

Birth Order and Anxiety Levels in Young Adults with Siblings with Special Needs

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### Abstract

Current research shows that neurotypical children who have siblings with a physical or mental disability report higher levels of anxiety (Orsmond & Seltzer, 2009). However, little research has been done to explore this occurrence in adults. The purpose of this study was to investigate whether or not having a sibling with a physical or mental disability increased anxiety levels of the adult neurotypical sibling and if gender or birth order played a role in this relationship. The results revealed correlations of marginal significance that indicated that females report higher levels of anxiety than males. However, there were no significant correlations supporting the initial hypothesis. The implications of these results will be discussed in the following manuscript.

### Birth Order and Anxiety Levels in Young Adults with Siblings with Special Needs

In 2010, about 19 percent of the United States population had some sort of mental or physical disability (U.S. Census Bureau, 2012). Because about 78 percent of people have at least one sibling, it is fair to assume that most of these disabled people have a sibling (U.S. Census Bureau, 2011). The family dynamics of a family with a child with special needs differ from those of a typical family. When one of the children has some sort of mental or physical disability, the parents are often forced to give more of their attention to this child (Chan & Goh, 2014). Often times this leads to less attention for the neurotypical sibling (Chan & Goh, 2014). Additionally, depending on the severity of the child's disability, the sibling may have to provide care for the child with special needs. These added responsibilities and lack of attention could lead to psychological strains on the sibling that could result in lifelong effects such as anxiety.

Current research indicates that adolescents who have siblings with autism spectrum disorder experience higher levels of anxiety and depressive symptoms (Orsmond & Seltzer, 2009). People who have siblings with special needs report that their relationship with their parents have been affected as well (Orsmond & Seltzer, 2007). In research conducted with adolescents aged 12-18, sisters of children with special needs reported higher levels of anxiety than brothers (Orsmond & Seltzer, 2009).

Because research indicates a higher level of anxiety in adolescents with siblings with special needs, we aspired to replicate these results in young adults. In this study, we investigated the anxiety levels of young adults who have siblings with special needs and compared these levels to young adults who have siblings without special needs. We formed three hypotheses. First, young adults who have siblings with special needs will have higher levels of anxiety

symptoms. Second, the young adult will have higher anxiety levels when his or her disabled sibling is younger than him or her. Third, females will experience higher rates of anxiety than males.

## **Methods**

### *Participants*

Seventeen undergraduate students (14 females and 3 males; average age=21, SD=5.6) from a mid-sized university in the Southwest participated in this study. Of all the participants, 65% were caucasian, and 35% were hispanic. All participants had at least one sibling. Approximately 53% of participants had at least one sibling with a physical or mental disability. Of the participants that had a sibling with special needs, 22% were younger than their sibling and 78% were older than their sibling. Participation was completely voluntary; each participant either fulfilled a course requirement or received extra credit for a psychology course by participating in this research.

### *Materials*

*Demographics.* Each participant completed a questionnaire regarding his or her gender, ethnicity, age, birth order, and whether or not his or her sibling had a physical or mental disability.

*Anxiety.* The participants completed two questionnaires regarding their levels of general anxiety. The first anxiety questionnaire that they completed was the Beck Anxiety Inventory (Gates, Lineberger, Crockett, & Hubbard, 2001). This questionnaire includes 21 symptoms of anxiety, such as feeling of choking and fear of losing control. Participants were directed to indicate how much they had been bothered by each symptom in the past month on a scale of zero

to three, zero being not at all and three being severely. The second anxiety questionnaire completed by the participants was the Generalized Anxiety Disorder 7-item Scale (GAD-7) (Spitzer, Kroenke, Williams, & Lowe, 2006). This questionnaire includes seven symptoms of anxiety, such as feeling nervous, anxious, or on edge. The participants were directed to indicate how often they had been bothered by each symptom in the last 2 weeks on a scale of zero to three, zero being not at all and three being nearly everyday. At the end of the questionnaire, the participants were asked to indicate how difficult these symptoms made it for them to do their work, take care of things at home, or get along with others on a scale beginning with not difficult at all and ending with extremely difficult.

*Social Anxiety.* The last anxiety questionnaire the participants completed was the Social Anxiety Questionnaire for Adults (Caballo, Arias, Salazar, Irurtia, & Hofmann, 2015). This questionnaire includes thirty social situations such as greeting someone and being ignored. The participants were directed to indicate the amount of unease or nervousness each situation would cause them on a scale of one to five, one being not at all or very slight and five being extreme stress.

*Sibling Effects.* Participants completed a Sibling Effects Scale measuring conflict, rivalry, status/power, and warmth/closeness within their relationship with their sibling (Furman & Buhrmester, 1985). The questionnaire includes 26 items. For the first 13 items, the participants were directed to indicate how often they disagreed with their sibling, spent time with their sibling, etc. on a scale of zero to three, zero being never and three being very often. For the last 13 items, the participants were asked the same questions reversed using the same zero to three scale. For example, “How often did your sibling spend time with you?”

