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Quality of Sibling Relationship and Age Spacing in Single-Parent Households Versus Two-Parent Households

Mari Varga Overlock
Walden University

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Walden University

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Mari Overlock

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Walden University
2017

Abstract

Quality of Sibling Relationship and Age Spacing in Single-Parent Households Versus
Two-Parent Households

by

Mari V. Overlock

MA, Texas A&M University – Texarkana, 2008

BS, Texas A&M University – Texarkana, 2007

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Sibling relationship quality is affected by several variables, such as gender, age spacing, marital conflicts, parenting, and parent-child relationship, which simultaneously influence personality and developmental outcomes. Furthermore, sibling relationships can significantly influence the social climate of the family and vice versa. The objective of this study was to examine the effects of household composition (1-parent home vs. 2-parent home) and the number of years between siblings ages on sibling relationship quality, and to determine whether parental conflict response management strategies differ between single-parent and 2-parent homes. The participants were 124 adult mothers with at least 2 children. Participants provided demographic information and completed the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire to measure sibling relationship quality and the Parental Conflict Management Strategies to measure parental responses to sibling conflict. The 4 research questions were assessed using a quantitative design that used 2-factor multivariate analysis of variance and a chi-square test of independence. The result revealed that household type affected sibling rivalry such that 1-parent households reported less sibling rivalry than 2-parent households. The results also showed that there is no preference for any specific conflict management strategy for sibling conflict among single-parent and two-parent households. Social change implications may result from this study based on a better understanding of how sibling relationship quality has been affected by different family dynamics, such as changes in household composition.

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Dedication

I would like to dedicate this to my three sons, Ren, Harry, and Timmy. Your unconditional love, encouragement, and support were essential in completing this dissertation. Thank you for your love and for always believing in me. I'm blessed beyond measure by having you in my life.

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To the memory of my dad, you gave up everything, and I feel your smile. Last but not least, thank you God, for without you, none of this would have been possible.

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Chapter 1: Introduction to the Study

Introduction

In this chapter, I will summarize the purpose and the nature of this study, as well as the problem statement. I then briefly present the research questions and the theoretical base. I also explore assumptions, scope, and limitations and define key terms. Also in Chapter 1, I provide a concise synopsis of the proposed issue. I then provide a valuable base for the literature review in Chapter 2 and a discussion of the methodology in Chapter 3.

Crucial to a family unit, whether traditional, blended, or otherwise, is the interaction between siblings. Sibling relationship plays a significant role on the development of the individual, as well as on family dynamics. Older siblings often serve as role models, social partners, and rivals (McHale, Updegraff, & Whiteman, 2012; Solmeyer, McHale, & Crouter, 2014). The sibling bond is lifelong, nonelective, and often described by an emotionally intense love-hate relationship (Cicirelli, 1995).

Sibling relationships can significantly influence the social climate of the family and vice versa. Siblings are vulnerable to the risk and protective factors in the family context, which can directly contribute to parenting and problem behaviors. Risk factors include marital problems, depression, substance use, and parental favoring; on the other hand, protective factors include low stress, healthy marital relationships, and family values (Dirks, Persram, Recchia, & Howe, 2015).

Conflict and aggression are as common among sibling as are compassion and laughter. Because of the siblings' shared history and the bonds between them, they can

provide to each other support, guidance, and powerful emotional experiences. These emotions can range from love to hostility (Feinberg, Solmeyer, & McHale, 2012).

Birth order is among other factors that affect an individual child in the family, similar to socioeconomic status, numbers of family members, health, religiosity, and culture (Averett, Argys, & Rees, 2011; Sulloway, 1996). Early psychologists, such as Adler, Freud, and Jung, were among the first who proposed the importance of sibling relationships and suggested that birth order influences personality development. Among these theorists, Adler (1937) offered the most comprehensive analysis of the effect of birth order on personality. Adler argued that birth order is a significant factor in personality development, which later affects how individuals identify themselves, relate to others, and perceive the world around them (Simpson, Bloom, Newlon, & Arminio, 1994). Birth order studies show that wider age spacing is associated with less conflict between siblings (Kolak & Volling, 2013). Tucker and his colleagues (Tucker et al., 2013) studied siblings' proactive and reactive aggression during adolescence. They concluded that youth's reactive aggression is more common with their close-aged sibling than is proactive aggression.

Although sibling relationships can build proficiency in self-regulation and emotional understanding, they are also powerful in the development of antisocial behavior, which places children at risk for a multitude of negative outcomes (Tsamparli & Frrokaj, 2016). Siblings are natural competitors because they share resources, such as goods, space, and property, as well as parents' love and attention (Tucker et al., 2013).

Many parents are disturbed and feel helpless by the conflicts between their children, and they have difficulty deciding the right response to these disputes (Kramer, 2014).

Variables, such as birth order, age spacing, and emotional climate can all affect sibling rivalry (Buist, 2010; Sulloway, 1996). For example, siblings who are close in age have more everyday life experiences that are similar and are more likely to engage in competition. The source of sibling rivalry can be the need for material resources (toys, room, clothing, etc.) or parental attention (Sulloway, 1996). Furthermore, when a parent favors one child over another, it is a possible fuel for an unhealthy rivalry between siblings (Gamble & Yu, 2014). According to Cicirelli (1989), sibling rivalry often increases depression while decreases well-being. Another study (Solmeyer et al., 2014) concluded that sibling rivalry is related to anxiety, depression, and behavioral problems. Although it is rare, positive outcomes of sibling rivalry have been found as well, such as learning how to compromise and share (Halligan, Chang, & Knox, 2014).

Parents often become overwhelmed with the demanding emotional and social support necessary to adequately raising their children. They tend to give up the supportive social network to their children; thus, siblings often have no alternative but to rely on one another (Roth, Harkins, & Eng, 2014). Furthermore, the effect of marital conflict on sibling relationships is relatively understudied. Existing literature showed substantial evidence that marital conflict linked to children's behavioral maladjustment, such as depression, aggression, and conduct problems (Heinrichs & Prinz, 2012). It is likely that such behavioral and emotional problems would be expressed in negativity in sibling relationships.

Owing to various social changes during the last few decades (globalization, 24-hour workplace, etc.), more parents are working longer hours and many children are getting a relatively small amount of the parents' time. The average family unit spends more time in the workplace than in their home, and more people feel isolated and disconnected than before (Armando, 2005). With the decrease in parent-child time, siblings may look more to each other for attention and development than to their parents (Roth et al., 2014). Because two-parent families are the main family constellation in U.S. society, the majority of research findings apply to two-parent households. However, the results cannot be generalized to all families, including single-parent households. Life could be different for children whose parents are separated or divorced.

Freud and Minuchin supported a theoretical proposition that during times of stress and family conflict, siblings repress their rivalry and nurture one another, thereby strengthening their bond. This study is a step further explores how changes in family structure (divorce, separation) influence sibling relationship quality. Basing my work on the major assumption that the family system affects the sibling system, I attempted to examine the effect of household composition (1-parent home versus 2-parent home) and the number of years between siblings on the quality of sibling relationships. In this study, the term *single-parent household* represented only separated and divorced families and only mothers were included as research participants. Widows, widowers, and those who were never married were excluded.

Results from this study provide further evidence to support program effectiveness in improving sibling relationships and family well-being. In addition, the outcome of this

study may help development of therapeutic interventions for sibling therapy. In addition to practical utility, the results of this study may provide direction for work on factors that shape sibling relationships and their influences. Finally, this study may add to understanding of parental views and their approach with regard to sibling rivalry and why it is important to study.

Problem Statement

Earlier research treated the family as a “monolithic unit” (Pike, Manke, Reiss, & Plomin, 2000, p. 96) without distinguishing the variety of experiences of siblings within the family unit. Later, sibling relationships researchers revealed that each child in the same family could lead to a different perception of that family unit (Cox, 2010).

Concern is shared among family professionals and parents about how marital conflict and divorce affect children. Research, which assessed interpersonal relationships in the family structure measured mother-child, father-child, and sibling or peer relationships (Gamble & Yu, 2014). The majority of studies concluded that divorce has negative consequences on children’s interpersonal skills. The conflict between parents can be a significant stressor for children (Jacobs & Sillars, 2012). The interparental conflict also could cause stress for parents and make them less effective in dealing with their children (Davies, Coe, Martin, Sturge-Apple, & Cummings, 2015). Findings show that children who grow up in a single-parent family do less well several developmental outcomes compared with children who grow up in a two-parent family (Nixon, Greene, & Hogan, 2012). However, some studies did not find differences in interpersonal relationships between sibling when compared with divorced and not divorced families.

Some even reported the positive effect of divorce on sibling relationships (Roth et al., 2014).

I based this study on the fact that parental separation and divorce can lead siblings to both a supportive and a highly conflicted relationship. The research most pertinent to this dissertation study was conducted by MacKinnon (1989). In this observational study, same-sex and cross-sex dyads were investigated in married and divorced families. The researcher observed 48 sibling dyads from divorced families and 48 sibling dyads from two-parent families while playing a board game. Mothers were administered questionnaires addressing the quality of other dyadic relationships within the family. The results were consistent with earlier findings: siblings containing older males in divorced families appear to be more negative and more resistant than older female dyads from divorced families or older male dyads from married families. MacKinnon (1989) also concluded that sibling relationship quality is related to the quality of other dyadic relations within the family, such as the quality of spousal and ex-spousal relationship. These studies revealed that sibling gender constellation effects usually emerge from parental differential treatment and siblings' direct experiences with one another (McHale et al., 2012).

Rasbash, Jenkins, O'Connor, Tackett, and Reiss (2011) found that parenting resources are burdened by stress, marital dissatisfaction, low social economic status, large family size, and single parenthood. As a result of small parenting resources, children are often treated differentially by their parents. Results have shown that in single-parent households, low income and high parenting stress are significantly correlated with

children's problem behavior (Cunningham & Knoester, 2007). Furthermore, single parenting often increases stress and limits parenting resources. According to Nixon et al (2012), children who live in single-parent households show a higher tendency toward psychiatric disease and addiction, and lower rates of educational success, contrasted with children in two-parent households. They also found that children who grew up with a single parent are less likely to complete high school than those who were living with two parents (Nixon et al., 2012). According to Voorpostel, Lippe, and Flap (2012), children living in one-parent households are at a greater risk of living in poverty, experiencing higher insecurity, and developing behavioral problems compared with children who live in two-parent households. Although results showed that in single-parent families negative parenting is higher than positive parenting (Roth et al., 2014), the likelihood of increased differential parenting in the single household has not been thoroughly investigated yet.

On the other hand, households with two parents and financial security reduce the likelihood of children's behavior problems. These findings support the belief that two individuals who share parenting tasks, contribute to financial stability, and support each other for better psychological well-being are more beneficial than when only one parent is present (Nixon et al., 2012). Although the longitudinal effect of single-parent households on children's achievement, conduct, health, social competence, and psychological adjustment has been studied, its effect on sibling relationship quality remains unclear. The majority of the previous sibling studies were largely confined to two-parent families. They did not adequately address single families. It has been widely assumed that the conclusions reached by considering of two-parent families could be

readily transposed to single-parent families, such as birth order and sibling rivalry (Noller, 2005).

The significant effects of stress on parental differential treatment have been expressed by Gahler and Garriga (2012). They argued that in many families, parents' resources, such as time, patience, support, and attention, are minimal and finite. In addition, parents are often coping with stress, depression, and marital conflicts and they become less intentionally equitable with their children (Gahler & Garriga, 2012). Managing conflicts, especially sibling conflict, is difficult for many families, but single-parent homes can present even more challenges. Because sibling rivalry based on the increased need for parental attention, the presence of only one parent can increase sibling rivalry in the family (Nixon et al., 2012).

Disagreement exists among researchers and practitioners about how parent should intervene in sibling conflict. Some researchers believe that parental intervention may interfere to balance in sibling relationships, whereas others believe that parents should take an active role in sibling conflict (Kramer, 2010). Kramer, Perozynski, and Chung (1999) summarized the most common parental conflict responses that were used in this study. The most common parental conflict responses are passive nonintervention, active nonintervention, collaborative problem solving, redirection, power assertion, commands to stop fighting, and exploration of emotions (Kramer et al, 1999).

A gap in the literature exists related to understanding of parental experiences and their approach with regard to sibling conflict. Several studies investigated the effects of gender, birth order, and developmental outcomes for each child's individual adjustment

from the child's point of view. The current study attempted to go beyond the traditional approach to sibling relationship research by focusing on mothers' views, who have first-hand knowledge of their children and their behavior. Of approximately 12 million single-parent families in the United States, more than 80% are single-mother households.

Studies show different parenting between mothers and fathers and different mother-child and father-child relationships (Jenkins, Rasbash, Leckie, Gass, & Dunn, 2012). This study included only mothers as participants to control for these potential differences.

Because of the high rates of divorce and remarriage, an increasing number of children experience living in a married or cohabiting step-family (King, 2009). Research is limited regarding how a step-parent entrance into a child's life influences sibling relationships. Because this study focused on sibling relationship quality and not parent-child relationships, criteria to participate in this research included having a step-parent who lived with the siblings more than 1 year. The conceptual focus for the study was to identify sibling relationship differences based on different family structures (one-parent home versus two-parent home) and other factors, such as age differences between siblings.

Purpose of the Study

Sibling conflicts during childhood have been connected to long-term negative consequences, such as disturbed and antisocial behaviors (Voorpostel et al., 2012). In addition, there is a debate among researchers and practitioners about how parents should be involved in their children's conflict. The quality of sibling relationships is vulnerable and can be affected by several environmental factors, such as marital problems, substance

use, parenting, and parental favoring, which can directly contribute to problem behaviors. The purpose of this study was to examine the effects of household composition and age spacing on the quality of sibling relationship. I used a quantitative, nonexperimental design to examine the effect of household composition (one-parent home versus two-parent home) and the number of years between sibling ages on sibling relationships. I also explored whether parental conflict response management strategies differ between single-parent and two-parent homes.

The independent variables were household type (single-parent, two-parent) and sibling age difference (2–5 years, greater than 5 years). The three dependent variables that I used to measure sibling quality were warmth, agonism, rivalry. The participants could choose from seven types of parental conflict management strategies: passive nonintervention, active nonintervention, collaborative problem solving, redirection, power assertion, commands to stop fighting, and exploration of emotions.

Research Questions and Hypotheses

The objectives of this study were to (a) examine the effect of household composition (1-parent home versus 2-parent home) and the number of years between siblings on sibling relationships, and (b) determine whether parental conflict response management strategies differ between single-parent and two-parent homes. In this study, I answered the following research questions:

Research Question 1: Does household composition affect the quality of sibling relationships?

H₀1: There are no significant differences in the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (PEPC-SRQ, Kramer & Baron, 1995) in single-parent households when compared with two-parent households.

H_a1: There are significant differences in the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995) in single-parent households when compared with two-parent households.

Research Question 2: Does sibling age difference affect the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995)?

H₀2: There is no difference in the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995) between sibling pairs whose age differ by up to 5 years and sibling pairs whose ages differ by more than 5 years.

H_a2: There is a significant difference in the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995) between sibling pairs whose ages differ by up to 5 years and sibling pairs whose ages differ by more than 5 years.

Research Question 3: Is there an interaction of household composition and sibling age difference on sibling relationship quality (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995)?

H₀₃: There is no interaction between household composition and sibling age difference on sibling relationship quality (warmth, agonism, and rivalry), measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995).

H_{a3}: There is a statistically significant interaction of household composition and sibling age difference on sibling relationship quality (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995).

Research Question 4: Are there any preferences of parental conflict management strategy to sibling conflict among single-parent and two-parent household?

H₀₄: There is no preference for any specific conflict management strategy for sibling conflict among single-parent and two-parent households.

H_{a4}: Among single-parent and two-parent household one or more of the conflict management strategy for sibling conflict is preferred over the others.

Nature of the Study

I used a two-factor, fully-between groups design to investigate Research Questions 1, 2, and 3. The independent variables were household type (single-parent, two-parent) and sibling age difference (2–5 years, greater than 5 years). There were three

dependent variables that measured sibling relationship quality: warmth, agonism, rivalry. A two-factor multivariate analysis of variance (MANOVA) was used to statistically analyze the data. Preliminary analyses of possible covariates (dyad gender: male/male, female/female, female/male and biological vs. nonbiological parent) was conducted prior to data analysis. Running preliminary analyses of these variables with the dependent variables was investigated to determine if it was necessary to add any significant covariates in the analysis.

