PERCEIVED SIBLING COMPATIBILTIY AND THE EFFECTS OF PERSONALITY

by

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(Under the Direction of Charles F. Halverson)

ABSTRACT

This exploratory study examined perceived sibling compatibility and the effects of personality factors on 134 sibling pairs of older adolescents. The sibling pairs completed an Internet-based survey with a demographic questionnaire and two measures. The Lifespan Sibling Relationship Scale (LSRS; Riggio, 2000) measured perceived sibling compatibility, and the Inventory of Children's Individual Differences (ICID; Halverson & Havill, et al., 2003) measured personality structure. Results showed that high compatibility sibling pairs were more likely to share in the same levels of certain personality factors and that Agreeableness was most important when predicting perceived sibling compatibility.

INDEX WORDS: Sibling relationships, Siblings, Compatibility, Personality

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CHAPTER 1

INTRODUCTION

Time spent with siblings takes up more of children's out of school time than any other interpersonal relationship context (McHale & Crouter, 1996). Siblings serve as role models, play mates, confidants and even adversaries. Regardless of one's role as a sibling, the relationship represents a long-term bond that impacts all of life. Why are some siblings more compatible than others? This is a question that parents, researchers, and siblings alike have wondered about for years. The relationship begins in a rather closed environment where siblings do not get to choose who their sibling are, whether they are of the same gender, or how much attention siblings are receiving from parents. Through social understanding, siblings learn a sense of self-worth as they compare themselves to their brothers and sisters within their sibling relationship (Dunn & Slomkowski, 1992). There are many factors that go into any long-term relationship, but when one is bonded through sharing the same parents, and sharing the same environment over years, some factors will weigh heavier on certain individuals, while others will have little effect. Individual personality traits, gender, age, home and school environments, as well as characteristics of parents and peers all play a part in the developing relationship between siblings and create variation in sibling compatibility.

The most common factors that have been studied in sibling relationships include parent-child interaction and parental treatment of siblings, family constellation variables including birth order and family dynamics, and siblings as older adults. Factors included in this study are the sibling relationship, sibling compatibility and the effects of personality on older adolescents.

These factors are considered because when interaction occurs between two people, the amount of similarity that is found between the people reflects their compatibility with one another, which is, in turn, related to one's personality characteristics and the way these characteristics are viewed by others. Although this is true for any two people who meet, it is even more important for siblings who have to understand how to relate to one another on an everyday basis.

Why do some siblings get along better than others? To answer this question, researchers must recognize the systems in which siblings exist. Developmentalists have long recognized the potential influence of context developing in adolescent relationships (Bronfenbrenner, 1979), particularly the family. Within each family, there are many substantial relationships that vary in communication, role modeling and attachment. The most common family relationship that researchers focus on is the parent-child relationship. This relationship is central in a substantial amount of the literature; however, because most social development research focuses on parent-child relationship processes, it tends to neglect sibling relationship dynamics (Bullock & Dishion, 2002). Emphasis on parents as the primary agents of socialization can be traced back to Freud (1949), who argued that the significant aspects of personality take shape during the early years of life when children spend much of their time at home under their parent's close supervision (Brody, Stoneman, & McCoy, 1992). The parent-child relationship has been found to affect the sibling relationship in a number of ways, such as through differential treatment of siblings (Brody, Stoneman & Gauger, 1996; Stocker & Dunn, 1994), and perceived partiality in parental interaction (Daniels, Dunn, Furstenberg, & Plomin, 1985). How siblings believe they are treated by parents may be more basic to relationship quality than how an outsider would depict parental treatment (Dunn & Plomin, 1990). As of now, most research concerning parental involvement has examined differential treatment of siblings (Schicke, 1995). Most adolescent

research has characterized parents, especially mothers, as being the primary source of influence with the family.

Social comparisons in sibling relationships represent a potential source of environmental influence on personality development in childhood (Dunn, 1996), but there is surprisingly little research on how within-family comparisons may shape personality traits and self-evaluations among adolescents (Tesser, 1980). The way siblings understand one another and get along with one another is dependent on both of the sibling's individual personality traits. These personal characteristics of an individual influence how that individual views and is viewed by the world (Pervin and John, 1997); which leads to how one constructs meaning from experiences. It is possible that sibling compatibility is just a personality issue. Some personalities are associated with compatibility; maybe others are not; therefore, it is important to examine the influence of personality on sibling compatibility.

<div align="center">Purpose of the Study</div>

The purpose of this exploratory study was to examine the role of personality on how siblings perceive their compatibility. Although it is known that individual differences in personality do affect how experiences are perceived, it is not known whether perceived sibling compatibility will be directly associated with personality characteristics, specifically relating to sibling compatibility. Also of interest are which particular personality characteristics plays a part in predicting sibling compatibility. Demographic variables including age differences, number of siblings in the family, gender of each sibling, and geographical proximity are also included in this research to explore a possible association between these particular variables and those of personality and/or sibling compatibility.

CHAPTER 2

REVIEW OF LITERATURE

The importance of sibling relationships has been previously underestimated in researchers' views concerning the family contexts. McGoldrick, Watson and Benton (1999) have suggested a cultural bias that values the immediate individual and family experience over the lifelong connections that characterize many sibling relationships.

Sibling Relationships

Sibling ties exist within the sibling subsystem, the larger family system, and the broader culture and society (Cicirelli, 1994). With the predominant focus on the nuclear family, relationships outside the boundaries of marriage and parenthood, such as those among older siblings, are typically overlooked (Connidis & Campbell, 1995). The sibling relationship itself can influence the family system, affecting many families. Today, about 80% of individuals have a least one living sibling (Connidis & Campbell, 1995), and many people underscore the importance of sibling relationships through childhood and adulthood. McHale and Crouter (1996) analyzed children's time spent in out-of-school hours and found that time spent with siblings takes up more of children's time than any other interpersonal relationship context. In their study, 33 % of time was spent with siblings, 23% with mothers, 19% with fathers, 13% with friends and 12% alone. Siblings can serve as role models, play mates, confidants and even adversaries at varying points in the sibling relationship, and most siblings will experience each of these different roles. Regardless of one's particular role as a sibling, the relationships are, in most cases, long lasting and have an impact on development. The sibling relationship is also

important for teaching children how to interact with others (Cicerelli, 1976). Siblings are in a good position to teach one another and provide modeling and reinforcement for one another. Research has also shown that the quality of sibling relationships influences child adjustment, particularly in the period of adolescence, in which identity and autonomy development are of key importance (Dunn, 1994). All of these variables make sibling relationships an important focus of research.

A majority of the sibling research has been focused on older adults. Much research focuses on adult transitions, such as what happens when one begins their own family, care-taking behaviors and siblings as friends later in life (Connidis, 1994). In a study conducted by Campbell, Connidis, and Davies (1999), the roles of adult siblings (55+) were examined. Specifically four social support networks, including confidants, companions, emotional support, and instrumental support were observed. The results show that singles, especially women, the childless, and widowed women stand out as having particularly involved sibling ties. Another study conducted by Connidis and Campbell (1995) also examined the age group of 55 and older. This study replicated earlier findings that women and respondents with sisters, the singles, and the childless tend to have more active sibling ties than their male counterparts.

Although there has been extensive research on the important and lasting impact of siblings, and the sibling relationships throughout one's life, very little research has focused on the sibling relationship during the transition to adulthood (Dunn, 1984). One exception is the work of Tucker, Barber, & Eccles (1997), which examined older adolescents' perceptions of the following sibling relationship characteristics: advice about life plans, personal problems, satisfaction with support, and sibling influence on interests and goals. They found that

adolescents rely on their siblings as a source of advice about life plans and personal problems, being especially true for second-borns and females.

<u>Compatibility</u>

When studying compatibility among siblings, the sibling's personal relationship with one another is the key component. For this study, it is most important to understand the self-perception of compatibility between the sibling pairs. How one sibling perceives their compatibility with their sibling is more important than how well the two siblings seem to get along. In previous research when studying closeness in siblings, there have been many different measures for this variable. Some of which include, Relationship Closeness Inventory (RCI; Berscheid, Snyder & Omoto, 1989), Sibling Relationship Quality (SRQ; Furman & Buhrmester, 1985), and the Lifespan Sibling Relationship Scale (LSRS; Riggio, 2000). Some measures focus on aspects of warmth and conflict and power. Some measures focus on the family structure variables, and other measures focus primarily on the developmental aspects of the siblings affect, behavior and beliefs concerning the sibling and the sibling relationship. Although these measures differ somewhat on which specific properties are being evaluated, in all of the measures, the key component is relationship closeness or compatibility between the siblings

Studies examining factors such as warmth and closeness influencing sibling relationships in adolescents have shown conflicting results. White (2001) proposed that sibling relationships should become less important as individuals make the transition to adulthood. Siblings may become less important to one another as they assume adult roles, getting married and starting a family. These events may take away from time that was once spent with siblings. Some researchers have found that these relationships become less close and warm during adolescence (Buhrmester & Furman, 1990), whereas other have found the warmth and closeness to increase

during adolescence and adulthood (Cicirelli, 1984). Specific sibling personality traits between the younger and older sibling may make a difference if they become closer during adolescence or grow apart.

