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Examination of Birth Order and Personality Effects on Coping Strategies in Light  
of COVID-19

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## Abstract

Personality has been connected to many outcomes, including coping strategies and their effectiveness. Research on birth order has suggested personality differences but there has been little evidence collected to connect birth order, personality and coping. The present study was designed to address this deficit. One hundred and six participants completed a self-report questionnaire designed to identify Big Five personality traits and coping methods. Correlational analysis revealed a significant relationship between emotional stability coping style. Specifically, it was positively associated active and negatively associated with avoidant coping. Contrary to expectation, there was no relationship between birth order and either personality or coping style. The results are discussed in terms of connection with prior work.

### Examination of Birth Order and Personality Effects on Coping Strategies in Light of COVID-19

In light of recent events, people all around the world have been asked, with short notice, to make major life changes, including social distancing and working from home. This extreme behavioral change, in addition to the uncertainty surrounding the COVID-19 pandemic, has forced individuals to confront high levels of stress and anxiety. As a consequence, individuals must rely on the coping skills they have developed. Research suggests that many variables affect coping strategies, including personality (Evans, Martin, & Ivcevic, 2018).

Much research has been done exploring determinants of personality, including a robust literature on birth order. For example, previous research suggested that birth order influences personality within the context of fighting for parental affection/attention affected for example by the amount of investment the parent gives the child or the children's role within the family (Dunkel, Harbke, & Papini, 2008). Meaning middle children seem to be less socialized than their younger siblings due to their parents giving them less attention. According to Harris (2000), when participants were asked to give a self-report no difference in personality was found but when participants were asked to describe their family there seemed to be a notable difference when parents described their oldest and youngest children. This could be due to factors such as age difference or if the siblings lived in different houses.

Given the potential for personality differences based on birth order, and the connection between personality and coping strategies, it is possible that birth order might be related to differences in coping and its effectiveness. To date, little if any research has focused on differences in coping skills as a function of birth order. The current project seeks to address this gap in the literature.

## **Birth Order and Personality**

It is commonly assumed that there are birth order differences in personality, and many researchers have attempted to investigate this formally. According to Sulloway (1999), birth order is likely to affect personality because one of the important ways personality is shaped is by their environment. In many studies, the firstborn is seen as being stubborn and the lastborn is freer (Sulloway, 1999). Later borns are also seen to be more extroverted because they were taught to be more social and due to growing up in a household with more people. This is due to parents giving the youngest child anything they wanted (Rohrer, Egloff, and Schmukle, 2015).

Another proposed reason for this difference is that parents are more aggressive with firstborns, pushing them to be the best they can be. However, by the time the last child enters the family, they become more lenient as a consequence of parental experience and differential resource distributions (e.g., multiple rather than one child vying for attention). Healey and Ellis's (2004) research expanded Sulloway's (1999) work, controlling for age and household exposure, and suggested that the family niche is an important factor in forming personality.

Later studies exploring the issue have found that there are many additional factors that could influence the development of personality, independent or in conjunction with birth order. For example, Dunkel, Harbke, and Papini (2008) noted that things like parental education, parental age, and birth spacing were all potential moderators of personality. In sum, the research on personality and birth order is far from conclusive.

## **Personality and Coping Strategies**

It has been identified that personality impacts how people cope. In part, this is due to the fact that personality determines the types of stressors individuals are exposed to. Based on Carver and Conner-Smith (2009), personality and coping are moderated by age, stressor type, situational versus dispositional coping, and time lag (p. 692). This means that different

personality traits such as extraversion and coping skill are situationally moderated. The strongest evidence for an association between personality and coping was found when individuals were exposed to high stress (Carver & Conner-Smith, 2009, p. 691). This is likely because high stress necessitates extensive coping and therefore is more likely to lead individuals to personalize their method.

Similar results were found by Afshar et. al (2015), who found that score on the Big Five Personality Inventory were associated with different coping strategies. For example, participants who were high in neuroticism seemed to lean more towards more passive coping strategies (Afshar et. al, 2015). In addition, Evans et.al (2018) found that high schoolers' personality has an effect on their coping behavior. Thus, research suggests that personality may be aligned with coping style and strategy implementation for both adults and adolescents.

### **Birth order and Coping Strategies**

Minimal research has been conducted on the association between birth order and coping. If birth order is related to differences in personality, and personality is related to coping, then it may be the case the birth order is also related to coping. Beyond that, birth order may affect coping due to differential early experiences. For example, Pilkington, White, and Matheny (1997) suggest that birth order may determine the number of resources a child can access during stressful situations. (e.g., many firstborns are able to access more resources early on because they don't need to compete with a younger sibling).

The aim of the present research is to formally investigate the potential relationship between birth order, personality and coping. Given the mixed findings on birth order and personality, strong hypotheses were not generated. However, it was expected that personality would be related to self-reported coping style. Finally, although the research suggests that birth

order might be connected to coping through either personality or differential experience, no hypotheses were generated about the specific connection between birth order and coping.

## Methods

### Participants

A total of 108 participants, aged 18-74 year olds ( $M = 31$ ,  $SD = 11.35$ ), were recruited through the data collection site Amazon MTurk or through email sent out to college students taking summer classes at the University of San Diego. 35 of the participants were college students and 73 were working full time. From the data collected, 48% were first born, 14% middle, 29% last born, and 9% were an only child.

### Procedure

Each participant filled out a self-reported questionnaire online from a personal computer. The questionnaire was designed to identify participants' perception of their parents, Big Five personality traits, and coping methods. They also provided us their age, number of siblings, age of siblings, and whether or not they were raised in the same household.

