

# Sibling Order, Personality, and Substance Use: Are They Related?

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## INTRODUCTION

- Addiction is something that impacts thousands of Americans every year. 3.3 million deaths a year are due to alcohol abuse, not including other drugs (Moñino-García, et al., 2019). Although there are numerous research papers about addiction, something that needs to be researched is how sibling order may impact addiction severity.
- When it comes to siblings' substance use, de Veld, Wolberink, and van Hoof (2017) found that children in a single child household are less likely to use substances when being compared to children in a house with siblings.
- It is widely believed that siblings hold different character traits, such as rebellious or peacekeeping. It is important to study if these characteristics may impact addiction.

## HYPOTHESES

- It is expected that older siblings are less likely to have a severe dependency on substances compared to middle or youngest.
- It is expected that people who have the characteristic of aggression are more likely to have a more severe SUD. Additionally, individuals who have the characteristic of caregiver are less likely to develop a severe SUD.

## METHODS

- Participants were recruited through local organizations (Alliance for Substance Abuse Progress (ASAP), Foundation for Youth (FFY) and Cardinal Recovery) and were over the age of eighteen. Participants were required to have completed one treatment program.
- Out of the 47 participants, 1 was excluded from this study due to an incomplete questionnaire, (n=46).
- From the 46 participants, there were 24 males, 21 females, and 1 who preferred not to say.
- Although the age range was 18-74, the mean age of participants was 41.49

## MEASURES

- SUD Severity was measured by the Drug Dependence Item Questionnaire (Liu, Siyang, Tu, Dongbo, & Cai, Yan. 2020), which assesses all symptoms of diagnostic criteria for drug dependence. The questionnaire contains 17 items using a seven-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).  $\alpha=.98$ ,  $M= 69.07(SD= 18.35)$
- To measure the characteristics of aggression and care-giver, several personality items were used from the Birth Order Research-Based Questionnaire and Family of Origin (or Equivalent) Birth Order Interview (Eckstein, Sperber, & Miller 2009) survey is used to research how individuals felt in their families in terms of birth order. The survey has 25 descriptive words that the participants will rate themselves using a five-point Likert ranging from 1 (strongly disagree) to 5 (strongly agree). After that, five of those descriptive words apply to the characteristics of aggression and care-giver. For Aggression,  $\alpha= .73$   $M=13.53$  ( $SD= 3.31$ ). For care-giver,  $\alpha= .68$   $M=12.96$  ( $SD= 3.70$ )

## RESULTS

- To test the first hypothesis that oldest siblings have less severe SUD compared to middle and youngest siblings, a one-way ANOVA was conducted between sibling order and SUD severity. See figure 1.
- There was no statistical significance difference in severity found between youngest, middle, and oldest children.  $F(2,39)= .28$   $p=.76$  (see Figure 1).
- To test the second hypothesis that aggression leads to a more severe SUD and care-giver leads to a less severe SUD, two correlations were run.
- For aggression, there was a negative weak correlation between aggression and SUD Severity that did not reach significance  $r(44)= -.21$   $P=.16$  For caregiver, there was a weak correlation between the caregiver characteristic and SUD severity that did not reach significance  $r(45)=.22$   $P=.15$ . See figure 2.

Figure 1 Differences in SUD Severity Based on Sibling Order.