Cross-sectional and short-term longitudinal studies have produced inconsistent results when researching the association between child personality and sibling relationship quality. When studying the affects of sibling relationship quality and personality, Brody, Stoneman, & Gauger (1996) found that personality characteristics of the older sibling play a more essential role in the outcome of the quality in the sibling relationship, while others have found that the personality of the younger sibling plays more meaningful role on the sibling relationship. This was found to be true when a high degree of conflict was present (Brody, Stoneman, & Burke, 1987; Stoneman & Brody, 1993). Furman and Lanthier (1996) studied how personality traits were linked to sibling relationships. Their results show that in a sample of young school age children, Conscientiousness of each sibling was most often associated with the different dimensions of sibling relationships. Conscientiousness was positively associated with warmth, and negatively associated with conflict and power. The second most important factor was Agreeableness. In a prior study, Munn and Dunn (1989) examined the ways children's personality traits interact to predict relationship dimensions. Their findings suggest that differences in personality are associated with conflict; therefore, similarities would be conducive to less conflict.

Attachment

According to attachment theorists (Ainsworth, 1989), the relationship with a sibling can be seen as an attachment relationship. This particular sibling connection, or bond, is worth exploring. According to family systems theory, siblings constitute a major subsystem of the

larger family system (Minuchin, 1985). Therefore, the sibling relationship should have a major impact on the behavior and development of children. Although few studies have been concerned with the development of sibling attachment during adolescence (Buist, Dekovic, Meeus, & Van Aken, 2002), it is an area which has potential to connect a number of areas in both the sibling literature and the family literature. For example, in a recent study of adolescent siblings (Buist, et al., 2002), one sibling filled out a questionnaire concerning his/her attachment relationship with their parents and adolescent sibling. The results indicated that the attachment relationships were influenced by both gender of the adolescent and gender of the attachment figure. Concerning attachment to father and mother, children reported deterioration in quality of these relationships during adolescence. For attachment to siblings, however, the patterns of development were more complex. There was a clear difference between same-sex attachments and other sex attachments, with same-sex attachments generally being of higher quality than different-sex attachments. Overall, attachment to female attachment figures, mother and sister, was of higher quality than attachment to male figures, father and brother.

Individual Characteristics

Dunn and Plomin (1990) noted that much research of sibling relationships has relied primarily on mothers' and researchers' assessments of intrasibling relationships. From the previous study, one can see that there are other means of attachment and/or influences on siblings and adolescents, such as individual characteristics of the adolescent. Another area that is not studied well is how individual differences of siblings affect their relationships with others in the family. It is important to recognize that siblings' perspectives often do differ from each other as well as parental reports. As research has shown, even though siblings grow up in the same house with the same parents, they do not have the same experiences, thoughts or feelings

(Plomin & Daniels, 1987) (non-shared environment). Environments that siblings encounter together makes them no more similar than children picked at random from the general population to be siblings (Plomin, Asbury & Dunn, 2001; Plomin & Daniels, 2001).   How siblings differ in temperament and/or personality most likely contributes to differences in relationships and compatibility. Behavioral-genetics research has consistently found that children growing up in the same family do not share many effective environmental influences in the family (Plomin, et al. 2001).   Rather, the way environmental events are interpreted and responded to is, in part, a function of individual characteristics in temperament and personality. Shiner and Caspi (2003) have discussed how both temperament and personality differences may influence responsivity to different types of comparison information and thereby influence individual reactions. Getting both siblings views in research will assist in understanding how personality is related to differing assessments of family members and experiences.

Parent-Child Relationships

Sibling interactions within the family system may vary considerably as a result of parental differential treatment (Cicirelli, 1995). Brody, Stoneman and McCoy (1992) found that when younger children received significantly higher negative emotionality ratings from both parents than did the older siblings, the parents enacted higher rates of differential treatment that favored the younger sibling. When older siblings were rated as significantly more negative in emotionality, and when both siblings were rated as similar in negative emotionality, parental treatment was more nearly equal. Dunn, Deater-Deckard, Pickering, and Golding (1999) researched the effects of hostility between parents, and how that affected the siblings. The results showed that the mother's relationship with her children was directly related to the older

siblings negativity towards the younger sibling, and as the hostility between the mother and father increased, the negativity of the older sibling increased towards the younger sibling.

<u>Peer Relations</u>

Not all researchers agree that parental influence matters much in adolescent development. Judith Rich Harris' book, <u>The Nurture Assumption </u>(1998), suggests that many parents and many researchers are rethinking their old views of how much credit parents deserve when their children turn out well. According to Harris (1998), the belief that parents make children turn out the way they do is nothing more than a cultural myth. Harris argues that what children experience outside the home, in the company of their peers, is most important. It has been shown through previous research that the quality of children's relationships with their parents and their peers are related, and are both important. Children and adolescents who were securely attached to their parents were more socially competent, had more reciprocal friendships, were more well-liked by their peers, and had more positive interactions with their peers than those who were insecurely attached to their parents (Belsky & Youngblade, 1992; Fagot & Kavanagh, 1990).

Duncan, Boisjoly, and Harris (2001) researched siblings, peers, neighborhoods and schoolmates as indicators of the importance that different contexts had for adolescent development, primarily achievement and behavior. The largest correlations were found between siblings, where the data suggests that family-based factors are several times more powerful than neighborhood and school contexts in affecting adolescent's achievement and behavior. Reviews of research in this area indicate that friendships among children are related to certain dimensions of behavior and personality (Dunstan & Nieuwoudt, 1994). For example, children who are shy, lonely, and alienated, have a low self-concept and show anxiety and social incompetence in

social situations tend to have difficulties with friendship formation and maintenance (Hartup, 1983; Peplau & Perlman, 1982). On the other hand, the characteristics of friendliness, popularity, social competence, positive self-concept and peer acceptance are positively correlated with friendship status (Reisman, 1985). These studies show how personality has an impact with friendship formation, however, when it comes to siblings, the relationship is already formed, and therefore siblings must capitulate to one another's personalities.

Birth Order

Birth order can be an important mediator in a child's social development, as it can predict differential treatment by parents, and bestow certain expectations set by society to be met. Baskett (1985) conducted a study to determine what expectations or beliefs adults hold about a child based strictly on his or her sibling status alone. The fifty-item checklist was compiled by a focus group of college undergraduates that were asked open-ended questions about what they would expect boys and girls of different sibling status to be like. From these responses, the most common descriptive characteristics were selected. Questionnaires were distributed to both students and parents alike. The results show that both groups of adults gave more positive ratings and had higher expectations for oldest children than to younger or only children. Parental status did not interact with sibling status, and both parents and non-parents gave their highest ratings to oldest children. Another study found that only children exhibited higher levels of Neuroticism compared to individuals with siblings, on the other hand, a study examining the personality, birth order and jealousy found that later-borns were more jealous than firstborns (Buunk, 1997); where Neuroticism and social anxiety was related to jealousy. Although these researchers did find significant results concerning birth order, most studies do not find any significant results for birth order alone.

Gender

Although many research articles have found that sister-sister dyads are more compatible and closer than sister-brother or brother-brother dyads (Connidis & Campbell, 1995; Riggio, 2000), the definition of "compatible" and "closer" is important. It has been shown frequently that females are more likely to share personal secrets and have more active personal ties to their siblings than their male counterparts (Connidis & Campbell, 1995). It has also been shown that opposite-sex siblings generally feel less close than same-sex sibling pairs (Buhrmester & Furman, 1990), and this between sibling difference might be even greater when the two siblings attend different schools (Buist, Dekovic, Meeus, & van Aken, 2002). Floyd (1995), however, found that even though women, who are in the same age group as the previous study, associate closeness with verbal interaction and sharing emotions, there were no significant gender differences found in the overall assessment of relational closeness or satisfaction with sibling relationships, men just showed it in different ways, such as shaking hands, drinking together and talking about sexual issues.

Age Spacing

Research has indicated that an age spacing of 2 to 4 years between siblings may be optimal for greater mental stimulation and interaction from one another while minimizing conflict (Cicirelli, 1994). Age differences between college student siblings have shown that siblings closer in age (2 years or less) are more likely to hold a more positive self-concept than siblings with larger age gaps (Bloom, Anderson & Hazaleus, 1984). Regarding age difference between siblings, most research points to the lack of consistent results concerning conflict or prosocial behavior (Dunn & Kendrick, 1981; Dunn & Munn, 1986). Nonetheless, Minnett,

Vandell, and Santrock (1983) and Stocker, Dunn and Plomin (1989) did find that more conflict existed in wider-spaced siblings.