### Measures

**Birth Order.** We classified birth order as being first, middle (anyone born between the first and last), and last born. Participants were asked to select their birth order by choosing from a list provided (First, Middle, Last, or Only Child).

**Identification With Parents.** We used the Perception of Parents Scale (Grolnick, Deci, & Ryan, 1997) in order to see how they identify with their parents. Participants were asked how true each statement is from a 4 point Likert scale (1 being definitely true to 4 being definitely false). Responses to this item were not analyzed for the present study.

**Personality.** In order to assess personality, participants completed the Ten-Item Personality Inventory (TIPI; Gosling, Rentfrow, & Swann, 2003) which is designed to determine scores on each of the big five personality traits. The scale gave two adjectives that the participant stated whether or not they agreed with the statement (e.g. extraversion matches with the adjectives extroverted and enthusiastic) on a 7 point Likert scale (1 being strongly agree to 7 being strongly disagree).

**Coping Skills.** Participants were given a list of scenarios from The Brief COPE Inventory (Carver, 1997) and chose whether or not the description fit them on a 4 point Likert scale (1 being I haven't been doing this at all to 4 being I've been doing this alot). This allowed us to see what type of coping strategies each participant uses to destress. The two main aspects were avoidant and approach coping. It also allowed us to find more concrete coping strategies that fell into the categories of avoidant and approach coping (e.g. denial (avoidant) and emotional stability (approach)).

A second measure of coping was generated by presenting participants with two different scenarios. If they were in college they answered one dealing with school work stress and one dealing with social stress. If they are full time workers they answered one dealing with work stress and family stress. The participants were asked to imagine themselves in the situation and provided (via free response) a few sentences to describe how they would attempt to cope. The aim of this secondary measure is to see what coping strategies are generated independent of specific prompts and thus provides a qualitative assessment in addition to the more straightforward scale. Responses to this item were not analyzed for the present study.

## Results

### Preliminary Analysis

To calculate scores on the TPI, items associated with each of the Big Five factors (extroversion, agreeableness, conscientiousness, emotional stability, and open to experience) were reverse coded if necessary and averaged to create 5 separate scores. Next, items from the Brief Cope Inventory were separated into two categories, approach and avoidant coping. Avoidant Coping items included denial, substance use, venting, behavioural disengagement, self-distraction and self-blame. Approach Coping items included active coping, positive reframing, planning, acceptance, seeking emotional support, and seeking informational support. Scores on each subset, avoidant and approach, were summed and averaged to create two composite coping scores for each participant..

### Primary Analysis

To investigate the relationship between coping style and personality, bivariate correlations were calculated for each personality item score and the two coping scores. There was a significant negative relationship between emotional stability and avoidant coping,  $r = -0.173$  and  $p < 0.05$ . Extraversion was positively associated with approach coping,  $r = 0.247$  and  $p < 0.01$  and negatively associated with avoidant coping,  $r = 0.181$  and  $p < 0.05$ . Table 1 provides a summary of the results.

To test the effect of birth order on personality and coping style, TIPI and Brief Cope scores were analyzed with a one-way independent ANOVA. Birth order was the independent variable with personality and coping being used as the dependent variables. There was no difference in scores on the five personality dimensions based on birth order (all  $F$ 's  $< 2.13$ , *ns*).

Similarly, there was no difference in coping scores for either approach or avoidance based on birth order ( $F$ 's < 2.03, *ns*).

### **Discussion**

The aim of the present study was to extend the literature on birth order, personality and coping by exploring the potential connection between all three. Consistent with prior work, there were some correlations between personality and coping styles. Specifically, emotional stability was negatively correlated with avoidant coping, such that those higher in emotional stability used less avoidant coping techniques. There was also a positive correlation between extraversion and approach coping, consistent with prior work.

There was no evidence for a connection between birth order and personality or birth order and coping. These null results are not surprising, given the mixed findings in previous research. A reason why there might not be a relationship is because of the pool of participants used for the study. This type of effect might only be seen unless children are still living at home with their parents and siblings. Another reason could be due to not having an evenly distributed set of participants. In this study, there were more first borns studied than the other categories of birth order which could have affected the results.

It is of course possible that a relationship exists and the limitations of the study prevented us from demonstrating that. For example, it could be the case that the self-report surveys used failed to provide enough specificity to separate respondents effectively into categories or to describe accurately variability in coping. Additionally, lack of motivation to answer questions completed through an online platform could have reduced accuracy in respondents. It is possible too that self-report measures, filtered through the respondents self-assessment, might not provide the most useful means for assessing these constructs.

In the future, researchers could use a different approach when studying this topic. For example, it could be helpful to test stress levels and incorporate that in the analysis. Testing stress levels will allow for a more accurate analysis because it will show us how different amounts of stress affect one's coping style. In addition, rather than having participants fill out a questionnaire it might be more beneficial to have an interview. This way, the researcher has the opportunity to pick up on nuances and gives the participants to describe their own coping style rather than picking a pre-generated answer. Another improvement could be to ask participants about their culture because different cultures believe/practice differently. By doing this, it will allow the researcher to see how the participants' life impacts their decision when deciding what strategy to use.

In sum, although the research failed to find significant relationships with birth order and personality and birth order and coping, the findings are consistent with prior work. Although birth order, per se, may not determine personality or influence coping, personality variables were connected with differences in coping in expected ways. Future research using multiple methods is warranted to more fully explore the connection between these variables.

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**Tables****Table 1***Relationship Between Coping style and Personality*

	Approach Coping	Avoidant Coping
Extraversion	.247**	-.181*
Agreeableness	-.055	-.052
Conscientiousness	-.104	-.160
Emotional Stability	-.018	-.173*
Open to Experiences	-.099	-.126

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

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