I used a nonparametric test to investigate Research Question 4. Several parents who use a particular conflict management style were counted based on whether the parents live in single-parent or two-parent homes. I used a chi-square test of independence to examine whether household type is related to conflict management style.

Mothers in single- and two-parent families were surveyed using an online survey service (SurveyMonkey.com). SurveyMonkey is an internet site created specifically to conduct online research. Millions of companies, organizations, and individuals use this online survey software. It also upholds college institutional review board academic and ethical standards. SurveyMonkey offer a variety of services, such as helping researchers obtain a representative sample, and it provides tools for creators to collect strictly anonymous responses (SurveyMonkey, 2016). I did not make an exception for the types of sibling relationships; however, every participating family had to have two biological siblings who lived in the same household for at least 1 year.

Instruments that I used in this study were the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (PEPC-SRQ, Kramer &

Baron, 1995) to assess sibling relationship qualities; the Parental Conflict Management Strategies (Kramer et al., 1999) to help find the most common parental responses for sibling conflict; and the Demographic Data Collection Form, which provides information about the number of children, birth order, sibling dyad gender (male/male, female/female, female/male), age of children, age spacing between siblings, the age of participating mothers, the type of household, biological or nonbiological parent, and the number of people living in the household. I discuss additional specifics of each testing instrument in Chapter 3.

Theoretical Base

Sibling relationship have been connected to many fundamental theories. Families' influence in personality development has been present in literature since the late 1800s. As a result of the family therapy movement, the different impacts of the sibling relationships created more attention among psychotherapists (Whiteman, McHale, & Soli, 2012). Bowen (1971), Munichin (1967), Satir (1967), and Whitaker (1958) were pioneers that influenced the family therapy movement and created a framework for understanding human problems in an intergenerational setting. The family system theory emphasizes that a family is a "system" where all members are related and depend on each other (Whiteman, McHale, & Soli, 2012).

Families are dynamic and made up of different subsystems (parent-child, siblings, and marital) that are interconnected and commonly influential. A family systems perspective is significantly important in the development of sibling relationships (Haefner, 2014). To date, family scholars focus more on shifting family structure, the

changing roles of parents, and different parenting strategies within the family (Howe, Karos, & Aquan-Assee, 2011). However, the vast majority of sibling researchers focused on parent-child relationship (Milevsky, Schlechter, & Machlev, 2011) and less on sibling relationship qualities. Studies that did focus on siblings explore more characteristics (e.g. birth order, gender) and their outcome concerning parental involvement (McHale et al., 2012). Sibling relationship qualities have been linked to both family dynamics and structural characteristics, such as gender, age spacing, and birth order.

Families are open systems and they adapt to changes in internal and external influences, including the development of individual family members. Dynamic families continuously try to maintain balance between stability and change. However, repetitive fluctuation in norms, activities, and roles creates dysfunctional families and relationships. During transition periods, the family system is more susceptible to change. According to the family systems perspective, changes in sibling relationships are most critical through the transition to adolescence, parental divorce, and when firstborn sibling moves out of the family home (Whiteman et al., 2011).

According to family system theory, family subsystems are interdependent; thus sibling relationship is influenced by the larger family context (Minuchin, 1985). This theory is supported by a considerable, substantial number of findings of the relationships between parental interventions and siblings conflict resolution strategies. Parental interventions provide necessary knowledge and skills for children to use for constructive conflict resolution strategy (Tucker & Kazura, 2013).

Many studies found that siblings experience their family dynamics differently, which resulted in their differences in adjustment (Abuhatoum & Howe, 2013). Based on the family system theory, this study examined the effect of household composition (one-parent home versus two-parent home) and the number of years between siblings on the quality of sibling relationships. This study also explored whether parental conflict response management strategies differ between single-parent and two-parent homes.

Definitions of Terms

Birth order: The two variations of birth order are: ordinal position and psychological position. Ordinal position or actual birth order “refers to the numerical rank order in which siblings were born into or entered the family of origin” (Stewart, 2012, p. 76). Psychological position or psychological birth order refers to the role the child adopts in his or her interactions with others (Mills & Mooney, 2013). Adler believed that birth order refers to a child’s interpretation of his or her perceived positions in the family (Kalkan, 2008).

Birth order researchers proposed some challenges considering psychological or ordinal positions of birth order. Some of these challenges include large age gaps between siblings, death or impairment of a sibling, blended families, and differential familial and cultural norms. When the age differences are greater than 5 years, it confounds strict ordinal position. A newborn will have much less direct contact with a 5-year-old school age sibling who is in a different stage of development. Another issue relying on strict ordinal position is when a sibling has a physical or mental disability, which may alter psychological roles due to decreases in some abilities. A death of a sibling may also

changes psychological roles within the family. Furthermore, researchers find it difficult to apply ordinal positioning in blended families, where a child can be counted as firstborn and second-born at the same time. These kinds of issues demonstrate some obstacles to research and create a debate between to use psychological or ordinal position in birth order research (Mills, & Mooney, 2013).

Sibling relationship: For most individuals sibling relationship is a lifelong relationship (Buist, Dekovic, & Prinzie, 2013). Emotional intensity is one of the characteristic features of sibling relationships. The two constant dimensions are positivity/warmth and negativity/conflict (McHale et al., 2012). There are different types of sibling relationships: biological siblings, (share both parents), half-siblings (share one biological parent), step-siblings, foster siblings, and adoptive siblings (Button & Gealt, 2010).

Parental conflict management strategies: Children from the same family can receive different treatments from their parents through a variety of areas, chores, disciplines, and privileges (Tucker, McHale, & Crouter, 2008). For many parents, sibling conflict is a major concern (Tucker & Kazura, 2013), which is one of the reasons for the development of some parenting guidelines at handling sibling conflict and rivalry (Kolak & Volling, 2011).

Washo (1992) found five major parental conflict management strategies: power assertion techniques, collaborative problem solving, conflict avoidance, commands to stop fighting, and nonintervention. Based on Washo's finding and previous research, Kramer, Perozynski and Chung (1999) expanded the list to 7 categories of parental

conflict management strategies. These include “passive nonintervention, active nonintervention, collaborative problem solving, redirection, power assertion, commands to stop fighting, and exploration of emotion” (p. 1104). I used these seven strategies in a survey form for this study where mothers had to indicate their most common response during their children’s conflict.

Assumptions of the Study

Concerning this study, I made the following assumptions:

- The sample was adequately represented the population.
- The participants were able to understand and answered questions regarding sibling relationships qualities and conflict management.
- Participants answered questions honestly.
- Assumption related to the methodology is that the instruments that were used in this study measured their assigned variables accurately.
- The administration and scoring instructions were followed by the researcher using valid and reliable instruments, such as Parental Expectations and Perceptions of Children’s Sibling Relationships Questionnaire (PEPC-SRQ); The Parental Conflict Management Strategies; and The Demographic Data Collection Form.
- The data that were derived from the study may identify correlative factors between variables, but they were not interpreted as evidence of a causative factor.

Scope and Delimitations

Delimitations that determine boundaries of this study included families where either single parent or 2 parents are present. Every participating family had to have at least two siblings (2 to 2+ years). Mothers in single-parent and two-parent families were surveyed using online survey service (SurveyMonkey.com). In this study, single-parent families represented only separated and divorced parents, and only mothers were included as participants. Widows, widowers, and never married were excluded. Furthermore, there is very limited research about how a stepparent influences sibling relationships. Since this study focused on sibling relationship quality and not on parent-child relationship, criteria to participate in this research included stepparent who lives with the siblings more than 1 year.

Participants needed to be able to speak and read English, but there was no restriction regarding ethnic background, socioeconomic status, or education level. The independent variables were household type (single-parent, two-parent) and sibling age difference (2–5 years, greater than 5 years). There were three dependent variables that measured sibling relationship quality: warmth, agonism, rivalry.

Limitations

- This study's nature and approach did not permit conclusions as cause and effect, it helped to identify the extent of the relationship among and between variables and made prediction possible.
- While samples are used to test a hypothesis about population, samples are not expected to be identical to the population. As a result, there were some

discrepancies between a sample statistics and the corresponding population parameter.

- This study used questionnaire instruments; therefore, potential response bias may have presented.
- Multi-divorce experiences may have occurred in some participating families who may alter the response patterns.
- Some non-assessed factors may have influenced the participants' responses, such as the level of education, socioeconomic status, health issues, and ethnic background.
- This study was nonexperimental, which means that variables were not manipulated, and participants were not randomly assigned, both of which are necessary for experimental design.

Significance of the Study

The qualities of sibling relationships are highly variable, and this variability is associated with children's conflict strategies (Tucker et al., 2013). Insights from this study provide a better understanding of how the quality of sibling relationships could be affected by living in single-parent households versus in two-parent households. Such information could help parents and educators to facilitate the development of a healthier sibling relationship.

There has been a little consideration of the role of sibling relationship quality in child and family treatment considering the permanence of the sibling relationship and the role of siblings in the individual's development. This study supports the notion that the

role of the sibling relationship in family dynamics and treatment outcomes is complex and point to increased attention in both clinical and research domains.

The identification of environmental, social, and other factors that affect sibling relationship quality could have important effects on research and applications. Results from this study also help counselors when examining their clients' family-of-origin, birth order, age spacing and family dynamics. These results also help parents to determine more efficient responses when dealing with similar situations involving sibling conflicts. There are a wide variety of settings where the findings of this study have potential applications, such as therapeutic services, psychotherapies, education, and medicine. Positive social change result from this research is based on a better understanding of how sibling relationship quality has been affected by different family dynamics. Sibling relationships should be considered when developing family-centered approaches and treatment as well as larger intervention studies. In summary, the result of this study supports the development of preventive interventions that construct emotional and social competencies to help improve sibling relationship qualities.

Summary

Increasing our knowledge of the effects on sibling relationships could lead to treatments that aid parents, educators, and psychologists in preventing or decreasing the displays of negative emotions by using selective interventions to meet the needs of emotionally disturbed siblings. Furthermore, the conclusion from this study alerts clinicians to be aware of additional factors that may impact a patient's psychological well-being whether or not he or she comes from a two-parent or a single-parent family.

This study attempted to add to our understanding of parental experiences and their approach in regards to sibling conflicts and why it is important to study.

In Chapter 2, I provide a comprehensive literature review on sibling relationship characteristics, birth order, supporting theories, family dynamics and issues related to sibling relationships, and parenting issues. In Chapter 3, I discuss the research design, methodology, instruments used to collect data, and the procedure of data analysis. In Chapter 4, I present the significance of the results and details of the findings. Finally, in Chapter 5, I summarize the study along with the limitations, and I discuss how the results can add to further research and can promote social change.

Chapter 2: Literature Review

Introduction

In the literature review, I discuss previous research on sibling relationships, birth order, parenting, family, and other environmental factors and their effects on development and problem behaviors among siblings. Empirical research on sibling relationships, birth order, age spacing, and parenting appears in peer-reviewed journals, books, and dissertations. In my review, I focused on empirical research conducted during the past few decades. I began with digital searches using the Walden University Library and electronic psychology and sociology databases, such as Academic Search Complete, Primary Search, PsycINFO, PsycARTICLES, PsycBOOKS, PsycCRITIQUES, PsycEXTRA, PsycTESTS, SocINDEX, and Mental Measurement Yearbook with Test in Print. Search terms included *birth order*, *firstborn*, *age spacing*, *siblinghood*, *sibling rivalry*, *sibling conflict*, *sibling relationship*, *sibling influence*, *antisocial behavior*, *parenting styles*, *divorce*, and *TTS*. Furthermore, I selected options within various databases to look for related articles that had cited the article being examined. The retrieval sources included the library services of Walden University and Texas A&M University – Texarkana.

I begin this chapter with a discussion of the history and development of sibling relationship research and examine related theories. I continue the discussion by reviewing different types of sibling relationship characteristics, such as sibling rivalry, sibling violence and abuse, and sibling warmth and conflict. The literature review includes all main factors that possibly affect the quality of sibling relationships, such as gender, age

spacing, birth order, family dynamics, and other sociocultural factors. The review further discusses family system influences, especially parenting techniques and the effects of single-parent and two-parent families on sibling relationships. The chapter concludes with the summary.

Foundations of Research on Sibling Relationships

According to the U.S. Census Bureau, nearly 80% of youth ages 18 years and younger live with at least one sibling (US Census Bureau, 2015). The sibling relationship is a lifelong relationship of an individual's life (Buist, 2010). McHale et al.(2012) called siblings “companions, confidantes, combatants, and as the focus of social comparisons” (p. 913). One of the primary goals of research on sibling relationships has been to identify factors that explain these dynamics among siblings. These factors range from personality characteristics to cultural norms and values (McHale et al., 2012).

One of the first studies on birth order can be traced back to the late 1800s when Galton (1874) found an overrepresentation of firstborns among British scientists (McHale et al., 2012). In the 1950s, researchers focused on sibling gender constellation (Brim, 1958; Koch, 1956). A significant finding of these researchers was that sibling gender constellation occurred through parental differential treatment and through siblings' direct experiences with one another (McHale et al., 2012). Other studies found evidence of sibling size effect on achievement and education (Blau & Duncan, 1967). Most of these earlier studies focused on sibling constellation effects; they focused on patterns of sibling outcomes instead of the influence processes being measured directly (McHale et al., 2012).

Other research on sibling relationships was created within the psychoanalytic and ethological traditions in the early 20th century. Adler's theory of individual psychology located sibling relationships to the center of family dynamics and personality development (Whiteman et al., 2012). Adler argued that by reducing competition between siblings, siblings differentiate or "de-identify," and as a result they develop different qualities and choose different "niches." Some studies found evidence consistent with Adler's theory. The two main themes that emerged from these perspectives that influenced early sibling research were "the significance of early experience and the adaptive functions of social behavior" (McHale et al., 2012, p. 915).

Some researchers measured siblings' personal characteristics and their effect on sibling relationships. When siblings' temperament was tested, the result showed a connection between temperament and siblings relationship difficulties (Kolak & Volling, 2013). Researchers also investigated sibling relationships by comparing families with versus without a child with a disability. Results showed higher warmth and positive affect among dyads with physically challenged or chronically ill siblings (Burbidge & Minnes, 2014).

When researchers investigated of how marital and parental subsystems affect sibling relationships, there were some inconsistent findings. Some study showed that sibling relationships were more positive in divorced families than in married families (Voorpostel et al., 2012). However, a few study concluded higher conflicts between siblings in divorced or separated families versus married families. These inconsistent findings were explained by different possible dimensions of sibling relationships

examined. However, these studies found a general consistency about the connection between negativity in parent-child relationships and sibling conflict (Roth et al., 2014). System family influences on sibling relationships were further investigated and found incongruence between mothers' and fathers' differential treatment of siblings (Tucker & Kazura, 2013). Owing to these inconsistent findings, this dissertation attempted to add further evidence of how marital and parental subsystems affect sibling relationships by comparing single-parent and two-parent families.

Theoretical Foundations

Darwin (1859) proposed that the "fittest" species were the most likely to survive and more likely to pass on their genetic traits; the "survival of the fittest." Darwin suggested that it was survival of the fittest that leads to sibling (offspring) rivalry (Badger & Reddy, 2009). Sulloway (2001) encompassed Darwin's theory by differentiating the "ultimate" and "proximate" influences on sibling relationships. According to Sulloway (2001) the ultimate causes of behavior are based on natural selection and biological disposition to strive for parental attention and survival; whereas proximate causes of behavior are due to social and environmental influences.

The Sibling relationship has been related to some fundamental theories. For example, attachment theory suggests that an emotional bond between siblings existed throughout their lifetime (Fortuna, Roisman, Haydon, Groh, & Holland, 2011), and social comparison theory indicated that siblings use each other as a source for social comparison (Chun Bun, Solmeyer, & McHale, 2012).

