ADULT SILBING COMMUNICATION: ATTACHMENT STYLE AND STRATEGY

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ABSTRACT

In an effort to further understand communication within sibling relationships, this study examined adult sibling relationships and the connection between attachment styles and the strategies or relational maintenance behaviors used to maintain such relationships.

The study will employ the theoretical framework of attachment theory originally presented by Bowlby (1973). Scholars agree that the basic principle of attachment theory is that attachment relationships continue to be an important factor throughout the life span. Current research has used this theory to link attachment style with the use of relational maintenance behaviors in voluntary relationships. Having developed this framework, the next logical application of the theory is to discuss the use of attachment style and relational maintenance behaviors in non-voluntary relations. Of particular interest to this study is the connection between siblings in middle adulthood and the maintenance strategies used with their sibling.

ACKNOWLEDGEMENTS

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CHAPTER 1. INTRODUCTION

The recent increase in the study of sibling relationships has provided scholars with a wider glimpse into nonvoluntary relationships. As a nonvoluntary relationship, sibling relationships occupy a prominent position in each other's lives. Sibling relationships have more thoroughly been studied in childhood, but less research has explored the sibling relationships in middle adulthood. However, research has demonstrated that "most adult siblings do remain in contact, seek periodic visits, and find a sense of well being in the sibling relationship" (Cicirelli, 1995, p. 67). This generates the need to continue our quest for greater understanding within this genre of relationships.

Traditionally, Cicirelli (1995) explains, "research has been concerned with the effects of birth order, family size, and gender or individual differences in various intellectual and personality characteristics" (p. 1). However, more recent research provides data that suggests that when siblings no longer live together, they communicate and share experiences by talking directly to each other during face-to-face interactions, by telephone or through other mediums.

This provides a foundation for more additional research on interpersonal relationships between siblings and the communication factors that influence these nonvoluntary relationships. Myers, Brann, and Rittenour (2008) explain "early and middle adulthood marks a time period when sibling interaction is renegotiated in light of individual's life circumstances and competing demands" (p. 156). They suggest, "because the interaction that occurs during early and middle adulthood serves as a precursor for whether and how siblings communicate in their later years, scholars should investigate the

cognitive and behavioral factors that determine siblings communicative efforts to maintain these significant relationships" (p. 156).

One of the first steps in this pursuit is to assess the relational maintenance behaviors siblings' use in an effort to maintain communication with their siblings. In particular, this study will explore whether attachment styles contribute to the type of relational maintenance behaviors used by siblings in middle adulthood. The study will employ the theoretical framework of attachment theory, originally presented by Bowlby (1973, 1980) with the premise that attachment styles may be related to the type of relational maintenance behaviors siblings choose to implement.

To date, only three studies exist that appear to have explicitly linked attachment style and the use of relational maintenance behaviors. First, Simon and Baxter (1993) studied voluntary relationships, specifically focusing on both married and dating individuals. As hypothesized, Simon and Baxter found that securely attached individuals use more prosocial maintenance behaviors than individuals in other attachment groups. Bippus and Rollin (2003) replicated this study using a sample of individuals reporting on relational maintenance within friendships. They found that people perceive secure friends using more prosocial maintenance behaviors than insecure friends. More recently, Dainton (2007) extended this research to include relational maintenance behaviors in married individuals and two additional attachment styles. Similar to previous research, the study provided usefulness in explaining self-reported relational maintenance behaviors.

While all three studies have provided significant research in relational maintenance behaviors and attachment theory, they are each limited to studying voluntary relationships. As the longest-lasting relationship, the sibling relationship is considered a nonvoluntary

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relationship and the most difficult to terminate (Myers, 2001). With this in mind, communication in this particular relationship is perhaps not only the most critical, but it also requires more maintenance than any other relationship.

Therefore the importance of communication as it pertains to the sibling relationship will be considered in this study. Specifically, the research focuses on the maintenance strategies, that is, the communication approaches siblings use to sustain a desired relational definition. An overview of attachment theory illustrates the distinct link between attachment theory, relational maintenance, and sibling relationships. Finally, this chapter will conclude with a synopsis of the study as well as definitions of relevant terms.

Attachment Theory

Attachment theory was first proposed by John Bowlby (1988) as a framework for studying how children develop secure (or insecure) attachments as a function of early interaction with caregivers (Guerrero, Farinelli, & McEwan, 2009). However, new research suggests that attachment theory may apply to sibling relationships as well. Teven, Martin, & Neupauer (1998) suggest that an attachment to siblings may be even more intense than an attachment to a parent. As such, attachment theory proposes a practical framework through which researchers can understand adult sibling relationships. Guerrero and Bachman (2006) examined prosocial maintenance behaviors as well as two key dimensions underlying attachment style. They assert that "attachment theory is more than a description of personality types; the theory provides an account of how people develop cognitive scheme that guide perceptions and social behavior" (p. 343).

Guerrero, Farinelli and McEwan (2009) explain, "attachment styles have been conceptualized as relatively coherent and stable patterns of emotion and behavior [that] are

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exhibited in close relationship" (p. 489). Under this assertion, Guerrero and Bachman (2006) explain, "it is reasonable to expect that people with various attachment styles would maintain their relationships in line with differentiated patterns of emotion and behavior" (p. 342). Furthermore, attachment theory provides a structure for investigating both relational satisfaction and emotional communication (Guerrero et al.). This study sought to examine one partner's relational satisfaction and the other partner's style of attachment and emotional communication. Evidence from their study suggests, "the often cited relationship between attachment and relational satisfaction is partially explained by emotional communication" (p. 487). Both emotional communication and relational satisfaction contribute to relational maintenance behaviors.

Sibling Relationships

Voluntary relationships, such as romantic or platonic relationships, are a popular and often studied platform within communication. Participants in these relationships commit to each other on a voluntary basis; a mutual desire to remain involved encompasses their affiliation and contributes to their connection. Nonvoluntary relationships, however, are not relationships one might choose, but rather a relationship that is created for them. Therefore, communication that evolves in this relationship may differ from the communication that evolves in voluntary relationships.

Nonvoluntary relationships are defined as a relationship "in which the actor believes he or she has no viable choice but to maintain it, at least at present and in the immediate future" (Myers, 2001, p. 20). As such, the sibling relationship becomes one of the most enduring relational ties found within their lifetime since it persists throughout their lifespan (Fowler, 2009; Myers, 2001; Myers & Bryant, 2008; Voorpostel & Van Der

Lippe, 2007). This assertion appears true for half-siblings, step-siblings, and adoptive siblings since sibling relationships "usually begin early enough in life to have a longer time course than relationships with parents, spouses, offspring, or most other friends and relatives" (Cicirelli, 1995, p. 2).

Unique to the sibling relationship is that is also outlasts all other relationships during one's lifetime. Cicirelli (1995) explains that the "sibling relationship is ascribed rather than earned, that is, brotherhood or sisterhood is a status that is obtained by birth (or by legal-action, as in the case of step-siblings and adoptive siblings)" (p. 2) therefore contributing to its permanence throughout one's lifespan.

Adding to its complexity, Myers (2001) suggests the sibling relationship differs from voluntary relationships in three ways. First, for most individuals, the sibling relationship is the longest lasting relationship in their lives. Second, unique roles and functions exist in the sibling relationship including confidants, role models, socialization agents, and caretakers. Siblings also provide emotional, financial, and moral support for each other. Third, sibling relationships cannot be terminated at any time (Myers, 2001; Myers & Bryant, 2008). In other words, sibling relationships do not conclude or vanish. While "there may be dissolution of an active sibling relationship under certain circumstances, there is no dissolution of the sibling status" (Cicirelli, p. 2). In addition, commitment found within a sibling relationship may exist due to obligation or force, rather than choice (Rittenour, Myers & Brann, 2007).

