The invisible wall between us: How cognitive motivation influences interactions with strangers

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Introduction

- Social interaction has been beneficial in human evolution
    - Accumulative knowledge
    - Social Craving (Tomova et al., 2020)
- Social interaction involves a lot of information
    - Different processing of information
    - Behavioral output
- Over 1/3 of adults feel serious loneliness and 61% of those are young adults age 18 -25 (Harvard Graduate School of Education, 2021)
- Social isolation is detrimental to physical and mental health

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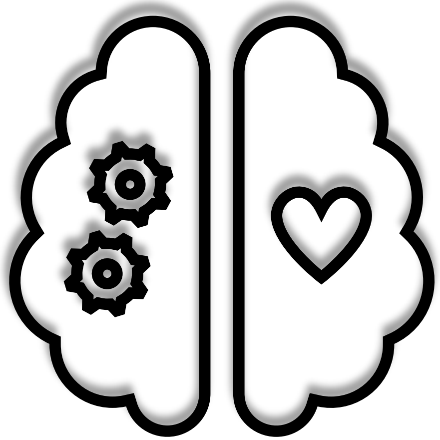
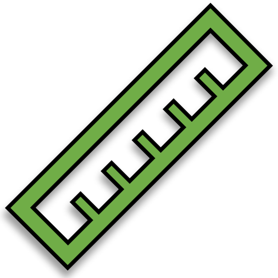
Predictors for Social Interactions





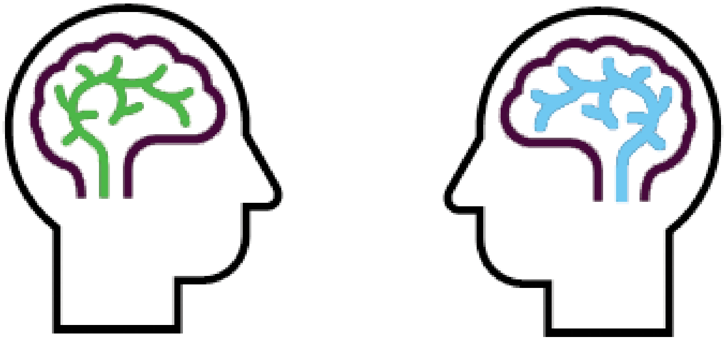
Trust

(Goto, 1996)

Distance

(Brown, 2001)

Motivation



Cognitive Motivators

Need for Cognitive Closure (NFCC): The desire to find a firm answer instead of allowing ambiguity or uncertainty to remain (Kruglasnki, 1990 Kruglanski et al., 2010)

Social Anxiety (SA): discomfort involving social interactions ranging from mild discomfort to social phobia (American Psychological Association, 2013)