<u>Geographical Proximity</u>

The effect of geographical proximity on sibling relationships is a fairly new area of study that has begun to emerge in the sibling literature. White (2001) introduced proximity as one of four behavioral measures of sibling relationships. This particular analysis was based on 8,838 individuals ranging in age from 18-85. The results from this study showed that closer geographical proximity was positively related to contact among siblings and that those individuals with a larger number of siblings were more likely to be in closer proximity. Lee, Mancini & Maxwell (1990) also found that geographic proximity is important for understanding sibling ties, with greater proximity enhancing sibling closeness.

The early literature on siblings focused on the role of family constellation variables, such as birth order, sex of sibling, and age spacing in the dyad. Other researchers have suggested that family constellation variables do not account for much variance in sibling behavior (Brody, Stoneman, & Burke, 1987; Brody, Stoneman, & McCoy, 1992). These researchers believe that studying characteristics such as temperament and parental behavior will better predict sibling behaviors. As Brody and Stoneman (1990) and Dunn (1988) have all agreed, the key to understanding the individual differences in prosocial and aggressive behavior lies not in family status characteristics, but in personality of the individual child.

A few studies have examined the links between age differences, birth order, sex of sibling and individual characteristics, such as intelligence and personality traits. Only a small number, however, directly examined the links among these variables and the sibling relationship (Furman & Buhrmester, 1985). Furman and Lanthier's (1996) stated, "Intuitively, one would expect that

the personality characteristics of individuals would be related to the characteristics of their relationships with their siblings. Surprisingly little empirical research, however, has focused on the links between the two." Furman and Lanthier have proposed study in an area that is basically unexplored. Sibling personality is one of the defining individual characteristics that make each person unique, and is the individual variable used in this paper.

<div align="center">Personality</div>

Personality is an individual difference that influences how a person views and is viewed by the world (Pervin & John, 1997). These individual differences, or distinctive qualities and characteristics of each person, define who we are and affect our relationship quality and compatibility with one another. As is stated by many researchers, the personality of each sibling plays a role in sibling relationship quality (Brody et al., 1987, 1996; Brody, Stoneman & McCoy, 1992; Stocker et al., 1989).

Personality and Relationships

In one study, undergraduates (N = 233) were given definitions of the five factors and asked to identify adjectives that would be associated with the five factors. In the final study, the group of undergraduates grouped 30 adjectives into clusters of traits. The results suggest that most laypersons can easily grasp the nature and understanding of these five factors (Snead, 1998). Havill, Allen, Halverson and Kohnstamm (1994) also understood the importance of incorporating the average person into personality research when they asked parents to come up with free descriptors to describe their children's personality. This is quite important. Not only does the current research benefit those who are saturated with knowledge and literature concerning personality, but it also puts forth a new understanding to those who may be interested in this field, but may not have all of the background that experienced researchers encompass.

Using the Five-Factor Model (FFM) of personality, Bouchard, Lussier, and Sabourin (1999) investigated the contribution of personality traits to marital adjustment. The Dyadic Adjustment Scale, which measures marital satisfaction/compatibility, and the NEO-FFI (Costa & McCrae, 1992) were administered to 446 couples. The results showed that self-reported and partner-reported personality traits were both significant predictors of marital adjustment. Specifically, higher levels of Neuroticism was negatively related to marital adjustment, Extraversion in general had a negligible influence; higher levels of Openness as well as Agreeableness were positively related to marital adjustment, as was Conscientiousness. A current study, examining temperament and the quality of best friendships, asked if adolescent sibling relationships moderated the link between temperament styles and the quality of relationships with best friends. Results indicated that adolescents with difficult personalities experienced less positive relationships with their siblings and best friends (McCoy, Brody, & Stoneman, 2002). These findings also support the conjecture that adolescent personality, is likely to have implications for relationships with others, or at least their perceptions of those relationships (Saudino & Plomin, 1996). When researching job satisfaction and how personality affects performance, Morrison (1997) found that franchisees higher in Agreeableness and lower in Extraversion were more likely to develop congenial relations with their franchisors. This study collected data from 307 US franchisees in four different industries, using a mailed questionnaire. A study aimed at identifying the links between white racial identity and personality factors found interesting results. Silvestri and Richardson (2001) found that aversive racist attitudes were negatively correlated with Agreeableness, Extraversion, and Openness, and, positively related to Neuroticism. The findings suggest that the recognition of internalized racism was associated with greater uncertainty/negative affect (high Neuroticism) and

egocentricity (low Agreeableness). Conscientiousness was not significantly correlated with any of the racism subscales.

It has been asserted that one's personality shows little or no change for most personality traits after age 30 (McCrae & Costa, 1990). One example of this comes from a study that examined levels of Neuroticism, Extraversion, and Openness in a national sample of over 10,000 adults from the ages of 35 to 84. Results from this study showed that although all three factors showed a linear decline, the correlations with the age were insignificant (Costa, McCrae, Zonderman, Barbano, Lebowitz, & Larson, 1986). These results are consistent with other research analyses as well (Costa & McCrae, 1988; Siegler, George, & Okun, 1979). What makes this research so important is age. Through further research, the data show that before age 30, there appear to be some developmental changes in data personality. Costa and McCrae (1994) examined how personality changed with age when researching a group of college students and a group of older adults on a measure of the five-factor model, the Revised NEO Personality Inventory (NEO-PI-R; Costa & McCrae, 1992). Students scored significantly higher than the older adults on Neuroticism, Extraversion, and Openness to Experience, and scored significantly lower on Agreeableness and Conscientiousness. This research helped describe the development of adult personality. The research, however, needs to be extended into younger ages so that we can bridge the gap between personality development in children and personality in adulthood.

When studying young adolescents and children, most researchers refer to the term temperament and not personality. In fact, until recently, children were not thought to have personalities like adults do (Halverson, personal conversation). The link between the five domains of personality in adults and temperament in children has been explored in some studies (Caspi, 2000; Caspi & Silva, 1995; Ahadi & Rothbart, 1994); however, because of the many

different instruments measuring temperament and personality in typically developing children, little empirical work on the convergence across constructs now exits; this is a major weakness in child temperament/personality research (Halverson, et al., 2003). Only recently have efforts been made to measure the five personality dimensions in children with an instrument developed from free descriptors that parents used to characterize their children (Havill, Allen, Halverson, & Kohnstamm, 1994). A culmination of these descriptors has been used to develop a self-report measure, the Inventory of Children's Individual Differences (ICID): (Halverson, Havill, & Deal, 2003). Halverson and Havill (1998) have found the five dimensions (Extraversion, Neuroticism, Agreeableness, Conscientiousness and Openness) in parent's ratings of young children. Davey, Eaker and Walters (2002) also used the ICID as a self-report measure in a 9 to 12 year old sample of pre-teens and also extracted five of the personality domains.

In conclusion, we know that sibling ties exist across many contexts, including the sibling subsystem, the larger family system, and the broader culture and society (Cicirelli, 1991). We also know that social comparisons in sibling relationships represent a potent source of environmental influence on personality development in childhood (Dunn, 1996). There is surprisingly little research, however, on the association of within-family comparisons and personality traits and self-evaluations among adolescents (Tesser, 1980).   From the published research found on these particular topics, most of the literature concerns family constellation variables and parent-child relationships. An examination of the studies examining factors in sibling relationships in adolescents reveals many gaps in the literature. Munn and Dunn's (1989) research, which focused on children's personality traits and sibling relationships, or sibling compatibility, found results that suggest that differences in personality were associated with more conflict. Also, Costa and McCrae (1990) reported higher levels of conflict, or negative

marital adjustment, with higher levels of Neuroticism through partner-reported measures concerning marital adjustment and personality traits. In conjunction, McCoy, Brody and Stoneman (2002) found that adolescents with difficult temperaments experienced less positive relationships with their siblings and best friends. What components make up a difficult temperament or personality? What are the links between sibling compatibility and one's personality? Does one sibling's perception of compatibility with their sibling affect the other sibling's perception of compatibility with their sibling? If so, does this perception stem from one's personality or levels of each individual personality factor? Again, Furman and Lanthier (1996) stated it best when they said, "Intuitively, one would expect that the personality characteristics of individuals would be related to the characteristics of their relationships with their siblings. Surprisingly, little empirical research has focused on the links between the two." The current research is an exploratory study that delves into the relationship between siblings, their perception of one another, and how one's personality plays a role in that relationship.

There has been a great deal of research strictly focusing on personality characteristics and how these dimensions or characteristics affect relationships. There is growing consensus that there are five basic factors that account for differences in personality (McCrae & Costa, 1990). The five factors are Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience.