Freud (1922) addressed the concept of sibling rivalry through his theory of socialization. He emphasized that competition for parental attention was the basic theme of the sibling relationship. He also recognized that jealousy between siblings can function for adaptive and developmental purposes. Freud (1922) proposed that:

The achievement of a sense of social responsibility and social conscience are rooted in the efforts brothers and sisters make to deal with their enmity toward each other. When children recognize that their parents love their siblings, too, and they are fearful of losing their parents' love if they express hostility toward the siblings, the children defend against those harmful wishes, in part, by identifying with each other, which leads them to seek equal treatment for all. If one child cannot be the favorite, then no child shall be the favorite. (Edward, 2013, p. 78)

Individual psychology focused on the individual's relationship to the outside world. Individuals interpret their experiences based on their own abilities and impressions in a creative way to build up his or her attitude toward life (Adler, 1937). According to Adler (1927) "before we can judge a human being we must know the situation in which he grew up. An important moment in the position which a child occupied in his family constellation"(p. 149). Adler's theory (1935) of individual psychology located sibling relationships at the center of family dynamic and personality development (as cited in Ansbacher & Ansbacher, 1956). Adler was one of the first researcher who focused on sibling roles in the course of psychotherapy. He focused on the birth order influence on personality development referred as the "structural or constellation variables." Adler (1932) claimed "that the situation is never the same for two children in a family; and that

each child will show in his style of life the result of his attempts to adapt himself to his own peculiar circumstances” (p. 108).

Adler (1928) also believed that birth order is essential for a person’s emotional development and self-esteem. Toman (1961) further expanded and systematized Adler’s findings by studying different patterns of sibling behavior. Toman also suggested that birth order, gender, and age spacing are significant factors of sibling relationships and personality development. Later on, researchers became more interested the quality, not the structure, of sibling relationships (Whiteman et al., 2012). As a result, other variables, such as parent-child and marital relations have been found to affect the quality of sibling relationships (Jenkins et al., 2012).

Social learning theory (Bandura, 1977) emphasized that children who are exposed to frequent and severe conflict, develop aggressive and argumentative behavior, which may lead to the belief that such action yields rewards. Observational learning is very common in sibling relationships. Siblings have 3 important features (power, nurturance, and similarity), which increase the possibility that they will be used as a model for behavior (Whiteman et al., 2012). Early researchers who examined sibling relationships were consistent about the notion of sibling influences, especially when they applied learning theories, such as observational learning.

Social learning theory (Bandura, 1977) offered a better understanding of the underlying mechanism in sibling interactions. According to the social learning theory, the observer pays attention to the model and then imitates the model’s behavior. This approach emphasizes that behavior is learned through modeling, imitation, and

reinforcement. Siblings with high-quality relationships spend more time together and have more chance to observe and model each other's behavior. Furthermore, children often use the relationship between their parents as a model and apply it to their relationships with their siblings. Thus, siblings have healthy relationships when parents have a good relationship, and when parents have marital conflict and violence siblings are more aggressive in their dealings (Meunier et al., 2011).

On the other hand, some evidence suggest that siblings may get closer in the time of marital conflict which has been explained by Engfer's compensatory model of family processes (Engfer, 1988). According to the compensatory model, individuals may look for support in one family subsystem in response to distress in another subsystem; thus children who witness marital conflict may turn to their siblings for affection and support (Voorpostel et al., 2012).

The family system approach emphasizes the dynamic nature of family structure and process. The principles of family system theory are derived from general system theory. Families are hierarchically organized into interdependent subsystems, such as sibling relationships, marital relationships, and parent-child relationship. Typically, subsystems have flexible boundaries that allow for influences of other subsystems (Whiteman et al., 2012).

Boundary disturbance conceptualizations originated from structural family therapy (Minuchin, 1974) and they have been applied at an empirical level to investigate the family system and subsystem dynamics (Bascoe, Davies, & Cummings, 2012). The two most common boundary disturbance forms in families are enmeshment and

disengagement (Bascoe et al., 2012). Enmeshed relationships have been characterized by diffusive boundaries and manifested in high levels of emotional and psychological entanglements. Conditional warmth occurs with high levels of dominant and controlling behaviors. Children in enmeshed relationships are at risk for internalizing problems and developing social skills. Disengaged relationships have been characterized by overly rigid boundaries, manifested in cold and unfriendly interactions. There is no access to warmth or support, and hostility is commonly evident during interactions. As a result of disengaged relationships, siblings became psychologically distanced, which creates significant emotional entanglement, rejection, and externalizing problems (Sturge-Apple, Davies, Cicchetti, & Manning, 2010).

A family systems framework allows to explore sibling relationships in a larger context. Theoretical and empirical literature have been discussed the sibling relationship within the context of the larger family system. Studying the relationships and dynamics of the family subsystems could provide a more comprehensive view of family functioning and could help to understand interconnections between subsystems in order to understand the family unit as a whole system. Multisystem approach provides a more perceptive understanding of the processes involved in sibling relationship quality. Based on the family system theory, this study aimed to examine the effect of household composition (1-parent home versus 2-parent home) and the number of years between siblings on sibling relationships quality (Howe & Recchia, 2014).

Siblinghood

The importance of early experience and the adaptive functions of social behavior were the two main influences of first sibling research (McHale et al., 2012).

Developmental scholars used naturalistic observation methods as part of the ethological perspectives to study the role of the sibling in early socioemotional development (Fosco, Stormshak, Dishion, & Winter, 2012). Some researchers on child development concluded that jealousy, envy, and rivalry between siblings could support emotional growth (Edward, 2013).

The majority of research on sibling relationship showed that it affects the social, cognitive, and emotional development of siblings. The sibling relationship is like children's "training ground" for testing out motivations, abilities, and actions without the threat of losing their relationship. In this involuntary connection, a child can safely learn and develop social and cognitive understanding about the world (Howe & Recchia, 2014).

The sibling relationship is not fixed and changes during the lifespan (Buist et al., 2014). For example, during adolescence, the older sibling may have more authority over the younger sibling, but as they age, they become more equal (Myers & Goodboy, 2010). A variety of sibling relationships exist, such as hostile, aggressive, supportive, and affectionate ones (Gamble & Yu, 2014). McHale and his colleagues (Updegraff & Whiteman, 2012) were defined four types of sibling relationships based on the 2 dimensions of warmth and hostility: harmonious, hostile, affect-intense, and uninvolved.

Throughout the years, a number of instruments have been developed to examine sibling relationships, such as the Lifespan Sibling Relationship Scale (LSRS; Riggio, 2000), the Relationship Assessment Scale (RAS; Dearing & Steadman, 2011), the Sibling Relationship Questionnaire (SRQ; Furman & Buhrmester, 1985); and Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (PEPC-SRQ; Kramer & Baron, 1995). Kramer and Baron (1995) developed the PEPC-SRQ to measure parental perceptions of sibling relationships in three dimensions: warmth, agonism, and rivalry. PEPC-SRQ will be discussed in more detail in Chapter 3, since this instrument was used in this study to assess parental appraisals of sibling's relationship quality.

Volling (2012) emphasized the importance of sibling relationships in the development of emotion regulation by using dynamic ecological systems perspective. She argued that through sibling interactions an individual learns emotional self-regulation. She also noted that by using mutual influence, siblings create a dynamic relationship that contributes positively or negatively to the learning of self-expressions and emotional reactions.

Studies have shown that the quality of the sibling relationship has a high impact on the psychosocial development of children, especially throughout developmental periods (Tucker & Kazura, 2013). During childhood and adolescence, children spend an extensive and increasing time without parents' and adults' supervision. These times provide an opportunity to influence one another's behavior and impact socioemotional development. Research on direct sibling influences suggests that through frequent and

emotionally charged social exchanges, siblings influence positive development or negative development by creating adjustment problems (McHale et al., 2012).

It is important to note that not all studies focused on a negative component of sibling relationships. For example, Halligan et al (2014) discussed positive effects of parental divorce of the sibling relationship. Sibling rivalry can teach children how to share and compromise. According to some researchers, the sibling relationship is an important contributor to positive developmental outcomes, by showing empathy (Trucker & Kazura, 2013), academic engagement (Bouchey, Shoulberg, Jodl, & Eccles, 2010), and prosocial behavior (Whiteman, McHale, & Crouter, 2007). The healthy sibling relationship is connected with positive social, cognitive, and emotional skills. Siblings in a healthy relationship provide one another with supportive companionship, and they show higher independence, social competence, and self-control (Edward, 2013). The study of sibling relationships is significant, especially when connecting sibling relationships in childhood to sibling relationships in adulthood. Results showed how much effect siblings have on one another's lives (Finzi-Dottan & Cohen, 2011).

Sibling Relationship Types

Siblings can influence one another directly and indirectly (McHale et al., 2012). Some findings suggested that sibling influences emerge beyond the effects of parents (Averett et al., 2011). A study compared adolescents' relationship with their best friends and their siblings, and the result showed a higher level of control with siblings than with friends (McHale et al., 2012). Van Volkom, Machiz, and Reich (2011) studied perceptions of sibling relationships among college students. They found that gender, birth

order, and marital status of parents could all affect the quality of the sibling relationship. The result also showed that sibling rivalry is the highest during childhood and adolescence.

Patterson's (1986) provided a coercive process model of sibling aggression for understanding the processes for how children develop their generalized coercive interpersonal style. He stated that siblings are training models for learning how to interact with a social partner. In a case of a negative sibling relationship, a child may develop poor self-regulation skills and an inability to communicate and solve problems peacefully and more efficiently. This style then transmitted over into other social situations causing problem behaviors. For example, a child may interact with peers who also have poor social skills or may have trouble in school (Solmeyer et al., 2014).

Between 30% and 80% of siblings experience some form of psychological maltreatment by their sibling (Button & Gealt, 2010). In a study approximately 65% of the 8,122 children between the ages of 9 and 18 experienced some form of sibling aggression (Button & Gealt, 2010). Another study found that adolescents were more likely to engage in reactive than proactive aggression with their closest-aged sibling (Tucker et al., 2013).

Physical aggression between siblings is common, such as, kicking, pushing, and slapping. However, more severe forms of aggression, such as using objects or weapons to cause pain to sibling are less frequent. Victims of sibling abuse often suffer both immediate and long-term consequences. They frequently experience fear, shame, humiliation, guilt, and anger (Button & Gealt, 2010). Siblings in physically abusive

relationships often experience insecurity, depression, and issues with self-esteem later in life (Dam, Korver-Nieberg, Velthorst, Meijer, & Haan, 2014).

While sibling aggression is an expression of sibling rivalry (Tucker et al., 2012), they also often express warmth and affection toward each other (Buist, 2010). Sibling warmth is a significant predictor of sibling relationships' quality and lower levels of sibling warmth are linked to greater aggression between siblings (Dirks et al., 2015).

While some researchers do not make a distinction between rivalry, conflict, and jealousy when discussing sibling relationship, these are distinctive features of sibling relationships (Kolak & Volling, 2011).

Sibling Rivalry

Competition can be found within numerous biological contexts. For example, masked and Nazca boobies are known as siblicidal species. After their eggs hatch, the elder chick pushes its sibling out of the nest, and the younger chick inevitably dies (Ferrere, Wikelski, & Anderson, 2004). In spotted hyenas, same-sex cubs exhibit siblicide more often than male-female twins (Hofer & East, 2007). Siblicide is also displayed in parasitic wasps, where the wasp lays multiple eggs and the strongest larva kills its rival siblings (Grimaldi & Engel, 2005).

Among humans, sibling rivalry could occur in a variety of environmental settings, such as home, school, and other social settings (McHale et al., 2012). The cause of sibling rivalry can be material (e.g., money), cognitive (e.g., time spent training a child), or interpersonal (e.g., love, affection) (Kolak & Volling, 2011). According to Vivona (2007), "sibling rivalry is not simply a contest for the love of the parents, but for

recognition of the child's value and specialness... regards the efforts children make to regain their feeling of being special with respect to their siblings as a component in identity formation" (cited in Edward, 2013, p. 79).

The regressive behaviors associated with sibling rivalry among children are excessive crying, bed-wetting, thumb-sucking, or using baby talk. Negative behaviors that are common in sibling rivalry among adolescence are destructive behavior, lying, and anger (Pfaffly, 2015). Nonbiological influences significantly affect sibling rivalry, such as parental conflict or parental favorites (Iturralde, Margolin, & Shapiro, 2013). Lamb and Sutton-Smith (1992) categorized sibling rivalry influence into two main types: sibling-generated and adult-initiated. Sibling-generated rivalry aims for parental attention and higher status within the sibling relationship. An adult-initiated rivalry is based on an overt comparison, which includes direct statements comparing siblings (e.g. "your brother is better at sport"); and covert comparison, when parents make subtle comments about siblings without direct comparison (e.g. "you should play a sport like your brother").

According to theoretical views, sibling rivalry occurs within the setting of a social triangle that includes both siblings and one or both parent (Whiteman et al., 2012). Jealousy is stimulated when one child experiences the loss of the parent's attention to a sibling. Sibling rivalry often results in conflict and problem behaviors (Kolak & Volling, 2011). On the other hand, sibling envy can help support separation and individuation. When children can distinguish between what belongs to oneself and what belongs to their sister or brother, it helps them to learn differentiation. Identifications are stimulated both

by a wish to be like a sibling and the same time go above the same sibling who is envied. This ambivalent relationship offers an opportunity to learn how to love and hate the same person (Edward, 2013).

Sibling Influences on Problem Behavior

Social learning theory is often used to explain different family interactions, like sibling violence and abuse. According to the theory, modeling and reinforcement are the 2 most important factors in learning aggressive behavior (Edwards, 2013). Over the past two decades, there has been an increasing interest in sibling influences on problem behavior and adjustment issues. The majority of research on this matter is based on Patterson's (1984) social learning model, indicating that coercive interactions between siblings often extend to antisocial behavior (Kolak & Volling, 2011) and aggression with peers (Hardy, Beers, Burgess, & Taylor, 2010). Patterson (1986) suggested that through "deviancy training" siblings provide an arena for direct practices, observational learning, and reinforcement of problem behavior. Through hostile interactions, siblings become "fellow travelers" on the path to an antisocial lifestyle. Patterson (1986) emphasized that unskilled parents are the primary source of these adverse outcomes, and they are also more likely to be antisocial using similar interactions outside their households (Solmeyer et al., 2014).

According to Adler (1976) delinquent behavior wasn't caused only by the environment, but the child's interpretation of his or her position. An individual with a gifted sibling may feel neglected and may deceives himself or herself as a "problem child." The child then may looks for evidence that his or her perception is accurate. Also,

when a child is the mother's favorite, the other child may reject his or her friendship and interest. When no one is there to give the child a different explanation and when the circumstance is misunderstood, it could be a starting point for a delinquent behavior (Adler, 1976).

Sibling conflicts in childhood are also associated with later deviance, substance use, bullying, and school problems (Solmeyer et al., 2014). Some studies showed sibling concordance in substance use (Tsampanli & Frrokaj, 2016). During adolescence, when individuals begin to engage in more risky behaviors, sibling influences often become stronger (Fosco et al., 2012). Siblings' externalizing and antisocial behaviors have been shown as strong indicators of sibling influences (Meunier, et al., 2011).

Usually, older siblings provide models of antisocial behaviors to younger siblings. These behaviors may include a deviant talk or other behaviors that undermine parental authority. Siblings also are similar in their risky sexual behaviors and outlook about sex and teenage pregnancy. In addition to social learning, same-sex siblings and those with warm relationships have a higher tendency to engage in risky sexual behaviors. Sometimes, older siblings play a matchmaker role, introducing their younger sibling to partners who are older and more experienced sexually, leading to an increased risk of early sexual activity and teenage pregnancy (Averett et al., 2011). Buist's (2010) findings were consistent with previous findings, which showed that there is a link between higher levels of older sibling delinquency and higher levels of younger sibling delinquency for all gender combinations.

Sibling Violence

“When an adult hits another adult, it is called assault or domestic violence (and is illegal); when an adult hits a child, it is called abuse (also illegal); when a child hits another unrelated child, it is sometimes called bullying. However, when a sibling hits another, it is called rivalry and is considered by most to be a normal part of growing up” (Hardy et al., 2010, p. 65).