Research Question 1

Need for order

Need for Predictability

Decisiveness

Avoidance of Ambiguity

Closed-mindedness

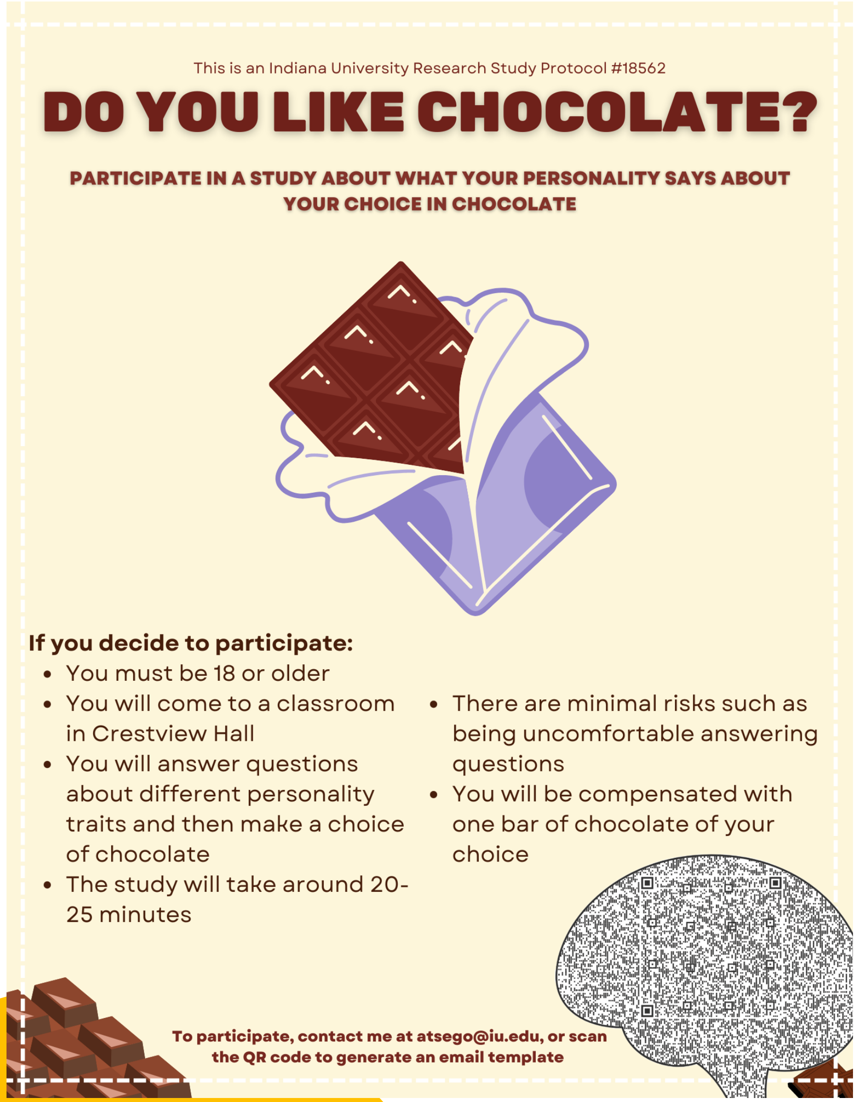
- **RQ_1 - How do the different subscales of the NFCC scale correlate with SA?**
  - NFCC subscale Need for Structure positively correlated with social anxiety (Stadler, 2007)
  - NFCC and Interaction anxiety (SA subtype) have significant relationship with Intolerance for Uncertainty (IUS) scale (Berenbaum et al., 2008; Whiting et al., 2014)

Hypothesis 1

- **H_1 - Both SA and NFCC will <u>negatively</u> correlate with extraversion and <u>positively</u> correlated with neuroticism from the Big 5 Personality Traits**
  - NFCC and SA both positively correlate with neuroticism and negatively correlate with extraversion (Stadler, 2007; Kaplan et al., 2015)

Hypothesis 2

- **H_2 - Those high in NFCC and SA will be less likely to socially interact, sit further away, and if they do interact, they will take longer to do so**
    - Individuals high in NFCC lack of trust in unknown individuals (Dreu et al., 1999; Acar-Burkay et al., 2014)
    - Individuals high in NFCC are more sensitive to negative emotion and may use this to avoid an interaction (Wei et al., 2015)
    - Higher stress and general anxiety in NFCC (White, 2022)
    - Strong relationship between desired interpersonal distance and social anxiety (Perry et al., 2013)
    - Less likely to notice positive affect of interaction. No reward for behavior (Goodman et al., 2021)
    - Social anxiety associated with lower extraversion (Kaplan et al., 2015)



Methods

- Participants
  - N = 30
  - M_{age} = 30.07, 18-62, *SD* = 13.38
  - 10 Men (33.3%)
  - 20 Women (66.7%)

Quasi-Independent Variables

The Need for Cognitive Closure Scale

(Roets & Van Hiel, 2007; Webster & Kruglanski, 1994)

- 41-items, 6-point Likert Scale, Strongly Disagree to Strongly Agree, Some items reverse scored, Summed total
- "I don't like situations that are uncertain" and "I dislike questions which could be answered in many different ways."

Leibowitz Social Anxiety Scale (LSAS)

(Baker et al., 2002).

