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The Effects of Birth Order on Psychological Resilience Among Adolescents Exposed to Domestic Violence

Tamaryn Kelley and Robin Guill Liles

Kelley, Tamaryn, conducted the research described in this manuscript in partial fulfillment of an independent study for credit toward her Master's of Science in Mental Health Counseling-Clinical in the Department of Human Development at North Carolina Agricultural and Technical State University.

Liles, Robin Guill, served as the professor-of-record for Ms. Kelley's independent study and as supervisor for the research process.

Abstract

This study was designed to investigate the impact of birth order characteristics on psychological resilience of adolescents exposed to domestic violence. This study predicted that i) younger children will be most resilient to exposure of domestic violence; and ii) older children will take on a parental role, and although able to function well, will not be as resilient. Four participants, recruited from a regional hospital's behavioral inpatient unit, completed a demographic questionnaire as well as a recorded interview utilizing the Multidimensional Trauma Recovery and Resiliency Interview (Harvey et al., 1994) to assess for psychological resilience. Interviews were transcribed and a resiliency/recovery score was computed using the MTRR-I companion rating scale, Multidimensional Trauma Recovery and Resiliency Scale (Harvey et al., 2000). This study found that there is not one particular birth order that fairs the best or worst in overcoming traumatic events. Rather, all birth order positions have both strengths and weaknesses in domains contributing to resiliency and recovery.

Introduction

Some individuals are able to recover more easily after experiencing a traumatic event, and others have significantly more difficulty working through the trauma. This is a topic that has gained much interest in recent years (Legault, Anawati, & Flynn, 2006). The construct of psychological resilience suggests that individuals can attain positive psychological development and health despite exposure to dangerous and traumatic events. In the clinical setting, it is important to understand why some individuals are more resilient than others. The practical benefit of preventative efforts rather than retroactive treatments is obvious. Clinicians can screen for and develop interventions for individuals who may have more difficulty recovering from a traumatic event. Research has shown that exposure to domestic violence has a significant impact on a child's mental

health (Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). There is a pressing need for understanding what aids resilience within this population. This study could answer in part what role birth order may play in psychological resilience among adolescents (ages 12-17) who have witnessed domestic violence.

Utilizing Adlerian theory in framing the research process, we studied personality and psychological state by taking into account the multidimensional foundations of developmental theory such as age, gender, and environment. Alfred Adler explained personality theory through latent individual personality characteristics based on birth order (Eckstein, 2000).

The research question for this study was: What role does birth order play in the psychological resilience of adolescents exposed to domestic violence? Hypotheses were: i) middle and younger children will be most resilient to exposure of domestic violence; ii) older children will take on a parental role, and although able to function well, will not be as resilient. There were no only children who took part in the study.

Literature Review

Birth Order

Many factors play into the concept of psychological resilience. Intelligence levels and personality traits are two components that aid in coping after experiencing adversity. Although birth order is not deterministic, individuals in a specific birth order possess life experiences that impact how that individual views the world and how he or she navigates through life (Corey, 2009). Salmon (2003) found that individual personality traits vary according to birth order. Adler defined birth order as a strong indicator of personal lifestyle development and that this lifestyle impacts how an individual copes with life experiences (Khodarahimi & Ogletree, 2011). Previous data have suggested that older children tend to be more persistent and have greater self-efficacy, while younger children have higher measures of joy. Both joy and self-efficacy are important when addressing resilience. Adler proposed that individuals interact within society based upon their assumptions about the world, which are influenced by their birth order (Croake & Olson, 1977). Thinking ecologically, a family may be conceived as a social microsystem in which children seek to find their purpose and function (Bronfenbrenner & Morris, 1998; Liles & Juhnke, 2008).