According to Kettrey and Emery (2006) individuals often label violent sibling aggression as “conflict” and “rivalry.” Sibling conflict usually arises from some disagreement, which could rise to a level of the physical fight when “one sibling takes on the role of aggressor about another sibling” (Kiselica and Morrill-Richards 2007, p. 149). Because conflict among siblings is often viewed as normal (Edward, 2013), determining sibling abuse is often difficult. In some cultures, sibling aggression often appears to be a normative experience of a childhood where children can learn to resolve conflict (Jacobs & Sillars, 2012).

Tucker and his colleagues (2013) studied siblings’ proactive and reactive aggression during adolescence. They concluded that youth’s reactive aggression is more common with their close-aged sibling than proactive aggression. Object ownership may be the earliest signs of sibling power struggles (Kolak & Volling, 2011). Later on, during middle childhood, control over the social environment provokes more conflicts among siblings (McHale et al., 2012). Studies have shown that the older sibling is usually more powerful due to age, experience, and knowledge (Averett et al., 2011). Age or age gap gives older siblings a greater capability to control interactions (Tucker et al., 2013).

Sources of power can be evaluated during and after conflict. Differentiating between the process and the outcome of siblings' conflict helps researchers to understand how power applied during the progress of a conflict produces its' effect (Tucker et al., 2013). French and Raven (1959) developed the typology of powers: reward power refers to when an individual uses compensation through positive (e.g., praise) or negative reinforcement (e.g., whining) to influence the behavior of another. Coercive power refers to the threat of punishment, such as psychological threats (e.g., rejection from a valued person) or physical threats (e.g., kicking). Legitimate power is based on a person's right, whereas information power refers to persuasion based on a logical argument (Raven, 1965). Referent power occurs when a person identifies with the other's qualities, and finally, expert power refers to one's superior knowledge or ability (Abuhatoum & Howe, 2013).

Although sibling violence is wide-ranging, not all children participate in it. Researchers try to find the reason why it happens between some siblings and why not between all of them. According to learning theory, children learn negative behavior through observation and experience, and they imitate this behavior in similar situations (Whiteman et al., 2012). This theory highlights the reason why children who experience, hear or see family violence are more likely to participate in violent sibling relationships (Piotrowski, Tailor, & Cormier, 2013).

Sibling violence is the most common form of domestic violence, and is connected to other types of family violence such as intimate partner violence and child abuse. In families where abuse and neglect are present, sibling violence occurs at four times the

rate of positive sibling interactions. There is also a strong connection between the quality of the relationships between parents and the quality of sibling relationships. Witnessing violence between parents increases the occurrence of sibling violence (Tippett & Wolke, 2015). For example, parents who use constant physical punishment inconsistently or in a dramatic manner are likely to increase violence and aggression in children. They demonstrate through physical punishment that hitting or slapping is permissible. As a result, a child may generalize that it is acceptable to use physical force against siblings (Edward, 2013).

Siblings in a conflictual relationship have a higher tendency to engage in criminal activity and externalize behavior problems than siblings in less conflictual relationships (Dirks et al., 2015). Sibling violence often has both immediate and long-term negative consequences. As a result of a violent experience, an individual may increase tolerance for violence or even learn to use violence to resolve conflict in other relationships as well (Greenwood, 2014). Piotrowski et al (2014) found that there is a link between sibling aggression and aggression later in life.

Sibling violence and abuse are often cause an emotional impact for an individual, while the symptoms are often unrecognized, and the effects frequently ignored by others. Research shows that children with siblings who are hostile and aggressive are more likely to have lower self-esteem, depression, insecurity and anxiety problems (Hardy et al., 2010).

Warmth and Conflict

As siblings go through various stages of life, their relationships often evolve from childhood to adulthood and from conflict and rivalry to support and friendship (Myers & Goodboy, 2010). The majority of studies arrived at the same conclusions, such that harmonious sibling relationships showed a high level of warmth and low level of conflict; whereas conflictual sibling relationships showed a high degree of conflict and low level of warmth (Buist & Vermande, 2014).

A recent meta-analysis confirmed that sibling warmth and sibling conflict constantly associated with internalizing as well as externalizing problem behavior (Buist et al., 2013). Conflictual sibling relationships indicate higher levels of internalizing problems and it is one of the leading risk factors for problem behaviors (Solmeyer et al., 2014), especially when combined with an absence of sibling warmth (Buist & Vermande, 2014). Furthermore, a chronic conflict has been linked to aggressive behavior, academic difficulty, poor peer relations, and adolescent substance abuse (Buist et al., 2013). These results indicate that children with conflictual sibling relationships show higher levels of aggression than with children with warm sibling relationships.

Adolescents with conflictual sibling relationships are more depressed than adolescents with uninvolved sibling relationships (McHale et al., 2012). Siblings who share their feelings with siblings and use pretended play with them have a higher chance of developing skills to understand the feelings of others (Howe & Recchia, 2014). Warm sibling relationships are positively related to the cognitive, social, and emotional

development of siblings and a reduced risk for internalizing and externalizing symptoms (Buist & Vermande, 2014).

The conflict between siblings both decreases well-being and increases levels of depression (McHale et al., 2012). Sibling conflict is related to a variety of negative outcomes, such as anxiety, depression, and various behavioral problems (Derkman, Engels, Kuntsche, Vorst, & Scholte, 2011). While high levels of sibling conflict linked to a higher frequency of psychological problems, sibling warmth is a significant predictor of lower internalizing problems and less social difficulties (Bascoe et al., 2012).

Most researchers agreed about the harmful effect of conflict in sibling relationships. However, some believed that a child can benefit from it in certain situations. They didn't see conflict as negative or positive but rather as a normative feature of human interaction. Sibling conflicts often help a child to learn about emotion, perspective taking, negotiation, and problem solving. These experiences are significant and efficient in later life that helps individuals with emotion understanding, social competence, and peer relationships (Abuhatoum & Howe, 2013).

Influencing Factors of Sibling Relationships

Sibling characteristics, such as gender, age spacing, and birth order have been identified as primary factors that affect sibling relationships. Age spacing and gender can be a significant element in the cause of sibling rivalry as well. Same-sex siblings who are closer in age are tending to be involved in more competition due to parental expectations. However, greater birth spacing between siblings indicated less sibling rivalry and higher elder sibling support due to less resource competition (Solmeyer et al., 2014).

Gender Dyads

Findings are consistent about identifying gender as a key factor in sibling influences. It has been shown that females have a higher tendency to internalize problems than males in sibling relationships where low sibling warmth and high coercion exist (Solmeyer et al., 2014). A longitudinal study showed a much higher occurrence of collisions among same-sex siblings, particularly among male pairs. A study also concluded that siblings in sister pairs have much greater positive sibling relationships than siblings in brother pairs (Buist, 2010).

As siblings enter adolescence, they experience greater gender-based differences in intimacy and support. Female siblings often stay consistent, while male siblings decrease in intimacy and support (Gamble, Yu, & Kuehn, 2011). Furthermore, studies of sex differences in aggression showed that boys have a higher tendency to engage in rough plays and other activities to seek high-intensity pleasure than girls (Hardy et al., 2010). Sibling gender constellation has been studied since the 1950s and most of them revealed that differences in sibling interactions have been detected as a function of gender and ordinal position. However, later studies suggested that it is unlikely that qualities of sibling relations are primarily determined by structural variables. Recent studies focus more on family dynamics and family processes than structural variables (McHale et al. 2012). Although this study included gender in a preliminary analysis, the main focus was on age spacing as one structural variable.

Birth Order

Birth order research has a long history in psychology and has generated thousands of studies (Sulloway, 1996). The primary purpose of birth order research is to gain a better understanding of the relationship between family conditions and the well-being of individuals. One of the central assumptions of birth order research is that the experiences of an individual based on the position they have in the family (Mills & Mooney, 2013). Dreikurs (1950) described birth order as “the only fundamental law governing the development of the child’s character: he trains those qualities by which he hopes to achieve significance or even a degree of power and superiority in the family constellation” (p. 41).

Adler (1927) stated that birth order is one of the main reasons why siblings with similar genes have very different personalities. Adler emphasized that the firstborn child lives as an only child and is the center of attention until a sibling arrival, which may cause stress and frustration if the situation handled inappropriately. When the situation handled appropriately, the firstborn can respond by becoming responsive and protective (Mills & Mooney, 2013).

In addition to birth order position, family structure, such as family size, sex of siblings, culture, and socio-economic characteristics are also play important roles in the child’s personality development. It is difficult to control all these variables during empirical research. However, a significant number of research studies revealed the effect of birth order on development by examining psychological functioning, through such

variables as intelligence, motivation, relationships, behavioral problems, and general personality characteristics (Eckstein et al., 2010).

Personality characteristics of birth order have been of interest to psychologists for more than a century. During the 1930s, numerous studies were published that investigated birth order and delinquency. These earlier findings commonly confirmed the overrepresentation of firstborn individuals (Fortes, 1933; Sletto, 1934). Wile and Noetzel (1931) concluded that firstborn were more delinquents than later born. Parsley (1933) studied delinquent girls in Chicago and arrived at the same conclusion: the predominance of firstborns. Armstrong (1933) found that in smaller siblingships (2-5) delinquents tend to be firstborn, whereas, in larger siblingships, intermediate positions were overrepresented.

Birth order affects personality development and also it is an important influence in sibling rivalry as well (Kolak & Volling, 2013). The oldest siblings tend to have more power in a sibling relationship while youngest and middle children experience more comparisons to one another (Recchia, Ross, & Vickar, 2010). During early and middle childhood, older siblings usually take a dominant role while younger siblings become a “follower.” However, during adolescence, the power in sibling relationship becomes more balanced, where older sibling begins to give up control and younger siblings obtain an equal status (Tucker & Updegraff, 2010).

Birth order affects different roles taken in later life, such as happiness, success, and even partner selections. Adler concluded that “firstborns can be conservative or rebellious” (as cited in Sulloway, 1996, p. 56). In his book “Born to Rebel”, Frank

Sulloway (1996) supported Adler's theory and claimed that birth order had a major and consistent effect on the Big Five personality traits and that children's personality development influenced by chance experiences and systematic influences. Using the Big Five dimensions of personality studies, Sulloway suggested that firstborns tend to be "dominant, aggressive, ambitious, jealous, and conservative," while laterborns are more "adventurous, risk-taking, sociable, and cooperative" (p. 73). He also concluded that firstborns were higher in achievement and conscientiousness, and laterborns were more rebellious and open to experiences. Since Sulloway's results, some studies tested his findings and arrived at the same conclusions (Mills & Mooney, 2013).

Earlier studies about birth order and delinquency concluded that firstborns were overrepresented among individuals with delinquent behavior. However, after about 1940, the majority of studies tended to shift to middleborns. Later studies emphasized that the intermediate birth positions were more vulnerable to becoming delinquent (Eckstein et al., 2010). Since studies used different methods and definitions, it is hard to explain the reason for the shift toward the middleborn from firstborn. Price and Hare (1969) noted that there are several reasons could cause this shift, such as the change in the rate of birth, child-death, or limited research areas. Rahav (1980) corroborated many of the birth order studies, which is that middleborns are tended to be delinquents in their siblingships. He suggested that if the middleborns were in a high-risk position, a reduction of family size or longer birth intervals could have a preventive effect.

Variables, such as age spacing, birth order, or siblings' gender are seems linked to family environment and the quality of the relationship among siblings (Eckstein &

Kaufman, 2012). However, this does not mean that we can put people into firm “either-or categories” and “stereotype” them. Other factors, such as gender, age, family environment, etc. could significantly influence and change the outcomes of one’s personality characteristics (Eckstein & Kaufman, 2012).

Transition to Siblinghood (TTS)

Older children often experience trauma when a younger child is born, and they feel replaced by a new brother or sister. A child may feel a loss of a previous sense of the self and the loss of the mother as a person before a new sibling arrival. If a child experiences a new sibling arrival as a threat of annihilation, he or she may wish to destroy the newborn. This feeling transmuted over time into aggressive play and an unhealthy rivalry (Edward, 2013).

The majority of firstborn children experience the transition to siblinghood (TTS) in their ages of 2 or 3. Although the TTS is a ubiquitous and expectable event in families, it can often be a traumatic experience causing emotional disturbance and behavioral problems for firstborns. TTS has been viewed by clinicians, nurses, and physicians as a stressful event for a child and often causes emotional upset, disruptive behavior, sibling jealousy, sibling rivalry, or even developmental crisis for firstborns. Mothers are regularly distressed and experience guilt about their changed relationship with their firstborn. They also feel that it is difficult to handle their older children’s disruptive behavior after the sibling’s arrival (Volling, 2012).

Volling (2012) in her meta-analysis summarized 43 published sources related to the transition to siblinghood (TTS). She concluded that most of the studies involved an

underlying assumption about the stressful and disruptive event of TTS, which could lead to psychopathology unless adequate support and coping resources were available. Some studies concluded that firstborns show less affection and response to their mother during the transition, they struggle with sleep problems; they become temperamentally vulnerable, and they develop behavioral problems and regressive behavior. Volling (2012) further emphasized that the age and developmental level of a child who experiences TTS are critical. Younger children are less advanced in cognitive, social, and affective skills. This disadvantage could be a potential risk for psychological difficulties during this transition.

Dunn et al (1981) interviewed a sample of 40 families and studied the firstborn's reaction during the transition to siblinghood. The result showed marked changes in the firstborns' behavior. About 92% of the children in the sample showed an increase in problem behavior, such as tearful, clingy, withdrawn, demanding, and they showed increased confrontation toward their mothers. They also concluded that firstborns' negative mood was related with their anxious behavior weeks later as a result of the sibling's arrival (Dunn, Kendrick, & MacNamee, 1981).

Due to the biological differences in the stress response system, temperamentally sensitive children have a higher reaction from environmental stress, including a new sibling's arrival (Ellis, Boyce, Belsky, Bakersmans-Kranenburg, & Ijzendoorn, 2011). Researchers agree that family factors, such as the mothers' active involvement with their firstborn and more harmonious marriage can ease the difficulty of the transition to siblinghood for firstborns. Also, supportive co-parenting is a significant help for children

who are more temperamentally vulnerable. What most TTS researchers conclude is that after a second child is born, there are significant changes in the mother-firstborn relationship. Mothers often use more discipline and decrease the amount of affection and warmth after giving birth to the second child. Furthermore, firstborns often experience declines in attachment security to their mothers; they display less positive and more negative affection during the mother-firstborn interaction. Also, when the mother's emotional states change after the infant's birth, it may affect the firstborn's adjustment and level of intensity of TTS (Volling, 2012).

It seems that the individual's temperament is one of the main factors necessary to understand the level of difficulties during TTS. While TTS is not a negative and stressful experience with every firstborn, researchers agree that it affects a small subgroup of children. Future research may identify these children and find out how they may differ from other children (Volling, 2012).

Sociocultural Factors

According to McHale et al (2012), the four cultural universals in sibling relationships are a common comparison, common companionships growing up, the ubiquity of siblings, and imbuing sibling roles and relationships. Contrary to most nonwestern societies, the United States supports the independence of siblings and does not promote interdependence among siblings (McHale et al., 2012). Researchers recognized that some aspect of individualistic ideology and the nuclear family structure support sibling rivalry, which may lead to antisocial behavior. Thus, the increasing

societal individualism may cause a more conflictual situation in family life, and more competition among siblings (Whiteman et al., 2012).

The early cross-cultural research identified the caregiving responsibilities of older siblings across cultures (Averett et al., 2011). Also, there has been an emerging interest in studying siblings from different racial and ethnic minority groups, to explain differences in sibling dynamics and influences (McHale et al., 2012). However, there is a very limited research on sibling relationships among ethnic minority groups.

One longitudinal study (Tamis-LeMonda & Kahana-Kalman, 2009) showed that the risk of teenage pregnancy is four times higher for younger sisters among African-American and Latina girls who became a parent before age 20. Another study (Brody et al., 2003) showed that among “poor, rural, African American families,” there is a significant connection between the older sibling’s delinquent behavior and the younger sibling’s conduct problems. Studies that focused on cultural practices and values showed positive sibling relationships, such as ethnic identities in African American families and “familism” and “simpatico” values among Mexican American Families (Whiteman et al., 2012). Since much less known about how siblings support positive development among ethnic minority families, it could be an important direction for future research.

