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The relationship between childhood sibling attachment and sibling social support during young and middle adulthood

Abby Ann Welander

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THE RELATIONSHIP BETWEEN CHILDHOOD SIBLING ATTACHMENT AND SIBLING SOCIAL SUPPORT DURING YOUNG AND MIDDLE ADULTHOOD

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Masters of Science
in
Psychology: Clinical Counseling

by
Abby Ann Welander
June 1997
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ABSTRACT

There have been few studies on the potential lasting effects of early childhood sibling attachments into the young and middle adult years. The purpose of this study was to assess whether the quality of childhood sibling attachments has an effect on the level of emotional and/or practical support between siblings in the young and middle adult years. One hundred ten participants between the ages of 18-60 were recruited from a mid-sized state university and were asked to complete questionnaires assessing background information, childhood sibling attachment, and current levels of emotional and practical social support from their siblings. As hypothesized, a significant, positive relationship was found between trust and communication in the childhood sibling attachment and the amount of emotional support the participant received from his/her sibling during young and middle adulthood. Feelings of alienation, however, were not significantly correlated with emotional support during adulthood. Similarly, there was a positive relationship between trust and communication in childhood sibling attachment and practical support, but no correlation between childhood sibling alienation and practical support. Unexpectedly, the amount of geographical distance between the siblings during adulthood did not moderate the amount of practical support the siblings provide each other. Overall, the findings suggest that the positive emotional qualities of the sibling attachment remain unchanged through the course of time, whereas the negative qualities of childhood sibling
attachment do not seem to have a significant effect on the level of social support provided as adults. Also, the level of practical support adult siblings provide each other does not seem to depend on the geographical distance between them. Discussion of the findings focuses on the internal working model of relationships and its application to sibling attachments.
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Chapter One: Introduction

Sibling relationships have been largely overlooked in the developmental and family literature until fairly recently (Bedford, 1989). Since the late 1970's, there has been a steady rise in research conducted on children's and older adults' sibling relationships. There are mixed reports on what variables are predictive of the quality of adult sibling relations. Most of the studies do agree that siblings provide each other with social support during childhood and in late adulthood. However, there are relatively few studies examining siblings' levels of social support during young and middle adulthood. Even fewer studies link childhood sibling attachments with social support during the young and middle adult years.

The main focus of this thesis is the relation between childhood sibling attachments and practical and emotional support during early and middle adulthood. The importance of studying siblings and the sibling bond is first discussed. In order to describe sibling attachment, the parent-child attachment and the internal working model is discussed next, which also may be applied to siblings. Most of the research reviewed focuses on sibling attachments during the childhood and elderly years. Then there is a discussion of the gap that exists in research on siblings' relationships during young and middle adulthood. The focus of this review is on the attachment between siblings during young and middle adulthood and the social support they provide each other. The hypotheses and methods of the study then are described as well as the results and discussion of the findings.
The Definition and Importance of the Sibling Relationship

According to Bank and Kahn (1982), the sibling bond is defined as many things including “a tie that unites, an obligation or an agreement, and a connection or a system of connections” (p. 15). The individuals’ shared history and family thus create a level of comfort and predictability with the sibling even when the relationship itself is difficult or uncomfortable. During times of stress and change, the interaction between siblings is at its highest level, otherwise siblings appear to lose contact over time (Bank & Kahn, 1982). Also, siblings have been found to engage in more interaction during different life cycles such as childhood and adolescence, and then the sibling relationship is reactivated again in late adulthood.

Sibling Relationships During Childhood

In order to understand the sibling attachment during young and middle adulthood and how the internal working model may be applied to siblings as well, it is important to first review the sibling relationship during childhood. Siblings play an important role in each other’s lives while growing up because they act as socializing agents during childhood and adolescence. It is normative for a child’s sibling to be their first intimate relationship with a peer (Connidis, 1989). The sibling relationship then becomes a model for appropriate interaction with friends, particularly the first friendships of childhood. This is consistent with attachment theory as the siblings learn how to act socially from not only their parents, but also their siblings. Therefore,
siblings learn from each other how to interact with peers on a daily basis, and they learn the skills needed to have a close relationship (Bedford, 1989). Siblings can teach each other through socialization and modeling and these learning processes can continue for life.