- 24-item scale, 4-point Likert Scale, 0 to 3 fear of a situation and 0 to 3 avoidance of a situation, Summed total
- "Calling someone you do not know very well" and "Going to a party."

Quasi-Independent Variables

Intolerance for Uncertainty Scale (IUS)

(Buhr & Dugas, 2002; Freeston et al., 1994; Sexton & Dugas, 2009)

- 27-item scale, 5-point Likert Scale, Not characteristic of me to Entirely Characteristic of me, Summed total
- “It frustrates me not having all the information I need” and “I should be able to organize everything in advance.”

Mini-International Personality Item Pool (Mini-IPIP)

(Cooper et al., 2010; Donnellan et al., 2006)

- 20-item scale, 6-point Likert Scale, Strongly Disagree to Strongly Agree, Some items reverse scored, Mean score of trait
- “[I] Am the life of the party” and “[I] Sympathize with others’ feelings

Dependent Variables

Social Interaction

- Engage in conversation with the confederate

Physical Distance

- 5 chairs placed in a row that are each 15cm apart

Interaction Latency

- If the participant socially interacts with the confederate, how long does it take
- 3-minute max

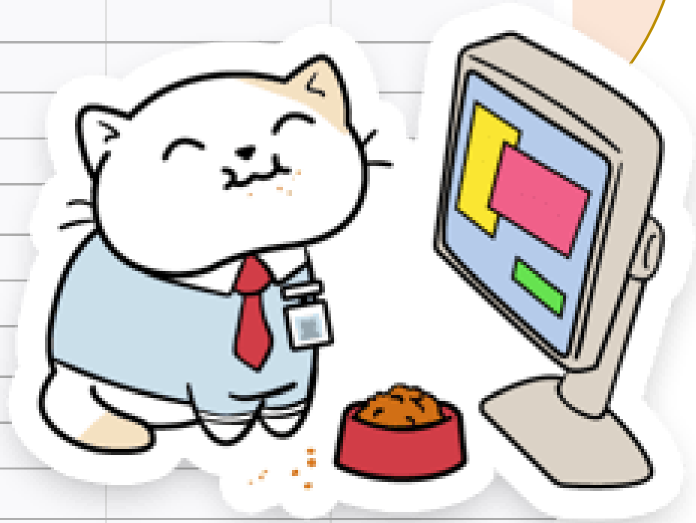
Procedure

Confederate

RQ_1 - Results

Correlations

		LSAS_TotalTotal	NeedForCognitiveClosureScore	NeedForOrder	NeedForPredictability	Decisiveness	AvoidanceOfAmbiguity	ClosedMindedness
LSAS_TotalTotal	Pearson Correlation	--						
	N	30						
NeedForCognitiveClosure Score	Pearson Correlation	.403*	--					
	Sig. (2-tailed)	.027						
	N	30	30					
NeedForOrder	Pearson Correlation	.250	.815**	--				
	Sig. (2-tailed)	.183	<.001					
	N	30	30	30				
NeedForPredictability	Pearson Correlation	.474**	.812**	.585**	--			
	Sig. (2-tailed)	.008	<.001	<.001				
	N	30	30	30	30			
Decisiveness	Pearson Correlation	.064	.745**	.471**	.504**	--		
	Sig. (2-tailed)	.736	<.001	.009	.005			
	N	30	30	30	30	30		
AvoidanceOfAmbiguity	Pearson Correlation	.327	.866**	.562**	.599**	.720**	--	
	Sig. (2-tailed)	.078	<.001	.001	<.001	<.001		
	N	30	30	30	30	30	30	
ClosedMindedness	Pearson Correlation	.456*	.440*	.290	.275	-.023	.318	--
	Sig. (2-tailed)	.011	.015	.120	.141	.903	.087	
	N	30	30	30	30	30	30	30



H_1 - Results

- SA had marginally significant positive correlation to neuroticism
- NFCC had significant positive correlation to neuroticism
- No significant correlations with extraversion.