Family System Influences

Family researchers frequently conclude that siblings are often significantly different from one another. The causes and effects of these siblings’ differences are a focus of interest for many scholars. Research on sibling relationships also helps to understand families as a social system (Chun Bun et al., 2012). Siblings are like building

blocks of the family structure, and their relationships significantly affect the family dynamics. The different subsystems that can be found within a nuclear family are parent-parent, parent-child, and child-child (McHale et al., 2012).

Family systems effects on sibling relationships have been studied through both parents' differential treatment of siblings. Results showed that systemic family influences are apparent in research of mother-father patterns of differential treatment for siblings (Solmeyer, Killoren, McHale, & Updegraff, 2011). The few studies that have examined both sibling and other family relationships suggested that the fathers-child relationship is more strongly linked to sibling relationship qualities than the mother-child relationship (Fosco et al., 2012). After the birth of a sibling, fathers become more involved in the care of an older child while mothers are caring for the newborn. Thus, the father and older sibling relationship may become stronger and closer. Later on, when fathers interact with their infant sibling, the older sibling may become distressed. This interaction can be explained by findings that mothers and fathers usually adopt different roles with their children and they have different levels of involvement with them. While it is common that mothers focus on caregiving and fathers focus on play and leisure, children learn from their interactions with fathers and then apply what they learn to sibling relationships (Gamble & Yu, 2014).

Two main hypotheses have been created to explain links between central family relationships: the congruence (similarity) hypothesis and the compensation hypothesis (Derkman et al., 2011). The congruence hypothesis focuses on a positive connection between different relationships. For example, positive relationships between parents

direct a positive approach to their children, and then children became positive in the relationships with their siblings. The compensation hypothesis emphasizes an inverse relation between dyadic family relationships. In other words, if the parent-child relationship is problematic and conflictual, the sibling relationships often compensate for becoming closer (Derkman et al., 2011). Sibling relationship in conflictual and divorced families will be discussed later in this chapter.

Several studies indicated that siblings experience their family dynamics differently, which manifested in their differences in adjustment (Gamble & Yu, 2014). This finding can be applied in situations when siblings live in domestically violent family and experience violent inter-parental conflict (extreme family environment, high-risk families) but they have differing levels of adjustment problems (Piotrowski et al., 2014).

Earlier research revealed the link between inter-parental conflict (IPC) and children's emotional and behavioral problems. However, the more recent studies identified the characteristics of children and their responses to IPC that may be related to child dysfunction (Sandler, Wheeler, & Braver, 2013). Children often use self-blame as a reaction to IPC, which is also associated with internalizing behavior problems. A child's self-blame about IPC results in feeling guilt, sadness, and shame. When children see parents' conflict as a threat to the family system or when they can't cope with it, they become anxious and develop low self-esteem or low self-worth (Davies et al., 2015).

Age, age spacing, and gender differences between siblings also play important roles in adjustment related to their experiences of inter-parental conflict. Younger children, for example, may not be able to fully understand complex interpersonal exchanges,

and as a result, they may misinterpret or feel responsible for the inter-parental conflict. However, older children have the capability for use greater reasoning capacity, and they use higher coping resources with respect to the conflict as compared with their younger siblings (Clements, Martin, Randall, & Kane, 2014).

Siblinghood in One-Parent versus Two-Parent Households

According to the U. S. Census Bureau (2015), the number of single-parent families in the United States has significantly increased during the last few decades. Out of about 12 million single-parent families, more than 80% were single-mother households and about 17% were single-father households. Single-parent families are among the poorest in the United States, with 46% receiving food stamps. Almost half of the single mothers have never been married, and only one-third of them receive any child support (US Census Bureau, 2015). Statistics also show that single-parent families are the fastest growing family type in the United States, and this has multiple significant impacts on children, parents, and in the general society (Jacobs & Sillars, 2012).

Marital conflict and negativity in the parent-child relationship have been related to sibling conflict and violence (Lam, Solmeyer, & McHale, 2012). While siblings exposed to the same source of inter-parental conflict, their understanding, reaction, and adjustment may significantly differ; and as a result, they also produce varying levels of anxiety and disturbance (Iturralde et al., 2013). Inter-parental conflict also has damaging effects on the sibling relationship itself. Some research concluded that children with divorced parents showed more negative behaviors with their sibling, while their level of positive behaviors stayed the same (Clements et al., 2014).

Familiar stress and stressful life events, such as marital discord, divorce, and maternal illness are significantly impact child's adjustment causing emotional and behavioral difficulties (Lam et al., 2012). During stressful life events, positive sibling relationships are an important support for children. High levels of familiar support and consistent parental discipline often prevent a child from maladjustment caused by life events. Furthermore, findings showed a linear relationship between marital conflict and differential parenting (Jacobs & Sillars, 2012). During problematic marriages, a parent may create an alliance with one child, which creates differential treatment among siblings (Minuchin, 1985).

Some investigations found a connection between positive sibling relationships and lower levels of internalizing symptoms during an inter-parental conflict (Iturralde et al., 2013). When an affectionate sibling relationship is present, siblings were less likely to experience a change in internalizing problems after experiencing stressful life events. One of the explanations for this finding was that the security and comfort were that once been given only by parents may often be attributed to an older sibling who became a parental figure while the stressful live event was occurring within the home (Jacobs & Sillars, 2012).

Divorce clearly affects the family system. In addition to changes in spousal and parenting roles, sibling relationship often changes as well. Studies often explained child adjustment to divorce as a cause-effect relationship where parental behavior and conflict are the main factors (Jacobs & Sillars, 2012). Most studies concluded that following divorce, siblings often experience either increased conflict or greater closeness in their

relationships (Roth et al., 2014). Jacobs and Sillars (2012) examined social support from siblings after divorce and found diversity in the quality of sibling relationships. Research showed that divorce affects children differently based on their age and stage of development. The quality of sibling relationships during and after divorce is also affected by age differences between siblings (Roth, et al., 2014).

There are limited researches on family dynamics by comparing single-parent and two-parent household. Amato (1987) studied family processes in different household types from “the child’s point of view.” His study concluded that children receive similar levels of support and punishment from mothers, regardless of household type. Result also showed that children in one-parent families experienced less support, control, and punishment from fathers, more household responsibility and authority, more conflict with siblings, and less family cohesion when compared to children in intact families.

Parental Responses to Sibling Conflict

Family system theories suggest that parents play a significant role in the development of sibling relationship quality. Differential parental treatments could cause siblings to become more different from one another affecting family interrelation (Milevsky et al., 2011). Adler in his theory of individual psychology emphasized the negative implications for adjustment when a sibling feels inferior or disfavored (Ansbacher & Ansbacher, 1956). The same effect of parental differential treatment, such as the treatment with discipline and the use of privileges may result in less positive sibling relationships and adjustment differences among siblings (Shanahan, McHale, Crouter, & Osgood, 2012). Children who are exposed to harsh, inconsistent, and

differential parenting often develop aggressive and coercive behaviors and are motivated by self-serving intentions during sibling interactions (Stormshak, Bullock, & Falkenstein, 2009).

There is an ongoing debate among researchers and practitioners about how parents should manage conflict between their children. Some researchers believe that parents should not intervene in sibling conflict (Pardini, Fite, & Burke, 2008) because it disrupts the balance of power in sibling relationships, especially when parents take sides with one of the children. In contrast, other researchers believe that parents should play an active role in sibling conflict (Myers & Goodboy, 2010).

While parental favoritism negatively affects sibling relationship and often causes sibling rivalry, it may continue into adulthood (Myers & Goodboy, 2010). Parent-child relationship quality is critical for the negative implications of differential treatment. It can be moderated by family values and dynamics, a child's perceptions of fairness, and his or her understanding of the parents' reasons for differential treatment (McHale et al., 2012).

For many, parent sibling conflict is a primary concern, which is one of the reasons for the development of some parenting guidelines at handling sibling conflict and rivalry (Kolak & Volling, 2011). It has shown that parental interventions influence children's conflict strategies and they correlate with children's fighting styles (Tucker & Kazura, 2013). When mothers use disciplinary responses, sibling conflicts are more competitive. When parents treat siblings differently, it can predict children's adjustment. The 2 main features of differential parental treatment are: differential positivity and differential negativity. Parents can show more positive affect and involvement to one child than the

other (differential positivity), or may show more negative behavior toward one child than the other (differential negativity) (Recchia & Howe, 2009).

Parents are continually drawn into sibling conflicts and when facing difficulties in managing the conflict often apply harsh discipline or take sides by supporting the victim. However, in cases when parents only mediate their children's conflicts and allow them to develop their solutions, reports show that siblings' conflict strategies became more constructive and often end in compromise instead of win-loss solutions. When faced with failure in parenting and problem solving, children tend to seek access to deviant peers or increase their unsupervised time, which creates a higher risk for antisocial behavior (Tucker & Kazura, 2013).

While differential parental treatment has been seen as a negative process, not all aspects of it indicate pathogenic influences. One indication is the possibility of a small effect size of differential parental treatment in sibling adjustment. Another indication is children's capability to make a distinction between fair and unfair treatment by their parents (McHale et al., 2012). Since parenting has a significant influence on sibling relationship quality, one of the objective of this study was to determine whether parental conflict response management strategies differ between single-parent and two-parent homes.

Summary

This chapter presented an overview of sibling relationship research in the past and the present. During the last few decades, there have been some methodological advances of sibling research where social and socializing processes were more directly measured

including attention to both members of the sibling relationship. From these works, we can learn more about sibling relations and influences, which affect both individuals and families.

The review showed how sibling relationships were shaped by several variables and how parenting and parent-child relationship significantly impact the quality of sibling relationships. There are consistent findings that some factors, such as personality characteristics, birth order, gender, and other environmental aspects simultaneously influence sibling relationships and developmental outcomes (McHale et al., 2012).

The chapter reviewed some important issues concerned with sibling relationships. The complex picture that emerges from this analysis shows the complication and importance of sibling relationships, and how this relationship has a dominant socialization role and unique power that are apparent in the wide range of developmental outcomes.

It is important to note that because two-parent families are the main family constellation in our society, the majority of research findings apply to two-parent families. However, the results cannot be generalized to all families, including single-parent families. Life could be very different for children whose parents are separated or divorced. Chapter 3 includes a narrative of the research design and methodology of this study.

Chapter 3: Research Method

Introduction

This chapter includes a discussion about the research design, instrumentation, sample and population, ethical protection of the participants, data collection, and analysis of the study procedure. The primary purpose of this research was to examine sibling relationship quality in single-parent households and two-parent households. The objective of this study was to (a) examine the effect of household composition (1-parent home versus 2-parent home) and the number of years between siblings on sibling relationships, and (b) determine whether parental conflict response management strategies differ between single-parent and two-parent homes.

Research Design

I used a quantitative, nonexperimental design to identify sibling relationship quality between single-parent households and two-parent households; explore the relationship between age spacing and sibling relationship quality; and determine if there are different parental conflict response management strategies in single-parent households than in two-parent households.

I designed this study to gain a better understanding of sibling relationships and how environmental factors, such as different family settings, may affect the quality of sibling interactions. I selected mothers as because they have first-hand knowledge of their children. Among the numerous instruments that focus on sibling relationship, the PEPC-SRQ is the only one that assesses parental perceptions of their children's relationships with one another. This study included different strategies for learning about sibling

relationship quality, which may have advantages over designs that follow a single approach. The result of this study provided a richer picture of parental perceptions and added to the literature regarding sibling relationship quality and family dynamics.

The PEPC-SRQ (Kramer & Baron, 1995) helped to evaluate maternal perceptions of sibling relationship quality, their actual perceptions of standards, and their views on sibling conflicts (see Appendix A). The Parental Conflict Management Strategies (Kramer et al., 1999) assisted in determining the most common parental responses for conflicts between siblings in both single-parent households and two-parent households (see Appendix B). It also helped to evaluate the effectiveness of parental intervention strategies. The Demographic Data Collection Form provided basic demographic information about the participants (see Appendix C).

I selected the participants (mothers) from single- and two-parent households to obtain an equal number in each group (independent variables). I drew data from the PEPC-SRQ, where three types of sibling relationships were assessed: warmth, agonism, and rivalry (dependent variables). Using the Parental Conflict Management Strategies, parents selected the most frequent conflict response management strategies they use with their children. The seven responses the participants were able to choose were passive nonintervention, active nonintervention, collaborative problem solving, redirection, power assertion, commands to stop fighting, and exploration of emotions. The Demographic Data Collection Form provided information about the number of children, birth order, age of children, sibling dyad gender (male/male, female/female, and female/male), age spacing between siblings, age of participating mothers, type of

household, biological or nonbiological parents, and number of people living in the household.

Dyad gender and biological or nonbiological parent represented covariates in this study. Prior to the main analysis preliminary analyses of these variables with the dependent variables were conducted. A two-factor, fully-between groups design investigated Research Questions 1–3. The independent variables were household type (single-parent, two-parent) and sibling age difference (2–5 years, greater than 5 years). The three dependent variables that measured sibling relationship quality were: warmth, agonism, rivalry. A two-factor multivariate analysis of variance (MANOVA) was used to statistically analyze the data.

A nonparametric test frequency distribution used to investigate Research Question 4. A number of parents who use a particular conflict management style were counted based on whether the parents live in single-parent or two-parent homes. A chi-square test of independence was used to examine whether household type is related to conflict management style. Although these approaches do not permit conclusions as cause and effect, it helps to identify the extent of the relationship among and between variables and makes prediction possible. Also, this study was nonexperimental, which means that variables was not manipulated, and participants were not randomly assigned, both of which are necessary for experimental design.

Setting and Sample

Mothers from single-parent and two-parent households were the source of information for this research who currently living in the home with their children. These

participants were selected for the following reasons: (a) they are a reachable population; (b) they have necessary reading comprehension skills to complete the questionnaires; (c) and they are presumed to provide reliable information. The participating mothers (ages 18+) were divided into 2 groups: single-parent households, divorced or separated for more than 1 year (excluding widows, widowers, and never married) and two-parent households, including stepfamilies living together more than 1 year (only mothers have to participate). Every participating family had to have at least 2 biological siblings (2 to 2+ years). In cases when more than 2 children live in the same household, sibling relationship was assessed between the first and second born child. Potential participants were randomly selected through an online survey service (SurveyMonkey.com). Participants needed to be able to speak and read in English, but there was no restriction concerning ethnic background, socioeconomic status, or educational level. The completion of the assessment package was taken no longer than 30 minutes.

By using Power and Precision 4, a power analysis sample size was calculated for this study. Since this study was a 2x2 Analysis of Variance (4 independent samples), the value of $k = 3$. The result indicated that for a medium effect with a power of at least .80 and alpha set at .05, a minimum of 128 participants should be selected for this study. The study's 128 cases were distributed evenly among the 2 levels of household types (single and two-parent families), for a total of 64 cases per category. Potential participants were found through online survey service by using SurveyMonkey.com. SurveyMonkey was created in 1999. It is an internet site and created specifically to conduct online research (SurveyMonkey, 2016). This online survey software is used by millions of companies,

organizations, and individuals. It also upholds college Institutional Review Board's academic and ethical standards. SurveyMonkey offer a variety of services, such as helps researchers to get a good representative sample and provides tools for creators to collect strictly anonymous responses (SurveyMonkey, 2016). Kirkby, Wilson, Calvert, and Draper (2011) demonstrated how quickly and easily can be complete a research by using SurveyMonkey. They conducted their online research and obtained a sound result on estimating sample size in new population in less than a week.

I used criterion sampling, which involves selecting cases that meet some predetermined criteria that are essential for eligibility to form part of the sample. Through criterion sampling, the researcher is able to determine criteria or essential characteristics which are result of the research problem or the purpose of the research (Palinkas, Horwitz, Green, Wisdom, Duan, & Hoagwood, 2015). Furthermore, using criterion sampling, the researcher can select essential characteristics, such as mothers from single-parent households and mothers from two-parent households, with at least 2 children, in order to be able to look at the research problem.

Instrumentation and Materials

Instruments that were used in this study include the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (PEPC-SRQ; Kramer & Baron, 1995; see Appendix A), the Parental Conflict Management Strategies (Kramer et al., 1999; see Appendix B), and a Demographic Data Collection Form (see Appendix C). Permission from the developer to use PEPC-SRQ and the Parental Conflict Management Strategies for this study has been granted (see Appendix D).