Distinguishing a nonvoluntary relationship that extends over the lifetime is difficult, however, distinctions are made that separate the sibling relationship into three stages: childhood sibling relationships, adolescent sibling relationships, and adult sibling

relationships (Rittenour, Myers & Brann, 2007). Additionally, the adult sibling relationship can be sub-divided into three categories: early or emerging adulthood, middle adulthood, and late adulthood or old age (Myers, 2001; Myers & Bryant, 2008, Rittenour et al.). These sub-categories of sibling relationships become important in the study of relationships, as communication evolves as siblings' transition through the stages.

<div align="center">Definition of Terms</div>

Sibling Relationship

The term *sibling relationship* refers specifically to the nonvoluntary relationship that is created for an individual that originates at birth and continues throughout one's lifespan. Cicirelli (1995) distinguishes the characteristics of a sibling relationship "as the interdependency of two children who either (1) share some degree of common biological origin (full siblings, half siblings); (2) share a relationship defined legally (stepsiblings, adoptive siblings); (3) share some degree of commitment or socialization to the norms of siblings roles in a particular culture (fictive siblings)" (p. 4). Since the presence of a sibling is constant, they serve as a primary function in each other's lives as well as in the structure of their families. Myers (2001) explains that through the use of communication, siblings will develop, maintain, and enhance their relationships, overall contributing to the one of the most enduring relationships in which they will participate (Fowler, 2009).

Relational Maintenance

Relational maintenance behaviors used by siblings to sustain their relationships are defined as the actions and activities in which individuals engage to sustain desired relational definitions (Canary & Stafford, 1994). Siblings' use of the five relational maintenance behaviors have been examined producing evidence that suggests siblings use

behaviors that act as ways of maintaining their relationships (Canary & Dainton, 2003; Myers, 2001; Myers & Weber, 2004). Researchers generally agree that five relational maintenance behaviors are used across relational contexts and include: positivity (behaving in a cheerful and optimistic manner), openness (self-disclosure and direct discussion of the relationship), assurances (messages stressing commitment to the partner and relationship), networks (relying on common friends and affiliations), and sharing tasks (taking responsibility for accomplishing responsibilities that face the relationship (Canary & Dainton; Dainton, 2007, Myers, 2001).

Sibling relationships illustrate the dynamic nonvoluntary relationship experienced throughout one's life through the use of relational maintenance behaviors. This study specifically explores the dimension of communication in sibling relationships through the use of relational maintenance behaviors. Attachment theory will be used to guide this study. Consequently, a description of current studies on the subject will be described, a review of literature provided, a proposal of the method needed to complete this study, as well as a discussion of how this particular study will contribute to the overall discussion of siblings and communication.

CHAPTER 2. REVIEW OF LITERATURE

This chapter provides a review of literature guiding this study. First, a discussion of sibling relationships is presented, followed by a survey of relevant literature exploring how sibling relationships have been studied to date. A summary of communication processes critical to maintenance that encompasses sibling relationships follows. Next, a synopsis of attachment theory is presented that includes its application to sibling relationships. Finally, the purpose of this study is clarified and the research questions are established.

Sibling Relationships

Recent research over the last decade has provided communication scholars with an increase in studies examining the relational maintenance behaviors used among family members. In particular, it is the study of relationship maintenance behaviors between adult siblings that have gathered the most attention (Myers, 2011).

Considered one of the most enduring relational connections in family constructs (Fowler, 2009; Myers, 2001; Myers & Bryant, 2008; Rittenour, Myers & Bran, 2007; Voorpostel & Van Der Lippe, 2007), the sibling relationship has become a primary focus in research. Commitment found within sibling relationships may often occur due to obligation or force rather than by choice, creating a unique dynamic in maintaining the relationship. (Rittenour et al.) In addition, Lee, Mancini, and Maxwell (1990) advocate that cultural expectations exist that may suggest sibling relationships *should be* more emotionally close, meaningful, and enduring than any other interpersonal association.

Mikkelson (2006) posited that the sibling relationship is differentiated from voluntary relationships by a paradoxical nature; unlike romantic or platonic relationships, sibling relationships are one in which the participants express liking and loving for each

other while simultaneously engaging in antisocial, hurtful, and destructive behaviors

(Myers & Goodboy, 2010; Rittenour, Myers & Brann, 2007). These behaviors include

conflict and rivalry, jealousy, verbal, physical and relational aggressiveness (Myers &

Goodboy) and exist across the lifespan.

These behaviors also contribute to the commitment illustrated by sibling

relationships. While the foundation for sibling relationships is nonvoluntary, the

commitment that stems from the relationship varies across the lifespan (Rittenour, Myers,

& Brann, 2007) resulting in different types of maintenance behaviors used by siblings.

Specifically, sibling interaction becomes more voluntary as siblings become older,

suggesting that commitment may waver based on how actively involved siblings are in

each other's lives at any given point in time (Rittenour et al.). The level of involvement

may be a direct result of age, as three stages are identified through which sibling

relationships progress: childhood and adolescences, early and middle adulthood, and old

age (Myers & Bryant, 2007; Rittenour et al.).

The first stage begins when the sibling is an infant and lasts into the sibling's teen

years. In this stage siblings provide each other with companionship and emotional support,

delegated caretaking, and aid as well as direct services that emerge in the form of sibling

coalitions and situational services (Myers & Bryant, 2008). It is during this time that

siblings illustrate more intimate daily contact since siblings generally interact within the

home (Cicirelli, 1995).

The second stage is categorized as early and middle adulthood. This stage of

siblingship occurs between the ages of 26 to 54 years (Myers & Goodboy, 2006) and marks

a time period when sibling interaction is renegotiated in light of individual's life

circumstances such as marriage, children, and careers (Myers, Brann, & Rittenour, 2008).

It is during this stage that siblings grow older and start a family of their own. They continue

to provide siblings with support, however, they feel less obligated to do so because their

relationship with their spouse and children have now been assigned greater precedence than

the relationship with their sibling (Myers & Bryant, 2008).

It is important to note however that a phase before early and middle adulthood

exists that is referred to by scholars as emerging adulthood. This period of time is often

characterized by a chaotic state of change and exploration (Myers & Bryant, 2008). It

constitutes of period of time in which young adults no longer consider themselves to be

adolescents, but at the same time do not consider themselves to have reached adulthood,

and generally occurs between the ages of 18 to 25 years (Myers & Bryant). During this

time, siblings no longer live with their parents; they become actively involved with others,

whether through marriage, cohabitation, or their own financial stability. They have reached

their educational aspirations, are comfortable with embracing the roles of a marital partner

and parent, and are able to live self-sufficiently (Myers & Bryant). Intimacy during this

state is maintained at a distance by telephone, email, and periodic visits (Cicirelli, 1995).

Typically, a continued level of companionship and emotional support is also illustrated

during this stage (Myers & Bryant, 2008; Rittenour, Myers, & Bryant, 2007). However,

Myers and Bryant (2008) explain that most emerging adults also focus on individualist,

rather than other-oriented goals.

The third stage is categorized as old age. This stage begins when siblings are no

longer responsible for their children and may have entered into retirement from their

vocations (Cicirelli, 1995). It is during this stage that siblings adopt a renewed level of

importance for their sibling (Myers & Bryant, 2008) and typically resolve their rivalries, validate their relationships by engaging in shared reminiscence, and intensify their emotional bond with each other (Rittenour, Myers, & Brann, 2007). Cicirelli (1994) explains that during this final stage, most adult siblings will continue to see each other from time to time, however, the frequency with which they interact depends on the closeness of the relationship. This variable contributes to the dynamic nature of the sibling relationship and fuels the need to study sibling communication.

Fowler (2009) insists "although siblings play an important role in each other's lives, relatively little is known about communication that characterizes sibling relationships" (p. 51). Likewise, Stafford (2005) asserts, "despite the relative prominence, permanence, and potential importance of sibling relationships, little work has been conducted on maintaining this relationship" (p. 79). However, many researchers agree sibling relationships deserve greater attention (Fowler, 2009; Mikkelson, 2006).