The sibling bond also may be described as much more than just a shared history or an obligation (Bank & Kahn, 1982; Cicirelli, 1982; Dunn, 1985; Dunn & Kendrick, 1982; Troll & Smith, 1976). This bond also may be described as an “attachment” to a sibling. Bank and Kahn (1982) and Cicirelli (1982) suggest that Bowlby’s attachment theory (1969/1982) might not only be applied to parents and children, but also to the siblings as well.

Attachment theory and childhood sibling attachments.

Bowlby’s attachment theory (1969/1982) states that patterns of relating are built upon the early interactions between the primary caregiver (often generalized as the mother) and the child (Bretherton, 1991). Thus, the infant is prepared to engage in social relations from birth and early maternal responsiveness to the infant is crucial to the child’s developing self. The primary caregiver serves as an object of security and the child’s attachment can be indicated from his/her attempts to maintain proximity, contact, and communication with the parent. The child may leave the parent for varying distances and times to explore the world knowing the security figure is close by (Cicirelli, 1982). How effectively the attachment figure can fill this security role depends on their skill of social interaction, especially their sensitivity to the infant’s signals.
(Bretherton, 1995). If the parent consistently ignores or misreads the child's need for closeness or autonomy, the development of open communication between the partners becomes impaired, which can lead to later social difficulties for the child.

Bowlby broadened his theory of attachment by proposing that through an individual's early relationships an "internal working model" is constructed which provides a model for future social relationships and emotional bonding (Kreppner, 1992). This suggests that the child will actually use these internal working models in creating their future experiences by recreating early patterns of interaction and communication in later interactions. If the child developed a secure attachment with the parents then they develop an internal working model of their parents as loving and responsive and also see themselves as worthy of love and support (Bowlby 1969/1982; Bretherton, 1985; Teti & Ablard, 1989). In contrast, if the child has an insecure parent-child attachment, they will hypothetically develop working models of the caregiver as unresponsive and unloving while they see themselves as unworthy of nurturance and support. Thus, the attitudes and behaviors that are acquired from these early attachment experiences shape subsequent relationships as the children reenact social behaviors that the caregiver modeled. Bank and Kahn (1969/1982) and Cicirelli (1982) believe that the attachment may be generalized to other members of the family, rather than just the primary caregiver, so that the siblings also may be a part of the child's internal working model.
Sibling attachment is also linked to children's security of attachment to their mother. Studies show that an older sibling who is securely attached will respond to his/her infant sibling's distress in the mother's absence (Stewart, 1983; Stewart & Marvin, 1984; Teti & Ablard, 1989). However, if this older sibling does not have a secure attachment with the mother he/she will not be able to comfort the younger sibling. Teti and Ablard (1989) also find that siblings are most likely to develop nonantagonistic relationships if the infant has a secure attachment and the older sibling has an even more secure attachment to the parent(s). In the case of two insecure children, presumably the products of a nonnurturant caregiving history, they reenact the behavior of the caregiver in their interactions with each other such as ignoring their sibling's needs. Stewart (1983) found further evidence that girls emulated their mothers, and boys emulated their fathers when comforting their younger siblings in the mother's absence. Thus, these studies show a direct correlation between parental attachment and the sibling relationship, and the research indicates that younger siblings look toward older, securely attached siblings for comfort. In childhood then, researchers have found evidence for sibling attachment. Brothers and sisters do indeed look to each other for comfort, responsiveness, and as a secure base from which to explore (Stewart, 1983). We also have information on older adults' sibling attachments.