Extraversion

The concept of Extraversion originated with the writings of Hippocrates, was expanded by Galen, a Greek physician, and was then modernized in our century by Carl G. Jung (1921). Extraversion is bipolar, the low end being called Introversion. Jung considered both of these concepts not to be personality traits per se, but enduring orientations toward the world. Jung's

typology started much research concerning Extraversion, and many instruments were developed

to measure and organize the Extraversion factor (Elphick, Halverson, & Marszal-Wisniewska,

1998). There are many studies of Extraversion, and many show how the trait is universally

essential in describing the basic dimensions of personality. One of the main proponents of the

trait approach to personality was Cattell. Cattell believed that our own natural, spoken language

was the key to discovering the major dimensions of personality (Elphick, et al. 1998). Using

clusters of adjectives in the English language, Catell consistently confirmed that Extraversion

was a higher-order, primary trait, and could be located in the lexicon. Trait-descriptive

adjectives were clustered by Norman (1963), and then reduced by another, Goldberg (1990) and

then put into facets of Extraversion by others, McCrae and Costa (1990). McCrae and Costa

(1990) described Extraversion as a trait that concerns differences in preference for social

interaction and lively activity. Hogan (1983) believed that Extraversion could be separated into

two distinct but related constructs of Surgency and Sociability. Although Extraversion may be

explained somewhat differently by different researchers, overall there is a common core of

concepts. Extraversion is marked by sociability, talkativeness and assertiveness. There are both

agreeable aspects of Extraversion (sociable, enthusiastic) and disagreeable aspects, being (rough,

manipulative), but Extraversion has been found to be a salient, important dimension and has been

identified in virtually every important multidimensional inventory for adults (Watson & Clark,

1997).

Agreeableness

Agreeableness also has a long history. Ranging from Greek mythology to Shakesphere's

plays, people have used descriptions summarized by the concept of Agreeableness. For example,

Goldberg (1981) described the construct as a universal dimension, encoded in all the world's

languages. Agreeableness terms are commonly used to describe persons and relationships, and

are extremely important when researching one's personality traits and compatibility.

Agreeableness has usually been the first factor to emerge from factor analyses on adult

individual differences (Havill, Besevegis, & Mouroussaki, 1998). Although some researchers

were quick to dismiss the importance of Agreeableness, saying that it is contained in many

factors, most factor analytic data have Agreeableness as a major personality dimension (Havill,

et al. 1998). Agreeableness describes the quality of social interaction across languages and ages.

Even with young children, terms that describe Agreeableness are more frequently used to

describe personality. Agreeableness is linked to social relationships describing child-parent,

sibling, peer relationships, etc. Agreeableness is characterized by warmth, compassion, trust and

generosity. High levels of this factor are associated with prosocial behavior, such as

cooperation, consideration, empathy, being close to others, and getting along well with others.

As important as Agreeableness is in social relationships, too much Agreeableness may be

detrimental, as is true for Extraversion. High Agreeableness can be linked with excessive

generosity and gullibility. On the other hand, low Agreeableness can be linked to antagonistic

behaviors and an inability to trust others.

Conscientiousness

Conscientiousness has an interesting history dating back to the early 19th century. One

interesting contributor to the concept of Conscientiousness was Sigmund Freud. Freud believed

that Conscientiousness was primarily inborn and that it was modified by the type of toilet

training (Khonstamm, Zhang, Slotboom, & Elphick, 1998). The first empirical proof of the

importance of Conscientiousness as a trait came with the work of Cattell (1945), who linked

Conscientiousness to the Freudian concept of Superego (Khonstamm, et al. 1998). Tupes and

Christal (1961/1992) later named this trait Dependability. Twenty years later, Digman and Takemoto-Chock (1981) proposed the label of Will to Achieve as more appropriate than the term Dependability (Kohnstamm et al. 1998). Further research done by Goldberg (1992) and McCrae and Costa (1990) gave similar operationalizations of Conscientiousness. A core central meaning of this trait, however, has not been achieved: Goldberg related Conscientiousness to being organized and neat, and McCrae and Costa related the trait to being industrious and diligent. Although these terms are different, they seem both to describe Conscientiousness. Other examples of definitions include a capacity for cognitive, behavioral and emotional control (Strayhorn, 2002). In Big Five studies, the Conscientiousness factor describes such characteristics as dependability, responsibility and attentiveness mixed with high levels of aspiration and productivity.

Emotional Stability / Neuroticism

Emotional stability, and the opposite, Neuroticism, is one of the most widely used and important dimensions of adult personality (Angleitner, Kohnstamm, Slotboom, & Besevegis, 1998). There are many instruments designed to measure Emotional Stability and Neuroticism, each measuring a variety of negative affective experiences (Watson & Clark, 1984). Although this trait is widely known and used in adult personality, it has been more difficult to define and less clear when relating Neuroticism to children. Careful analyses conducted with various populations by Burt in 1915, H.J. Eysenck in 1967, Cattell in 1947 and Tupes and Christal (1961), who found six bipolar adjectives from Cattell's 35-variable list that marked the domain of Neuroticism (Angleitner, et al 1998). It was found that most of the markers developed for Emotional Stability showed substantial loadings on other factors of the FFM, relating to Extraversion and Agreeableness, and the proportion of adjectives that loads primarily on

Neuroticism was relatively small. Within Emotionality Scale, one has negative and positive

emotionality, but these are not considered to be opposites, but rather independent constructs

(Watson & Tellegen, 1985). Studies connecting measures of Negative and Positive Affect with

scales for FFM Neuroticism and Extraversion have consistently found that measures of Negative

Affect are substantially correlated with Neuroticism but are unrelated to Extraversion, whereas

Positive Affect scales are significantly related to Extraversion, but not to Neuroticism (Watson &

Tellegen, 1985). When dealing with children's characteristics, Emotional Stability can be

divided into three factors: Emotional Reactivity, Self-Confidence and Anxiety-Fearfulness. Of

these factors, Emotional Reactivity has received the most descriptors by parents when describing

their child. Other descriptors commonly associated with Neuroticism are anxious and hostile,

and decriptions of anger and ill-temperedness. In Big Five studies, children who are high on

Neuroticism are low in self-esteem and insecure about relationships with others (Shiner & Caspi,

2003). In the English language there are far fewer words to denote Emotional Stability than

Neuroticism and negative functioning. This may be one reason why the majority of adjectives

that load on this factor are negative (Angleitner, et al. 1998).

<u>Openness to Experience and Intellect</u>

The Openness-Intellect domain has been less clearly defined than the other domains.

This trait has been described by terms referring to temporary states, social roles and highly

evaluative terms, which were significantly reduced when Cattell (1943) and Norman (1967),

among others, defined a hierarchical classification system (Mervielde, De Fruyt & Jarmuz,

1998). Another issue surrounds some theorists' exclusion of ability-related traits from the

personality domain (e.g., H.J. Eysenck 1971, 1994), and Zuckerman (1991). These theorists

have preferred to use traditional intelligence tests to measure intellective traits, the construct

from the personality domain. On the other hand, there are other major personality theorists who define personality as including intellectual traits, attitudes and one's values (Brand, 1994; Rorer, 1990). Although many researchers believe that this category should be included in the Big Five, the best label for this fifth personality describes Openness and Intellect.

In the mid-1970's, Costa and McCrae (1976) assembled the NEO, which was a questionnaire measuring Neuroticism, Extraversion and Openness. After years of testing, Openness factor was deemed worthy, that included six separate facets including Fantasy, Aesthetics, Feelings, Actions, Ideas, and Values (Costa & McCrae, 1985). This model is now commonly referred to as the Five-Factor Model (FFM). Some of the common adjectives used by Costa & McCrae (1992) to describe Openness include imaginative, humorous, artistic, insightful, inventive, cautious, and flirtatious. Goldberg (1992) includes adjectives such as intelligent, perceptive, reflective, creative and sophisticated in his model.

Not only were Openness and Intellect found to be crucial in explaining and studying adult personality, but research has found these traits to be present in temperament scales as well. Angleitner and Ostendorf (1994) found an Openness component that explained 11.4% of the variance in specific temperament scales, primarily the Sensation-Seeking Scales (SSS: Zuckerman, 1979). Also, research based on teacher ratings for primary school children provided clear evidence for Intellect and Openness as dimensions of personality (Digman & Takemoto-Chock, 1981; Mervielde, Buyst, & De Fruyt, 1995).

<div align="center">Summary</div>

After reviewing the literature on sibling relationships, compatibility and personality, it is shown that individual differences in personality do influence how experiences are perceived.

However, in this study it will be seen as to whether perceived sibling compatibility will be directly associated with personality characteristics, specifically relating to sibling compatibility.

Hypotheses

Note: While there is no specific, or general, theory that accounts for the influence of each personality trait, based on sibling compatibility and past research I expect that:

<u>Hypothesis One</u>: Sibling pairs in the high compatibility group will have personalities more highly correlated on the five ICID personality factors when compared with sibling pairs in the low compatibility group. Those sibling pairs who perceive their sibling relationship as similar in sibling compatibility will be more likely to exhibit similar personality traits.