Correlations

		Extraversion	Neuroticism	LSAS_TotalTotal	NeedForCognitiveClosureScore
Extraversion	Pearson Correlation	--			
	N	30			
Neuroticism	Pearson Correlation	.002	--		
	Sig. (1-tailed)	.495			
	N	30	30		
LSAS_TotalTotal	Pearson Correlation	-.250	.292	--	
	Sig. (1-tailed)	.092	.059		
	N	30	30	30	
NeedForCognitiveClosure Score	Pearson Correlation	-.122	.465**	.403*	--
	Sig. (1-tailed)	.261	.005	.014	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).

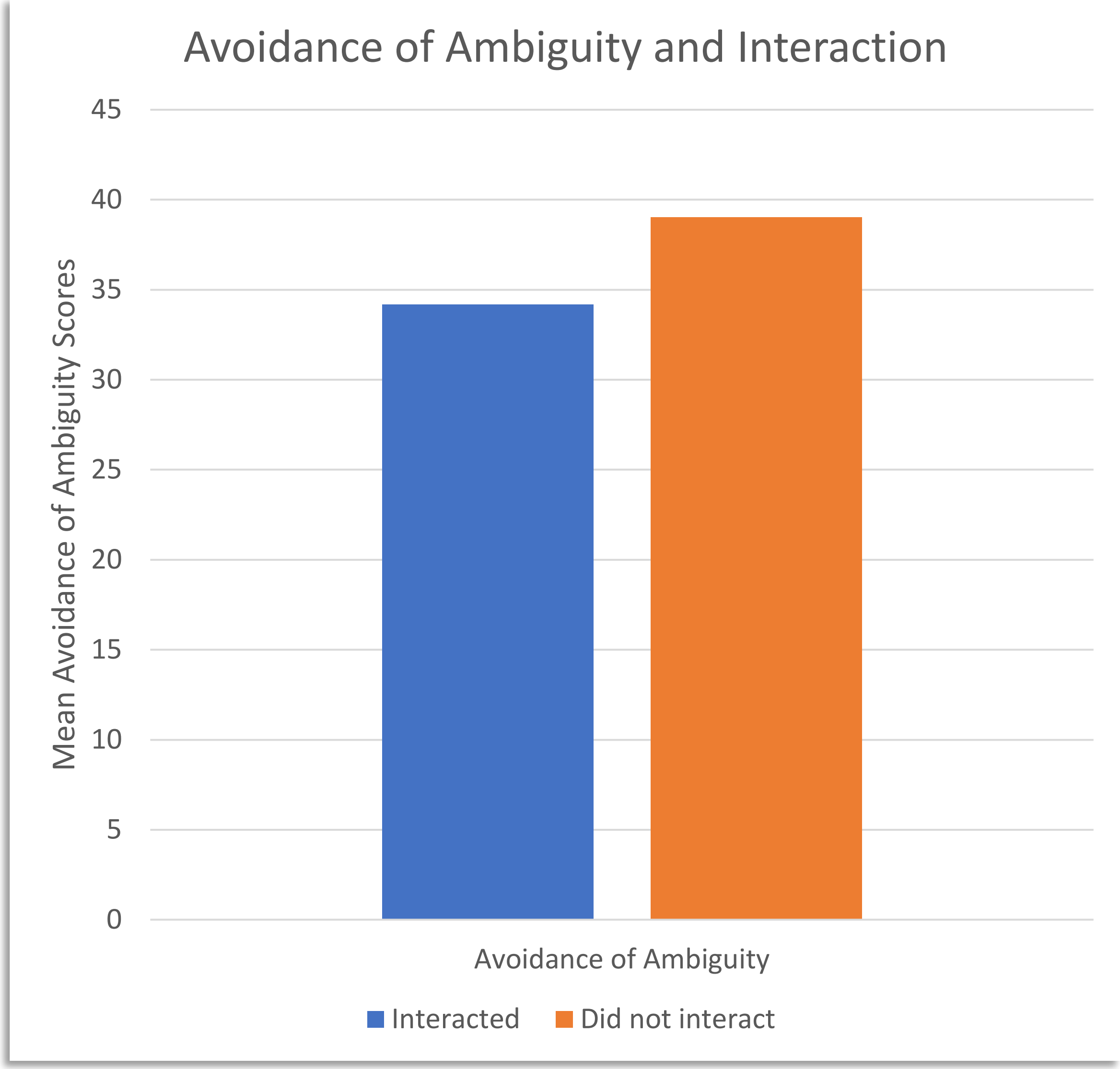
H_2 Results

NFCC

Avoidance of Ambiguity Subscale

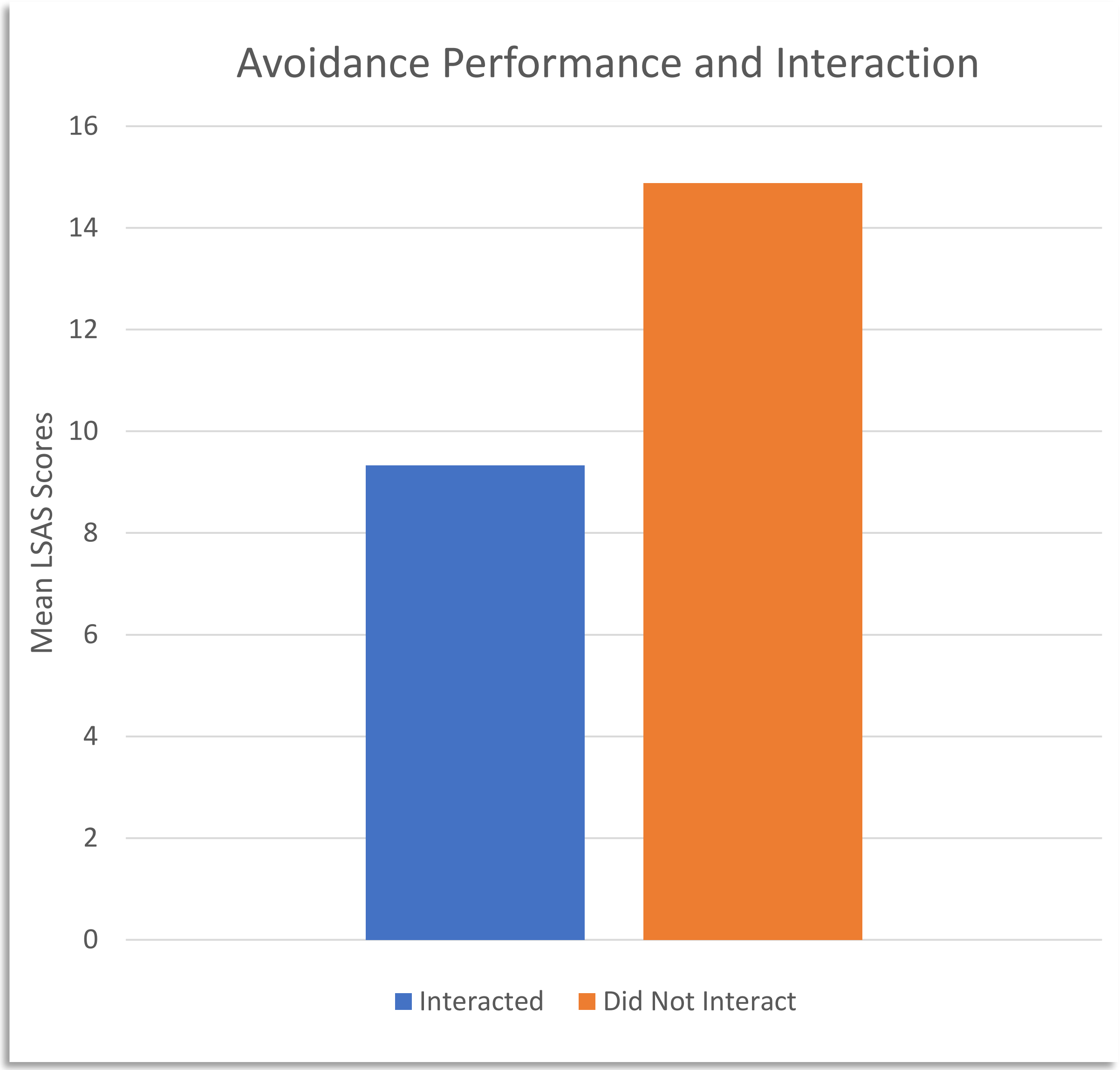
- 6 of 30 participants interacted

- Those that socially interacted (*M* = 34.17, *SD* = 7.52) compared to those that did not (*M* = 39.04, *SD* = 6.10) scored higher in Avoidance of Ambiguity, $t(28) = 1.67$, $p = .053$, $d = .76$.



