

# SPOTTING A LIAR IN A CARD GAME

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## Introduction

Of the Big Five personality traits (openness to experience, extraversion, conscientiousness, agreeableness, and neuroticism), the trait most connected with deception detection is openness to experience. **Openness to experience** is a personality trait that is related to new ideas and experiences (Elaad & Reizer 2015). Openness in a person can lead them to try new things, be more spontaneous, and be more cognizant of their inner-feelings.

Someone with a higher level of openness to experience may exhibit higher degrees of curiosity, creativeness, and value independence. **Psychosocial adversity** can be any life-altering event that culminated in immense stress, happens frequently (or was frequent in the past), and had adverse consequences on health. Harsher environments when growing up has a lasting effect on one's cognitive abilities.

It is often thought that rougher development conditions exclusively impair a person's cognitive ability. However, the mind of a person that grew up in a harsh environment or under rough conditions may develop specialized cognitive skills that differ from the conventional abilities that are normally tested using cognition (Frankenhuis et. Al, 2018). Harsh parenting is an example of psychosocial adversity that can impact a person's cognitive ability. It has been found that children who grow up in abusive homes may be better at pinpointing threats, and assessing the situation (Frankenhuis, 2016).

The present study investigated the correlation between psychosocial adversity and deception detection. We also investigated the correlation between openness to experience and deception detection.

## Method

### Participants (N = 62)

All participants were undergraduate students taking psychology courses that required outside study credits. Each participant consented to take part in the study.

### Materials

- Openness to Experience Survey (taken from the Big Five Inventory)
- Adverse Childhood Experience (ACE) Questionnaire
- 4 Partial decks of cards
  - Random card selection
  - 30 cards per deck

## References

- Elaad, E., & Reizer, A. (2015). Personality correlates of the self-assessed abilities to tell and detect lies, tell truths, and believe others. *Journal of Individual Differences*, 36(3), 163–169. <https://doi.org/10.1027/1614-0001/a000168>
- Frankenhuis, W. E., Panchanathan, K., & Nettle, D. (2016). Cognition in harsh and unpredictable environments. *Current Opinion in Psychology*, 7, 76–80. <https://doi.org/10.1016/j.copsyc.2015.08.011>
- Frankenhuis, W. E., Roelofs, M. F. A., & de Vries, S. A. (2018). Does exposure to psychosocial adversity enhance deception detection ability? *Evolutionary Behavioral Sciences*, 12(3), 218–229.
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## Hypotheses

1. That a higher score for openness to experience would positively correlate to detecting deception
2. That a higher adverse childhood experience score would positively correlate to detecting deception.



## Procedure

Participants completed two surveys:

1. Openness to experience questionnaire
2. adverse childhood experience questionnaire.

Two participants at a time then played 30 minutes of a card game called Cheat (also called Bullshit or I Doubt It).