<u>Hypothesis Two</u>: There will be no association between similarity of perceived sibling compatibility and similarity of personality levels for all five ICID factors. When the five personality factors are split into low and high levels, and compared in a 2 x 2 matrix, it would seem likely that there would be a significant difference between the groups for one or more of the personality factors. Because of the exploratory nature of the hypothesis, a null hypothesis will be assumed.

<u>Hypothesis Three</u>: Agreeableness will predict perceived sibling compatibility best. From reviewing previous research, Agreeableness holds the greatest likelihood of predicting the relationship of perceived sibling compatibility.

CHAPTER 3

METHODS

The focus of this study was perceived sibling compatibility and the effects of personality on sibling pairs. It was proposed that specific personality factors may be more important than others when predicting perceived sibling compatibility.

Participants

Current data were gathered for this study. Human subjects' approval to gather and analyze the data was received on October 23, 2002, from the Institutional Review Board at the University of Georgia (see Appendix A). Target participants for this study were recruited from specific introductory courses from the Department of Family & Consumer Sciences at the University of Georgia. Other participants were reached via an advertisement presented in the University of Georgia's school newspaper, The Red and Black. Target participants included any student 18 or over, with a sibling who was also 18 years of age or over. This research project was not limited to the University of Georgia students. Anyone who read the newspaper article, or who heard about the survey via other participants was welcome to take part in the research project. For the current study, 134 sibling pairs (268 siblings), participated in the research project. The initial number of siblings was reduced because some sibling pairs did not follow directions in using a code that allowed matching of the anonymous questionnaires. The demographic questionnaire included information on the age differences between siblings, the proximity between siblings the number of siblings in the family and the sex of each sibling. The age difference between siblings ranged from 0 (twins) to 13 years, with the mean $\underline{M}$ = 3.87 ($\underline{SD}$

= 2.78). The geographical proximity question was determined using a scale, 1 through 4, where 1 = reside together ($\underline{N}$ = 15), 2 = reside within 1 hour ($\underline{N}$ = 50), 3 = reside less than 5 hours ($\underline{N}$ = 44), and 4 = reside more than 5 hours ($\underline{N}$ = 25). The number of siblings in the family ranged from 2 to 5, with the mean $\underline{M}$ = 2.6 ($\underline{SD}$ = .77). For the sex of both siblings, where 1 = female and 2 = male, there were 79 female-female sibling pairs, 4 male-male sibling pairs, and 51 mixed sex sibling pairs.

<div align="center">Measures</div>

Lifespan Sibling Relationship Scale. The Lifespan Sibling Relationship Scale (LSRS; Riggio, 2000) is a self-report instrument focused on the developmental relationship between siblings. There are a total of 48 questions answered on a five-point Likert scale. The LSRS measures three factorially derived dimensions of the sibling relationship in childhood and young adulthood. These three dimensions are (a) frequency and positivity of behavior toward the sibling (b) affect toward the sibling, and (c) beliefs about the sibling and the sibling relationship. Each of the three dimensions includes eight questions for both childhood relationship and adult relationship (see Appendix B). This questionnaire addresses the importance of the developmental aspect of the sibling relationship across the lifespan. Another beneficial aspect of the LSRS is that it is not confounded with questions assessing the parent-child relationship, which most sibling questionnaires include. It has been stated by the author of the Lifespan Sibling Relationship Scale (LSRS) that the LSRS has been found to possess good psychometric properties, including high internal consistency, high construct validity and discriminant validity (Riggio, 2000). The lifespan sibling relationship scale was used to measure perceived sibling compatibility (see Appendix B).

Inventory of Children's Individual Differences. The ICID is a measure of child personality

structure. It has shown reliability in samples ranging from 3 to 23 years of age. Each of the five

domains was further factored resulting in 15 robust mid-level scales. The scale reliabilities are

consistently high across all countries and ages, indicating a high degree of coherence of the 15

scales for all ages and countries. Extraversion was defined by 4 mid-level scales including

Sociability, Activity Level, Positive Emotions, and negative loadings on Shy and Withdrawn.

Agreeableness is characterized by six mid-level scales: Considerate, Compliant, Positive

Emotions, and low on Strong Willed, Antagonistic and Negative Affect; Conscientiousness was

described by three mid-level scales that included Achievement Orientation, Organized and low

on Distractibility. Neuroticism was defined by Fearful Insecurity, Negative Affect and

Distractibility, while Intellect described children who were bright and inquisitive. The ICID has

been used by researchers collecting parent and teacher ratings of individuals ranging from 3 to

23 years of age. It has also been used as a self-report instrument for individuals 9 to 23 (Davey

et al., 2002) (see Appendix B).

<div align="center">Procedure</div>

Participants for this study were contacted through the department of Family and

Consumer Sciences, along with the advertisement from The Red and Black, and from word of

mouth. In order to participate in the research, the participants logged onto a website. The survey

included five demographic questions, the LSRS questionnaire and the ICID questionnaire. Each

sibling rated their own sibling on the demographic questionnaire, the ICID and the LSRS; in

return, their sibling did the same. All data were anonymous and each sibling's data were

separately collected. There was also a lottery drawing in which three $50.00 prizes were

awarded to those who choose to include their e-mail addresses at the end of the survey. The e-

mail addresses were held in a separate web site, and it was not mandatory to include this information. Once the target sibling completed the survey, they then contacted their sibling and gave them the same web address and a four-digit code linking the two siblings. The second sibling then followed the same format as the target sibling. Once both siblings submitted the survey separately, research participants' duties were completed.

An Internet survey was employed to ensure a higher and faster return rate and to cut down on the work and cost of mailing. Participants were able to complete the survey on line and, therefore bypass the postal service. The information from the survey web site was automatically downloaded into Excel, which was then transferred to SPSS, where the analyses took place.

<div align="center">Analyses</div>

Descriptive statistics were obtained for the demographic questions. A paired-sampled $\underline{t}$-test was performed to analyze hypothesis one. A chi-square analysis was performed to analyze hypothesis two and a multiple regression was performed to analyze hypothesis three. Before testing hypotheses, total mean scores were found for each sibling, in each pair, from the LSRS to measure perceived sibling compatibility. By adding all of the 48 total items, a total mean score of perceived sibling compatibility was obtained. After this mean was calculated, sibling pairs were then split up in two groups, High Compatibility (sibling pairs' perception of similar compatibility) and Low Compatibility (sibling pairs' perception of less similar compatibility). Those sibling pairs who were placed in the High Compatibility group had LSRS means within three points of one another. Those sibling pairs that were placed in the Low Compatibility group had LSRS means that were outside of the 3-point cut-off. The 3-point cut-off came from the standard error of the mean for sibling one and sibling two, $\underline{SE}$= 3.1, $\underline{SE}$= 2.9, respectively. For

hypothesis two, in order to place each sibling pair into high and low levels of each personality factor, descriptive statistics were obtained by combining the means of each personality factor for sibling one and two, splitting the means into three equal categories (low, medium, high) and then using the low and high compatibility groups to ensure that both sibling fit into the corresponding category.

CHAPTER 4

RESULTS

The purpose of this exploratory study was to examine the role of personality on how siblings perceive their compatibility. Although it is known that individual differences in personality affect how experiences are perceived, it is not known whether perceived sibling compatibility will be directly associated with an individual's personality characteristics. Also of interest was whether particular personality characteristics were more important in predicting sibling compatibility. Demographic variables including age difference, number of siblings in the family, gender of each sibling, and geographical proximity were also included in this research to explore possible associations between these variables and those of personality and sibling compatibility. Three hypotheses were proposed.

Tests of Hypotheses

To test hypothesis one, that sibling pairs in the high compatibility group would have more highly correlated personality factors than sibling pairs in the low compatibility group, a paired samples t-test was used. Results showed that for sibling pairs in the high compatibility group ($n = 86$), Extraversion, Agreeableness, Neuroticism, and Openness/Intellect were all significantly correlated between siblings one and two. Extraversion = .23*, Agreeableness = .54***, Neuroticism = .33**, Openness/Intellect = .44***. For siblings in the low compatibility group ($n = 47$), there were no significant correlations. In order to test significant differences between the two compatibility groups, the analysis was followed up by a z-test. The results

show that Agreeableness, Conscientiousness, Neuroticism, and Intellect were all significantly different (see Table 1).