H2 Results

Social Anxiety Scale



- Those that socially interacted (M = 9.33, SD = 5.35) compared to those that did not (M = 14.88, SD = 6.82) scored higher in Avoidance of Performance, $t(28) = 1.85$, $p = .038$, $d = .842$.

Conclusion

RQ1 – Supported

- NFCC and SA Correlated
  - Need for Predictability
  - Closed Mindedness

H1 – Partially supported

- SA and NFCC had **positive** correlations with **neuroticism**
- No significant correlations with extraversion

H2 – Partially supported

- NFCC – Higher score in **Avoidance of Ambiguity** predicted social interaction
- SA – Higher score in **Avoidance of Performance** predicted social interaction
- Latency and distance not used
- Large Effect Sizes

Limitations

- Not a true social interaction
  - Confederate considered in authoritative position
  - Lab setting
  - Task Oriented

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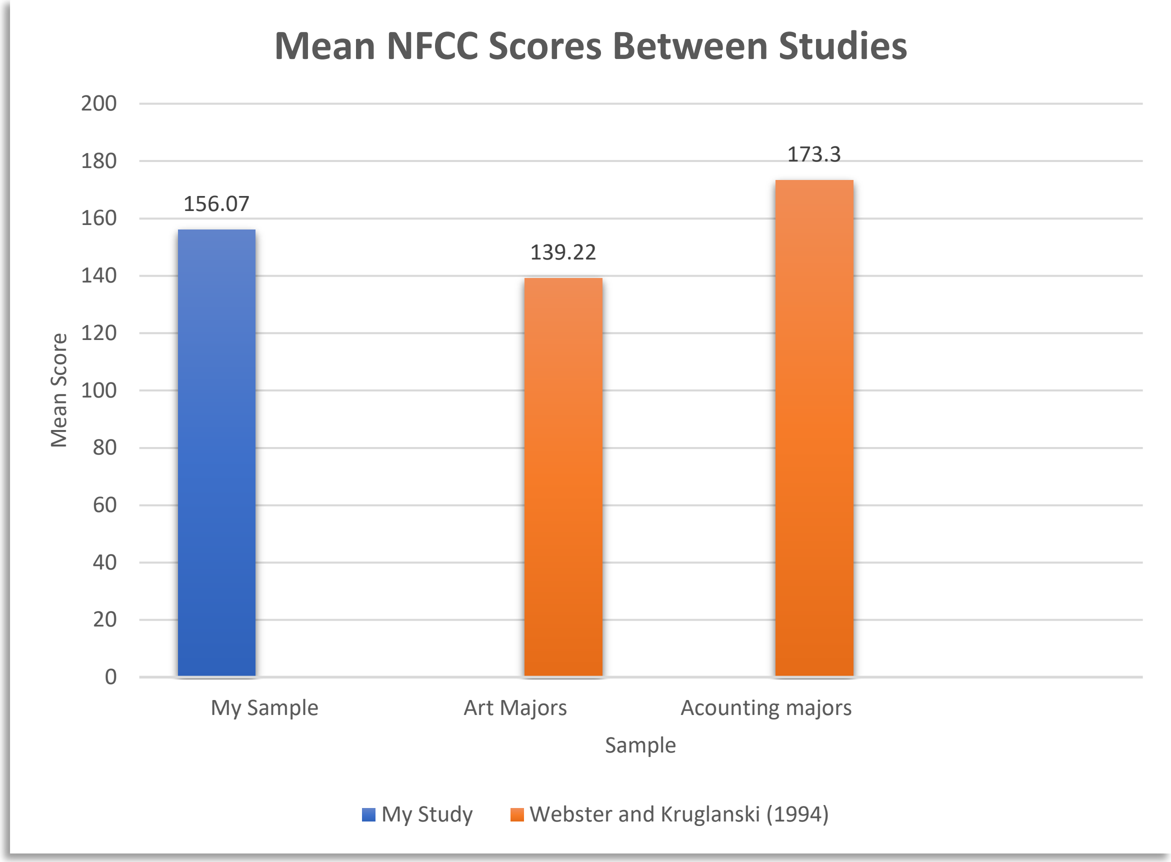
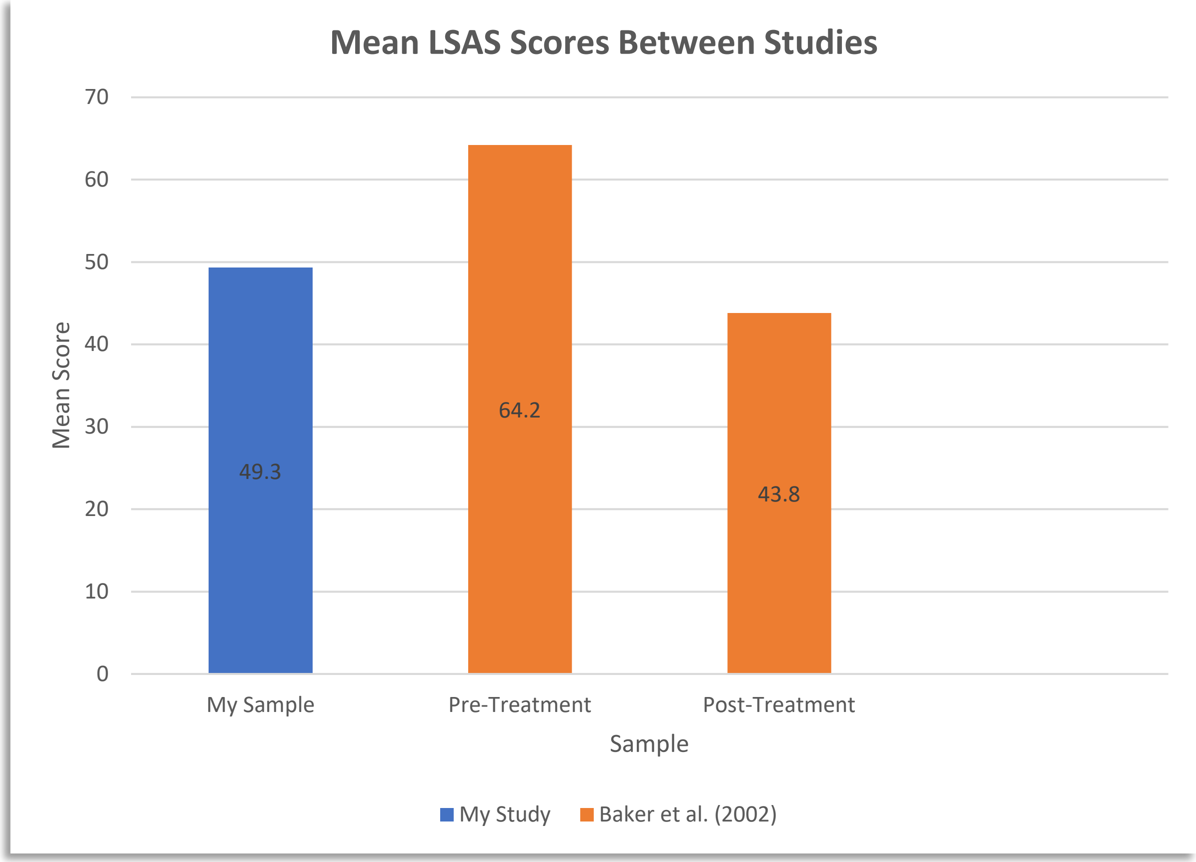
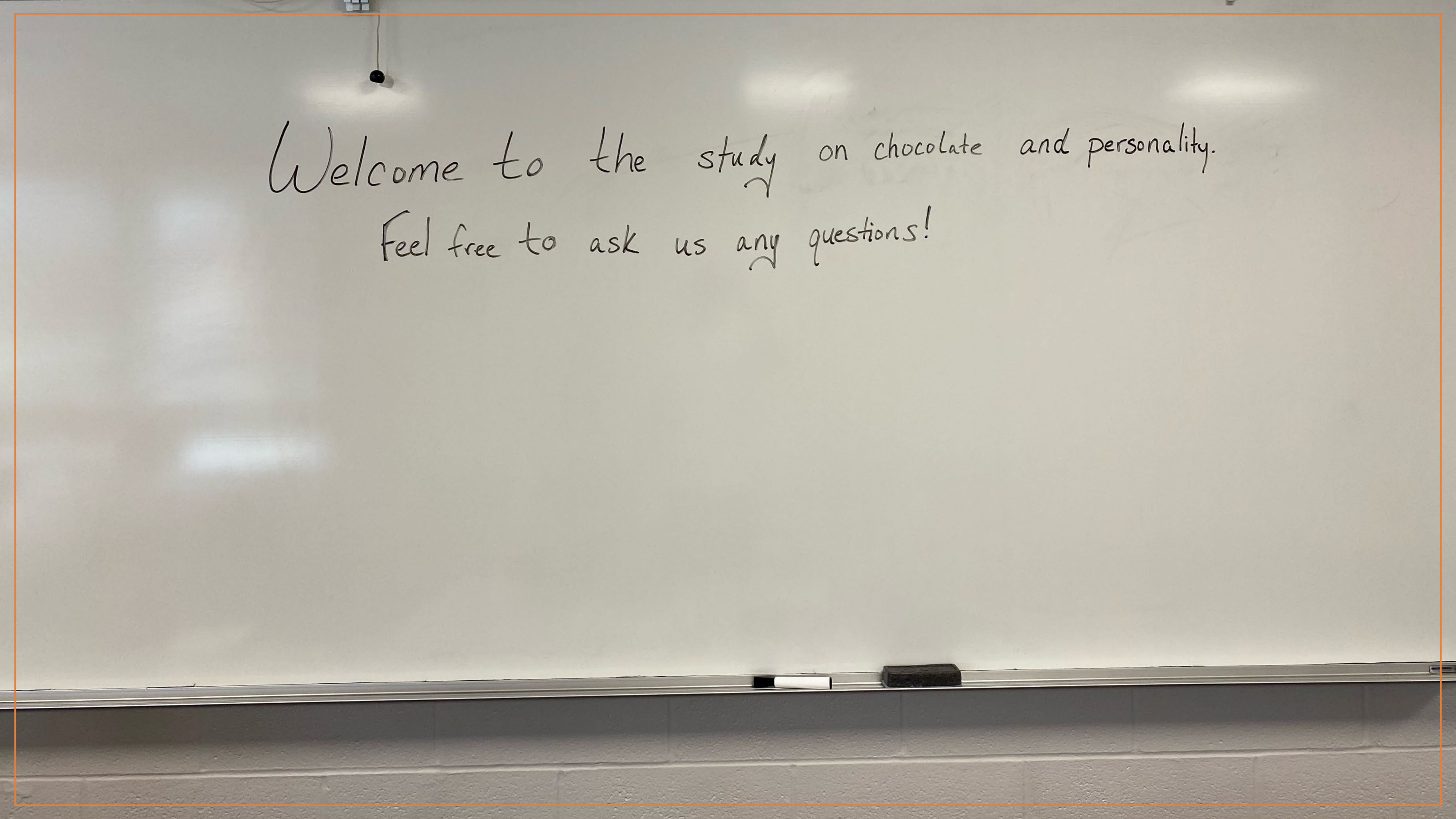
Thank you!

Comparison of NFCC and SA Scores






Welcome to the study on chocolate and personality.
Feel free to ask us any questions!