**Parental Expectations and Perceptions of Children's Sibling Relationships
Questionnaire (PEPC-SRQ).**

According to Kramer and Baron (1995), the PEPC-SRQ examines parental perspectives of the quality of their children's sibling relationships and their perceived standards for sibling relationships. This 27-item measure focuses on parental perceptions of sibling relationship quality in 3 areas: warmth (e.g. How frequently do your children help one another?); agonism (e.g. How frequently your children arguing?); and rivalry (How often are your children jealous?). The PEPC-SRQ is a parental rating, includes three important aspects of sibling relationship quality, which are parental standards measure, the perception of actual relationship and perceptions of problems. "Addressing these three features provides a richer picture of parental perceptions and adds to the literature regarding the nature of sibling relations in early adolescence and our understanding of family dynamics" (Dunn, 1993 as cited in Howe et al., 2011, p. 239).

Since parents have firsthand knowledge about their children, this study used the PEPC-SRQ to assess sibling relationship quality. The PEPC-SRQ assesses parental viewpoints on sibling relationship quality by applying two complementary strategies, direct approach and discrepancy approach. This study used the direct approach. Through this approach, parents were directly asked how they perceive their children's relationship, such as how often they play together, fight, or talking to each other. By using a 5-point Likert scale (1 = *never* to 5 = *always*), parents rated the extent of 27 events to be present or absent in their children's relationship.

Test-retest reliability for the PEPC-SRQ was evaluated with 25% of the sample ($n = 29$). Scores on Warmth, Agonism, and Rivalry standards correlated .74, .86, and .77, across the two time points. Test-retest correlations for the parental perceptions of siblings' actual behavior were .71 for Warmth, .47 for Agonism, and .37 for Rivalry (Kramer & Baron, 1995). Using Cronbach's alpha, internal reliability for the standards PEPC-SRQ were .86 for Warmth, .88 for Agonism, and .81 for the Rivalry. Alphas for the perceived qualities by parents were .86 for Warmth, .73 for Agonism, and .76 for the Rivalry.

The construct validity of the instrument was supported by both the similarity of the factors derived of the PEPC-SRQ and other standardized measures designed for use with parents or with children with different ages (Kramer & Baron, 1995). Other standardized measures designed for use with either parent of children include the Sibling Relationship Questionnaire (Furman & Buhrmester, 1985) and the Sibling Relationship Questionnaire (Stocker & McHale, 1992).

By using the PEPC-SRQ, three factors can be identified: Warmth, Agonism, and Rivalry. The Warmth scale ($\alpha = .86$ for parental standards) includes 15 items: pride, protectiveness, comfort, loyalty, help, kindness, respect, affection, sharing worries, talking to each other, playing together, sharing, teaching, sharing feelings and support. Agonism ($\alpha = .88$ for parental standard) consist 8 items: fighting over objects, fighting over territory, arguing, aggression, anger, threats, unresolved conflicts, issuing prohibitions to control the sibling's behavior, and teasing. The Rivalry scale ($\alpha = .81$ for parental standards) includes 3 items: rivalry, competition, and jealousy (Kramer & Baron,

1995). Because the scales include different numbers of items, a linear transformation technique was used to re-code the data. Transformed scores were computed by using the formula: $(\text{Raw scale score} - \text{lowest possible score}) \times 10 / (\text{Highest possible} - \text{Lowest possible score on original scale})$. The possible scores on the transformed scales were ranged from 0 to 10.

Parental Conflict Management Strategies.

Kramer et al. (1999) developed The Parental Conflict Management Strategies to assess conflict management strategies among parents in response to sibling conflict. Based on previous research (Dunn & Munn, 1986; Washo, 1992), Kramer et al. (1999) identified seven categories of parental conflict management. The first category is the passive nonintervention when parents simply ignore the conflict between siblings. Next is the active nonintervention, when parents decide not to intervene in the conflict but verbalize their expectation that the children should resolve the problem on their own. When parents choose the collaborative problem-solving strategy, they actively work with their children to find a mutually acceptable solution to the conflict. During redirection, parents divert the children's attention away from the conflict to a nonconflictual object or topic, or may direct the children to different activities. The power assertion category indicates a parental threat to punish children if they don't stop arguing. Another similar strategy is the commands to stop fighting, where parents use verbal statements to stop the conflict between children. The last category is the exploration of emotion when parents focus on to explore and discuss the children's feelings and emotions about the conflict (Kramer et al., 1999).

Certain characteristics (i.e., sex composition and age gap) and the level of conflict between siblings may lead parents to use a particular conflict management strategy (Kramer et al., 1999). Siblings can get into a verbal conflict or they may use physical aggression. This study focused on the most commonly used conflict management strategy by parents without differentiating the type of conflict between siblings. To assess the most common conflict management strategy, mothers were asked to select 1 from the following list: passive nonintervention, active nonintervention, collaborative problem solving, redirection, power assertion, commands to stop fighting, and exploration of emotions. Detailed description and examples for each strategy were provided to make the selection easier.

Demographic Data Collection Form.

Demographic Data Collection Form (see Appendix C) provided information about the number of children, birth order, sibling dyad gender (male/male, female/female, and female/male), age of children, age spacing between siblings, the age of participating mothers, the type of household, biological or nonbiological parent, and the number of people living in the household. The age spacing between siblings was calculated based on the given information on this form. Participating mothers were asked to fill out this form in addition to the 2 previous questionnaires.

Data Collection

This study answered the following research questions:

Research Question 1: Does household composition affect the quality of sibling relationships?

H₀₁: There are no significant differences in the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (PEPC-SRQ, Kramer & Baron, 1995) in single-parent households when compared to the two-parent households.

H_{a1}: There are significant differences in the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995) in single-parent households when compared to the two-parent households.

Research Question 2: Does sibling age difference affect the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995)?

H₀₂: There is no difference in the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995) between sibling pairs whose age differ by up to 5 years and sibling pairs whose ages differ by more than 5 years.

H_{a2}: There is a significant difference in the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995) between sibling pairs whose ages differ by up to 5 years and sibling pairs whose ages differ by more than 5 years.

Research Question 3: Is there an interaction of household composition and sibling age difference on sibling relationship quality (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995)?

H₀₃: There is no interaction between household composition and sibling age difference on sibling relationship quality (warmth, agonism, and rivalry), measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995).

H_{a3}: There is a statistically significant interaction of household composition and sibling age difference on sibling relationship quality (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995).

Research Question 4: Are there any preferences of parental conflict management strategy to sibling conflict among single-parent and two-parent household?

H₀₄: There is no preference for any specific conflict management strategy for sibling conflict among single-parent and two-parent household.

H_{a4}: Among single-parent and two-parent household one or more of the conflict management strategy for sibling conflict is preferred over the others.

After approval from the institutional review board (IRB) at Walden University, potential participants were found through online survey service (SurveyMonkey.com). A professional membership was purchased, which provided for the user a variety of services, such as design, storage, and downloadable features into SPSS for analysis.

SurveyMonkey also assists members to find participants in a reasonable time and provide confidential and anonymous survey data.

Those who agreed to participate were provided with a description of the study and were asked to fill out an online consent form first, which includes the description of confidentiality, background information about the study, contacts, and a statement of consent. The form also stated that the study has been approved by IRB, that participation is voluntary, and that the participants had the right to withdraw from the study at any time. The IRB approval number is 10-27-16-0276459. Participants also were assured that confidentiality would be maintained. An identification number was located on each document to maintain confidentiality. No surnames were used on any documentation.

The assessment packet included the consent form, Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire, the Parental Conflict Management Strategies, the Demographic Data Collection Form, and the Consent Form. The completion of the assessment package was taken no longer than 30 minutes.

Data Analysis

Upon returning the assessment, the researcher used a coding system for each assessment package. The coding system included: the date, a letter S (indicating single-parent households), a letter M (indicating two-parent or married-households), and a consecutive number. The instruments were hand scored, and the results were entered into the Statistical Package for Social Sciences (IBM SPSS version 23) for data analysis. A two-factor, fully-between groups design investigated Research Questions 1–3. The independent variables were household type (single-parent, two-parent) and sibling age

difference (2–5 years, greater than 5 years). The 3 dependent variables that measured sibling quality were: warmth, agonism, rivalry. Sibling dyad gender and biological or nonbiological parent represented the covariates in this study. Prior to the main analysis, preliminary analyses investigated these variables. A two-factor multivariate analysis of variance was used to statistically analyze the data.

A nonparametric test was used to investigate Research Question 4. A frequency distribution was used to analyze the result from the Parental Conflict Management Strategies Questionnaire. A number of parents who use a particular conflict management style were counted, based on whether the parents live in single-parent or two-parent homes. A chi-square test of independence was used to examine whether household type is related to conflict management style.

Protection of Human Participants

There has been a careful consideration of the nature of this study and its potential effects on the participants. Participation in this study was voluntary, and they were free to withdraw from participation at any time without consequences. Each participant had to fill out an online consent form first, which discusses in detail the procedures for participation in the study, the voluntary nature of the study, confidentiality, and contact information for the researchers in case of questions regarding the study. Participants did not have to give personal contact information in order to complete the survey. The researcher provided email address in order to answer questions regarding the survey. There were no probable risks or benefits for participation in the study. However, there

was a possibility that participants may get emotionally upset while reflecting on family issues. In this case they were free to withdraw at any time during the process.

To protect the privacy of the participants, data were collected on an individual basis and the identities of the study participants remained anonymous (i.e. no identifying information were collected or retained). Confidentiality of the assessment data were assured since each participant received only a code number and only the researcher had access to those records. The computerized analysis kept on a password-protected computer. All demographic data, questionnaire, and documents related to this research kept locked in a filing cabinet and were accessible only to the investigator. Five years after completion of the study, all records will be destroyed.

Threats to Validity

Some limitations and threats to validity need to be considered when interpreting the result of this study. Information was collected from participants using self-report methods, which may create biases in responses and may affect the result. Also, parental responses to sibling conflict may be affected by family size, family structure, socioeconomic status, and ethnic and cultural background. In addition, multi-divorces experiences may have occurred in some participating families who may alter the response patterns, and as a result, the generalizability of findings may be limited.

The 2 instruments used in this research (PEPC-SRQ and the Parental Conflict Management Strategies) were developed by focusing on White, two-child, and two-parent families, whereas the current study is designed to include variables, such as single-parent families and families with two or more children without any ethnical restriction.

There has been very limited research to date that systematically study qualities of sibling relationship in accordance with cultural diversity. Additional limitations of the current study stem from the fact that this study focused only on parental perceptions of children relationships without the children's perceptions of their relationship. Very little is known about how parents' and children's perceptions of their relationships may agree.

While relationships between variables may exist for the conditions in which the study was conducted, it cannot be generalized to other conditions. The instrumentation in this study was controlled by including more than one group (single-parent household and two-parent household) and ensured that groups were used the same instruments and followed the same procedures.

This study was nonexperimental, which means that variables were not manipulated, and participants were not randomly assigned, both of which are necessary for experimental design. Assumption related to the methodology was that the instruments were used in this study measured their assigned variables accurately. However, this study used questionnaire instruments; therefore, potential response bias may be presented.

While samples are used to test a hypothesis about population, samples are not expected to be identical to the population. As a result, there were some discrepancy between a sample statistics and the corresponding population parameter. The data that were derived from the study may identify correlative factors between variables, but they can't be interpreted as evidence of a causative factor.

Summary

This chapter provided details of the research methods for this study, including research design, setting and sample, instrumentation, data collection and analysis, and protection of human participants. The research design and statistical analyses for the present research were selected to address the research questions in general. The use of two-factor MANOVA tested the significance of each independent variable alone and examined the relationship between variables. Also, the chi-square test of independence was used to evaluate the frequency data from a sample. These approaches offer the most comprehensive examination of the research variables and are most appropriate for a nonexperimental study such as this one.

Each of the measures used – PEPC-SRQ and Parental Conflict Management Strategies – have been demonstrated by the research literature to possess acceptable levels of reliability, validity, and consistency. Although it is argued that no research design is perfect (each has its weaknesses), the design and methodology of the present study were selected as a best approach given the time and restrictions associated with the research, including the ethical requirements in regard to research with human participants. Chapter 4 includes the data analyses and findings of the study, with the results recognized in relations to the four research questions.

Chapter 4: Results

Introduction

The purpose of this study was to (a) examine the effect of household composition (one-parent home versus two-parent home) and the number of years between siblings on sibling relationships, and (b) determine whether parental conflict response management strategies differ between single-parent and two-parent homes. I stated the research questions and hypotheses in Chapter 3. This chapter provides information on data collection procedures, sample characteristics, and data analysis, and a summary of the results relative to the four research questions and hypotheses.

Data Collection

I collected data for 2 weeks from 145 participants using SurveyMonkey. Participants were contacted through a targeted SurveyMonkey audience and a SurveyMonkey link, which was posted on Facebook. A targeted audience was purchased from SurveyMonkey to focus on participants who were married or single with at least two children living in their household. The SurveyMonkey link was also posted on several mother-oriented group pages on Facebook. Of the 145 responses, there was a total of 128 valid surveys, 56 from the SurveyMonkey targeted audience and 72 from the links to SurveyMonkey posted on Facebook. There were 17 incomplete surveys. For example, some participants filled out only the demographic questions, or some did not meet the participation criteria; these surveys were eliminated from the study. Although age, gender, income level, U.S. location, and commonly used device type were not contained

in the research study, they were included on the end of the survey for the targeted audience by SurveyMonkey.

Sample Characteristics

A total of 128 women participated in the study. The participants were anonymous and consisted of adult mothers (18 years of age or older) with at least two children. I collected demographic information from participants that included the number of children, age of children, sibling dyad gender (male/male, female/female, and female/male), age spacing between siblings, age of participating mothers, type of household, biological or nonbiological parent, and number of people living in the household. Demographics are displayed in Table 1.

The age of participating mothers, the number of children, and the number of people living in the household were not included in the analysis of the demographic characteristics because several participants skipped these questions. From the total of 128 completed surveys, 51 did not answer the question about their age, and 54 did not answer both questions about the number of children and the number of people living in their household. However, because they completed the survey with only these missing data, these surveys were counted as completed. Any other missing data on the Demographic Questionnaire, the PEPC-SRQ, and the Parental Conflict Management Strategies were labeled as missing and excluded from the analysis.

Additional demographic data (income level, U.S. location, and device type) were collected only from the targeted SurveyMonkey participants were not included in the final analyses, because these data are not known from participants who took the survey

via the link to SurveyMonkey posted on Facebook. Of the final sample, 56 were from the targeted audience, and 72 took the survey via the link posted on Facebook.

Initial review of the data revealed that the household composition was split such that 65 of the women reported living in a two-parent household, and 63 identified as the primary caregiver in a single-parent household. From the total of 128 participants, ninety-seven percent ($N = 124$) of the women reported that at least one parent in their household was biologically related to the children. Interestingly, the four women who reported living in a household that did not include at least one parent biologically related to the children were single parents. Due to this small sample size, responses from the four single-parents who were not biologically related to the children were excluded from final analyses. Table 1 provides various demographic characteristics of the final sample of 124 women.

Table 1

Demographic Characteristics of the Sample (N = 124)

	<i>n</i>	%
Household types		
Single-Parent Household	59	48.4
Two-Parent Household	65	51.6
Sibling age differences		
Less than 5years	101	81.5
More than 5years	23	18.5
Two-parent household		
Both Parents Biological	53	81.5
Step-Mother/Biological Father	3	4.6
Biological Mother/Step-Father	9	13.8
Single-parent household	59	100

Preliminary Analysis

MANOVA Assumption. Preliminary analyses were performed to determine whether the assumptions of a two-factor multifactor analysis of variance (MANOVA) were met. According to Warner (2013), there are 4 assumptions that must be met in order to conduct a MANOVA. They include independence of observations, normal distribution of the dependent variables, linear associations between the dependent variables, and homogeneity of covariance matrices.

Assumption 1: Independence of observations. Each survey respondent completed the survey independent of all other respondents. As such, the assumption of independence of observations was met.