Building the foundation for this assertion is a staggering statistic: 96% of Americans have at least one sibling (Mikkelson, 2006). Unfortunately, Lee, Mancini, and Maxwell (1990) explain that research on family relationships across adulthood typically focuses on the marital or parent-child pair, and less on the roles of other kin, such as siblings, that may play a role in adult relationships. More specifically, when research has been conducted on siblings, it has focused on siblings in childhood or later life (Lee, Mancini & Maxwell, 1990) placing less attention on sibling relationships during emerging and middle adulthood (Myers & Bryant, 2008).

Another popular direction of study includes sibling's commitment to one another across the life span. For example, Rittenour, Myers, and Brann (2007) explored the

commitment in the sibling relationship by examining whether sibling commitment (a) varies across the lifespan and (b) is associated with siblings' use of affectionate communication and communication-based emotional support. Their study found that sibling commitment does indeed remain stable about the lifespan and concluded that siblings who are supportive both emotionally and affectionately remain committed to each other despite such barriers as parenthood, geographical distance, and opposing lifestyles (Rittenour et al.).

Fowler (2009) also sought to determine how communication motives are associated with relational satisfaction within the sibling relationship across the lifespan. Throughout time, roles change and evolve as the needs of the relationship change and evolve. During childhood and adolescence, siblings provide mutual comfort and emotional support, and serve as allies for each other during parent-child conflicts (Fowler). Siblings typically remain important to each other in young and middle adulthood, and continue to exchange aid if it is needed (Fowler, 2009; Goettig, 1986). Life transitions provide new contexts for the provision of support: the birth of a child, a marriage or divorce, all signify life transitions that require the support of a sibling (Fowler). He suggests that "the death of a parent may be a particularly important turning point in the relationships of middle-aged siblings, as even siblings who are not close may be brought closer by the need to care for, and in many cases, bury, and grieve for a parent" (p. 52). The support system may be even more important during old age. O'Bryant (1988) explains that frequent contact with a sibling later in life appears to have a positive impact on the well-being of older adults, as siblings provide crucial support to each other in times of crisis or need.

Regardless of when or how a sibling might provide support, scholars agree that the sibling relationship maintains a constant presence across the life span, in spite of changes in the siblings' geographic proximity, relational status, socioeconomic status, and social networks (Myers & Bryant, 2008; Rittenour, Myers & Brann, 2007). Since sibling relationships are constant, they serve as a primary focus in each other's lives as well as in the structure of their families. Myers (2001) explains that through the use of communication, siblings will develop, maintain, and enhance their relationships.

Other characteristics unique to the sibling relationship includes longevity, a shared biological and relationship history, as well as an exposure to the same social and emotional contexts in which siblings share in the growth and development of their relationship (Rittenour, Myers, & Brann, 2007). How they contribute to this relationship becomes an area of interest, an opportunity for research to progress, since previous studies suggest that people who like each other are assumed to have more rewarding interactions (Voorpostel & Van Der Lippe, 2007). Cicirelli (1995) explains that sibling interaction and closeness decline during the early adulthood state, remain dormant during middle adulthood, and resurface as a prominent fixture during older adulthood, remaining so through old age, making relational maintenance behaviors a critical aspect of the sibling relationship. This assertion draws attention to the focus of this study: if relational maintenance behaviors are an inevitable construct of sibling relationships, precisely how do they contribute to the type of communication found within sibling relationships in middle adulthood?

Attachment Theory

Attachment theory was developed by psychiatrist John Bowlby (1973, 1980). He proposed the theory to explain the caregiver-infant bond that sought to explain why children tend to develop strong bonds with an attachment figure and experience distress when separated from that attachment figure (Dainton, 2007). From its inception, attachment theory was thought to exist throughout the lifespan (Stafford, 2005). It is defined as "any form of behavior that results in a person attaining or retaining proximity to some other differentiated and preferred individual" (Bowlby, 1973, p. 185).

Originally a platform limited to work in psychology; recent scholars have successfully applied attachment theory to research in communication. It provides a framework for investigating both relational satisfaction and emotional communication (Guerrero, Farinelli, & McEwan, 2009), expanding the original focus of attachment theory to include other relationships, including romantic relationships (Dainton, 2007). In fact, Canary and Dainton (2006) assert, "attachment theory provides a powerful theoretical lens for the study of maintenance processes" (p. 737). Harvey and Wenzel (2006) insist that the theory has since generated "an enormous amount of attention" and "shows great promise to live up to its goal of becoming the prominent approach to conceptualizing close relationships" (p. 43-44).

Conceptualizing close relationships requires attention to behaviors exercised by participants through communication within the relationship. Thus, attachment refers to the behavior oriented toward attaining or retaining closeness with a preferred individual who provides a sense of security (Bowlby, 1980). Like sibling relationships, attachment behaviors have been theorized to play a role across the lifespan (Dainton, 2007). Various

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behaviors parlay into categories of attachment and facilitate researchers in identifying behaviors that coincide with attachment styles.

Attachment styles have evolved since the theory's original formation. Guerrero, Farinelli, and McEwan (2009) insist "the theory provides an account of how people develop cognitive schema that guide perceptions and social behavior" contributing to the relational maintenance behaviors used within the sibling relationship (p. 343). Scholars explain that attachment styles can be modified based on interactions with significant others (Guerrero & Bachman, 2006). Therefore, the attachment theory predicts that interpersonal communication influences and is influenced by working models of the self and others (Guerrero & Bachman). Attachment *styles* are a result of these working models and current research suggests four attachment styles: secure, dismissive, fearful and preoccupied (Guerrero, Farinelli, & McEwan, 2009). Guerrero, Farinelli and McEwan (2009) explain that *secures* have positive models of themselves and others, are self-confident and comfortable with intimacy. *Dismissives* have positive models of themselves but negative models of others, are highly independent, and see relationships as nonessential. *Preoccupieds* have negative models of themselves but positive models of others and desire excessive intimacy to validate their self worth. Finally, *fearfuls* have negative models of themselves and others and avoid intimate relationships because they fear being hurt or rejected (p. 489).

These categories, however, provide more than a description of attachment or personality types. Guerrero and Bachman (2006) assert that attachment theory also "provides an account of how people develop cognitive schema that guide perceptions and social behavior" (p. 343). With this in mind, they applied attachment theory to romantic

relationships using attachment styles and relational maintenance behaviors. In their study, they observed that attachment plays a role in the relationship maintenance process, although people with different attachment styles will differ in the relational maintenance behaviors they choose.

They agree that attachment styles develop primarily as a mechanism that guide how people experience, respond, to, and regulate negative affect (Guerrero et al., 2009), contributing to the relational maintenance behaviors participants choose to use within a relationship. Similarly, Bippus and Rollin (2003) assert "individuals' attachment style differences are a reflection of the interaction people have with significant others, beginning with their primary caregivers" (p. 113). However, numerous studies have since considered the effect of attachment styles on individuals' communication behavior within their adult relationships (Bippus & Rollin, 2003).

Expanding this notion, Bippus and Rollin (2003) sought to determine how attachment styles affect individuals' relationship maintenance behaviors as they pertained to close personal friendships. Evidence from their research revealed that friendships report greater relationship satisfaction, greater use of prosocial maintenance strategies, and more integrating and compromising conflict behaviors for securely attached individuals as compared to the preoccupied, dismissive, and fearful attachment styles. Their research supported the premise that attachment styles affect people's behavior across a variety of adult relationships.