Although personal lifestyle affects coping styles, family size and dynamics also influence the strength of personality traits assigned to each birth position (O'Donnell, Schwab-Stone, & Muyeed, 2002; Pilowsky, Yirmiya, Doppelt, Gross-Tsur, & Shalev, 2004). For children who have witnessed violence, parental support was found to be a strong predictor for high measures of self-reliance. Parental support was also found to predict higher levels of resiliency scores (O'Donnell et al., 2002). Sibling age is associated with a more positive emotional outlook on stressful situations (Pilowsky et al., 2004). Children of greater age express a more positive outlook and greater empathy than those who are younger and in similar situations. Larger families may also predict greater deficits in socialization skills, and increased parental stress levels have been associated with delay in children's socialization skills (Pilowsky et al., 2004). Although first-born children receive attention as an only child, it is the later-born children who tend to enjoy the most attention for the longest time period (Salmon, 2003). Older siblings and earlier

born children seem more capable of taking another person's point of view, adapting to new situations, and resolving issues (Recchia & Howe, 2009).

Development and Behavior

Domestic violence significantly and negatively impacts a child's cognitive and emotional development. Negative effects include "emotional and behavioral functioning, social competence, school achievement, cognitive functioning, psychopathology, and general health" (Wolfe et al., 2003, p. 171). O'Donnell et al. (2002) found that among elementary school-age children, individuals exposed to violence were more likely to engage in substance use, delinquent behavior, and misconduct in school.

Resiliency may influence symptom severity of posttraumatic stress disorder (PTSD) in individuals exposed to violence (Zahradnik et al., 2010). Across cultures, exposure to violence positively correlates with PTSD; however, individual resiliency can buffer more severe symptoms of PTSD.

Personality Traits, Development, and Resilience

There is a strong correlation between resilience and personality factors, and the proper assessment of personality and resiliency has been ongoing since the 1950s (Friborg, Barlaug, Martinussen, Rosenvinge, & Hjermadal, 2005; Waaktaar & Torgersen, 2010). The five-factor model (FFM) of personality provides a robust structure for the assessment of personality traits, including neuroticism, extraversion, openness, agreeableness, and conscientiousness (McCrae et al., 2002). Friborg et al. (2005) found that positive perceptions of self and future correlated with emotional stability and the absence of neuroticism, both of which predict stress-tolerance. Social competence (measured as social intelligence) is also significantly correlated with resilience; and overall, personality traits such as agreeableness, conscientiousness, and emotional stability tended to correlate strongest with resiliency. The five-factor model also appears to be a strong predictor for school success, school maladjustment, and loneliness (Waaktaar & Torgersen, 2010).

Positive emotions influence stress management and trait resilience, offsetting the immediate adversities of personal stressors. Ong, Bergeman, Bisconti, and Wallace (2006) discovered that when participants experience higher levels of stress, daily negative emotion scores were also higher. Evidence indicated that increased morning cortisol levels, a stress hormone, is associated with psychosocial stress and that mood disorders alter these cortisol levels (Adam et al., 2011). Tugade and Fredrickson (2004) defined trait psychological resilience as the "capacity to modify responses to changing situational demands, especially frustrating or stressful encounters" (p. 322). Trait resilience appears significantly and positively related to positive emotions (Ong et al., 2006).

Developmental foundations such as age, gender, and environmental support impact resilience. A person's age and development affect personality trait development and individual ability to resolve conflict (Recchia & Howe, 2009). Older siblings appear better able to utilize conflict strategies and to implement problem-solving techniques. Earlier born children can generally share their perspective of an event and understand younger children's perspectives (Recchia & Howe, 2009). Gender seems to mediate exposure to domestic violence and corresponding negative effects. Khodarahimi and Ogletree (2011) found significantly negative correlations between the number of sisters in

a family and emotional factors. The number of sisters was negatively related to emotion attention, life satisfaction, and self-esteem. However, there was no significant relationship between family brothers and these three psychological constructs. Family support also influences individual resilience. Larger family size relates negatively to positive psychological constructs, possibly due to less individual attention and increased stress levels (Khodarahimi, & Ogletree, 2011). Zahradnik et al. (2010) found that community and family play an important role in “buffering the relationship between exposure to violence and PTSD re-experiencing symptoms” (p. 416). Family cohesion is congruent with lower levels of neuroticism, and thus higher levels of resilience (Friborg et al., 2005).

Methodology

Prior to conducting the study, Institutional Review Board approval was obtained from the researcher’s university and the regional behavioral health hospital where participants were admitted.