A chi-square analysis was used to test hypothesis two to show that there would be no mean level differences of personality similarity of perceived sibling compatibility for the two groups. The groupings of high and low compatibility and high and low levels of each personality factor were analyzed. Results show that Agreeableness and Neuroticism were significantly different between low and high personality levels and perceived sibling compatibility. Extraversion was not significant, but it was very close, $p = .06$. This is saying that although the groups were not significantly different, in the high compatibility group, 57.6% out 100% also fell into the high level of Extraversion group. In the low compatibility group, 63.3% out of 100% fell into the low level of Extraversion group. There were significant differences between the Agreeableness groups, where $p = .04$. Those sibling pairs who were in the high compatibility group were more likely to be in the high Agreeableness group (57.6%), and those in the low compatibility group were more likely to be in the low Agreeableness group (66.7%). The Conscientiousness group was not at all significant, where those in the high compatibility group were just as likely to be in the high or low Conscientiousness group, and the same for the low compatibility group, $p = .55$. For Neuroticism, $p = .05$, there were differences between the high compatibility group and low and high levels of Neuroticism, but the main differences showed up in the low compatibility group and the low and high levels of Neuroticism. Seventy percent of the pairs that fell into the low compatibility group also fell into the high Neuroticism group. The remaining 30% fell into the low Neuroticism group. As for Intellect, there were no significant differences at all, $p = .71$. The groups in the 2 x 2 were almost identical (see Table 2).

For hypothesis three, that Agreeableness would predict perceived sibling compatibility best, a linear regression was used. Two separate regressions were run. The first regression was run using the mean total LSRS perceived compatibility score for sibling one as the outcome variable and sibling one's five ICID personality factors as the predictor variables. The second regression was run using the mean total LSRS perceived compatibility score for sibling two as the outcome variable and the same five ICID personality factors for sibling two as the predictor variables. The results indicate that for sibling one, Extraversion and Agreeableness accounted for the variance in predicting perceived sibling compatibility. For sibling two, Agreeableness altogether accounted for the variance when predicting perceived sibling compatibility (see Table 3 and Table 4).

Although there was not a specific hypothesis concerning the demographic variables of age difference, number of sibling in the family, geographical proximity and sex of older and younger sibling, there were some interesting intercorrelations that were found between these demographic variables and sibling compatibility. There was a significant, positive correlation found between geographical proximity and age difference, where as the age difference between siblings increases, so does the geographical proximity between the siblings. Also, concerning age differences between siblings, a significant, negative correlation was found between both sibling one and sibling two compatibility scores. As the age difference between siblings increased, the perceived sibling compatibility scores decreased. Another significant, negative correlation was found between the sex of sibling one and two and the perceived sibling compatibility score for sibling one and two. This would be interpreted by saying that when the sex of either sibling is female, the perceived sibling compatibility score increases, or, when either of the siblings are male, the perceived sibling compatibility score decreases (see Table 5).

CHAPTER 5

DISCUSSION

The transition to adulthood is a time in which strong support systems and role models are needed. This transition is shown to be hard for siblings and some researchers have found that these relationships become less close and warm during adolescence (Buhrmester & Furman, 1990). In this study I explored perceptions of sibling compatibility and personality in a sample of older adolescents. The focus of this research was on compatibility among siblings because compatibility makes for strong, lasting relationships. A sibling can become a role model and the relationship can be a great support within the family as well as for the individuals. It is important to understand what specific factors are associated with sibling compatibility. For this research, personality characteristics were studied. Results suggest that siblings who have greater perceived compatibility are more similar in their personalities than are those who perceive their relationship to be less compatible. This finding supports the notion of similarity. When exploring types of similarities between any two people, it is usually the case that people who are more similar tend to be more compatible.

Personality refers to people's tendencies to behave, think and feel in certain consistent ways (Shiner & Caspi, 2003). Of course, compatibility also involves variables beyond personality. It has been shown frequently that female-female siblings are more likely to share thoughts and secrets, and overall, get along better than mixed-sex sibling pairs (Connidis & Campbell, 1995). When looking at the demographic variables in this study, I found that female-female sibling pairs were seen as more compatible than the mixed-sex or male sibling pairs.

Buhrmester and Furman (1990) also found that opposite-sex siblings generally feel less close than same sex sibling pairs. Also found was the significant, positive relationship between geographic proximity and sibling compatibility. Those siblings who were more similar in terms of geographical proximity were more highly compatible than more geographically distant sibling pairs. Lee, Mancini & Maxwell (1990) also found that geographical proximity is important for understanding sibling ties, with greater proximity enhancing sibling closeness. The same held true for age differences as well. As the age difference between siblings decreased, their perceived sibling compatibility score increased (see Table 4). Stocker, Dunn and Plomin (1989) also found that less conflict existed in closer-spaced siblings. This is not surprising. It is reasonable for people to be in the same niche and company of those they find similar to themselves.   Agreeableness has been an important trait in research for all ages (Graziano & Eisenberg, 1997). Regardless of what specific type of relationship is being scrutinized, Agreeableness will play a role. Altogether, Agreeableness stood out as the most important factor when predicting perceived sibling compatibility for this study. The personality factor that seems most relevant to any type of compatibility among pairs is Agreeableness. Havill, Besevegis, and Mouroussaki (1998) found Agreeableness to be the first factor to emerge from factor analyses on adult individual differences. Others have found that compatibility is related to personality of siblings, particularly younger siblings. Furman and Lanthier (1996) found the personality factor Conscientiousness to be the most important factor when predicting sibling warmth. The second most important factor for that study was Agreeableness. We have to keep in mind that the sample was composed of young school-age children. Agreeableness has been linked as the most important personality factor when studying positive interpersonal relationships among middle-school aged children (Jensen-Campbell, & Graziano, 2001). Furthermore, Graziano, Jensen-

Campbell, and Hair (1996) used the differences within Agreeableness when looking at patterns of interpersonal conflict among adults. After I found Agreeableness to be the most important factor when predicting compatibility, I looked at the six subscales that make up Agreeableness to see if there was something that was relatively more important when predicting sibling compatibility. These six subscales included Antagonistic, Compliant, Considerate, Strong Willed, Negative Affect, and Positive Emotions. A post-hoc analysis revealed a significant, negative relationship between compatibility and Negative Affect. That is, the lack of Negative Affect within each sibling is the best predictor within Agreeableness for predicting perceived sibling compatibility. A further breakdown of the individual marker scales within the Negative Affect subscale should be analyzed in future studies of sibling relationships.

Limitations

This study has several limitations. First, the definition of sibling compatibility is not consistently measured in the same way. Many researchers have called this variable by several different names included sibling warmth, sibling closeness, or sibling compatibility. I believe that it is important to make sure that the variable being measured accurately represents the construct of interest. This brings up another possible limitation. What measure is the best one's to use? There are many different personality measures, so how do you know which one to use. The ICID seemed the best choice because of the developmental aspect of the study for both the personality measure and the sibling compatibility measure. The ICID connects the personality literature, bridging a gap between temperament measures and adult personality measures. The LSRS was designed to target perceived compatibility for siblings when they were children and at the present time of older adolescence. Many of the other sibling measures I came across focused on parental interaction and peer interaction, which I was not interested in for my study.

Data were collected via the Internet, a procedure I found to be both positive and negative. The ease with which the survey was composed and put on-line saved a lot of stress. I did not have to worry about the sibling trying to hand mail the questionnaire to the other sibling, and then having both of them mail them back to me, nor did I have the work and cost of mailing. Another benefit of using on-line data collection was the ease in which the data were transformed into SPSS. I did, however, find that out the importance of the clarity of questions. On screen it may be harder to recognize or interpret what is being asked as opposed to being on paper. I also ran into some problems when matching the sibling pairs. I thought that the instructions on the survey were straightforward, however, I did have to cut out a few participants whose siblings either did not complete their survey, and those sibling pairs who did not use the same code. It is also important to note that because collecting data via the Internet is a new technique, the IRB would not allow participants under the age of 18 to participate. I was originally interested in collecting data on younger and older adolescents, however, I had to compromise. Hopefully after this method of collecting data is used more, this will not be a constraint. All in all, I was pleased with the Internet-based data gathering and would use this method in further research.

Another concern when collecting data centered on how the target sibling chose which sibling they wanted to participate. It would be more likely for the target sibling to choose a sibling that they are at least somewhat compatible with. This may bias the data, but can this bias be removed? One way to remove the target sibling choosing which sibling will participate is by removing the age difference variable and telling the subjects that they are to choose their sibling that is closest in age to them. This could also be done with gender and/or geographical proximity. Before I began collecting my data, I had conversations with many different people about how they would choose which sibling to include in the study. For every person I asked

with more than one sibling, they responded by saying they would choose either their sibling that was closest in age (the most common answer), their same-sex sibling, or the sibling they see most often.

Previous research linking personality and sibling relationships seems to have one thing in common: they always include parents as a factor, usually the mother. Brody and associates (1987), Stocker and associates (1989), Munn and Dunn (1989) and Furman and Lanthier (1996) all chose to study sibling relationships and personality, and all included mothers in their research. By including this other variable, it may take away from the sibling relationship itself. Another factor possibly influencing the results is the age of the sample. The age group for all of these studies ranged from pre-school to middle school aged children. I believe that further research is needed to explore this link between personality and sibling relationships, possibly leaving out the parent variable, and most importantly, focusing on the age group of adolescents.