Sibling Relationships During Late Adulthood

First, studies of older adult siblings often
characterize their relationship as more active than during the young and middle-aged adult years. However, there are differing opinions on the reasoning behind this increase in sibling relations. Activity increases between siblings in the late adult years because of an increase in mutual contact and due to siblings living closer to each other. For example, Suggs (1989) conducted a study on older adult siblings and her findings revealed that the greater the amount of mutual contact between elderly siblings, the higher the quality of their sibling relationship. And, the greater the sibling’s level of mutual helping behavior, (a variable which Suggs has trouble defining because it varies with each participant i.e., shopping, babysitting, emergencies), the higher the emotional quality of their sibling relationship as well. Suggs demonstrates that when siblings help one another their mutual contact is increased which often results in more activities done together. Another predictor of the quality of adults’ sibling relationships in Suggs study, is residential propinquity. Suggs suggests that the closer that people live to one another, the more activities they do together and the adult sibling literature indicates this also.

Avioli’s (1989) research offers a similar view that sibling relationships become more important through the years because they serve a social support function. Avioli argues that in order to obtain social support, the relationship must contain balanced reciprocity (i.e., balanced give and take within the relationship), maintenance of personal autonomy (i.e., maintaining independence and not being dependent on a
sibling), and optional exchange between siblings rather than obligatory exchange of support (i.e., providing psychological support because of an emotional bond, not because of a sense of obligation).

Bedford (1989) offers another explanation for the rise in psychological involvement between older adult siblings using the social motivation theory. This theory asserts that incentives for the sibling relationship are increased by late adulthood. She hypothesized that by old age, siblings have undergone personality changes and have matured enough to let go of any past rivalries or conflicts and also have entered a time where they will be more alone leading to the incentive of needing support. However, Bedford could not find significant evidence for this theory in her study. Post conventional levels of maturity were reached by only a minority of people in her study. Bedford suggests that relatively little sibling interaction often takes place during young and middle adulthood, and it maybe that the older siblings’ modes of relating have not had a chance to be modified through adult sibling experiences and so they used their childhood sibling relationship “baggage” as their guide to current relationships. Her findings support the idea that the internal working model developed during childhood carries over into adulthood.

Conidis (1989) takes this line of research a step further by not just measuring predictors of association between older siblings, but also by studying if siblings are friends in later life. If they consider themselves friends there is a higher probability of social support within the
relationship. She found that those siblings who were mutually confiding were most likely to be close friends. Their geographic proximity and parental status have a direct effect on the probability of being mutual confiders. If one or both are single or childless they are more likely to live near each other and more likely to be close friends. Gender was found not to act as a predictor of mutual confiding. However, she did find that closeness between siblings in childhood was predictor of the level of closeness they will continue to have later in life. Thus, the quality of the sibling relationship can remain unchanged throughout the course of life which is also consistent with the internal working model.

Sibling Relationships During the Early and Middle Adult Years

This review thus far has served to indicate that siblings play important roles in each other's lives during childhood and adolescence, that siblings can and do become attached to each other, and that most studies, with the exception of Bedford, find that siblings are close during late adulthood (Avioli, 1989; Connidis, 1989; Gold, 1989; Suggs, 1989). However, the quality of sibling relationships during the young and middle adult years seems to remain a mystery. Studies suggest that distancing often characterizes sibling relationships during the early and middle years of adulthood (Bedford, 1989). White and Riedmann (1992) contend that siblings are part of our "inner circle" of family of orientation when we are young, but move into the "outer circle" when we marry while the new inner circle
consists of parents, spouses, and children. Thus, according to White & Riedmann (1992), sibling ties appear stronger among those who lack parents, children, or spouses. Connidis (1989) also found a positive correlation between sibling closeness (both in physical and emotional closeness) and one or both siblings being childless. It is implied that as people grow older their children move out, they lose their parents, and may lose their spouse, and it is then that they bring their siblings back into their inner circle.

In White and Riedmann's study (1992) on middle-aged adult siblings, four factors including gender, age, socioeconomic status, and parental status, were found to be significant in siblings' level of social support. Perceived support was found to be higher for those with living sisters, regardless of the participant's gender, and for those without children. It also was found that lower education and social economic status indicated lower rates of involvement with siblings. The siblings' ages were shown to affect their relationship by reducing contact and actual exchange as the siblings became older. At the same time, their perception that siblings could be called upon for support became stronger with age. This study shows that 30% of their sample of adult siblings would call upon a sibling first for emergency help. The siblings' advancing age decreases the likelihood of providing actual services so this leads to the conclusion that the participants feel the siblings are more of a psychological social support even though the actual services siblings provide may decrease.

