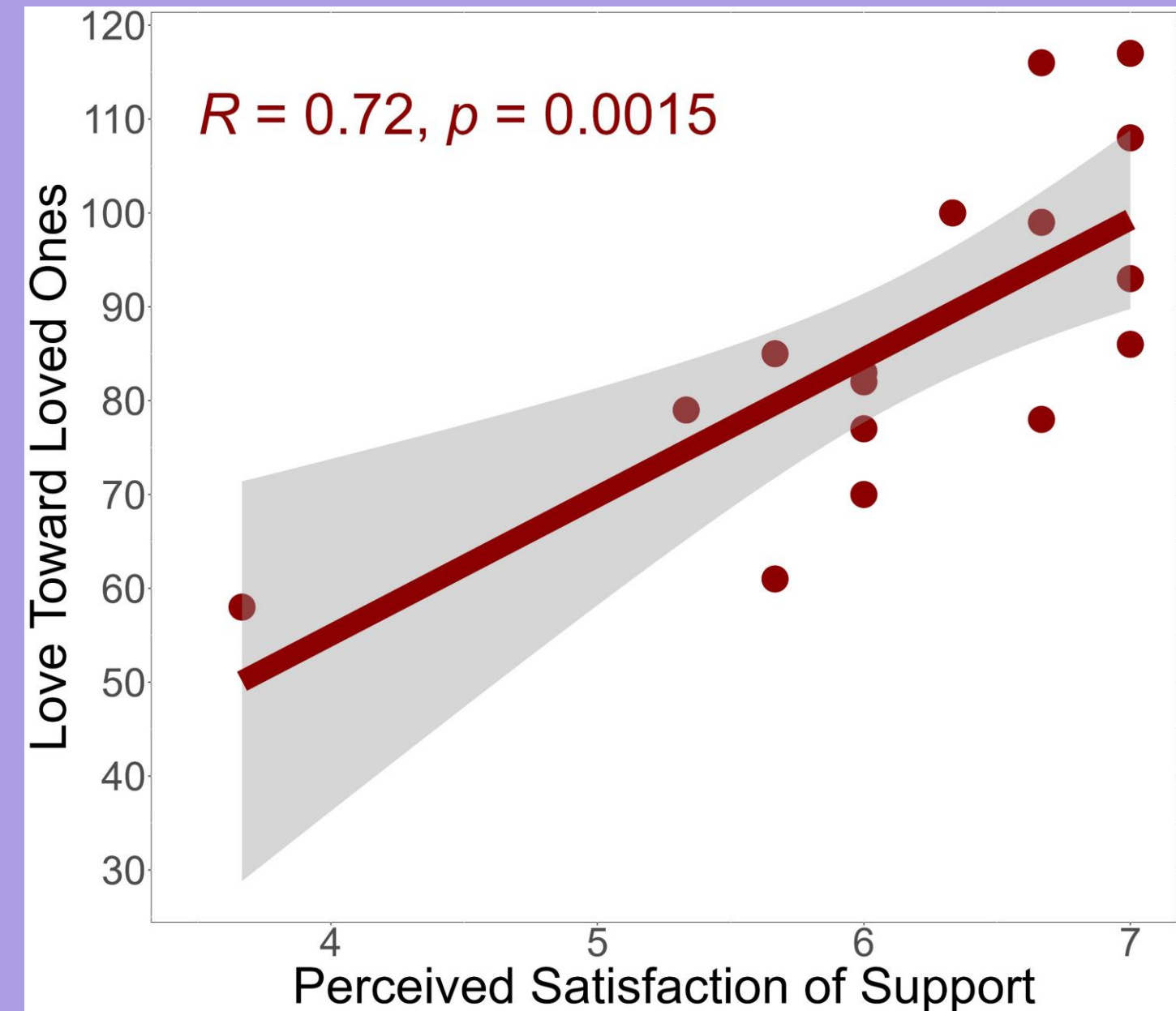
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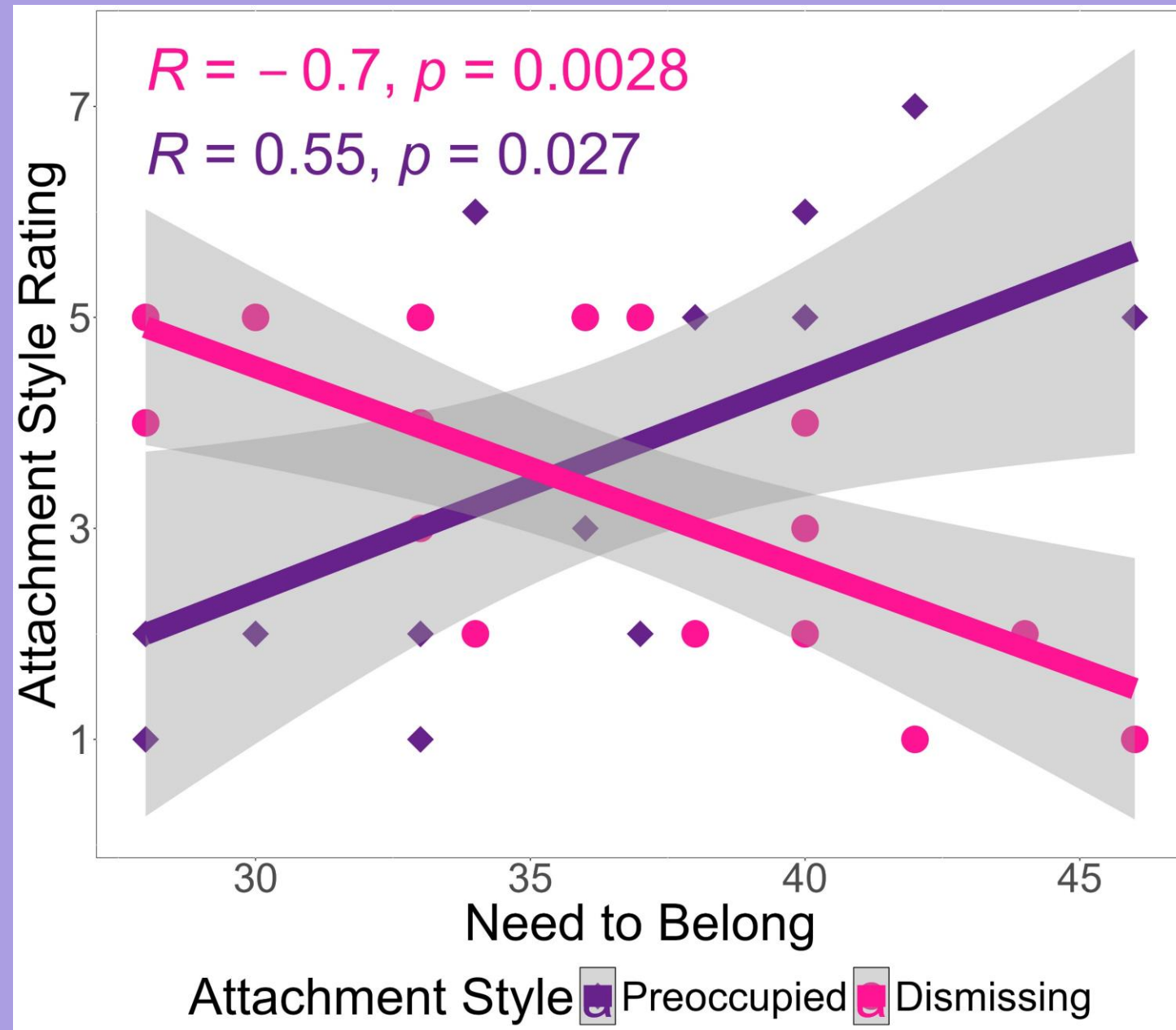
Greater feelings of love toward a loved one is related to greater feelings of satisfaction in overall social support.