The transition to adulthood is a time of vulnerability when support systems are extremely important. I feel that future research should examine the importance of the sibling relationship during the fragile age of adolescence. Another possible factor to consider when studying sibling compatibility and personality is attachment. According to family systems theory, siblings are a subsystem of the larger family system (Minuchin, 1985) and impact the development of children. Adolescence is a time when parents may be shunned away, and the child needs to have a strong support system. By introducing attachment as a variable when studying sibling compatibility and personality during adolescence, many questions about this unexplored age group may be answered.

In summary, this study has afforded me the experience of collecting my own data, collecting that data using the Internet, a 21st century technique, and grasping a personal

understanding for analyzing data. I feel that participants that played a part in this research feel as if their sibling relationship is important, and this is being shown in research endeavors. This study contributes to the literature on developmental sibling interaction and compatibility as well as the literature on personality, which are both critical when considering family dynamics.

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APPENDICES

APPENDIX A

Letter of Approval from Human Subjects

The University of Georgia

Office of the Vice President for Research

DHHS Assurance ID No.: M1047

APPROVAL FORM

Date Proposal Received: 2002-10-02   Project Number: H2003-10256-0

Ms. Cheryl Neale   Child and Family Development

Dr. Valerie Havill   Child and Family Development

Title of Study: Sibling Relationships and Their Correlated Variables

Approved: 2002-10-23   Begin date: 2002-10-23   Expiration date: 2002-10-23

Christina A. Joseph, Ph.D.

Chairperson, Institutional Review Board

APPENDIX B

SIBLING COMPATIBILITY STUDY

CONSENT FORM

Consent to Participate in the Sibling Compatibility Study: The questionnaires on the following pages in apart of a graduate thesis project entitled "Sibling Relationships and Their Correlated Variables." This research project is being conducted by Cheryl Neale in the Department of Child and Family Development. Your participation in this study will push forth new information concerning sibling compatibility and what variables affect this compatibility.

These questionnaires ask questions pertaining to your views on you and your sibling in childhood and in the present time. You will also be asked a few questions background questions about you and your sibling. The entire project should take you approximately 45 minutes to complete.

Your answers to the questions will be confindential. In any future publications from this study, the data collected will be presented so that no individual answers will be identified. Although measures have been taken to protect participant identity, there is a limit to the confindentiality that can be guaranteed due to Internet technology. Although you and your sibling will share the same identification number, one's answers will not be available to your sibling at any time. There will be separate web sites for you and your sibling. On the following page, you will be asked to type in the last four digits of your S.S. number. When you have completed this survey, you will then give your 4-digit code to your sibling so that we will be able to connect the data. Participation is voluntary, and you are free to skip any question you do not wish to answer. You may leave this site at any time.

At the end of the questionnaires, you will be asked for your e-mail address in order to participate in the 6 lottery drawings. Your e-mail address will not be connected to your questionnaire responses, as they are kept in a separate space. Once the lottery drawings have been awarded, all addresses will be destroyed.

If you have any questions, you can contact Cheryl Neale in the Department of Child and Family Development at 542-4905 or nealecw@hotmail.com.

By clicking the button you agree to the above terms and agree that you are 18 years of age or older.

For questions about your rights as a research participant, you may contact:
Chris A. Joseph, Ph.D.
Human Subjects Office
University of Georgia
606A Boyd Graduate Studies Research Center
Athens, Georgia 30602-7411
Telephone (706) 542-6514
Email Address: IRB@uga.edu

Demographic Questionnaire:

1. Please list the number of siblings in your family, including age and gender. Also include where you fit in (do not include names).

2. Please specify which sibling was chosen to complete the questionnaires.

3. For the chosen sibling, please choose one answer concerning proximity:

    - reside together
    - reside within one hour of each other
    - reside less than 5 hours away
    - reside more than 5 hours away

Lifespan Sibling Relationship Scale Items

1   Strongly Disagree
2   Disagree
3   Neither Agree or Disagree
4   Agree
5   Strongly Agree

1. My sibling makes me happy.	1 2 3 4 5
2. My sibling's feelings are very important to me.	1 2 3 4 5
3. I enjoy my relationship with my sibling.	1 2 3 4 5
4. I am proud of my sibling	1 2 3 4 5
5. My sibling and I have a lot of fun together.	1 2 3 4 5
6. My sibling frequently makes me very angry.	1 2 3 4 5
7. I admire my sibling.	1 2 3 4 5
8. I like to spend time with my sibling.	1 2 3 4 5
9. I presently spend a lot of time with my sibling.	1 2 3 4 5

10. I call my sibling on the telephone frequently.   1   2   3   4   5

11. My sibling and I share secrets.   1   2   3   4   5

12. My sibling and I do a lot of things together.   1   2   3   4   5

13. I never talk about my problems with my sibling.   1   2   3   4   5

14. My sibling and I borrow things from each other.   1   2   3   4   5

15. My sibling and I 'hang out' together.   1   2   3   4   5

16. My sibling talks to me about personal problems.   1   2   3   4   5

17. My sibling is a good friend.   1   2   3   4   5

18. My sibling is very important in my life.   1   2   3   4   5

19. My sibling and I are not very close.   1   2   3   4   5

20. My sibling is one of my best friends.   1   2   3   4   5

21. My sibling and I have a lot in common.   1   2   3   4   5

22. I believe I am very important to my sibling.   1   2   3   4   5

23. I know that I am one of my sibling's best friends.   1   2   3   4   5

24. My sibling is proud of me.   1   2   3   4   5

25. My sibling bothered me a lot when we were children.   1   2   3   4   5

26. I remember loving me sibling very much when I was a child.   1   2   3   4   5

27. My sibling made me miserable when we were children.   1   2   3   4   5

28. I was frequently angry at my sibling when we were children.   1   2   3   4   5

29. I was proud of my sibling when I was a child.   1   2   3   4   5

30. I enjoyed spending time with my sibling as a child.   1   2   3   4   5

31. I remember feeling very close to my sibling when we were children.   1   2   3   4   5

32. I remember having a lot of fun with my sibling when we were children.   1   2   3   4   5

33. My sibling and I often had the same friends as children.   1   2   3   4   5

34. My sibling and I shared secrets as children.   1   2   3   4   5

35. My sibling and I often helped each other as children.   1   2   3   4   5

36. My sibling looked after me (OR I looked after my sibling) when   1   2   3   4   5

    we were children.

37. My sibling and I often played together as children.   1   2   3   4   5

38. My sibling and I did not spend a lot of time together when we   1   2   3   4   5

    were children.

39. My sibling and I spent time together after school as children.   1   2   3   4   5

40. I talked to my sibling about my problems when we were children.   1   2   3   4   5

41. My sibling and I were 'buddies' as children.   1   2   3   4   5

42. My sibling did not like to play with me when we were children.   1   2   3   4   5

43. My sibling and I were very close when we were children.   1   2   3   4   5

44. My sibling and I were important to each other when we were children.   1   2   3   4   5

45. My sibling had an important and positive effect on my childhood.   1   2   3   4   5

46. My sibling knew everything about me when we were children.   1   2   3   4   5

47. My sibling and I liked all the same things when we were children.   1   2   3   4   5

48. My sibling and I had a lot in common as children.   1   2   3   4   5

Thank you for taking part in this questionnaire. In the following pages, we ask you to circle the responses that best describe your sibling. As you go through the questionnaire, some statements or words will be similar to ones you have rated earlier. In order to help our research, it is important that you continue to respond until you have completed the entire questionnaire.

> **The characteristic is present:**
> **1** *much less than the average sibling or not at all*   **5** *slightly more than in the average sibling*
> **2** *less than in the average sibling*   **6** *more than in the average sibling*

<u>SAMPLE QUESTION:</u>
MY SIBLING IS . . .
1.   cute   1   2   3   4   (5)   6   7

		Much less than average			Same as average			Much more than average
MY SIBLING IS . . .								
1.	insecure	1	2	3	4	5	6	7
2.	eager to learn	1	2	3	4	5	6	7
3.	well-mannered	1	2	3	4	5	6	7
4.	intelligent	1	2	3	4	5	6	7
5.	lively and enthusiastic	1	2	3	4	5	6	7
6.	always busy doing something	1	2	3	4	5	6	7
7.	affectionate	1	2	3	4	5	6	7
8.	slow to learn	1	2	3	4	5	6	7
9.	strong-willed	1	2	3	4	5	6	7
10.	stubborn	1	2	3	4	5	6	7
11.	sociable	1	2	3	4	5	6	7
12.	shy	1	2	3	4	5	6	7
13.	a leader	1	2	3	4	5	6	7

MY SIBLING IS . . .