Guerrero, Farinelli and McEwan (2009) sought to investigate associations among one partner's relational satisfaction and the other partner's style of attachment and emotional communication. Findings from their survey presented evidence that suggests

participants reported more relational satisfaction when their partners scored high in security and low in dismissiveness and preoccupation. Specifically the study "demonstrates that attachment is associated with specific forms of emotional communication related to anger and sadness, as well as the general expression of positive affect" (Guerrero et. al, 503). More importantly, the assertion is made that "emotional communication appears to provide a partial explanation for the often-cited link between attachment and relational maintenance" (Guerrero et. al, pg. 505).

Relational Maintenance Behaviors

Relational maintenance behaviors used by siblings to support their relationships are defined as the actions and activities used to sustain desired relational definitions, specified state or condition (Dainton, 2007; Dainton & Aylor, 2001; Myers & Weber, 2004). Dindia and Canary (1993) elaborate this notion by extending the characteristics to include maintenance as it refers to keeping a relationship in existence, to keeping a relationship in a satisfactory condition, or preventing or repairing relationship problems. The central premise in each of these definitions is that maintenance of the relationship involves participation from both siblings with a result that is satisfactory to both participants.

Stafford and Canary (1991; Canary & Stafford, 1992) identified five relational maintenance behaviors or strategies: *positivity* (which involves acting pleasant and cheerful when with a partner); *assurances* (which involves talking with the partner about commitment and the future of the relationship); *openness* (which encompasses self-disclosure and relational talk); *social networking* (which includes spending time together with mutual friends, family and others); and *task sharing* (which refers to the willingness to

help each other and share tasks in a fair manner (Dainton & Aylor, 2001; Guerrero & Bachman, 2006).

For example, Myers, Brann and Rittenour (2008) sought to investigate siblings' use of the five relational maintenance behaviors. Specifically, the purpose of the study was to examine whether the use of relational maintenance behaviors by siblings in early and middle adulthood is predicted by their communication motives. Evidence from their research suggests that siblings use relational maintenance behaviors to maintain their relationships in the same way participants do to maintain their voluntary relationships (Myers, 2001; Myers, Brann & Rittenour, 2008; Myers & Weber, 2004). In particular, the study established positive correlation between the communication motives and the five relational maintenance behaviors, but give credit to the "positive affect generally attributed to the sibling relationship" (Myers et. al, 2008, pg. 163).

Myers (2001) examined the use of relational maintenance behaviors in the sibling relationship, placing a specific focus on the association of sibling liking. *Sibling liking* is "conceptualized as the expression of affection and respect toward another individual" (Myers, 2001, p. 22). In addition, the study asserts that "various combinations of relational maintenance behaviors emerge as predictors of liking" and therefore contribute to ways in which siblings convey their commitment to the relationship. The research collected in this study affirmed the notion that "relational maintenance behaviors are just as vital to nonvoluntary relationships" (Myers, 2001, p. 26). More specifically, the study concluded that sibling liking is predicted by three of the five relational maintenance behaviors: positivity, networks and tasks. However, all behaviors were positively correlated with

sibling liking. The study concluded that all findings within the study generally support Stafford and Canary's (1991) assertion that all relationships require relational maintenance.

Stafford, Dainton, and Haas (2000) sought to extend the five-factor scale of maintenance strategies to include *routine* behaviors as well. Their study sought to incorporate both routine and strategic maintenance behaviors using an expanded maintenance scale, explaining that "routine behaviors are those that people perform that foster relational maintenance more in the manner of a 'by-product'" (p. 307). Strategic maintenance behaviors, on the other hand, are those behaviors "which individuals enact with the conscious intent of preserving or improving the relationship" (p. 307). Their views lead to the development of typologies inclusive of both routine and strategic relational maintenance behaviors, adding *advice* and *conflict management* to the list of relational maintenance strategies.

Like voluntary relationships, behaviors that siblings will use to maintain their nonvoluntary relationship will likely vary (Dainton & Aylor, 2001). For example, positivity and openness are conveyed in several ways between sibling relationships. Myers (2001) reported that enjoyment is the primary reason siblings remain in contact. Sibling contact increases when siblings confide in each other, when siblings consider each other to be close friends, and when siblings feel responsible for each other's welfare (Myers, 2001; Myers & Bryant, 2008). Furthermore, because maintenance behaviors vary depending on the relationship, siblings may use particular relational maintenance behaviors more frequently than other behaviors (Myers 2001; Myers, Brann, & Rittenour, 2008).

Previous research suggests that attachment styles may predict or contribute to the types of relational maintenance behaviors participants in a relationship choose to

demonstrate. Previous research also indicates that relational maintenance behaviors are inherent in every relationship, voluntary or nonvoluntary. Consequently, how one chooses to participate in an obligatory relationship may depend primarily on the type of attachment style they illustrate. Therefore, the goal of the present study is to explore whether the behaviors adult siblings use to maintain their sibling's relationships are pre-determined based on the innate attachment style within. Thus, the following research question is posed in this study:

> RQ: In what ways do attachment styles reveal relationship strategies used by adult siblings?

CHAPTER 3. METHOD

The purpose of the study is to investigate the ways, if any, in which attachment styles reveal relationship strategies used by adult siblings. To answer the proposed research question, online training through the Institutional Review Board (IRB) was completed and approval from the IRB received. The study then recruited participants who were between the ages of 26 and 54, a period of time defined as early and middle adulthood, to participate in an online survey.

The current study is a culmination of two phases of data collection in order to modify the survey instrument. Upon IRB approval, an email was sent to faculty, staff and graduate students using the *Listserve* feature provided by North Dakota State University. The email provided each of the recipients with information regarding the study. Should they qualify and choose to participate, a link was provided to the online questionnaire. Results from the initial survey revealed clarification was needed in each of the two sections included in the questionnaire. Therefore, the results of the initial survey became a "pilot test survey." Data from this survey was not included in the study.

Participants were asked to be between the ages of 26-54 in order to qualify for the study; a period of time defined previously as middle adulthood. However, several respondents questioned whether the referenced sibling could be older than the indicated ages. Adjustments were made to include referenced siblings over the age of 54 since this variable did not seem to effect the study. In addition, part two of the questionnaire asked participants to *rank* four questions using each of the four numbers only one time. However, the feature was not enabled that would emphasize this option and prevent participants from

using the number more than one time. As a result, participants chose to skip questions in this section. A feature preventing this option was added to the revised survey.

Findings from the initial survey provided a starting point for modification and clarification of the survey instrument. Upon review, experts in the Communication department were consulted and modifications were completed to each of the sections to increase the validity and reliability of the survey instrument. Phase two of the data collection provided participants with the same initial email, but included the updated version of the survey instrument.

Participants

Participants were recruited for this study using an email resource to maximize the sample population. An emailing list, *Listserve*, as provided by North Dakota State University was used to send the same standardized email to all graduate students, faculty and staff with an email address provided by the University, asking them to participate in the study. If they met the qualifications and chose to participate, a link was provided in the email that allowed them access the online survey and the ability to anonymously participate in the study.

Since the same email was generated and sent out to all faculty, staff and graduate students with an email address belonging to North Dakota State University, a convenience sample ensued. This eliminated the participation of faculty, staff and students enrolled in nearby universities, but allowed control over whom the emails were being sent. However, since *Listserve* automatically generates a list of email recipients, the total number of emails sent and received is unknown. One hundred responses were returned, ninety-nine of which were used in the data analysis. Of the participants that chose to participate, 23.2% were

between the ages of 26-30, 33.3% were between the ages of 31-40, 27.3% were between the ages 41-50, and 16.2% were between the ages 51-54. Gender was also collected upon receipt of the survey. Of the reporting participants included in the survey, eighty-four (85%) were female and fifteen (15%) were male.

Procedure

Upon receipt of the email, participants were provided with information regarding the purpose of the study and information required to meet the Internal Review Board (IRB) consent protocol. Consent to participant in the study was indicated when participants clicked on the link to the online questionnaire. The questionnaire was one page in length and took approximately five minutes to complete.