# Improving our understanding of how social connection, relationships, and well-being



16 adults  
18-35 years old

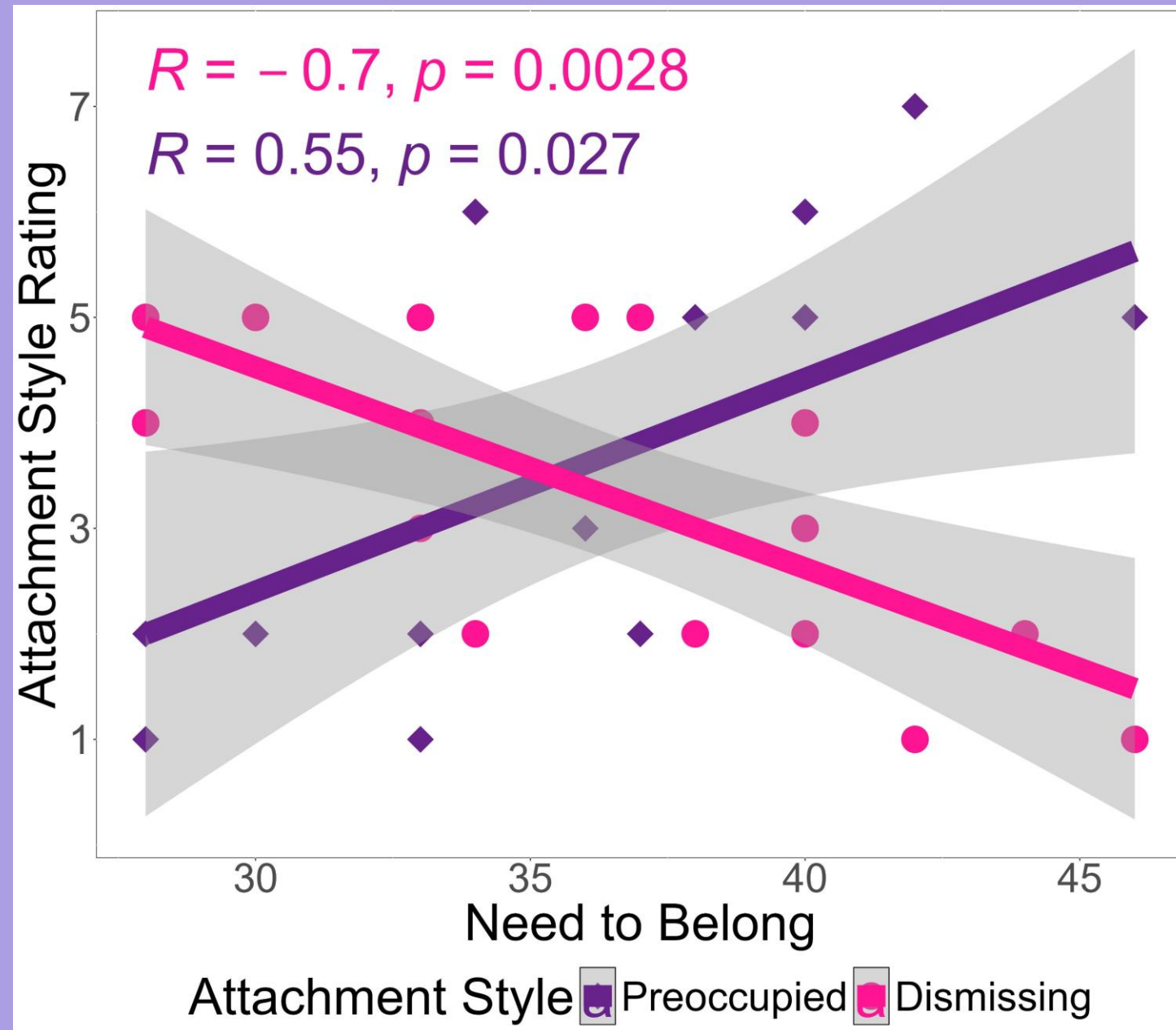


Stronger preoccupied and dismissive