14.	quick to learn	1	2	3	4	5	6	7
15.	a perfectionist	1	2	3	4	5	6	7
16.	disobedient	1	2	3	4	5	6	7
17.	creative	1	2	3	4	5	6	7
18.	moody	1	2	3	4	5	6	7
19.	careless	1	2	3	4	5	6	7
20.	mean	1	2	3	4	5	6	7
21.	cheerful	1	2	3	4	5	6	7

22.	friendly	1	2	3	4	5	6	7
23.	responsible	1	2	3	4	5	6	7
24.	self-centered	1	2	3	4	5	6	7
25.	fearful	1	2	3	4	5	6	7
26.	energetic	1	2	3	4	5	6	7
27.	helpful	1	2	3	4	5	6	7
28.	lazy	1	2	3	4	5	6	7
29.	disorganized	1	2	3	4	5	6	7
30.	aggressive towards others	1	2	3	4	5	6	7
31.	talkative	1	2	3	4	5	6	7
32.	unimaginative	1	2	3	4	5	6	7
33.	caring	1	2	3	4	5	6	7
34.	sneaky	1	2	3	4	5	6	7
35.	selfish	1	2	3	4	5	6	7
36.	always on the move	1	2	3	4	5	6	7
37.	withdrawn	1	2	3	4	5	6	7
38.	rude	1	2	3	4	5	6	7

ICID-R

		Much less than average			Same as average			Much more than average

MY SIBLING IS . . .

39.	happy	1	2	3	4	5	6	7
40.	organized	1	2	3	4	5	6	7
41.	easily upset	1	2	3	4	5	6	7
42.	active physically	1	2	3	4	5	6	7
43.	uncooperative	1	2	3	4	5	6	7
44.	untidy	1	2	3	4	5	6	7
45.	considerate	1	2	3	4	5	6	7
46.	slow to warm up to new people or situations	1	2	3	4	5	6	7

47.	good at problem solving	1	2	3	4	5	6	7
48.	irritable	1	2	3	4	5	6	7
49.	whiny	1	2	3	4	5	6	7
50.	outgoing	1	2	3	4	5	6	7
51.	obedient	1	2	3	4	5	6	7
52.	hard-headed	1	2	3	4	5	6	7
53.	a joy to be with	1	2	3	4	5	6	7
54.	loving	1	2	3	4	5	6	7
55.	sensitive to others' feelings	1	2	3	4	5	6	7
56.	quick-tempered	1	2	3	4	5	6	7
57.	honest	1	2	3	4	5	6	7
58.	disrespectful	1	2	3	4	5	6	7
59.	interested in new things	1	2	3	4	5	6	7
60.	easily distracted	1	2	3	4	5	6	7
61.	cooperative	1	2	3	4	5	6	7
62.	sweet	1	2	3	4	5	6	7
63.	afraid of a lot of things	1	2	3	4	5	6	7

ICID-R

		Much less than average			Same as average			Much more than average

MY SIBLING IS . . .

64.	self-disciplined	1	2	3	4	5	6	7
65.	closed to new ideas	1	2	3	4	5	6	7
66.	dependable and trustworthy	1	2	3	4	5	6	7
67.	thoughtful of others	1	2	3	4	5	6	7
68.	a hard worker	1	2	3	4	5	6	7
69.	curious	1	2	3	4	5	6	7
70.	quick to understand what is said or going on	1	2	3	4	5	6	7

MY SIBLING . . .

71.	likes to be the center of attention	1	2	3	4	5	6	7
72.	keeps things neat and tidy	1	2	3	4	5	6	7
73.	likes to play outdoors	1	2	3	4	5	6	7
74.	complains frequently	1	2	3	4	5	6	7
75.	gets angry easily	1	2	3	4	5	6	7
76.	easily adapts to new situations	1	2	3	4	5	6	7
77.	loves to be with other people	1	2	3	4	5	6	7
78.	gets along well with others	1	2	3	4	5	6	7
79.	shows interest in everything	1	2	3	4	5	6	7
80.	gives up easily	1	2	3	4	5	6	7
81.	gets feelings hurt easily	1	2	3	4	5	6	7
82.	wants things his/her own way	1	2	3	4	5	6	7
83.	loves to play sports	1	2	3	4	5	6	7
84.	needs help with a lot of things	1	2	3	4	5	6	7
85.	gets bored easily	1	2	3	4	5	6	7
86.	does things carefully and with thought	1	2	3	4	5	6	7

ICID-R

		Much less than average			Same as average			Much more than average
MY SIBLING . . .								
87.	manipulates to get his/her own way	1	2	3	4	5	6	7
88.	forgets things easily	1	2	3	4	5	6	7
89.	prefers to be alone	1	2	3	4	5	6	7
90.	likes to take charge	1	2	3	4	5	6	7
91.	makes friends easily	1	2	3	4	5	6	7
92.	gives in to others	1	2	3	4	5	6	7
93.	lacks confidence	1	2	3	4	5	6	7

94.	speaks well	1	2	3	4	5	6	7
95.	only makes reasonable demands	1	2	3	4	5	6	7
96.	likes to ask questions	1	2	3	4	5	6	7

MY SIBLING HAS . . .

97.	a lot of imagination	1	2	3	4	5	6	7
98.	difficulty solving problems	1	2	3	4	5	6	7
99.	difficulty making friends	1	2	3	4	5	6	7
100.	a short attention span	1	2	3	4	5	6	7
101.	a good memory	1	2	3	4	5	6	7
102.	a lot of friends	1	2	3	4	5	6	7
103.	good thinking abilities	1	2	3	4	5	6	7
104.	difficulty in adjusting to new situations	1	2	3	4	5	6	7
105.	good concentration	1	2	3	4	5	6	7
106.	a drive to do better	1	2	3	4	5	6	7
107.	a large vocabulary	1	2	3	4	5	6	7
108.	a sense of humor	1	2	3	4	5	6	7

Table 1

Correlations from results of Dependent t-tests of Sibling Scores on Personality Variables in High

and Low Sibling Compatibility Groups

Personality Variables	High Compatibility (n = 86)	Low Compatibility (n = 47)
1. Extraversion	.23*	-.06
2. Agreeableness	.54***	.13
3. Conscientiousness	.14	-.26
4. Neuroticism	.33**	-.04
5. Openness/Intellect	.44***	-.24

* $p < .05$.   ** $p < .01$.   *** $p < .001$

Note. Correlations of High and Low Compatibility groups are significantly different except for

the correlation of High and Low Compatibility on Extraversion.

Table 2

Prevalence (%) of High and Low Levels of Five Personality Factors Among High and Low

Perceived Sibling Compatibility

Personality Variables		Sibling Compatibility		$\chi2$
		Similarly Lo	Similarly Hi	
Extraversion:	Hi	11	34	
	Lo	19	25	3.50
Agreeableness:	Hi	9	34	
	Lo	18	25	4.40*
Conscientiousness:	Hi	15	33	
	Lo	16	27	.36
Neuroticism:	Hi	17	29	
	Lo	8	36	4.00*
Open/Intellect:	Hi	11	33	
	Lo	12	30	.14

* $p < .05$.

Table 3

Regression Analysis Summary for ICID Personality Variables Predicting Perceived Sibling
Compatibility for Sibling One (Target Sibling)

Variable	$\underline{B}$	$\underline{\beta}$	$\underline{Sig.}$
Sibling One			
Extraversion	.17	.21	.03*
Agreeableness	.16	.22	.05*
Conscientiousness	.02	.03	.79
Neuroticism	-.14	-.18	.17
Open/Intellect	-.02	-.04	.73

Note. $\underline{R2}$ = .26; $\underline{F}$ (5, 127) = 8.70, $\underline{p}$ = .00

Table 4

Regression Analysis Summary for ICID Personality Variables Predicting Perceived Sibling

Compatibility for Sibling Two

Variable	$\underline{B}$	$\underline{\beta}$	$\underline{Sig.}$
Sibling Two			
Extraversion	-.01	-.01	.95
Agreeableness	.33	.49	.00**
Conscientiousness	.03	.03	.76
Neuroticism	.02	.03	.85
Open/Intellect	.02	.02	.87

Note. $\underline{R}2 = .25$; $\underline{F}$ (5, 128) = 8.40, $\underline{p} = .00$

Table 5

Intercorrelations for Demographic Variables and Perceived Sibling Compatibility

Variables	1	2	3	4	5	6
1. Age Difference	--					
2. Proximity	.17*	--				
3. LSRS Sibling One	-.23**	.00	--			
4. LSRS Sibling Two	-.34**	-.05	.54**	--		
5. Sex of Sibling One	.15	-.08	-.19*	-.22*	--	
6. Sex of Sibling Two	.04	.01	-.20*	-.16	-.07	--

Note. LSRS = sibling compatibility measure; * p < .05.   ** p < .01.