Participants who chose to participate proceeded to the online questionnaire that instructed them to (a) identify the sibling with whom they have most recently experienced an interaction; provide an explanation for how they maintain their relationship with the identified sibling. (b) identify the demographics that pertain to them: age and gender (c) identify the demographic that pertain to their sibling: age and gender.

The participants were provided the following directions: "Complete this questionnaire in regard to the sibling with whom you most recently experienced an interaction (i.e.: face-to-face, email, cell phone conversation, text message or Facebook interaction). That is, think about the everyday things you actually do in your current sibling relationship. Remember that much of what you do to maintain your relationship can involve mundane or routine aspects of day-to-day life. This sibling can be a biological sibling, a step-sibling, or an adopted sibling. With this sibling in mind, explain how you maintain (or keep in existence) your relationship."

The second portion of the questionnaire provided participants with an adaptation of the attachment measure developed by Bartholomew and Horowitz (1991). This measure consists of four sentences adapted from the four paragraphs provided by Bartholomew and Horowitz describing the four attachment styles (secures, dismissives, preoccupieds and fearfuls). Participants were instructed to rank from 1 – 4 (1 being highest, 4 being lowest) the statement (sentence) that most closely matches their style, using each of the four numbers one time. Each statement represented one of the attachment styles. Later, the statement ranked with a 1 (highest, or the statement that most closely resembled the participant's style) will be placed on the back side of the index card as part of the data analysis. This process provided the distinction between the participant's view of their attachment style and the relational maintenance behaviors they chose to use in order to maintain their relationship with their sibling.

Data Analysis

Data analysis for this study was adapted from Myers (2011) using typological analysis. Data analysis proceeded in three steps. First, the author read the online questionnaire and the explanation provided by the participant (i.e.: the strategy/strategies the participant used to maintain their relationship with their sibling) was transcribed onto an index card for sorting convenience. If the explanation provided more than one strategy, the additional strategy was transcribed onto another index card. The attachment style to which the participant most resembled (i.e., 1=highest, or most like the description) was recorded on the back side of the index card. Strategies collected were then divided into one of five categories using the five-factor scale of maintenance strategies (Stafford & Canary,

1991; Canary & Stafford, 1992). Each of the five categories was then subdivided into one of four categories using the four attachment styles.

In addition, the demographics provided by the participant were also listed on the backside of the index card. Upon completion of the review of questionnaires, 254 relational maintenance behaviors or strategies were recorded.

In the second step, the strategies provided by the participants were reviewed using typological analysis. "Considered to be a standard qualitative analytical procedure, typological analysis allows a researcher to construct a categorical system using the units of analysis in the study that is based on a theoretical framework, common sense, coder experience, or a previously derived categorical typology" (Myers, 2011). In this study, category construction was based on research conducted on relational maintenance (Canary & Stafford, 1992; Dindia, 2003; Stafford & Canary, 1991) as well as research conducted on sibling relationships (Myers, 2011; Rittenour, Myers, & Brann, 2007). As each index card (i.e., strategy) was reviewed, the strategy listed on the index card was placed into a category. Specifically, the study used Stafford and Canary's (1991, 1992) five-factor scale of maintenance strategies that included *positivity, openness, assurances, networks* and *sharing tasks*, as categories for the strategies provided by the participants.

After completion of this step, each strategy was reviewed for consistency. Additionally, the attachment style listed on the back side of the index card was used to create sub-categories. The sub-categories were created using each of the four attachment styles: *secures, dismissives, preoccupieds and fearfuls.*

CHAPTER 4. RESULTS

The results of the current study are outlined in this chapter. The research question asked "in what ways do attachment styles reveal relationship strategies used by adult siblings?" Participants were asked one open-ended question and asked to respond with their sibling in mind. Specifically, participants were asked to "provide an explanation for *how* you maintain (or keep in existence) your relationship with your sibling." One hundred participants completed the survey; one survey was eliminated for being incomplete. Ninety-nine participants provided 254 reasons (or strategies) as to how they maintained their relationship with their sibling. (Table 1).

These reasons or strategies were coded into one of five categories using the five factor scale of maintenance strategies. In addition, research conducted by Stafford and Canary (1991), Canary and Stafford (1992) and Stafford, Dainton and Haas (2000) were used to guide the coding of each. The categories are: *openness, positivity, assurances, networks,* and *sharing tasks.* The strategies in each of the five categories were then sub-divided into four categories using the four attachment styles (*secures, dismissives, fearfuls and preoccupieds)*, each of which was then listed on the back of the index card.

Of the 254 strategies provided by participants, one hundred-four strategies (41%) were provided by participants who reported *secure* as their attachment style. Eighty-nine strategies (35%) were provided by participants who reported *dismissive* as their attachment style. Only nineteen strategies (7%) were provided by participants who reported *preoccupied* as their attachment style, while forty-two strategies (17%) were provided by participants who reported *fearful* as their attachment style. Examples of the reasons or strategies provided by participants are listed in Table 2.

Table 1

Number of Participants: Self-report Attachment Styles and Strategies

Attachment Style	# Participants	# Strategies Reported
Secures	41	104
Dismissives	35	89
Preoccupied	9	19
Fearfuls	14	42

Table 2

Examples of Strategies Provided by Participants

1. Assurances

    a. Example: *"I email or text her weekly"*
    b. Example: *"I try to call from time to time to see how things are going"*

2. Positivity

    a. Example: *"We trust each other"*
    b. Example: *"We are best friends"*

3. Openness

    a. Example: *"We talk on the phone about our day"*
    b. Example: *"We share pictures on Facebook"*

4. Sharing Tasks

    a. Example: *"We watch each other's kids"*
    b. Example: *"We live in different states, so we take turns visiting each other"*

5. Networks

    a. Example: *"We get together with family on holidays"*
    b. Example: *"We see each other at family dinners and summer vacations"*

As indicated in Table 2, strategies emerged from all five categories using Stafford and Canary's (1991) maintenance scale. However, not all attachment styles used each of the categories (Table 3). Furthermore, as the attachment styles indicate, participants who report a secure or dismissive attachment style also provide significantly more reasons or strategies for maintaining their relationship with their sibling. Specifically, this group provided 193 reasons (76%) for maintaining their relationship with their sibling.

In addition, the majority of reasons or strategies provided, regardless of attachment style, were categorized into one of two categories: assurances and openness. As Table 2 indicates, this may be influenced by the era of technology. Each of the four examples provided under the *assurance* category as well as the *openness* category (Table 2) include one of four mediums of communication: email, phone, Facebook, and text messaging. One might suggest these are a means of convenience as well as mediums or channels of communication, and would perhaps contribute to the reason *why* siblings choose specific strategies in order to maintain their relationship.

Another meaningful variable that resulted from the data includes the overwhelming response from female participants. Of the responses provided, 85% of those were from female participants, which may unknowingly contribute to the amount of strategies or reasons provided in this study. Myers (2001) reported that female siblings generally use relational maintenance behaviors at a higher rate than male siblings. In addition, Myers and Goodboy (2010) make the assertion that female-female dyads use relational maintenance behaviors at a higher rate that male-male dyads or cross-sex sibling dyads, contributing to the current research that female participants sustain greater levels of relational maintenance behaviors in their sibling relationships.

Regardless of gender, more evident in this study are the mediums or channels of communication that are used to maintain communication with siblings. In each of the five categories (*assurances, openness, positivity, sharing tasks and networks*) siblings reported using communication channels such as telephone, email, text messaging, *Skype*, and *Facebook* as strategies or reasons to maintain their sibling relationship. This data is similar to research collected by Myers and Goodboy (2010) who report that siblings who possess a degree of psychological and emotional closeness deliberately use communication channels at a higher rate to maintain their relationship.