attachment styles are related to feeling need to belong differently.

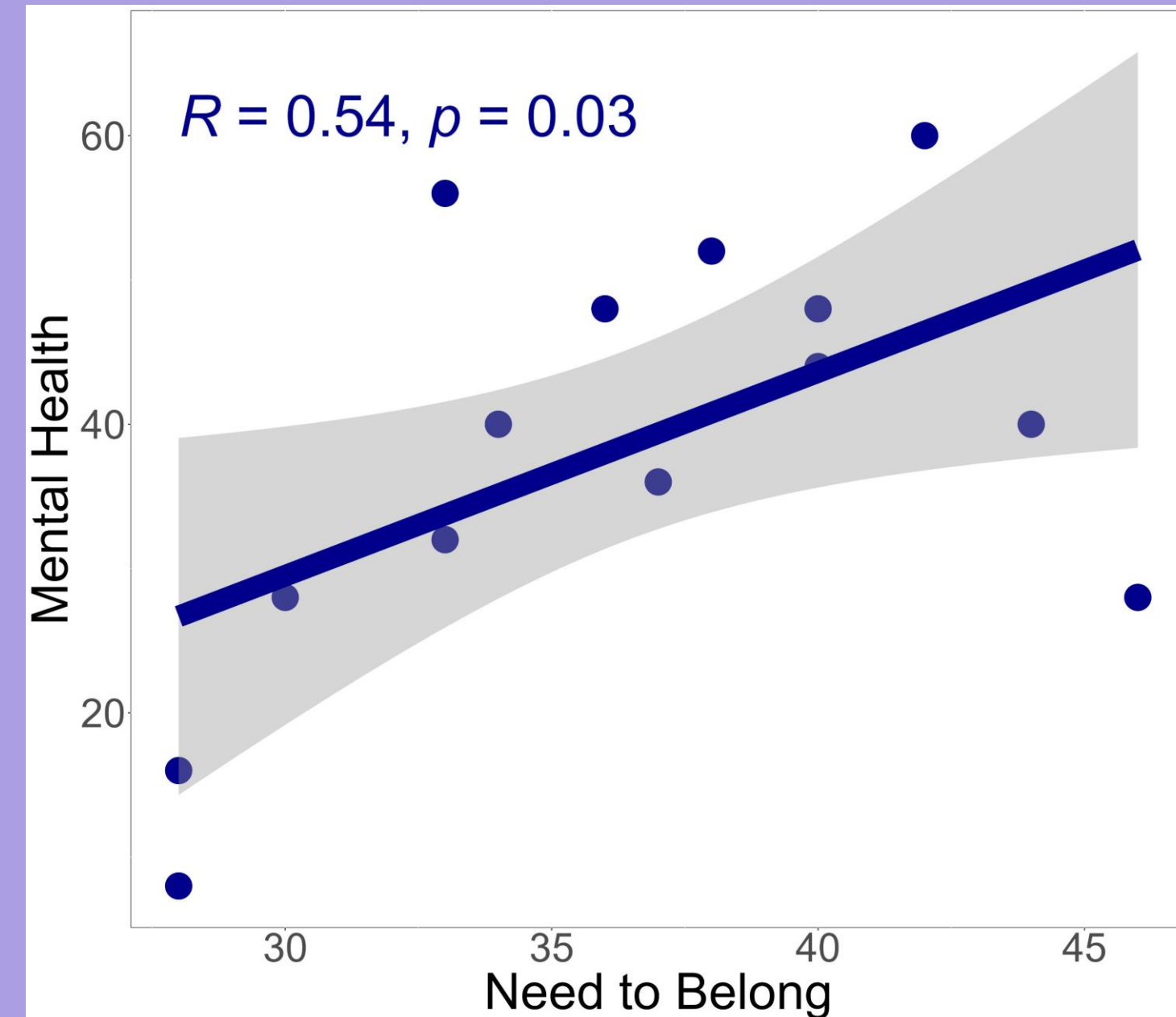
# Improving our understanding of how social connection, relationships, and well-being