Participants

Four participants (Female $n=3$; Male $n=1$; M Age = 14.75 years) took part in this study and were recruited from a regional hospital’s behavioral health inpatient facility. Participants were hospitalized in a behavioral health facility, admitted for various issues including depression, anxiety, and suicidal ideation. Participants were purposefully invited into the study as they had early exposure to domestic violence. Such exposure increases the risk of mental health issues (Wolfe et al., 2003; Zahradnik et al., 2010). Two participants were Hispanic/Latino; one, African American; one, Caucasian. Mothers’ highest educational level ranged from unknown to a bachelor’s degree. Two participants reported that prior to the beginning of the study, they had witnessed domestic violence in the past 30 days; one participant, in the past 1-3 months; one participant, in the past 7-9 months. Each participant witnessed verbal and emotional abuse; three participants witnessed sexual abuse; two participants were victims of sexual abuse.

Instrumentation

Demographic questionnaire. The demographic questionnaire included questions such as: (i) age; (ii) gender; (iii) ethnicity; (iv) grade level; (v) previous year’s academic grades; (vi) father’s educational level; (vii) mother’s educational level; (viii) caretaker/guardian; (ix) number of people in the household; (x) number of siblings; (xi) birth order position; (xii) relationship with sibling; (xiii) relationship with people in the household; (xiv) feelings of inclusion within household; (xv) types of domestic violence witnessed; and (xvi) time since last instance of domestic violence. The completed demographic questionnaires were labeled as P1, P2, P3, or P4.

Multidimensional Trauma Recovery and Resiliency Interview (MTRR-I). The MTRR-I (Harvey et al, 1994) is a 19-question semi-structured interview designed for victims of violent trauma entering individual or group treatment. The interview facilitates interviewer insight into individual phenomenological experiences and coping mechanisms. The interview covers individual (a) history and memory, (b) physical or mental difficulties, (c) relationships, (d) personal feelings; and (e) perceptions of life

experiences. Modified for use with adolescents, the interview consists of 19 open-ended questions, each with selected probes and/or prompts. Due to the semi-structured nature of the interview, no probes or prompts were read verbatim from the interview. Probes addressing sexual behavior and abusive relationships were omitted from the interview. For specific modifications made to the MTRR-I, please contact the principal investigator.

Multidimensional Trauma Recovery and Resiliency Scale (MTRR-99). The MTRR-99 (Harvey et al., 2000) is a companion rating scale to the MTRR-I. The MTRR-99 is a Likert-type rating scale. The MTRR-I and MTRR-99 are designed to assess a trauma survivor's psychological functioning in eight domains: "authority over memory, integration of memory and affect, affect tolerance and regulation, symptom mastery, self-esteem, self-cohesion, safe attachment, and meaning making" (Daigneault, Cyr, & Tourigny, 2007, p. 170). With the MTRR-99, the researcher rates interview narratives on a 5-point Likert scale across domains. Combined, the MTRR-I and MTRR-99 create a recovery/resiliency score (r/r), as well as domain-specific scores. MTRR-I and MTRR-99 reliability, validity, and inter-rater agreement have been reported in the literature (Daigneault et al., 2007; Peddle, 2007).

Procedure

We recruited participants from a regional behavioral health hospital, and we screened for study inclusion through hospital chart review and face-to-face interactions with the principal investigator (PI). Participants and their parents/guardians gave appropriate informed consent. Consent for audio recording was also obtained. Individuals participated in this study during their stay at the hospital, and no one was contacted once discharged. Each participant's treatment team was notified about interviews. Data collection was anonymous. Before initiating the interview, we read aloud the MTRR-I prompt to review the purpose of the interview. At 30-minute intervals, we asked participants if they felt comfortable continuing the interview, if they wanted to take a break, and if they wanted to get anything to eat or drink. After the interview, we thanked participants and asked them if they were experiencing any emotional upset as a result of the interview. All participants denied upset emotions or suicidal/homicidal thoughts. Each interview lasted approximately one hour. Narratives were subsequently rated using the companion rating scale.