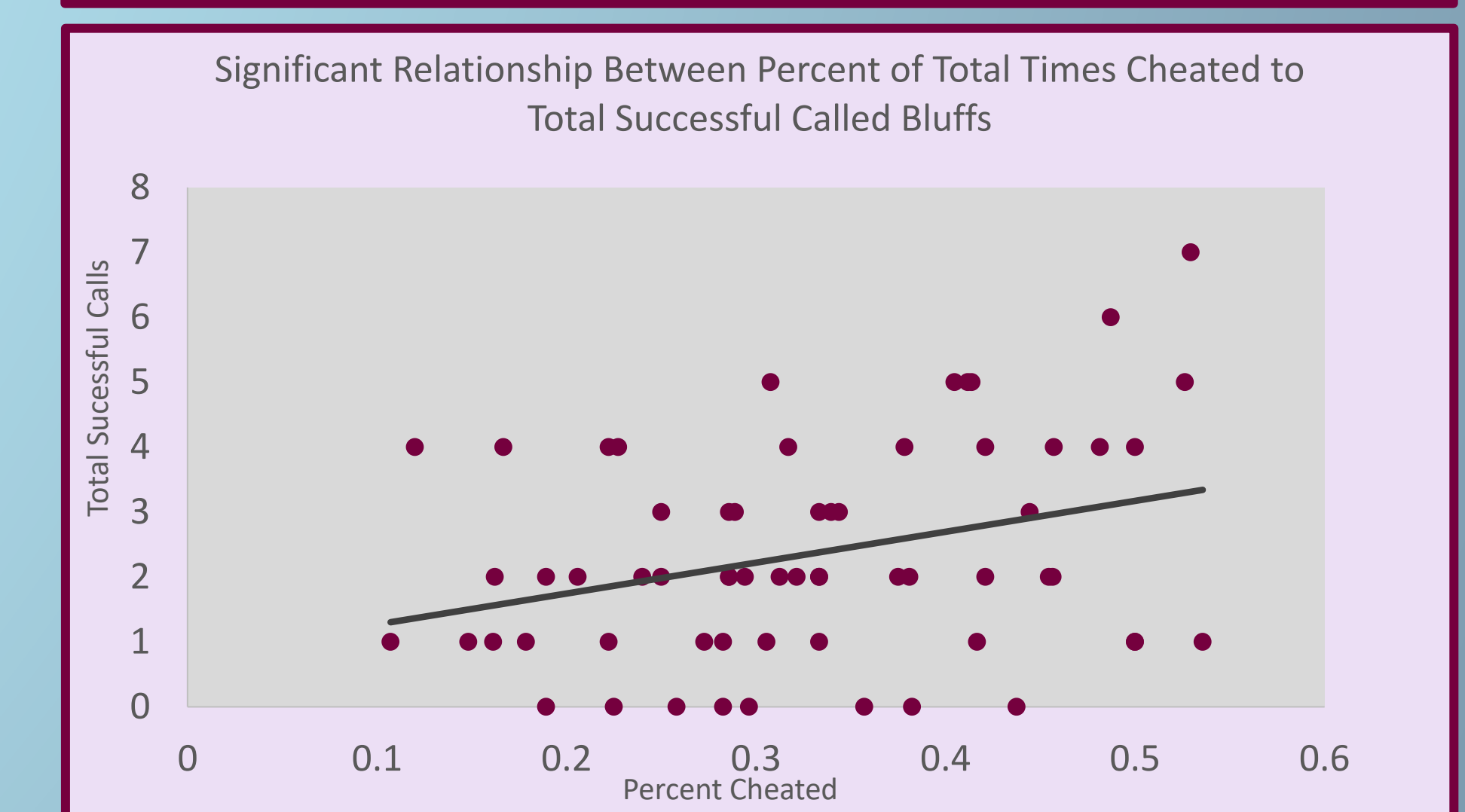
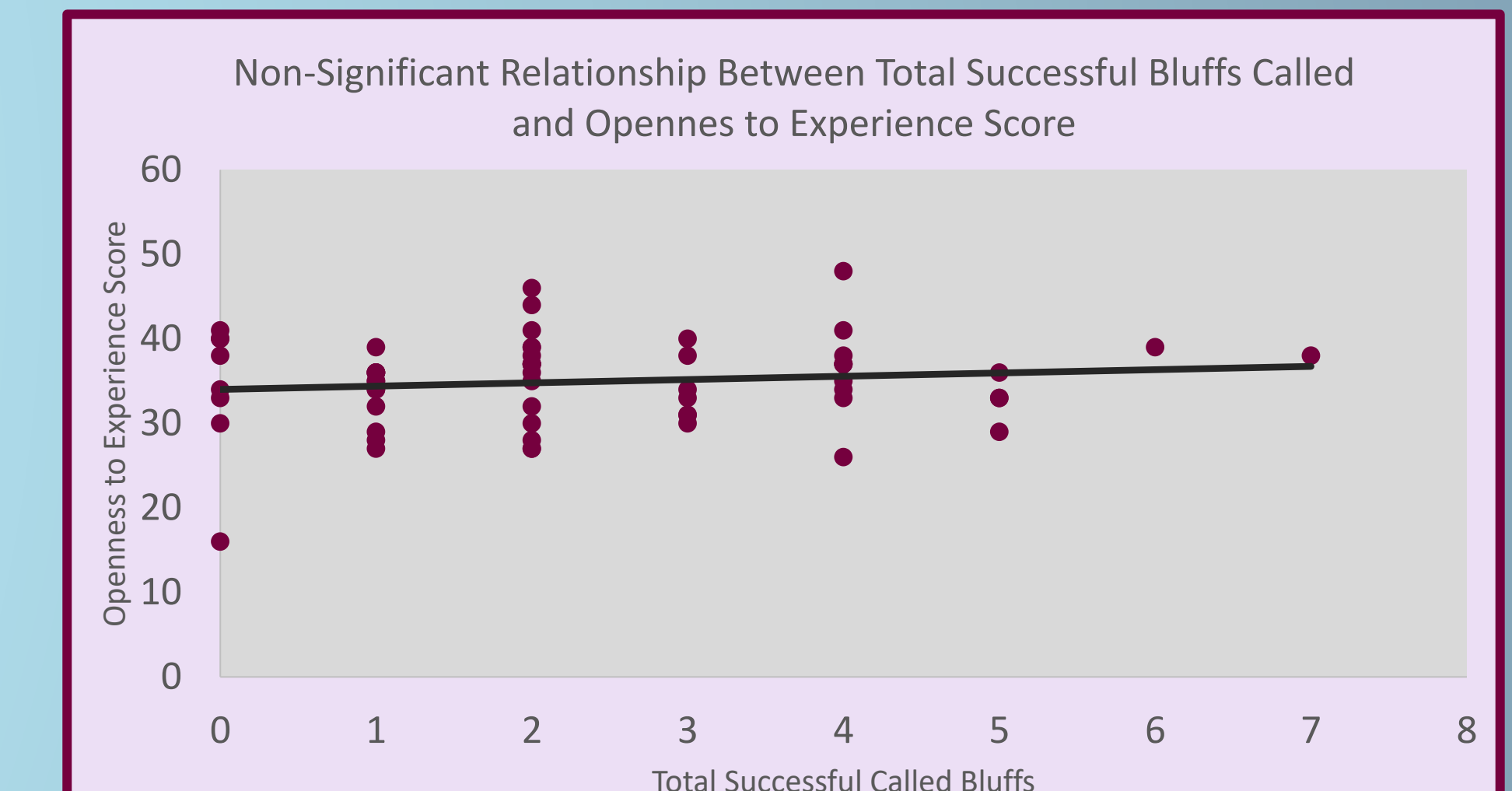
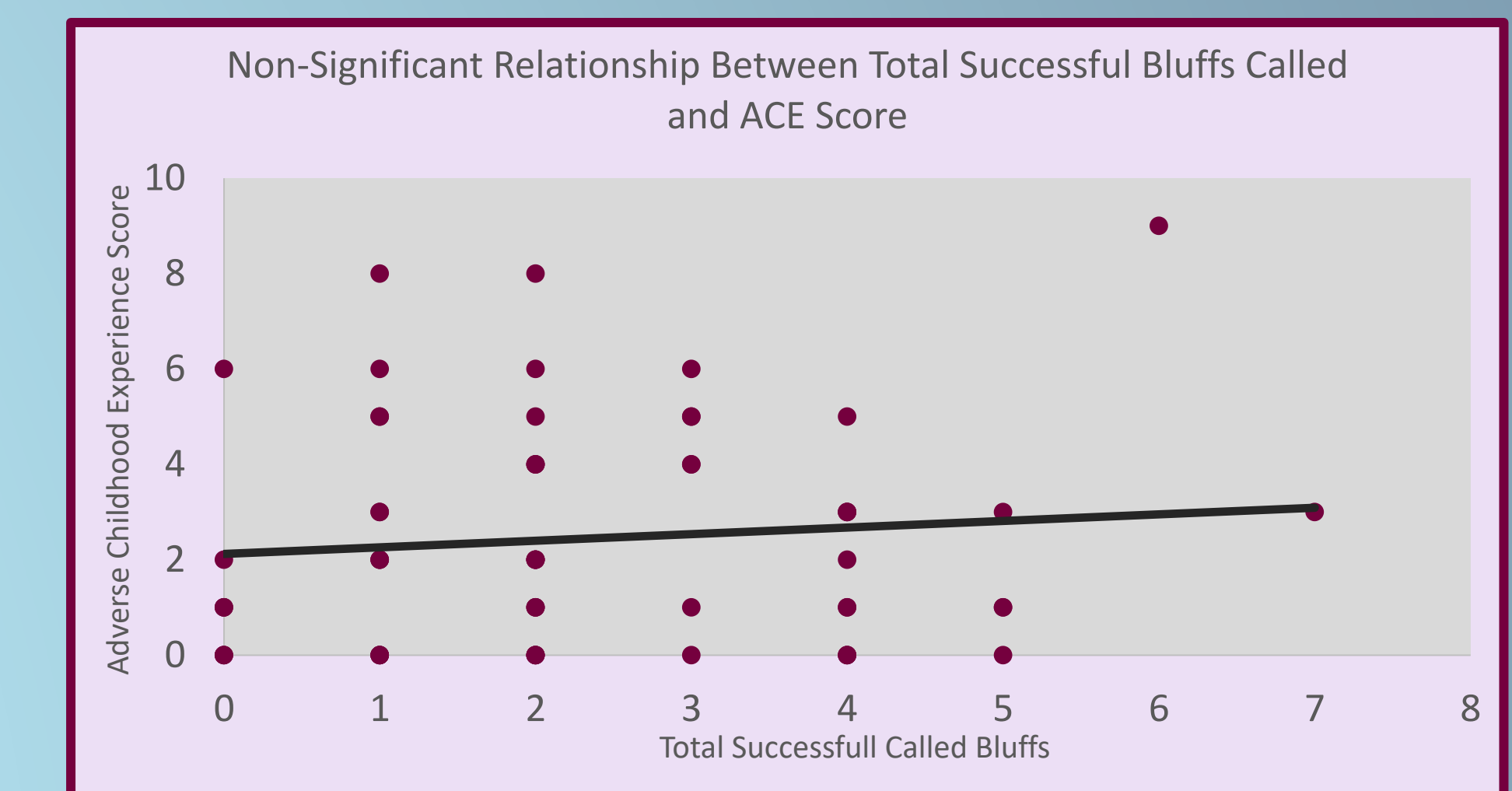
- One participant started the first round by placing down however many cards of one kind that they had in their hand, in the center. The game is played from Ace to King in alternating plays, with each turn having to place down the next card in ascending order.
- After one person places down their cards, the other person will have the chance to call the bluff or continue playing the game. After each card was placed down the player will indicate whether or not they lied during their turn on a scorecard.
- The Scorecard also had places to indicate if one participant decided to call their opponents bluff, a scale of how honest they thought the opponent was, if their opponent was caught or being honest when called out and if their opponent called the participant's bluff.
- One round of the game was over after one of the players ran out of cards, at which point they would select a new deck and start a new scorecard.