### *Procedure*

When the participants entered the room, they were instructed to sign in and were asked to sit at a desk. Once all the participants were present, each one read and signed an informed consent form. The participants were told to silence all electronic devices. We distributed the first questionnaire, waited for each participant to complete it, collected the questionnaires, and then passed out the next one. We followed these same steps for all five questionnaires. When the last set of questionnaires was collected, the debriefing form was distributed. Finally, participants were instructed to read the debriefing form before exiting.

### **Results**

A bivariate correlation was conducted between Beck Anxiety Inventory, GAD, Social Anxiety Questionnaire, Sibling Effects Scale, gender, whether or not the participant had a sibling with special needs, and whether the participant was older or younger than his or her sibling with special needs. There was a positive correlation between GAD score and Beck Anxiety Inventory score,  $r=0.63, p<.01$ . Those that got high scores on the Beck Anxiety Inventory ( $M=14.24, SD=8.81$ ) also got high scores on the GAD ( $M=9.47, SD=6.46$ ). There was a positive correlation between Beck Anxiety Inventory score and SAQ score,  $r=0.656, p<.01$ . Participants that reported a high score on the Beck Anxiety Inventory ( $M=14.24, SD=8.81$ ) also got a high score on the SAQ ( $M=81.29, SD=24.74$ ). There was a relationship of marginal significance between gender and GAD score,  $r=0.429, p<.10$ . Females ( $M=1.82, SD=0.39$ ) scored higher on the GAD ( $M=9.47, SD=6.46$ ) than males. There was also a relationship of marginal significance between gender and SAQ score,  $r=0.46, p<.10$ . Females ( $M=1.82, SD=0.39$ ) scored higher on the SAQ

( $M=81.29$ ,  $SD=24.74$ ) than males. No significant data were found supporting the hypothesis that participants with siblings with special needs have higher levels of anxiety.

### **Discussion**

The purpose of this study was to investigate whether or not having a sibling with a physical or mental disability increased anxiety levels of the adult, neurotypical sibling and if gender or birth order played a role in this relationship. No data were found supporting the hypotheses that having a sibling with a disability increases anxiety levels or that birth order had an effect; however, there were two correlations of marginal significance supporting the hypothesis that gender has an effect on anxiety levels.

We were able to reveal that females are significantly more likely to report higher levels of generalized anxiety than were men. This finding is consistent with prior research conducted by McLean, Asnaani, Litz, and Hofmann (2011) that also found that women have higher prevalence rates of anxiety disorders. Additionally, we found that women reported higher levels of social anxiety than did men. These gender differences could be because men may be less likely to report anxiety symptoms due to gender stereotypes (Shear, Feske, & Greeno, 2000).

Significant correlations were also found between GAD score and Beck Anxiety Inventory score as well as between the Beck Anxiety Inventory and the SAQ. These findings provide evidence that the participants answered the questions consistently because those that reported high levels of anxiety did so on all questionnaires, and those that reported low levels of anxiety also did so on all questionnaires as well.

Even though our research did not reveal that having a sibling with a physical or mental disability increased anxiety levels, prior research conducted by Gael Orsmond and Marsha

Seltzer (2009) did. According to Orsmond and Seltzer (2009), females with siblings with special needs report higher levels of anxiety than people with neurotypical siblings. Naomi Breslau's (1982) research also indicates that birth order plays a role in the psychological well-being of the neurotypical child because she found that when a female, neurotypical sibling was older than the sibling with a disability, she was more likely to score higher on psychological impairments. The reason for this finding could be due to the fact that when a child with special needs is brought into a family with a neurotypical child, then the neurotypical child's world is drastically changed.

### *Limitations*

Although this study was carefully conducted, there were some limitations. The first limitation was the sample size. There is a possibility that a larger sample size may have yielded different or more significant results. Our sample size was so small due to the time constraints on this study. However, even with a small sample size, the study did reveal some significant results that are supported by current research. Another limitation of this study was the uneven ratio of males to females. A larger sample size may have yielded a more even ratio.

### *Concluding Remarks*

To the best of our knowledge, there is currently no study that has been conducted to determine if having a sibling with special needs increases anxiety in the adult, neurotypical sibling. Current research either focuses on adolescents with disabled siblings rather than adults or psychological impairments other than anxiety. The results of this study indicated that females report higher levels of anxiety than males. This finding is consistent with current research conducted by McLean, Asnaani, Litz, and Hofmann (2011). However, this study was unable to determine that young adults who have siblings with special needs experience higher levels of

anxiety than young adults with neurotypical siblings or that birth order played a role in the relationship.

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