Results

We utilized a mixed-methods approach, focusing on participant narratives and self-reports. Due to the phenomenological nature of the study, the analysis was heavily weighted on qualitative profiles. Recurrent themes were identified and highlighted for each birth order. We recorded and transcribed interviews and rated interviews using the MTRR-99. We tabulated individual recovery/resiliency scores (r/r) using the eight domains of the MTRR-99. These domains were:

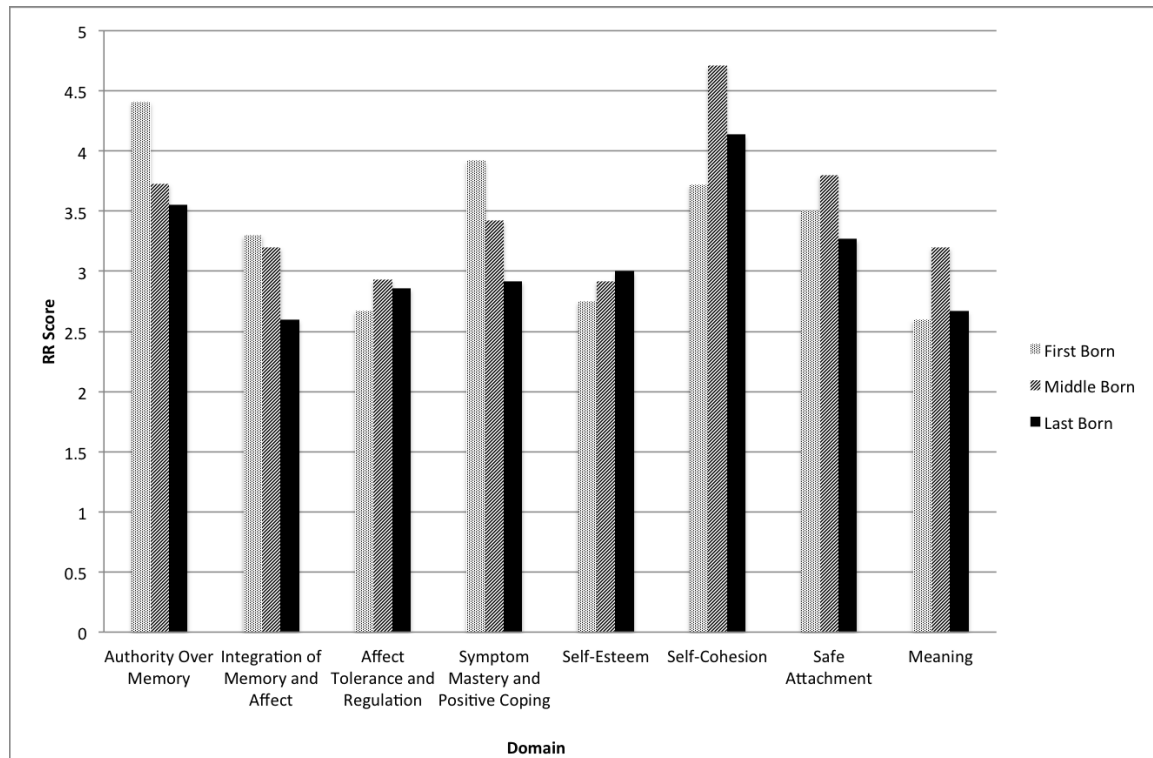
1. Authority Over Memory: ability to coherently recollect past events
2. Integration of Memory and Affect: psychological and emotional congruency
3. Affect Tolerance and Regulation: emotional regulation with painful memories
4. Symptom Mastery and Positive Coping: positive coping mechanisms
5. Self-Esteem: valuing oneself

6. Self-Cohesion: psychological and emotional integration within self
7. Safe Attachment: psychological and emotional integration with others
8. Meaning: understanding past and present events.

Participant domain scores were averaged to create recovery/resiliency scores (see Table 1).