Table 3

Maintenance Strategies by Attachment Style: # Reasons Provided

Type of Strategy	# of Strategies by Attachment Style			
	Secure	*Dismissive*	*Preoccupied*	*Fearful*
Assurances	36	33	6	9
Positivity	6		1	
Openness	46	49	10	28
Sharing Tasks	6			1
Networks	10	7	2	4

CHAPTER 5. DISCUSSION

The purpose of this study was to identify the ways in which attachment styles reveal relationship strategies used by adult siblings. Participants provided 254 reasons for how they maintained their relationship with their sibling and reported on which of the four descriptions (attachment styles) most resembled their style. Collectively, the data revealed that participants who reported their attachment style as *secure* also reported using a greater number of relational maintenance behaviors (strategies) to maintain their relationship with their sibling. In other words, the way in which attachment styles determine relational maintenance strategies is through the *amount* of relational maintenance behaviors used by the sibling in order to maintain the relationship.

Results in this study are similar to the results collected by Bippus and Rollin (2003) who found securely attached individuals were perceived by friends as using more prosocial behaviors than non-secure individuals. Their research suggested that individuals who identified themselves as being comfortable with themselves and their relationships (qualities included in the secure attachment style description), were more likely to engage in actions toward their friends that were more conducive to sustaining their relationship. Collectively, the research suggests that individual's "self-classification of their attachment style is a significant predictor of the relationship-directed behaviors," in particular as they pertain to adult friendships (p. 119).

Participants in this study who reported a secure attachment style provided one hundred-four maintenance strategies compared to participants who reported a fearful attachment style and only forty-two maintenance strategies. Collectively the data remains consistent, and relates well to research previously collect on attachment styles.

For example, Dainton (2007) suggested that a secure attachment orientation is positively related to maintenance activities used by adults. Those individual's who report a dismissive attachment style tend to view relationships as unrewarding and unnecessary (p. 292). Therefore, the maintenance strategies they choose tend to include fewer prosocial behaviors.

This notion is also consistent with the research collected by Myers (2011). Data in this study suggests that adult sibling relationships are maintained for one of two reasons: circumstance (i.e., *We are family, We live close to each other*) or choice (i.e., *We provide each other with support, We are friends*) (p. 57). In agreement with this assertion is Mickelson (2006) who contributes to this notion by suggesting that adult siblings who choose to maintain their relationship due to circumstance may do so because it is difficult for them to ignore the fact that their relationships are involuntary, obligatory, and pervasive.

The research is similar to data collected in this study as results indicate that participants primarily provide strategies that can be categorized into mediums of communication under the *assurances* and *openness* categories provided by the five-factor maintenance scale, perhaps suggesting the involuntary or obligatory nature of behaviors found within sibling relationships. This type of strategy might also utilize relational maintenance strategies that stem from convenience, as many strategies reported included *texting, cell phones and Facebook.* An observation of this relational maintenance behavior may give credit to the era of technology. Participating in self-disclosure with a sibling under the *openness* category via technical channels of communication is certainly more

convenient than sharing in the responsibility of the relationship and opting to plan outings under the *sharing tasks* category.

Furthermore, Myers (2011) suggests that during childhood and adolescence, siblings often receive messages from parents that stress the importance of maintaining their sibling relationships; that they should value their sibling. He suggests that the importance of these messages are then reinforced by their daily interactions with each other, their shared living space, and the time spent both with each other and their family (p. 58). With this in mind, it becomes clear why siblings may choose to participate in the maintenance of their sibling relationship out of habit, rather than an undivided interest. Some adult siblings may be motivated to maintain their relationships because the action of maintaining said relationship has been ingrained in them from an early age. Therefore strategies of convenience (perhaps mediums of communication) provide an effortless way of communication with, and therefore maintaining, their sibling relationship.

Another contributing notion of convenience may involve the level of closeness found between two siblings. Research by Myers and Goodboy (2010) found that adult siblings involved in intimate or close sibling relationships generally use relational maintenance behaviors more frequently than adult siblings involved in congenial, loyal or apathetic sibling relationships and therefore use a greater number of communication channels to maintain their relationships.

Mediums of communication are not only good for obligatory sibling relationships, but serve as an option for siblings who also choose to maintain their sibling relationships on a regular basis. For example, participants who report their attachment style as secure may choose to maintain their relationship due to choice, as they consider their sibling to be

their peer or friend. Simon and Baxter (1993) explain that securely attached individuals have reported engaging in more prosocial relational maintenance strategies than non-securely attached individuals. In other words, those siblings who are comfortable depending on others and having others depend on them (*secures)* will participate in more relational maintenance strategies than those siblings who are not comfortable depending on others (*fearfuls)*. Some adult siblings may be motivated to maintain their sibling relationships simply because they enjoy interacting with their sibling. Therefore, using resources such as *Facebook, texting* and *email* provide convenient methods of communication that can be used as frequently as they choose.

Furthermore, participants who reported a *secure* attachment in this study reported six strategies under the *positivity* category. Examples of these strategies include, *"We are best friends,"* and *"We trust each other."* Both contribute to the idea that *secure* individuals choose to participate in sibling maintenance out of choice, rather than obligation. More noteworthy might be the overwhelming amount of strategies that were categorized into the *openness* category. Behaviors included in this category were *phone, email, texting* and *Facebook*. These behaviors or strategies include mediums of communication that serve as vehicles for self disclosure. Self disclosure is a primary function of maintaining a relationship as it illustrates a level of closeness shared between siblings. Closeness, described by Myers and Goodboy (2010), contributes to an *intimate sibling relationship*. Characterized by a strong sense of emotional interdependence, psychological *closeness*, empathy and mutuality, intimate siblings consider themselves to be best friends and their relationships are not constrained by either geographic distance or negative feelings or behaviors.

The description of *intimate sibling relationships* is similar the characteristics of a *secure* attachment style and bodes well to the assumption that secure individuals feel close to their sibling and therefore choose to participate in greater amounts of relational maintenance behaviors.

Similar in nature is the *loyal sibling relationship*, also described by Myers and Goodboy (2010). They explain that although these siblings experience a sense of closeness at times, "they are less emotionally and physically involved in each other's lives" (p. 105). Instead, this type of sibling relationship will provide instrumental support in times of crisis and attend family events (ie: holidays). Such characteristics coincide with characteristics of the category *sharing tasks* where siblings rely on their friends and affiliations to facilitate the maintenance of their sibling relationship.

What we can surmise from this information, overall, is that an expanded measure of relational maintenance behaviors (strategies) provides, in some ways, a picture of the ways in which attachment styles help reveal the *amount* of strategies used by sibling relationships. However, this study does less to distinguish the attachment styles that *predict* the strategies used by siblings to maintain their relationship. This may be, in part, due to our reliance on technology as primary mode for communication. As previously mentioned, the majority of strategies provided by participants describe an aspect of technology as a means of communication, or method of maintenance.

Limitations and Future Research

An immediate limitation evident in this study is the measurement tool: the questionnaire used to collect information from the participant. Concern may be applicable as it pertains to the participant's ability to accurately self -report the information and whether the participants were truthful. The sample collected may also be limiting, as it is a sample of convenience rather than a randomized sample. It was not representative of the entire U.S. population, but rather representative of a Midwestern University. The convenience sample also included those enrolled in communication courses and/or working on the university campus, rather than the general public. It should also be noted that included in this section of limitations is the ratio of female to male participants. Only fifteen of the participants reported the male gender compared to the 84 participants who reported the female gender.

Another limitation is this study pertains to proximity. Dainton and Aylor (2001) explored long-distance relationships (LDR's) and geographically close relationships (GCR's) as they pertained to maintenance behaviors. Very little research has directly focused on the means by which LDR's and geographically close relationships (GCR's) are maintained (Dainton & Aylor, 2001) in particular as they pertain to sibling relationships. Like voluntary or romantic relationships, nonvoluntary or sibling relationships have the same opportunities to participate in LDRs as wells as GCR's. Of the 254 strategies collected, twenty-one of the strategies reported specifically described "distance" or "long distance" as a factor for the type of strategy provided and/used by a sibling. Dainton and Aylor (2001) assert, "an understanding of the means by which these relationships might be

maintained is of practical value" (p. 173) in particular when it comes to the physical distance that exists between siblings.