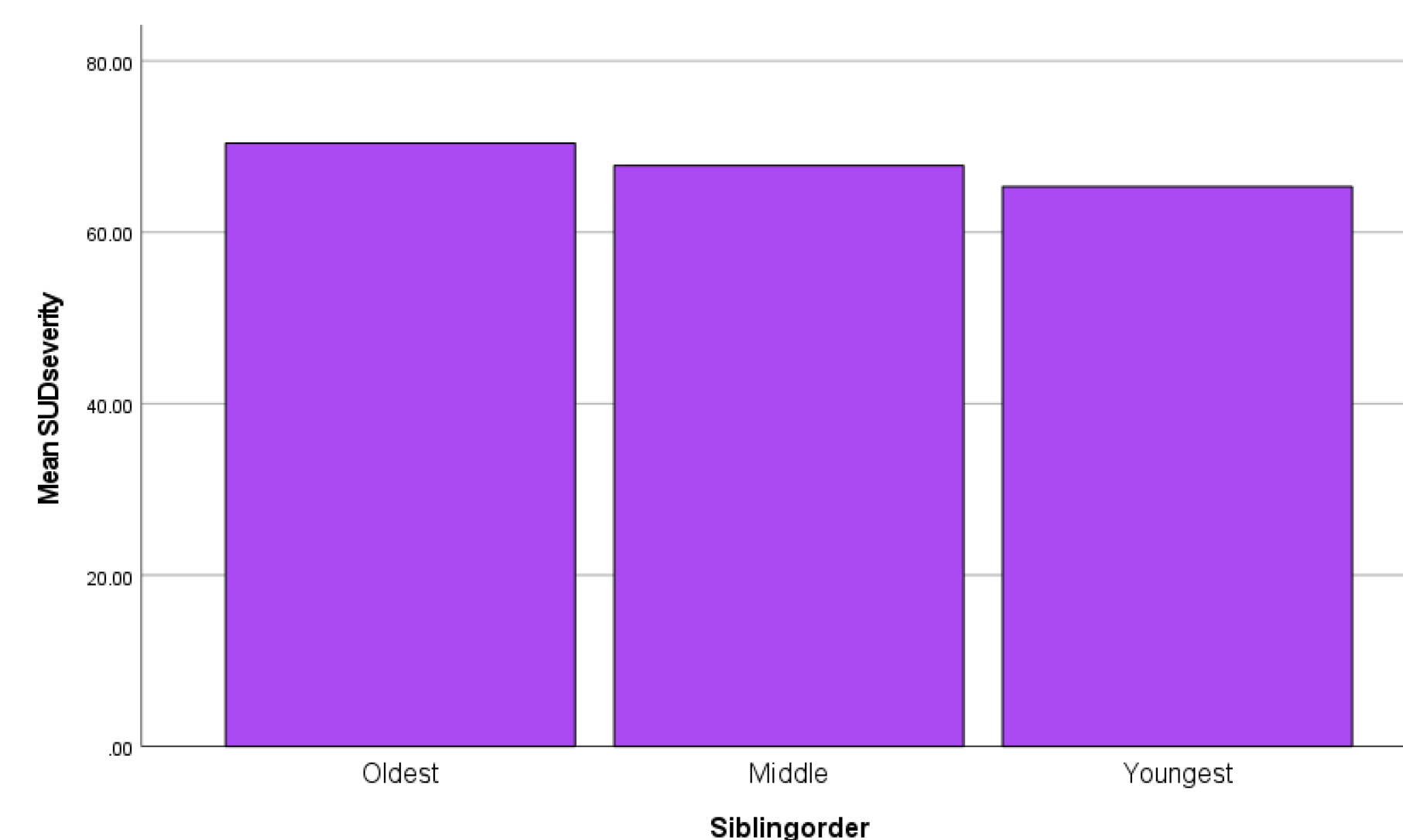
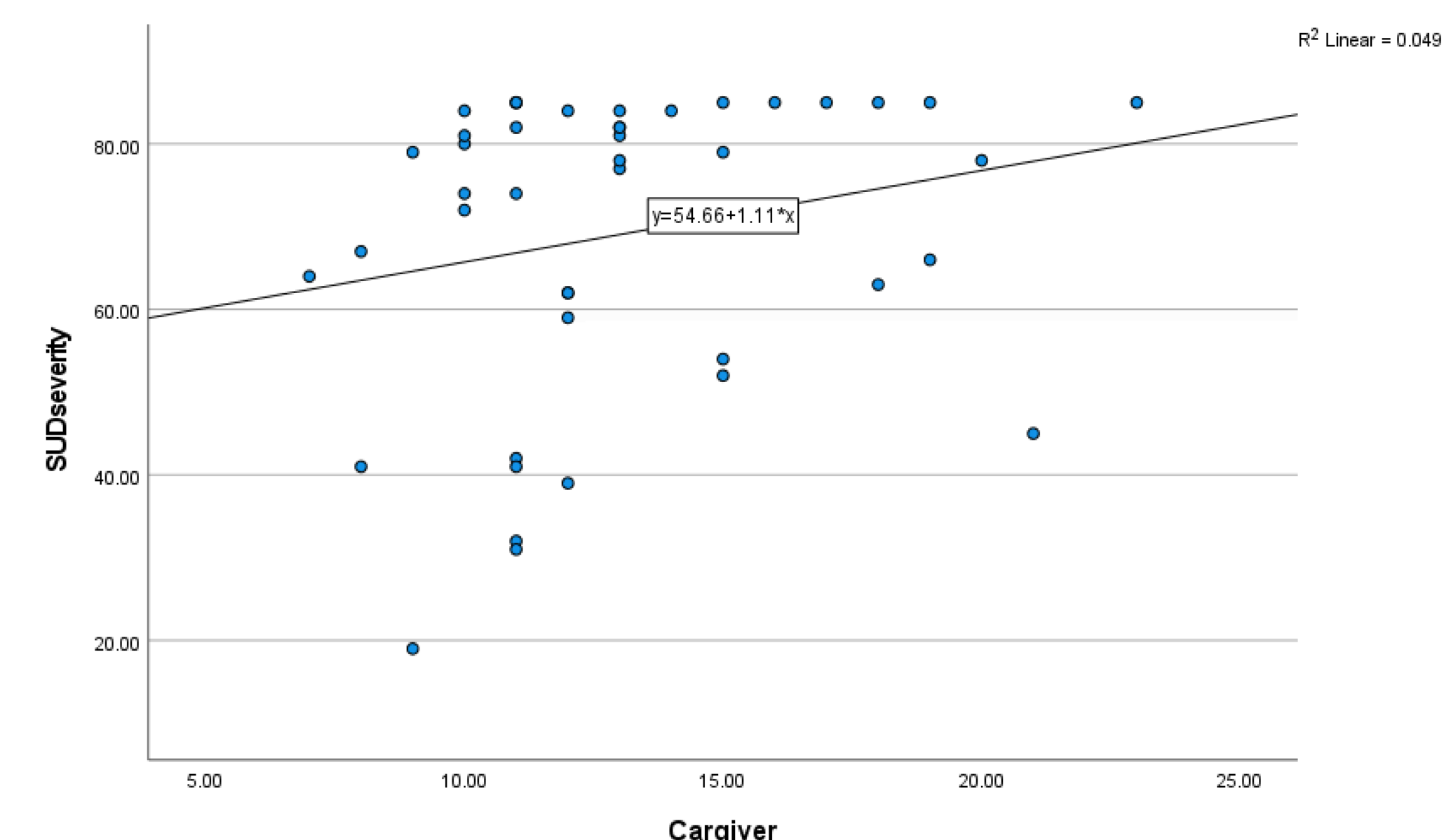