Assumption 2: Normality. Each dependent variable was quantified and measured at the interval level. A histogram was created for each dependent variable to visually illustrate the distribution of scores. The histograms indicate the dependent variables were relatively normally distributed. Furthermore, this assumption is robust when there is a large sample size. As such, the assumption of normality was met.

Assumption 3: Associations between variables are linear. The Linearity assumption was examined by visually inspecting scatterplots of the dependent variable. The scatterplots indicate that the relationship between warmth and agonism, warmth and rivalry, and agonism and rivalry were linear. This assumption was therefore met.

Assumption 4: Homogeneity of Covariance Matrices. Box's Test of Equality of Covariance Matrices was used to determine whether the variance/covariance matrices for

the dependent variables were equal across populations. The assumption was met ($p = .123$).

The Potential effect of sibling gender dyad on relationship quality. Sibling gender dyad (male-male, female-female, and female-male) may contribute to sibling relationship quality. To rule this out as a potential confounding factor, a one-way MANOVA was performed. The independent variable was sibling gender dyad, and the dependent variables were warmth, agonism, and rivalry. The result revealed that there was not a statistically significant effect of gender on relationship quality ($F(3,120) = 1.86, p = .09$).

Descriptive Statistics for the Independent Variables

Each independent variable was measured at the nominal level. Cases were categorized based on household type (single-parent or two-parent) and sibling age spacing (less than 5 years or greater than 5 years). The descriptive statistics for each independent variable revealed that there were 59 (48%) single-parent households and 65 (52%) two-parent households. The result shows that there were 101 sibling dyads whose age difference was less than 5 years and 23 whose age difference was more than 5 years. The descriptive statistics for each independent variable are presented in Table 2.

Table 2

Descriptive Statistics for Household Type and Sibling Age Difference

	Less than 5 years	More than 5 years	Total
Single-parent household	50	10	60 (48%)
Two-parent household	51	13	64 (52%)
Total	101 (82%)	23 (19%)	124 (100%)

Scoring of the PEPC-SRQ. A total number of 124 completed self-reports were analyzed for this study. All data were processed into SPSS version 23 and were analyzed by using this software. The PEPC-SRQ was used to measure sibling relationship quality among the participating families along three dimensions Warmth, Agonism, and Rivalry (Kramer & Baron, 1995). The PEPC-SRQ includes 27 items which measure maternal perceptions of sibling relationship quality (15 items about Warmth, 9 items about Agonism, and three items about Rivalry). Each item was rated by the participants on a 5-point scale where 1=*never* and 5=*always*. The standard score for Warmth was summed across items 2, 4, 6, 8, 10, 12, 14, 15, 17, 19, 21, 22, 24, 25, and 26. The standard score for Agonism was summed across items 1, 9, 11, 13, 16, 18, 20, 23, and 27. The standard score for Rivalry was summed across items 3, 5, and 7. Final scores were calculated by using the following formula: $(\text{raw scale score} - \text{lowest possible score} \times 10) \div (\text{highest possible} - \text{lowest possible score on original scale})$. The lowest possible score for Warmth was 15, for Agonism was 9, and for Rivalry was 3. The highest possible score for Warmth was 80, for Agonism was 45, and for Rivalry was 15. The final scores (ranged from 0 to 10) of Warmth, Agonism, and Rivalry were entered into the SPSS version 23 for analysis. Greater values indicated more of the measured quality.

Scoring of Parental Conflict Management Strategies.

The Parental Conflict Management Strategies (Kramer et al., 1999) described seven conflict response strategies and participants were asked to select one of the most common strategies they use with their children. In the SurveyMonkey survey, mothers

were asked to determine which strategy they use most with their children. The seven responses the participants could choose were: passive nonintervention, active nonintervention, collaborative problem solving, redirection, power assertion, commands to stop fighting, and exploration of emotions. A number of parents who use a particular conflict management style were counted based on whether the parents live in single-parent or two-parent homes.

Data Analysis

The purpose of this study was to determine whether household type (1-parent or 2-parent) and sibling age difference (less than 5 years or greater than 5 years) affect sibling relationship quality. Additionally, this study examined whether there was a relationship between parental conflict management style and household type.

A two-tailed (non-directional) two-way multiple analysis of variance was performed to test the first three hypotheses. The alpha level was set at .05. A MANOVA was selected because it examines the effect of multiple independent variables on multiple dependent variables in a single test. In this study, there were two independent variables (household type (1-parent or 2-parent) and sibling age difference (less than 5 years or more than 5 years)) and 3 dependent variables (sibling warmth, sibling agonism, and sibling rivalry).

A chi-square test of independence was performed to test the fourth hypothesis using SPSS IBM Statistics (version 23). This test was selected because it compares observed sample frequencies to what the expected frequencies would be if no relationship exists. The number of households that used one of 7 conflict management styles was

counted for both 1-parent and 2-parent households to determine whether there is a preference for a certain conflict management in 1-parent versus 2-parent households.

The data analysis is presented in four parts to discuss each of the research questions and subsequent hypotheses. The first section reports the result of the first research question which examined the quality of sibling relationship in single-parent households compared to two-parent households. The second section reports the findings of the second research question that examined if sibling age differences affect the quality of sibling relationships. The third section reports the results of the third research question which examined the interaction of household composition and sibling age difference on sibling relationship quality. The fourth section reports the result of the fourth research question which examined whether parental conflict response management strategies differ between single-parent and two-parent homes.

Multivariate Results

As described above, a MANOVA was performed to determine whether household type, sibling age difference, and the interaction between the household type and sibling age difference affects sibling relationship quality. As shown in Table 3, the results of the MANOVA revealed a statistically significant multivariate effect for household type with regard to sibling relationship quality ($F_{(3, 118)} = 2.73, p < .05, \text{partial } \eta^2 = .07$). There was not a statistically significant multivariate effect for age difference ($F_{(3, 118)} = 0.74, p > .05$) or the interaction between household type and age difference ($F_{(3, 118)} = 0.16, p > .05$) on sibling relationship quality. These results suggest that household composition (1-parent or 2-parent) affects sibling relationship quality regardless of sibling age difference.

Table 3

Multivariate Test Result

Effect: Wilks' lambda	Value	<i>F</i>	Hypothesis (<i>df</i>)	Error (<i>df</i>)	Sig.
Intercept	.060	621.577 ^b	3.000	118.000	.000
Household type	.935	2.727 ^b	3.000	118.000	.047
Age (<i>y</i>) Difference	.982	0.736 ^b	3.000	118.000	.533
household Type* age difference	.996	0.163 ^b	3.000	118.000	.921

Note. a, design: intercept + household type + age difference + household type, *, age difference; b, exact statistics.

Research Question 1

Research Question 1: Does household composition affect the quality of sibling relationships?

H_01 : There are no significant differences in the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (PEPC-SRQ, Kramer & Baron, 1995) in single-parent households when compared to the two-parent households.

H_{a1} : There are significant differences in the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995) in single-parent households when compared to the two-parent households.

As described above and in Table 3, household type had a significant effect on sibling relationship quality. As such, the null hypothesis for Research Question 1 was

rejected, and the alternative hypothesis was retained. Univariate tests indicated that the sibling relationship quality of rivalry was significantly different between single-parent and two-parent homes ($F_{(1, 120)} = 5.44, p < .05, \eta^2 = .04$) such that rivalry was less in one-parent households ($M = 2.84, SEM = .39$) than in two-parent households ($M = 4.04, SEM = .35$). Interestingly, household type did not affect the sibling relationship qualities of warmth ($F_{(1, 120)} = 1.21, p > .05, \eta^2 = .01$) or agonism ($F_{(1, 120)} = 0.69, p > .05, \eta^2 = .01$). The descriptive and univariate results of Research Question 1 are presented in Tables 4 and 5.

Table 4

Descriptive Statistics for the Effect of Household Type on Sibling Relationship Quality

	Warmth <i>M, (SEM)</i>	Agonism <i>M, (SEM)</i>	Rivalry* <i>M, (SEM)</i>
Single-parent household	5.75 (.30)	3.60 (.27)	2.84 (.38)
Two-parent household	6.20 (.27)	3.90 (.25)	4.04 (.35)

* $p < .05$

Table 5

Univariate Tests Results of the Effect of Household Type on Sibling Relationship Quality

Dependent Variables	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.
Contrast Warmth	3.653	1	3.653	1.209	.274

Error	362.453	120	3.020		
Contrast	1.730	1	1.730	0.690	.408
Agonism					
Error	300.684	120	2.506		
Contrast	26.785	1	26.785	5.440	.021
Rivalry					
Error	590.820	120	4.924		

Research Question 2

Research Question 2: Does sibling age difference affect the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (PEPC-SRQ, Kramer & Baron, 1995)?

H₀2: There is no difference in the quality of sibling relationships (warmth, agonism, and rivalry) as measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995) between sibling pairs whose age differ by up to 5 years and sibling pairs whose ages differ by more than 5 years.

H_a2: There is a significant difference in the quality of sibling relationships (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995) between sibling pairs whose ages differ by up to 5 years and sibling pairs whose ages differ by more than 5 years.

As described in Table 3, the results of the MANOVA indicate no multivariate effect of sibling age difference on sibling relationship quality. Therefore, the null

hypothesis for Research Question 2 was retained. The means and standard deviations associated with Research Question 2 are presented in Table 6.

Table 6

Descriptive Statistics for the Effect of Sibling Age difference on sibling Relationship Quality

Sibling Age Difference	Warmth <i>M, (SEM)</i>	Agonism <i>M, (SEM)</i>	Rivalry <i>M, (SEM)</i>
< 5 years	5.90 (.17)	4.02 (.16)	3.64 (.22)
> 5 years	6.06 (.37)	3.48 (.33)	3.25 (.47)

* $p < .05$

Research Question 3

Research Question 3: Is there an interaction of household composition and sibling age difference on sibling relationship quality (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (PEPC-SRQ, Kramer & Baron, 1995)?

H_03 : There is no interaction between household composition and sibling age difference on sibling relationship quality (warmth, agonism, and rivalry), measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995).

H_a3 : There is a statistically significant interaction of household composition and sibling age difference on sibling relationship quality (warmth, agonism, and rivalry) measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995).

As described in Table 3 there is no multivariate effect for the interaction between the two independent variables on sibling relationship quality ($F_{(3, 118)} = 0.16, p > .05, \eta^2 = .04$). Therefore, the null hypothesis for Research Question 3 was retained. The means and standard deviations associated with Research Question 3 are presented in Table 7.

Table 7

Descriptive Statistics for the Effect of Household Type and Sibling Age Difference on Sibling Relationship Quality

	Warmth <i>M, (SEM)</i>	Agonism <i>M, (SEM)</i>	Rivalry <i>M, (SEM)</i>
Single-parent			
< 5 years	5.64 (.25)	3.81 (.22)	3.10 (.31)
> 5 years	5.87 (.55)	3.39 (.50)	2.58 (.70)
Two-parent			
< 5 years	6.15 (.24)	4.24 (.22)	4.18 (.31)
> 5 years	6.25 (.48)	3.57 (.44)	3.91 (.62)

* $p = < .05$

Research Question 4

Research Question 4: Are there any preferences of parental conflict management strategy to sibling conflict among single-parent and two-parent household?

H_{04} : There is no preference for any specific conflict management strategy for sibling conflict among single-parent and two-parent household.

H_{a4} : Among single-parent and two-parent household one or more of the conflict management strategy for sibling conflict is preferred over the others.

The chi-square test of independence revealed no relationship between conflict style and household type ($X^2_{(124)} = 5.54, p > .05$). Table 8 presents the results of the chi-square. Therefore, the null hypothesis for Research Question 4 was retained. Table 9,

which presents the chi-square contingency table (expected frequencies are in parentheses), shows that “Collaborative” was the most frequently reported conflict style in both single-parent ($N = 23$, 38%) and two-parent ($N = 26$, 41%) households. Across both household types, relatively few relied upon passive ($N = 4$, 3%) and explorative ($N = 7$, 6%) styles.

Table 8

Chi-square Tests of Independence for Conflict Management Style in Single-Parent and Two-Parent Households

	Value	<i>df</i>	<i>p</i> -value
Pearson chi-square	5.542	6	.476
Likelihood ratio	5.978	6	.426
Linear-by-linear association	1.895	1	.169
<i>N</i> for valid cases	124		

Table 9

Observed versus Expected Frequency Distribution of Conflict Management Style in Single-Parent and Two-Parent Households

	Passive	Active	Collaborative	Redirect	Power	Command	Explore
Single-parent household	3 (1.96)	11 (10.20)	23 (23.70)	10 (8.23)	5 (5.81)	7 (6.77)	1 (3.39)
Two-parent household	1 (2.06)	10 (10.80)	26 (25.30)	7 (8.77)	7 (6.19)	7 (7.23)	6 (3.61)
Total	4	21	49	17	12	14	7

Summary of Results

The purpose of this study was to determine whether household type and sibling age difference affect sibling relationship quality. Additionally, this study examined whether single-parent and two-parent homes use different conflict management styles. The data were analyzed using a MANOVA and chi-square, respectively, using IBM SPSS 23 software. The results revealed that household type was affected sibling rivalry such that 1-parent households reported less sibling rivalry than 2-parent households. Despite the effect of household type on sibling rivalry, there was no effect of household type on sibling warmth or agonism. Additionally, sibling relationship quality was not affected by sibling age difference, and the interaction between sibling age difference and household type was not significant. With regard to conflict management style, most households (both single-parent and two-parent) used a collaborative management style.

Conclusion

The results of this study indicate that rivalry between siblings is greater in 2-parent households than in 1-parent households. Although sibling dyad gender and the interaction between household type and sibling age difference were also examined, neither one appeared to affect sibling relationship quality in a statistically significant way. These results will be discussed in greater details in Chapter 5. There will be a discussion of strength as well as limitations of the study, implications for social change, and recommendations for further study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this study was to examine the effect of household composition and age spacing on the quality of sibling relationship. The first research question examined the quality of sibling relationship in single-parent households compared to two-parent households by using the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (PEPC-SRQ, Kramer & Baron, 1995). The second research question investigated the effect of sibling age differences on the quality of sibling relationships. The third research question examined the interaction of household composition and sibling age difference on sibling relationship quality. The fourth research question looked at whether parental conflict response management strategies differ between single-parent and two-parent homes by using the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (PEPC-SRQ, Kramer & Baron, 1995). The findings indicate that there is a link between sibling relationship quality and household composition, but not between sibling age difference and sibling relationship quality. Among the measured sibling relationship qualities (warmth, agonism, and rivalry), a significant relationship was found between rivalry and household composition.

The qualities of sibling relationships are highly variable, and this variability is associated with children's conflict strategies (Tucker et al., 2013). Previously, some studies investigated the effect of gender, birth order, and developmental outcomes for each child's individual adjustment from the child's point of view. The current study

attempted to go beyond the traditional approach to sibling relationship research by focusing on maternal views who have first-hand knowledge of their children and their behavior.

There is a definite gap in the literature related to our understanding of parental experiences and their approach in regards to sibling conflict. The conceptual focus of the study was to identify sibling relationship differences based on different family structures (1-parent home versus 2-parent home), and other factors, such as age differences between siblings. This chapter includes an interpretation of the research findings, discusses limitations of the presented study, and provides recommendations for further research, as well as implications for social change, and closes with the conclusion of the study.

Interpretation of Findings

Research has shown that variables, such as gender, age spacing, birth order, and marital status of parents have been identified as primary factors that affect the quality of sibling relationships (Solmeyer et al., 2014). This study aimed to build upon previous research as presented in Chapter 2, which found that parental separation and divorce can lead siblings to both a supportive and a highly conflicted relationship and intended to explore further how changes in family structure (divorce, separation) influence sibling relationship quality. The current study addressed a gap in the literature by examining variables of household composition (1-parent home versus 2-parent home) and the number of years between siblings as predictors of the quality of sibling relationship.