Myers (2011) produced a study that discussed why adults maintain their sibling relationships. In a discussion of results, he explains that adult siblings identified "we live close to each other" as a reason to maintain their relationship (p. 57). Therefore, future research should be conducted to include sibling relationships under the umbrella assertion that siblings participate in the same behaviors voluntary relationships illustrate in order to maintain long-distance and geographically close relationships.

CHAPTER 6. CONCLUSION

Evident in the present study is that sibling relationships are inherited. We do not choose who constitutes this relationship. However, we may formally establish and maintain the relationship through the use of relational maintenance behaviors or strategies. What maintenance behaviors we choose to use, however, may depend on the type of attachment style that is innate upon birth. Therefore, the purpose of this study was to discuss the ways in which attachment styles reveal the types of relational maintenance behaviors used in communication with siblings.

As previous research has discussed, individuals who self-report their attachment style as *secure*, who have positive models of themselves and others, are self-confident and comfortable with intimacy, tend to participate in more prosocial relational maintenance behaviors. Meaning, the more comfortable one is with himself or herself and with others, the more likely they are to contribute to their sibling relationship by choice rather than obligation. On the contrary, individuals who self report their attachment style as *dismissive*, who prefer to be self sufficient and rely less on others, participate in fewer prosocial behaviors and perhaps, contribute to their sibling relationship out of obligation or habit rather than by choice.

While these results in this study may not be altogether surprising given the characteristics of adult sibling relationships, identifying the ways in which attachment styles expose relational maintenance behaviors or strategies reported by participants is important because it not only provides insight into *how* adult siblings maintain their relationship, but it also supplements the extensive body of research increasingly being used to study *why* sibling relationships choose to maintain their relationships. It contributes to

the innate nature of involuntary relationships much like the innate nature of attachment styles we adhere to in infancy.

As such, the results of this study are consistent with previous research in voluntary relationships. In addition, it extends the research to include non-voluntary relationships, in particular the sibling relationships inherent throughout one's lifespan. Understanding the process through which siblings maintain their relationships may contribute to the way in which we consciously communicate with our siblings.

Future research in this area should include proximity as a variable inherent in sibling relationships. How near or far one lives from their sibling may also contribute to the types of relational maintenance behaviors or strategies they choose to implement in their relationship. This may remain true and consistent regardless of the attachment style one chooses to report, and be altered merely on the basis of distance rather than attachment style.

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You are invited to participate in a survey to examine communication between adult siblings. If you are between the ages of 26 and 54 and have at least one sibling, you qualify to participate. This survey will take only about five minutes.

The survey is being conducted by Erin Stack, a graduate student in the North Dakota State University Department of Communication, advised by Ross Collins, professor of communication.

Your participation is greatly appreciated and will allow us to better understand how siblings communicate. If interested, you may request a copy of the study upon completion.

NDSU North Dakota State University
      Department of Communication
      Ehly 202
      N University Drive & Centennial Blvd
      Fargo, ND 58108-6050
      701-231-7705

Title of Research Study: Adult Sibling Communication: Strategy and Attachment Style
This study is being conducted by:
Erin Stack, student; erin.stack@ndsu.edu
Dr. Ross Collins, Advisor; ross.collins@ndsu.edu

Why am I being asked to take part in this research study?
You are being asked to participate in a study regarding adult sibling relationships. If you are between the ages of 26 – 54 and have at least one sibling, you qualify to participate in this study.

What is the reason for doing the study?
The purpose of this study to examine what communication strategies are used by adult siblings.

Where is the study going to take place, and how long will it take?
The link to the survey is provided in this email. Less than 5 minutes of your time is needed to complete this survey.

What are the risks and discomforts?
It is not possible to identify all potential risks in research procedures, but the researcher(s) have taken reasonable safeguards to minimize any known risks to the participant**.**

What are the benefits to me?
While no compensation will be offered, potential benefits include gaining greater insight into adult sibling relationships.

Do I have to take part in the study?
Your participation is this study is completely voluntary. If you decide to participate in the study, you may change your mind and stop participating at any time without penalty or loss of benefits to which you are already entitled.

What are the alternatives to being in this research study?
Instead of being in this research study, you can choose not to participate.

Who will see the information that I give?
We will keep private all research records that identify you. Your information will be combined with information from other people taking part in the study. When we write about the study, we will write about the combined information that we have gathered. We may publish the results of the study; however, your name will be anonymous and other identifying information private.
This study is anonymous. That means that no one, not even members of the research team, will know that the information you give comes from you.

What if I have questions?
Before you decide whether to accept this invitation to take part in the research study, please ask any questions that might come to mind now. Later, if you have any questions about the study, you can contact the researcher, Erin Stack at erin.stack@ndsu.edu

What are my rights as a research participant?
You have rights as a participant in research. If you have questions about your rights, or complaints about this research you may talk to the researcher or contact the NDSU Human Research Protection Program by:
· Telephone: 701.231.8908
· Email: ndsu.irb@ndsu.edu
· Mail: NDSU HRPP Office, NDSU Dept. 4000, PO Box 6050, Fargo, ND 58108-   6050.
The role of the Human Research Protection Program is to see that your rights are protected in this research; more information about your rights can be found
at: www.ndsu.edu/research/irb .

Documentation of Informed Consent:
You are freely making a decision whether to be in this research study. By clicking on the link below, it means that:
1.   you have read and understood this consent form
2.   you have had your questions answered, and
3.   you have decided to be in the study.

PLEASE CLICK ON THE LINK BELOW TO PARTICIPATE IN THE SURVEY
 http://www.surveymonkey.com/s/RS8797X

Thank you for your participation.
Sincerely,
Erin Stack

APPENDIX B. SURVEY INSTRUMENT FOR ATTACHMENT STYLE
Questionnaire: Part 1

Complete this questionnaire in regard to the sibling with whom you most recently

experienced an interaction (i.e.: face-to-face, email, cell phone conversation or text

message). That is, think about the everyday things you actually do in your current sibling

relationship. Remember that much of what you do to maintain your relationship can

involve mundane or routine aspects of day-to-day life. This sibling can be a biological

sibling, a step-sibling, or an adopted sibling. With this sibling in mind, complete the

questions below.

1. Provide an explanation for *how* you maintain (or keep in existence) your

    relationship with your sibling.

2. Identify the demographics that pertain to you:

    a. Age:

    b. Female or Male

3. Identify the demographics that pertain to your sibling:

    a. Age:

    b. Female or Male

Part 2:
Self-Report Attachment Styles Prototypes

Read the statements below. Rank from 1 - 4 (1 = highest, 4 = lowest) the statement that most closely matches your style. Each number can only be used one time.

(Secure). It is relatively easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I don't worry about being alone or having others not accept me.

1= most like the description   2   3   4 = least like the description

(Dismissing). I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

1= most like the description   2   3   4 = least like the description

(Preoccupied). I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

1= most like the description   2   3   4 = least like the description

(Fearful). I am somewhat uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I sometimes worry that I will be hurt if I allow myself to become too close to them.