## Data Analysis

A Bivariate correlation was done with openness to experience and psychosocial adversity as the independent variables and deception detection (total number of successful called bluffs) as the dependent variable.

## Results

- There was no significance found between openness to experience and detecting deception.
- There was no significance found between psychosocial adversity and detecting deception.
- Significance was found between the number of times a participant cheated and detecting the deception of their opponent.



## Discussion

The results showed two non-significant findings between both openness to experience (see middle figure) and psychosocial adversity (see top figure) and the total number of successful bluffs called. In addition to the hypothesis, there was a significant finding between the number of times a participant cheated and the number of times that participant correctly called an opponent's bluff (see lower figure). Future research should further examine emotions on cheating and deception detection, to see if people's standing on cheating relates significantly to how well they are able to spot another deceiver.

Some limitations of this study should be noted. One clear limitation was the participants understanding of the game. All participants were given the same instructions and the same opportunity to ask questions before beginning the study. However, the data indicates that some participants, may not have fully understood the game play. A second limitation is that when filling out the scorecard, there was no way to ensure that participants correctly and completely filled out the information. This did have a small effect on data collection and analysis. It should be noted that all numbers in the collected data used for analysis were taken straight from the scorecard regardless of how the information was input.

## Conclusion

In conclusion, this study of deception detection offered a different view to the common question: what makes one person better at detecting deception than another? This study looked at individual differences that may have aided in detection ability. It also used a game format rather than a scenario to provide a new angle to the study.