In similar research with middle-aged siblings, Gold
(1989) found only two factors of sibling relationships remained unchanged over time. The first was closeness, which can be defined as the strength of intimacy within their relationship, and the other factor was amount of contact, whether it be direct or by phone or mail. Two factors which were shown to increase over time were psychological involvement (i.e., the feeling that their sibling is emotionally available for support) and acceptance / approval (i.e., an increase in acceptance and forgiving of resentments or rivalries from the past). This suggests that the siblings in Gold’s study (1989) felt a stronger bond later in life which was not built on direct contact, but on a shared history. The internal working model may be applied as an explanation of Gold’s findings. The siblings’ childhood attachment may be carried over into adulthood and even strengthened throughout a lifetime. Gold’s study also shows that siblings can serve as a source of strong emotional support as they help each other cope with issues of old age.

Overall, the research studies on young and middle-aged siblings conclude that there is a low level of physical or face-to-face association between siblings during these years unless one sibling is unmarried or has no children. Then, the amount of physical contact increases again as they become older, their children move out, and their parents pass on. Siblings thus become their only tie to their family of origin during late adulthood. Although the sibling relationship seems to lie dormant as distance and physical contact decrease during these middle-aged years, the sibling bond is still there. The question is how it remains stable
throughout the years with the decrease in physical contact. Researchers suggest that the childhood attachment, derived from the internal working model of the parent-child relationship, is linked to social support during the young and middle adult years (Teti & Ablard, 1989). As stated earlier, Bank and Kahn (1992) and Cicirelli (1992) believe that this internal working model during childhood may be generalized to the siblings as well. The siblings develop this internal working model through their set of expectations concerning each other's availability and support. Thus, it is through the siblings' childhood experiences that a bond is developed, and then this bond is maintained by the internal working model.

The internal working model is directly applied to siblings' level of social support in the young and middle adult years. Siblings view each other as another source of security and a base from which they can explore. A study done by Ross, Dalton and Milgram (1980) indicates that most of the elderly people they studied saw their feelings of closeness to siblings as origins of their childhood experiences and being part of a close family. This may explain why, during middle adulthood while the relationship is nearly dormant, siblings still report being able to rely on each other in crisis situations. It also may explain why, after the siblings' parents have died and a threat has been posed to the attachment to the family, the relationship between siblings is more active (Cicirelli, 1982). In terms of the internal working model creating a set of expectations for future relationships, one study has even shown that the
more a marital partner duplicates the sibling relationship, the more successful and conflict-free the marriage will be (Bank & Kahn, 1982). This suggests that while the sibling relationship is "dormant", the individual may choose marital partners who recreate the relationship. Thus, not only does the internal working model predict the level of social support within the later sibling relationship, it also serves as a base from which they build their other means of social support. The internal working model operates in such a way that the sibling bond continues even when siblings are separated by distance and new families.

As stated earlier, there is generally a gap in the research conducted on sibling relationships during the young and middle adult years. It has been implied that the sibling relationship becomes inactive over this time, and the internal working model offers an explanation of why the siblings still feel bonded during these years. While it has been suggested that this sibling bond continues throughout a lifetime, there have been no studies directly linking childhood sibling attachment to social support between siblings in the young and middle adult years.

**Hypotheses**

In this study, it is first hypothesized that there will be a positive relationship between participants' perceived childhood sibling attachment and the degree of emotional support siblings provide each other in young and middle adulthood. In other words, the higher the score on siblings' perceived childhood attachment, the greater the level of emotional support (determined by a social support scale) they
will provide for each other during young and middle adulthood. While this has been suggested (Teti & Ablard, 1989), it has not been studied directly.

The second hypothesis is that this positive relationship between childhood sibling attachment and emotional support will not be affected by the participants’ geographic closeness. According to the internal working model theory, distance should not affect the sibling bond, and it is hypothesized that the quality of this bond is predictive of the emotional support. Thus, the emotional quality of the sibling relationship will remain unchanged through the course of time and regardless of geographic distance.