Table 1

Recovery/Resiliency Score by Birth Order Across Domains



Support for treatment of ordinal data (e.g., Likert) as interval-scaled data exists (Harwell & Gatti, 2001). Data re-scaling is accomplished when there are manifest and latent variables; whereby the manifest data are ordinal, and latent data retain interval properties. The latent, continuous variable here is the participant's resiliency level. The manifest or observed variable is the recovery/resiliency (r/r) score, obtained from participant mean domain scores. Given that latent variable data retains interval properties, and given the manifest variable, ordinal properties, a monotonic transformation, or rescaling, of the data can occur such that the rescaled scores become interval data (Harwell & Gatti, 2001).

Authority Over Memory and Symptom Mastery

First-born participants scored highest r/r scores in *Authority Over Memory* and *Symptom Mastery*. As well, these participants related a clear narrative of their life history, discussing both childhood and recent life memories with comparable clarity:

PI: Okay, so take me a little bit further, now maybe you are 6 or 7.

Par 1: When I was six, my mom, she sent me off to Virginia. I was living with my cousins for about a month while she was finding us a new home and moving in with this other man. It's the step-dad now. I didn't know that at the time; I didn't know anything about him except that he had cats, and I was very excited because I love cats.

PI: So now let's go back to more recent. Tell me an event that happened more recently.

Par 1: Um, okay. Joe (identity disguised) and I we were hanging out at the parking lot at a soccer field at night and all of a sudden the sprinklers turn on so all of a sudden him [sic] and I decide to strip down and run in the sprinklers. That was like the best night of my life. I came home soaking wet and my mom was like, "I don't even want to know." After that we just laid [sic] on the couch and watched movies. He went home at four so that we could get some sleep and do it again tomorrow.

First-born children tend to do better than middle- and last-born children in utilizing coping skills (positive and negative). Research has found that increased cognitive capabilities and positive personality traits contribute to decreased levels of stress and increased coping abilities (Rioli, Savicki, & Cepani, 2002). First-born participants discussed a wide range of coping skills:

PI: So if you're stressed out, you sleep. Is there anything you do to help yourself relax?

Par 2: I just listen to calm music, and I just lay down and stare at the wall or whatever. Or I'll talk to a friend that will make me laugh, you know, get my mind off of things.

PI: Okay. So you talk to your friends too. Are you a part of any groups or any group activities?

Par 2: Soccer.

PI: Does that help?

Par 2: Yeah, it helps. I'll get overwhelmed really easy when it comes to school work.

PI: So how do you deal with that?

Par 2: I'll give most of it back and I'll ask for small increments at a time. I'll do it a little bit at a time, I don't want too much at a time, I'll get overwhelmed.

PI: Okay, so you communicate with people and let people know what you need when you get stressed out?

Par 2: Yeah.

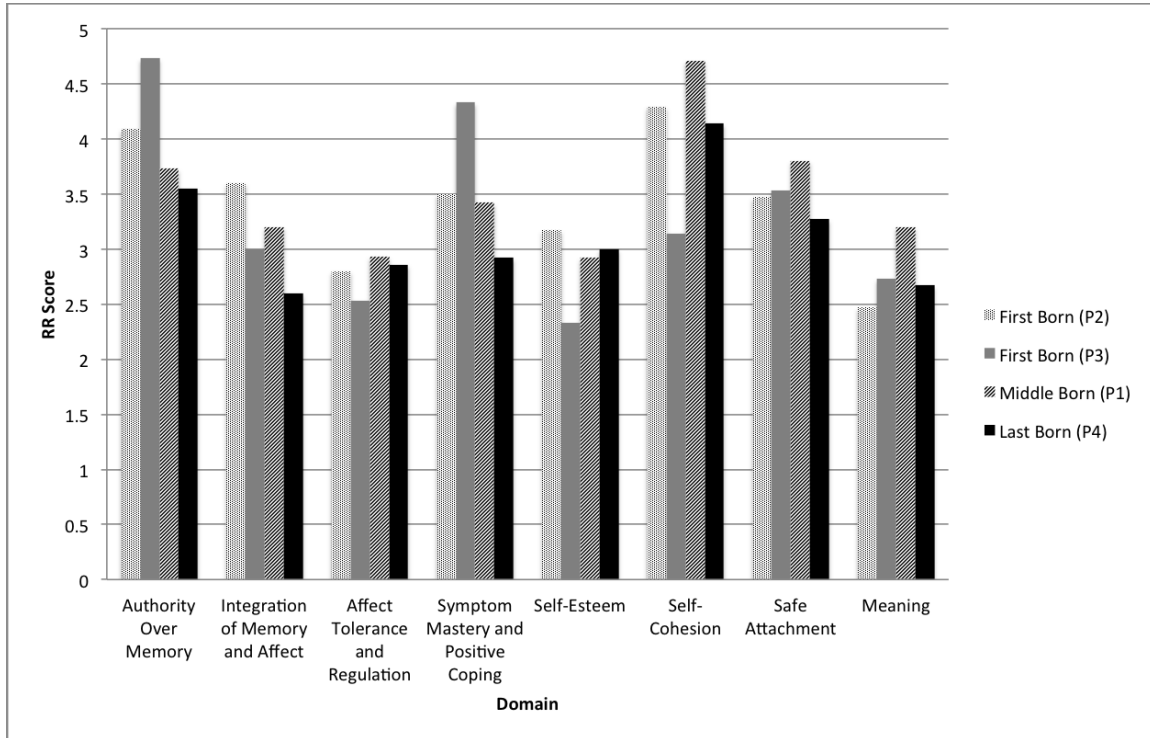
PI: Okay, what about any drugs or alcohol. Do you ever use any of that to help you cope?