Figure 2 Correlation of Caregiver and SUD Severity



## DISCUSSION

- The first hypothesis that oldest siblings have less severe SUD compared to middle and youngest siblings was not supported and the results were in the opposite direction than expected. The second hypothesis that aggression leads to a more severe SUD and care-giver leads to a less severe SUD was also in the opposite direction. After further reflection, caregivers may be so focused on helping others that they may not help themselves in their addictions.
- One limitation to this study was the lack of ethnic diversity. 84.4% of participants were Caucasian, the rest being a combination of Black, Hispanic/Latino, or other. In future studies, it would be good to see a more diverse sample size.
- In future studies, it would be interesting to see how other characteristics interact with SUD Severity, since we only looked at two in this one. Our mean age of participants was 41.49, so it may be hard for participants to remember their childhood characteristics accurately.

## REFERENCES

- de Veld, L., Wolberink, I. M., van Hoof, J. J., & van der Lely, N. (2018). The relationship between birth order and acute alcohol intoxication among Dutch adolescents. *Journal of Child & Adolescent Substance Abuse, 27*(5-6), 334-340.
- Eckstein, Sperber, & Miller (2009) Birth Order Research-Based Questionnaire and Family of Origin (or Equivalent) Birth Order Interview
- Liu, Siyang, Tu, Dongbo, & Cai, Yan. (2020) Drug Dependence Item Questionnaire
- Moñino-García, M., Adoamnei, E., Gadea-Nicolás, A., Arenal-Gonzalo, J. J., López-Espín, J. J., & Torres-Cantero, A. M. (2019). Family environmental factors associated with underage drinking. *Journal of Substance Use, 24*(1), 110-116.