Third, it is also hypothesized that there will be a significant positive relationship between participants’ perceived quality of their childhood sibling attachment and the degree of practical support they will provide for their siblings during young and middle adulthood. However, this relationship is expected to be stronger for those participants who are living closer to their siblings compared to those who are not since they would be more physically able to help.

Finally, differences between young versus middle-aged adults on the relationship between childhood sibling attachments and emotional and/or practical support will be explored.
Chapter Two: Method

Participants

One hundred ten undergraduate and graduate students were recruited from a mid-sized southwestern university, and participated for extra credit at their instructor's discretion. In order to participate, students had to be female, have only one sibling, and be between the ages of 18-60. The average age of the participant was 27 years old. Fifty-one participants had a brother and 58 had a sister. The ethnicity of the participants was as follows: 45% Caucasian, 22% Latina, 19% African American. The average income of the participants was between $35,000- $40,000. All participants were treated in accordance with the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 1992).

Materials

The participants completed a questionnaire assessing the quality of their current adult sibling relationship (in terms of emotional and practical support), the quality of their childhood sibling attachment, and basic demographic information.

Social support scales.

The Social Support Scale used was adapted from Barrera, Sandler, & Ramsey's Inventory of Socially Supportive Behaviors (ISSB) (1981). This 40-item scale assesses the frequency with which the participants are the recipients of supportive action. The ISSB items later were divided into four components by Stokes and Wilson (1984): Emotional
Support; Tangible Assistance & Material Aid; Cognitive Information & Feedback & Clarification; and Guidance with a directive quality. For purposes of this study, only the Emotional Support and Tangible Assistance components were used. Also, the instructions for this scale were modified for this study to request subjects to report the frequency of socially supportive behaviors received from their sibling only. Examples of emotional support items include: “Told you she/he feels close to you; Expressed interest and concern in your well-being”. Examples of tangible support items include: “Watched after your possessions while you were away; Pitched in to help you do something that needed to get done”. The ISSB uses a 5-point scale to assess the frequency of social support occurring during the preceding month ranging from 1=not at all, 2=once or twice, 3=about once a week, 4=several times a week, 5=about every day.

In past studies of reliability and validity, the ISSB has been found to have adequate test-retest reliability with the total ISSB scores on the first and second administration substantially correlated, \( r = .88, \ p < .001 \). The test-retest correlation coefficients for individual items ranged from a low of .44 to a high of .91. The internal consistency of the ISSB yielded coefficient alphas of .93 and .94 for the first and second administrations of the scale, respectively. Coefficient alpha for the emotional support component is .85 and for the tangible assistance is .71. In this research study, Cronbach’s alpha for the Emotional Support Scale was .96 and the Tangible Assistance Scale was .89.

In Barrera, Sandler, & Ramsey’s study, the Arizona
Social Support Interview Schedule (ASSIS) and the Family Environment Scale (FES) were used to test the validity of the ISSB. The ASSIS assessed the available network size (the number of people who were perceived as available to serve at least one of the supportive functions) and an actual social support network size (the number of people who were reported to have actually served at least one of the supportive functions). The ASSIS and the ISSB were significantly correlated with both available $r= .42, p<.01$, and actual support network size, $r= .32, p<.05$. Thus, the participant's subjective appraisal of social support was significantly correlated between the two measures. The cohesion subscale of the FES was used to assess the participants subjective evaluation of their family's supportive behavior. The ISSB was positively correlated with the FES Cohesion subscale, $r= .36, p<.01$.

Childhood sibling attachment.

Childhood sibling attachment was measured using a revised version of Armsden and Greenberg's (1987) 25-item inventory of peer attachment. The Inventory of Parent and Peer Attachment (IPPA) includes two sections. Section I is an inventory of the quality of Parent Attachment and Section II is an inventory of the quality of Peer Attachment. Armsden and Greenberg's scale for peer attachment was revised for this study as a retrospective measure by changing the word "peer" to "sibling" and changing the present tense to the past tense. Participants responded to the questions using a 5-point Likert scale with anchors ranging from 1= "Almost Never" to 5= "Almost Always". The test includes
three subscales which assess the quality of attachment: Trust, Communication, and Alienation. Items assess the trust for the other sibling, whether or not the participants feel their needs and desires were understood by their siblings, if they perceive their siblings as having been sensitive and responsive to their emotional needs (communication), and whether the siblings helped the participants with their concerns. Also included are items which assess anger or emotional detachment (alienation) from the sibling since this is a frequent response to an insecure attachment bond.