1= most like the description   2   3   4 = least like the description

APPENDIX C. SURVEY RESULTS

Strategy reported	Type of strategy – Using the five factor scale of maintenance strategies
Cell phone	Openness
Text messages	Openness
Facebook	Openness
We visit each other	Sharing Tasks
We make an effort to spend time with them on a somewhat consistent basis	Assurances
I make time for her	Assurances
Text	Openness
Phone calls	Openness
Skype	Openness
Frequent visits to see each other	Sharing Tasks
Text messages	Openness
Phone calls	Openness
Usually through text messages	Openness
Family get togethers	Networks
Communicate generally by text messages	Openness
Email	Openness
Family get togethers	Networks
We see each other every day	Assurances
We talk on the phone at least one per day	Assurances
We hang out (so he can see my kids)	Networks
Family functions	Networks
Texting	Openness
Talking on the phone	Openness
Email	Openness
We call each other almost daily	Assurances
Weekly phone calls to chat	Assurances
We see each other at least once every 3-4 weeks	Assurances
Take an interest in their daily/weekly life	Assurances
Text messages to each other	Openness
Face to face interactions	Assurances
Talking over the phone	Openness
We visit often	Assurances
We talk on the phone about our day	Openness
Emails	Openness
I keep in contact with her by telephone	Assurances
We email as she lives 500+ miles from my home	Openness
Emails	Openness
Yearly visits	Assurances

Strategy reported	Type of strategy – Using the five factor scale of maintenance strategies
Texting	Openness
Phone	Openness
Email	Openness
We chat weekly	Assurances
We get together once a year	Assurances
She calls when she needs something	Sharing tasks
Talk on the phone weekly	Assurances
Message back and forth on Facebook	Openness
Text daily	Assurances
I email her to see how she's doing	Assurances
Facebook	Openness
Phone	Openness
We get together with family for holidays	Networks
Phone	Openness
We see each other at family dinners	Networks
Talk on the phone every week	Assurances
Email sporadically	Assurances
Visit every 2 months	Assurances
Email	Openness
Phone	Openness
See each other in person	Assurances
Phone	Openness
Facebook	Openness
Face to face	Openness
Occasional email	Assurances
Occasional face to face meeting	Assurances
Most common way we connect is through text messages	Openness
Phone calls probably once a month	Assurances
Face to face visits every 2 months	Assurances
Email	Openness
Email	Openness
My sister and I maintain our relationship across 700 miles through email	Openness
Telephone	Openness
Texting	Openness
Facebook	Openness
We see each other once to twice a year	Assurances
Every summer our family spends a week together at the family cabin in Wisconsin	Networks
Occasional phone calls to Germany	Assurances
Face to face visits every 2 years	Assurances
Through email	Openness

Strategy reported	Type of strategy – Using the five factor scale of maintenance strategies
Phone calls	Openness
Email messages	Openness
Face to face	Openness
Cell phone calls every few weeks	Assurances
Personal visits several times per year	Assurances
I try to call from time to time to see how things are going	Assurances
Text	Openness
We visit each other	Sharing Tasks
I email her weekly	Assurances
Facebook	Openness
Email	Openness
Visits	Assurances
I text her most days	Assurances
Phone	Openness
Phone	Openness
Email	Openness
We see each other about once a month since we live 4 hours apart	Assurances
Phone	Openness
Visits	Assurances
Email	Openness
I her email her	Assurances
Text	Openness
Talk on the phone	Openness
Phone calls	Openness
I text him occasionally	Assurances
1-2 trips per year to see them	Assurances
Phone calls	Openness
Email	Openness
We plan outings together	Sharing Tasks
Visits	Assurances
Texts	Openness
Email	Openness
Facebook	Openness
Phone	Openness
Face to face visits	Assurances
Daily phone calls to each other	Assurances
Texts	Openness
Phone calls	Openness
Telephone	Openness
Facebook messages	Openness
Communicate daily by phone	Assurances

Strategy reported	Type of strategy – Using the five factor scale of maintenance strategies
We see each other several times per month	Assurances
We have mutual friends and get together with them	Networks
We see each other face to face roughly once a month	Assurances
We talk on the phone once a week	Assurances
We text every other day	Assurances
Mostly email	Openness
Occasional visits	Assurances
My sibling in Chicago (...) we mostly maintain our relationship by phone	Openness
Texts	Openness
Some email	Openness
We see each other some holidays when we go back to our home town	Networks
I make an effort to go to Chicago about once per year to visit my sister	Assurances
Phone	Openness
Email	Openness
Facebook	Openness
Visits in person	Assurances
We live in different states so we talk on the phone on a regular basis	Assurances
We visit each other at least once per year	Assurances
Phone calls	Openness
Email	Openness
Text messages	Openness
Family get togethers	Networks
Birthdays	Networks
We get together with family on holidays	Networks
We go fishing	Networks
Most communication is done through email	Openness
Texts	Openness
An occasional email	Assurances
We talk on the phone but not very often	Openness
We see each other once or twice a year	Assurances
Email	Openness
Email	Openness
Phone	Openness
I contact her by phone	Assurances
Skype	Openness
Before I moved to a new state we used to go shopping together	Networks

Strategy reported	Type of strategy – Using the five factor scale of maintenance strategies
Through family gatherings or events	Networks
Primarily we communicate via text	Openness
Telephone	Openness
We also see each other in person approximately 4 times per month	Assurances
Phone	Openness
We email occasionally	Assurances
We trust each other	Positivity
Visit in person occasionally	Assurances
Visits every six weeks or so	Assurances
Texting	Openness
Text a few times a week	Assurances
We see each other every weekend	Assurances
We try to visit each other	Assurances
Email	Openness
Text	Openness
We see each other for special occasions	Networks
We are best friends	Positivity
Text	Openness
Emails	Openness
We enjoy doing things together	Positivity
Phone calls	Openness
Texting	Openness
Seeing each other in person	Assurances
I visit frequently	Assurances
Phone	Openness
Text messaging	Openness
We send cards and gifts	Assurances
Phone	Openness
Visit	Assurances
Phone communication 2-3 times per week	Assurances
Text messaging 2-3 time per week	Assurances
Facebook communication at least once per month	Assurances
Messages via other family members	Networks
We visit most often by phone	Openness
In person at Christmas	Networks
Around special events	Networks
For a week or two at the lake in the summer	Networks
Telephone calls	Openness
Phone	Openness
Mostly through phone conversations	Openness
We're lucky to see each other 1x/year	Positivity

Strategy reported	Type of strategy – Using the five factor scale of maintenance strategies
Text messages	Openness
Email	Openness
Phone	Openness
Text	Openness
In person	Assurances
Email	Openness
I spend time with them	Assurances
We talk once or twice a year over the telephone	Assurances
Spend time visiting when I am in Phoenix (...)	Assurances
Mostly through email as we live far away from each other	Openness
Phone	Openness
Email	Openness
In person	Assurances
Texting	Openness
Email	Openness
Facebook	Openness
Occasional visits	Assurances
Email	Openness
Phone calls	Openness
Face to face visits with family	Networks
We meet in person on a biweekly basis	Assurances
Usually communicate through texts	Openness
Phone calls several times per week	Assurances
Texts	Openness
Email	Openness
We talk on the phone	Openness
Talk over chat often	Openness
We attempt to have nights out just the two of us	Positivity
We watch each other's kids	Sharing tasks
Talk with them and listen to their needs	Positivity
Facebook	Openness
Texts	Openness
Phone calls	Openness
Face to face at least once a week	Assurances
Phone	Openness
Texting daily	Assurances
Periodic phone calls	Assurances
Email	Openness
Through regular email	Assurances

Strategy reported	Type of strategy – Using the five factor scale of maintenance strategies
Email	Openness
Phone	Openness
By phone calls	Openness
Facebook	Openness
Telephone	Openness
Texting	Openness
We email each other often	Assurances
Texts	Openness
We live in different states so we take turns visiting each other	Sharing tasks
Communicating through texting	Openness
We share pictures we family on Facebook	Networks
We enjoy getting together	Positivity
Email frequently	Assurances
Emails	Openness
Text messages	Openness
2 or 3 times a year we go to a movie or play	Networks
Cell phone	Openness
Regular phone conversations	Assurances