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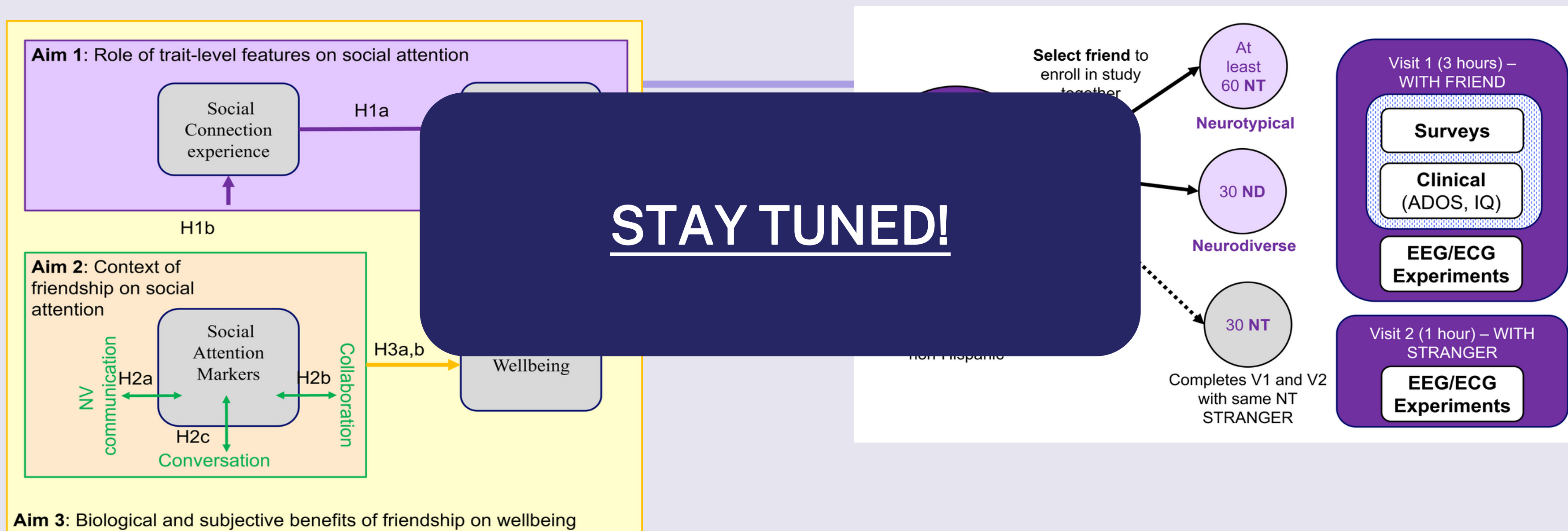
Stronger preoccupied and dismissive attachment styles are related to feeling need to belong differently.



Greater feeling need to belong is related to more optimal mental health outcomes.

# Combining all of these techniques to better understand how relationships aid in autistic adolescents' well-being

## Our Next Steps







The University of South Carolina

# Thank you very much!



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Maggie Johnson, USC



Mengya Xia &  
Caleb Coates (Not pictured), ASU



B-RAD Lab, USC

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