Par 2: Marijuana. Music.

Though first-born participants described coping skills, they also appeared to distract themselves from hurtful thoughts or memories. Croake and Olson (1977) agreed, finding that older children tend to be more persistent in the face of adversity (see Table 2).

Table 2

Individual Recovery/Resiliency Score by Birth Order Across Domains



Self-Cohesion, Safe Attachment, and Meaning

The middle-born participant demonstrated *Self-Cohesion*, *Safe Attachment*, and *Meaning*. Prior research suggests that middle-born children receive the least familial attention, not benefiting from being either oldest or youngest. Middle children tend to establish meaningful relationships outside of the family, whereas the first- and last-born children typically form closer relationships to the parents and family members (Salmon, 2003). Elevated recovery/resiliency (r/r) scores across *Self-Cohesion*, *Safe Attachment*, and *Meaning* domains appeared validated within participant narratives.

PI: What makes life meaningful to you?

Par: When people care about me.

PI: Are there particular people that make life meaningful to you?

Par: My mom. When I feel like she's caring about me. When she's doing stuff for me. One of those days is a big day for me. It means something good.

PI: Do you feel like you are part of a community?

Par: Yeah, everyone talks to me.

PI: Who's everyone?

Par: You know, people in the community.

PI: Are you spiritual or do you have any faith? Do you believe in a religion?

Par: Yeah. I'm Catholic... I like being Catholic.

Although the last-born participant scored highest amongst domains *Authority Over Memory* and *Self-Cohesion*, this participant did not have scores that suggested a noticeable positive difference over the scores from other participants.

Discussion

Resiliency research has been on the rise in recent years. Clinicians desire to understand what can enhance individual recovery from traumatic events. With adolescents, this is important as psychosocial theory suggests that teenagers are developing a sense of identity and purpose within society (Sandhu, Singh, Tung, & Kundra, 2012). The inability to recover from adversity during this stage of identity development could have lasting effects on an individual. To date, there is a wealth of information on birth order and interpersonal relationships, but the connection between birth order and resiliency has not been established (Croake & Olson, 1977; Khodarahimi, & Ogletree, 2011; Salmon, 2003).

In evaluating the results from this study, it is important to recognize the small *n* and corresponding generalizability of results. Among the four adolescent participants who witnessed domestic violence, first-, middle-, and last-born children had strengths in different domains. First-born children seemed to have better emotional regulation, memory retrieval, and utilized a variety of coping skills. The middle-born participant expressed an established sense of identity and was able to find support and meaning in a number of different people present in her life. Among his individual scores, the last-born participant scored highest in *Authority Over Memory* and *Self-Cohesion*, and was able to tell clear and concise stories from his past with ease. At least in these four cases, findings suggest that each birth order position carried specific strengths.