Household Composition

There is limited research on family dynamics by comparing single-parent and two-parent households. Most studies conclude that following divorce, siblings often experience either increased conflict or greater closeness in their relationships (Roth et al., 2014). When researchers investigated how marital and parental subsystems affect sibling relationships, there were some inconsistent findings. One study showed that sibling relationships were more positive in divorced families than in married families (Voorpostel et al., 2012). However, a few studies concluded higher conflicts between siblings in divorced or separated families versus married families (Roth et al., 2014). These inconsistent findings were explained by different possible dimensions of sibling relationships examined. Due to these inconsistent findings, this dissertation attempted to add further evidence of how marital and parental subsystems affect sibling relationships by comparing single-parent and two-parent families. As addressed by Research Question 1, the result of this study supports previous findings that marital and parental subsystems affect sibling relationship quality. The result revealed that 1-parent households reported less sibling rivalry than 2-parent households.

Previous studies investigated the family system influences on sibling relationship via mothers' and fathers' differential treatment of their children (McHale et al., 2012; Meunier et al., 2011). The few studies that have examined both sibling and other family relationships suggest that the fathers-child relationship is more strongly linked to sibling relationship qualities than the mother-child relationship (Fosco et al., 2012). Results of these studies show incongruence of mother-father patterns of differential treatments, such

that one parent shows favor toward one sibling and the other not. These works suggest negative marital and sibling dynamics which result in a rivalry and poorer adjustment in both siblings. These findings could be one of the explanations why the result of this study shows a higher occurrence of sibling rivalry in two-parent households. However, parental differential treatment was not investigated in this study, and only mothers were included as participants.

Furthermore, the result of this study added to the existing body of literature regard to sibling relationship research. This study supports previous findings that there is less conflict between siblings in divorced or separated families than in intact families. As evidenced by earlier studies, older siblings often take a parental or caretaking role during parental separation or divorce. Sibling relationship became more positive when navigating through the changing family system as a result of marital dissolution. Roth (et. al., 2014) concluded that parental divorce, although having negative effects on the individual, strengthens the sibling relationship. The result of this study supports previous findings that sibling relationships are more positive in divorced than in married families.

Age Spacing

Age spacing and gender can be a significant element in the cause of sibling rivalry as well. The research found that greater birth spacing between siblings indicated less sibling rivalry and higher elder sibling support due to less resource competition (Solmeyer et al., 2014). Birth order studies show that wider age spacing is associated with less conflict between siblings (Kolak & Volling, 2013). For example, during adolescence, the older sibling may have more authority over the younger sibling, but as

they age, they become more equal (Myers & Goodboy, 2010). Tucker and his colleagues (Tucker et al., 2013) studied siblings' proactive and reactive aggression during adolescence. They concluded that youth's reactive aggression is more common with their close-aged sibling than proactive aggression. The result of this study, as proposed by Research Question 2, did not show a significant effect of age differences between siblings on their relationship quality. However, this study only used two variables (less or more than 5 years age differences) and did not investigate the exact age differences.

Gender dyads

Previous findings are consistent about identifying gender as a key factor in sibling influences. Same-sex siblings who are closer in age tend to be involved in more competition due to parental expectations. It has been shown that females have a higher tendency to internalize problems than males in sibling relationships where low sibling warmth and high coercion exist (Solmeyer et al., 2014). This study also investigated the potential effect of sibling gender dyad on relationship quality. During preliminary analysis, sibling gender dyad was ruled out as a potential confounding factor, and there was not a statistically significant effect of gender on relationship quality.

Parental Sibling Conflict Management

Family systems effects on sibling relationships have been studied through both parents' differential treatment of siblings. For many, parent sibling conflict is a primary concern, which is one of the reasons for the development of some parenting guidelines at handling sibling conflict and rivalry (Kolak & Volling, 2011). However, there is an ongoing debate among researchers and practitioners about how parents should manage

conflict between their children. Some researchers believe that parents should not intervene in sibling conflict (Pardini, Fite, & Burke, 2008) because it disrupts the balance of power in sibling relationships, especially when parents take sides with one of the children. In contrast, other researchers believe that parents should play an active role in sibling conflict (Myers & Goodboy, 2010).

Since parenting has a significant influence on sibling relationship quality, one of the objectives of this study was to determine whether parental conflict response management strategies differ between single-parent and two-parent homes. The result of this study revealed no relationship between conflict style and household type. In this study, “Collaborative problem solving” was the most frequently reported conflict style in both single-parent and two-parent households. When using this strategy, parents actively work with children to find a mutually acceptable solution to the problem or conflict (Kramer et al., 1999). This study supports previous findings of the various forms of parental responses to children’s conflicts (Kramer et al., 1999). Although “Collaborative problem solving” was one of the most common parental responses in this study, parental non-intervention and intervention strategies were found to vary in both single-parent and two-parent households.

Theoretical Considerations

The current study used both family system theory and the wealth of literature presented and discussed in Chapter 2. A family systems framework allows exploring sibling relationships in a larger context. Theoretical and empirical literatures have discussed the sibling relationship within the context of the larger family system (Howe &

Recchia, 2014). A central tenet of family system theory is that families are dynamic and made up of different subsystems (parent-child, siblings, and marital) that are interconnected and commonly influential. A family systems perspective is significantly important in the development of sibling relationships (Haefner, 2014). To date, family scholars focus more on shifting family structure, the changing roles of parents, and different parenting strategies within the family (Howe, Karos, & Aquan-Assee, 2011). Sibling relationship qualities have been linked to both family dynamics and structural characteristics, such as gender, age spacing, and birth order.

According to family systems theory, family subsystems are interdependent; thus sibling relationships are influenced by the larger family context (Minuchin, 1985). The family system theory emphasizes that families are open systems and they adapt to changes in internal and external influences, including the development of individual family members. However, repetitive fluctuation in norms, activities, and roles such as divorce creates dysfunctional families and relationships.

Evidence suggests that siblings may get closer in the time of marital conflict which has been explained by Engfer's compensatory model of family processes (Engfer, 1988). According to the compensatory model, individuals may look for support in one family subsystem in response to distress in another subsystem. Thus, children who witness marital conflict may turn to their siblings for affection and support (Voorpostel et al., 2012). Research also shows a greater support from mothers to children following divorce than fathers (Jacobs & Sillars, 2012).

The result of this study is consistent with family system research that dynamic families continuously try to maintain a balance between stability and change. In this case, as a result of divorce, siblings try to compensate the changes in their family dynamics by becoming closer and more supportive in their relationships. The findings of this study support the notion that changes in family dynamics effects family subsystems, for example, the household composition has an effect on sibling relationship quality.

Limitations of Study

Several limitations of the current study are noted. The study included a relatively small sample that may have somewhat limited power to detect smaller effects, as well as to permit consideration of more complex associations. The sample also was limited to mothers as participants and perspective of fathers' was not included, which could be important for future research to investigate the contribution of fathers' perspectives in the understanding of sibling relationship quality. Furthermore, the previous finding revealed a relationship between age spacing and the quality of the relationship among siblings (Eckstein & Kaufman, 2012). Although this study used age spacing as one of the variables (less or more than 5 years age differences), there was not an investigation on the exact age differences between siblings.

Another limitation of this study was that socioeconomic status was not assessed in this study, which may influence the participants' responses as well as limits the generalizability of the findings. According to Voorpostel et al (2012), children living in 1-parent households are at a greater risk of living in poverty, experiencing higher insecurity, and develop behavioral problems compared to children who live in 2-parent

households. Households with two parents and financial security reduce the likelihood of children's behavior problems. As previous findings indicated, assessing socioeconomic status in different household composition could affect sibling relationship quality. Since this study did not assess the household income of the participants, future work might be considered to investigate how socioeconomic status may affect sibling relationships in different household compositions.

This study used self-report surveys to collect data; therefore, potential response bias may be presented. Self-reports are widely used in research, they are affordable, and are considered a consistent measurement tool (Creswell, 2009). However, while participants' responses to questions are assumed to be honest, there is a possibility that some questions were not answered honestly.

Implications for Social Change

This research conducted with single-parent and two-parent households suggests a link between household composition and sibling relationship quality. Among the measured sibling relationship qualities (warmth, agonism, and rivalry), 1-parent households reported less sibling rivalry than 2-parent households. This study supports the notion that the role of the sibling relationship in family dynamics and treatment outcomes is complex and points to increased attention in both clinical and research domains. Positive social change may result from this research based on a better understanding of how sibling relationship quality has been affected by different family dynamics, such as changes in household composition. Sibling relationships should be considered when developing family-centered approaches to promote positive and reduce negative

dynamics. Furthermore, the conclusion from this study may alert clinicians to be aware of additional factors that may impact a patient's psychological well-being whether or not he or she comes from a two-parent or a single-parent family. Therapist should become familiar with the patient's family dynamics, household compositions, and quality of relationships between the family subsystems (siblings, parent-child, and marital) early in the treatment process which may have a significant influence on a child's problem.

Sibling rivalry can have a negative effect on personal development which should encourage counselors to address this issue in therapeutic settings and help family members to understand and learn how to cope with sibling conflicts. Practitioners and therapist should be alert of sibling relationship dynamic, such as sibling rivalry and conflict, which possibly affects an individual's behavior and well-being. Counselors should work with both parents in two-parent families and address potential feelings of jealousy and rivalry that may arise when a child experiences different parental treatment in relation to his or her sibling, such that one parent may show favor toward one sibling and the other not (Chun Bun et al., 2012). As the result of this study indicates, there is less sibling rivalry in one-parent households when compared to two-parent households, which is also important information for practitioners. This information could be used as one of the strength to build on in therapeutic settings when dealing with children from single-parent households.

This study also attempted to add to our understanding of parental experiences and their approach in regards to sibling conflicts and why it is important to study. There is an agreement that the best approaches are the application of family-centered intervention

strategies that encourage parental prompting, coaching, and reinforcement to deal with sibling conflict. These family-centered approaches can limit child behavior problems, support socioemotional development, and strengthen parenting. Parents should be aware of their objectives for their children's relationship, and they should avoid unwarranted differential treatment and ineffective responses to sibling conflict. Furthermore, parents should try to establish harmonious family environments that boost the positive aspects of the sibling relationship (Kramer, 2010).

Recommendations

The outcome of this study suggests that further research is warranted in sibling relationship research. There are numerous studies that have been conducted examining the predictors of sibling relationship qualities. However, there are limited researches of the effect of ethnic and socioeconomic characteristics on sibling conflicts. It would be important to systematically investigate qualities of sibling relationships by with cultural diversity, family structure, and background. Also, since much less known about how siblings support positive development among ethnic minority families, it could be an important direction for future research. This study did not focus on a cultural element of sibling relationship quality. However, further exploration on the topic would be valuable.

A second recommendation is to study further how in single-parent families parent-child relationship affects sibling relationship quality. It is important to note that the majority of the previous sibling studies were largely confined to two-parent families. They did not adequately address single families. It has been widely assumed that the

conclusions reached by considering of two-parent families could be readily transposed to single-parent families, such as birth order and sibling rivalry (Noller, 2005).

Finally, findings reported here extend the result of previous studies where links between family settings and sibling relationship were examined. The finding of this study suggests that household type does affect the sibling relationship quality. Because of high divorce rates, cohabitation, and remarriage significantly increasing in America, children are experiencing multiple family transitions along with new parenting figures. Further study about how the entrance of a stepparent into a child's life influences sibling relationship quality would be recommended.

Conclusion

This study was based on family system theory research which suggested that families are hierarchically organized into interdependent subsystems, such as sibling relationships, marital relationships, and the parent-child relationship. Typically, subsystems have flexible boundaries that allow for influences of other subsystems (Whiteman et al., 2012). This study was developed to understand the impact of household types on sibling relationship quality. Some sibling studies were conducted, which often suggest strong links between sibling relationship qualities and different variables, such as birth order, age spacing, and gender. A contributing factor for this study is that this is the first psychological study to examine the effect of household types and age spacing on sibling relationship quality. Findings from this study draw links between sibling rivalry and household type but did not find differences based on age spacing of more or less than 5 years.

One of the main interests this study based on is that parental separation and divorce can lead siblings to both a supportive and a highly conflicted relationship. This study began with an extensive review of the literature on sibling relationship, age spacing, as well as family structures and parenting. Sibling relationships can significantly influence the social climate of the family and vice versa. Because of the siblings shared history and the bonds between them, they can provide to each other support, guidance, as well as powerful emotional experiences. These emotions can range from love to hostility (Feinberg et al, 2012).

The results of this study support previous research on sibling relationship quality that suggests positive sibling relationships in single-parent families. The result suggests a link between household composition (single-parent and two-parent) and sibling relationship quality.

Findings of the present study may assist professionals by providing them information to understand better sibling relationship quality and how it affected by changes in family structure. As research on sibling relationships progresses, theoretically and empirically based prevention and intervention programs will be refined to help successful sibling relationships. It is important to further investigate how sibling relationship quality contributes not only to children's normative development but also to children's adjustment to difficult life circumstances, such as separation or divorce of parents.

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Appendix A: Parental Expectations and Perceptions of Children's Sibling Relationships

Questionnaire (PEPC-SRQ)

PEPC-SRQ

HOW I SEE MY CHILDREN'S SIBLING RELATIONSHIP

Please choose the number that best fits your feelings about the following aspects of your children's relationship during the past 2 weeks.

	Never	Rarely	Sometimes	Usually	Always
1. Physical aggression (hitting, pushing, etc.)	1	2	3	4	5
2. Sharing	1	2	3	4	5
3. Jealousy	1	2	3	4	5
4. Playing together in a single activity	1	2	3	4	5
5. Competition	1	2	3	4	5

Appendix B: Parental Conflict Management Strategies

Date: _____
Family ID # _____

The following items represent ways that parents may respond when their children are having verbal or physical conflict. Please select one strategy which you use most frequently to respond for your children's conflict.

___ *Passive nonintervention*: Parents respond by simply ignoring the conflict.

___ *Active nonintervention*: Parents make a conscious decision not to intervene in their children's conflict, relaying the expectation that the children should resolve the issue on their own. For example, "I see that you two are having an argument. I'd like you to try to work this out together. I'll be inside if you need some help."

___ *Collaborative problem solving*: Parents actively work with both children together to reach a mutually acceptable resolution to the conflict. For example, a parent may sit down with both children and discuss each child's needs so that together they can devise an outcome on which all can agree.

___ *Redirection*: Parents attempt to end conflict quickly by directing the children's attention to a nonconflictual topic or object. For example, a parent may get out another toy to divert the children's attention away from the conflict or may direct the children to separate activities.

___ *Power assertion*: Parents use their authority and power to end children's conflict. For example, a parent may threaten to punish the children if they continue to argue.

___ *Commands to fighting*: Parents use persuasive verbal methods in an effort to terminate children's fighting. For example, a parent may tell the children to stop fighting or to "cut it out!"

___ *Exploration of emotion*: Parents explore how they and their children feel about the conflict. These strategies are not focused on resolving the conflict per se, but on discussing and exploring the participants' emotions. For example, a parent may comfort the "victim" and in so doing make the aggressor feel left out and motivated to mend their ways.

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Appendix C: Demographic Data Collection Form

Date: _____

Family ID # _____

1. Age of participant: _____

2. Household type:

___ Single-parent household: ___ Divorced ___ Separated

___ Two-parent household: ___ Both parents are biological

___ Step-parent is the: Mother or Father (circle one)

3. Number of people living in the household _____

4. Number of children living in the household _____

5. If you have more than two children living in your household please select two whose ages are between 2 and 18.

Child #1: Age: _____

Child #2: Age: _____

Gender: M F

Gender: M F

Appendix D: Permission from Author to Use Testing Materials



Mari Overlock <mari.overlock@waldenu.edu>

Requesting Permission

Kramer, Laurie F >

Sun, Jun 26, 2016 at 2:31 PM

To: Mari Overlock <mari.overlock@waldenu.edu>

Dear Mari,

Thank you for your interest in my research. You have my permission to use the two instruments in your dissertation research. I do request that you send me a summary of your findings at the conclusion of your project.

Best wishes for your research.

Kind regards, Laurie Kramer

Laurie Kramer
Associate Dean and Professor

From: Mari Overlock [mailto:mari.overlock@waldenu.edu]**Sent:** Thursday, June 16, 2016 11:30 AM**To:** Kramer, Laurie F**Subject:** Requesting Permission**3 attachments****PEPC-SRQ.pdf**

199K

**SCORPEPC.doc.doc**

25K