First-Born Participants

The first born adolescents were able to retell their life narrative in a clear, chronological fashion. Their ability to tell coherent stories from childhood until their recent past, without becoming emotionally overwhelmed, was evident. Both first-born participants described different day-to-day emotions, ranging from depressed to excited to loved. However, they also reported having control of their memories and the ability to distract themselves. One participant said, “I feel like I do a good job of keeping myself distracted. It’s easy not to think when you’re not told that much.” The ability to recall events, experience emotional range, and distract oneself from negative emotions and memories may contribute to adolescent resilience. First-born children in this study exhibited characteristics of individuals who have largely recovered from a traumatic event, but continue to distance themselves from the actual event. These individuals appeared reluctant to confront or revisit traumatizing events.

First-born participants noted that they separated themselves from their emotions when recalling traumatic events. Neither first-born participant became emotional during their interviews. One participant did describe a dream world where she could continue living her life without traumatic memories.

I’m living another life, I get a second chance at things. That’s where Heather (disguises implemented) is; and my family is different; and everyone is different, but everything is the same, you know? It’s a regular person’s life, but it’s not this life.

Within this study, the first-born participants’ techniques of distracting and disconnecting from past events could be linked to their affinity for persistence and achievement (Eckstein et al., 2010). Both first-born participants assumed responsibility for helping the

family and caring for younger siblings. One participant described her typical day as follows:

Got to make sure the kids are fed, got to make sure they take a shower, got to make sure the house is clean, got to make sure that they go to school, that they come back from school safely. Got to make sure that they're doing their homework...got to make sure they aren't starving or anything and then I've got to make sure I've made food for my dad, then I got to make sure my mom's okay. Got to make sure everything is okay.

Assuming family responsibility may be one way first-born individuals cope with disorganized households. In this study, it appeared that first-born participants were able to maintain the position as the mature first child through their caretaking behaviors. Through caretaking, the child obtains a sense of personal control and security and correspondingly decreases his or her anxiety. Salmon (2003) found that older children tend to assume more responsibility in order to help the family, and by contrast, middle children tend to focus on issues outside of the family.

Middle-Born Participant

The middle-born participant scored high in *Self-Cohesion* and *Meaning*, presenting with a strong sense of personal identity and life purpose. She did not experience dissociative or disconnected feelings. She described herself as “whole” and “complete,” although she admitted to having self-esteem issues. The participant found support in healthy, long-lasting friendships and deeply-connected relationships.

The middle-born participant obtained the highest resiliency/recovery score, viewing the family as important. This participant claimed that relationships with family members, both immediate and extended, provided a sense of meaning in life. The middle-born participant expressed unconditional love for her family, even when feeling that this love was unreciprocated. When the participant was asked about the importance of family members, the response was, “I don't care how they are. I just love them a lot and I can't be nothing without them... I don't care if they don't love me, I care about them so much.” This reaction supports Adlerian theory suggesting that the middle child often feels “squeezed out” of the family, and seeks relationships elsewhere. The middle child may also take the role of peacekeeper to maintain a purpose and role in the family (Corey, 2009).

Though middle-born children tend to be less attached to the family and less likely to help the family, they also offer support to other family members. In return, the middle-born child may receive more sibling support (Salmon, 2003). That is, middle born children are more likely to seek help outside of the family and simultaneously access sibling help, as available. The middle-born participant in this study developed relationships with individuals within both her family and cultural community, forming relationships with teachers in school and obtaining good grades. This participant also obtained the highest overall recovery/resiliency (r/r) score. O'Donnell et al. (2002) found that academic performance and peer support predicted higher resilience levels for most people across domains.

Last-Born Participant

The last-born participant acquired the lowest recovery/resiliency (r/r) score of study participants. This participant was similar to the middle-born participant in that the last-born participant was establishing a sense of personal identity and simultaneously creating meaningful relationships. This participant was able to describe traumatic events and yet also seemed overwhelmed by memories.

The last-born participant admitted actively avoiding activities and people that could trigger traumatizing memories and emotions. Research suggests that later-born children are likely able to describe their perceptions of an event, rather than viewing the experience from different perspectives (Recchia & Howe, 2009). The last-born participant became noticeably angry when discussing past trauma, saying, “When I see bullying, I just have to...” (participant makes punching gestures). Past research also suggests that externalizing behavior problems are significantly higher for boys than girls (Moylan et al., 2010). The participant seemed to ascribe meaning to past trauma, assuming the role of “superhero” in the “fight” against violence. This participant informed strength in asking for help, accepting help, and creating positive relationships.

The last-born participant did exhibit paranoid and anxious behavior, which is atypical of last-born children (Eckstein et al., 2010). The participant’s siblings, both older and out of the house, were estranged from the family, leaving the participant in the new role of an only child, “alone” in a chaotic home. The last-born participant’s anxiety and fearfulness could stem from past trauma (both within and outside the home) and ongoing adjustments within the household.

Therapeutic Implications

Moylan et al. (2010) reported that children exposed to domestic violence had higher levels of externalizing and internalizing behavior problems. Participants exposed to domestic violence and child abuse rated higher on delinquency and depression levels as measured by Beck’s Depression Inventory (Moylan et al., 2010). The Adverse Childhood Experiences (ACE) Study by Anda and Felitti (2003) further found that Adverse Childhood Experiences (ACEs), including forms of abuse and neglect, tended to occur in clusters and were often comorbid and co-occurring. In other words, in violent homes, multiple forms of violence and neglect are likely to be present and psychological trauma can increase exponentially (Anda & Felitti, 2003; Moylan et al., 2010).

Implications in the clinical setting include screening for exposure to violence, especially domestic violence. Clinicians working with adolescents must be aware of traumatizing history, especially exposure to violence. Individuals who are exposed to domestic violence are at increased risk for clinical depression and possibly suicidal ideation (Anda & Felitti, 2003). With more effective assessments, clinicians can create more effective individual treatment plans.

Though there were only four participants in this study, evidence appears to support strengths-based perspectives in the clinical setting. Strengths-based counseling purports that human beings have the potential to recover, but may not be aware of their potential (Van Wormer, 1999). Clinicians have the responsibility to advocate for and to empower their client(s). Adolescents exposed to domestic violence will likely feel less safe. The clinician can aid in instilling feelings of safety and control by helping

individuals recognize their assets and resources. In identifying strengths the individual has within him/herself, a counseling foundation for change and growth is established.

Contrary to prior research, findings from this study suggest that in violent homes, no particular birth order placement necessarily fares better than another. Rather, all birth order positions have strengths and areas of vulnerability. Focusing upon strengths inherent to each birth order placement could help the client gain a sense of meaning and purpose in an otherwise chaotic environment. Engaging the client in a holistic manner fosters client resiliency and rehabilitation.

Limitations and Future Research

There are a number of limitations to this study. The most significant limitation was the small *n*, and accordingly, results must be viewed with caution. Replicating this study and increasing participant number is necessary. Further, the MTRR-99 was modified to fit the study's target population (Harvey et al, 2000). Future research could corroborate reliability and validity of the MTRR-99, modified for adolescents. The primary investigator interviewed and rated individuals using the MTRR-99. To increase reliability, another researcher also rated the same participants and corresponding scores and narratives, obtaining an inter-rater coefficient of .90.

Birth order positions (and related strengths) should be considered when working with adolescents exposed to violence. Future research could study individual birth order effects within counseling settings and across various counseling issues. Research surrounding only children and twins could also be helpful.

The role of the first-born child is particularly interesting. Future research could examine the authenticity of resiliency measured in first-born children. Although these individuals appeared to have resilient components in their narrative, their resiliency seemed to be based on unhealthy habits such as utilizing negative coping skills and disassociating from past traumas. Future research could delve into what aids healthy resiliency in first-born children, particularly focusing upon coping strategies utilized by individuals who score higher on resilience measurements. Educating parents and supportive adults of the findings of this study may allow these individuals to be able to provide more support and/or recognize in what ways children will be most likely to further recover.

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