Cronbach's alpha was used by Armsden and Greenberg to assess internal consistency. In the peer scale, 10 items assessed Trust (alpha = .91), 8 items assessed Communication (alpha = .87), and 7 items were used to assess alienation (alpha = .72). A high score of Trust and Communication and a low score of Alienation correlates with a high quality of attachment. In this study, Cronbach’s alpha for the Trust subscale = .93, Communication = .93, and Alienation = .76.

In Armsden and Greenberg’s study, three week test-retest reliabilities were .93 for the Parent Attachment and .86 for the Peer Attachment measure. Data from the Tennessee Self Concept Scale (TSCS; Pitts, 1965) was used to evaluate the convergent validity of the IPPA. The TSCS assesses overall self-esteem using the Family Self and Social Self subscales. Peer Attachment scores correlate highly with the TSCS (r = .57, p < .001). Family Self-Concept, as measured by the TSCS, appeared strongly associated with Parent Attachment (r = .78, p < .001).

^NOTE: Item number 9 from this subscale was deleted due to its negative inter-item correlation within the alienation subscale.
Demographic / background questions.

Also included in the survey was a 23-item inventory of the demographic features of the sibling relationship such as age, gender, and marital status of sibling and participant, geographic distance, frequency of contact, sibling marital status, etc. These questions were necessary in order to find possible variables associated with a secure or insecure attachment between the siblings.

Procedure

The survey was advertised within the Psychology department at CSUSB to both undergraduate and graduate courses with the professors' approval. The survey was then distributed through the Peer Advising Center in the Psychology Department where the participant had the option of completing the survey at the center or taking it home and returning it at their own convenience. This survey took approximately 30 minutes to complete. The participant was informed of the confidentiality of their responses and they are not identifiable in any way. After the survey was completed the participant returned it to the Peer Advising Center and received an extra credit slip and debriefing statement.

Scoring and Analysis

Pearson product-moment correlation coefficients were calculated between childhood sibling attachment scores and both emotional and practical support for related groups and subgroups (e.g., young and middle adulthood and different subgroups based on geographic distance). Z-tests were then
used to test the difference in strength of the relationships between older vs. younger adults and emotional and practical support. A Z-test also was used to test the strength of the relationship between geographic distance and adult emotional support. A multiple hierarchical regression was completed to test for any moderating effects of geographic distance on practical support. In this analysis, the amount of practical support (dependent variable) was regressed on the level of childhood sibling attachment (independent variable), geographic distance (moderator), and the interaction of these two variables (i.e., a two-way interaction: childhood sibling attachment x geographic distance).
Chapter Three: Results

Preliminary Analyses

For a list of the means, standard deviations, and ranges for all study measures for young and middle-aged adults, see Table 1.

Before beginning the core analyses, the intercorrelations between the three independent variables (i.e., trust, communication, and alienation from the IPPA scale) were examined. Trust and communication were highly and positively correlated ($r = .89$, $p < .001$), suggesting that these two subscales are multicollinear. Alienation was moderately correlated in a negative direction with the trust subscale ($r = -.60$, $p < .001$) and communication subscale ($r = -.52$, $p < .001$). Because such a high correlation was found between the trust and communication subscales, for the purposes of this study, the two subscales were combined by summing the scale scores and taking their overall mean.

The intercorrelation between the dependent variables (i.e., the support subscales) was examined as well. There also was a high correlation between emotional support and tangible assistance ($r = .77$, $p < .001$). Although this high correlation indicates multicollinearity between the two scales, based on the wealth of literature indicating that emotional and practical support are separate constructs and should be examined as such, the two components of social support were kept as separate measures. Moreover, emotional support and tangible assistance may be differentially related to the geographic distance between the siblings, thus, two support scales were used in this study.
Because the literature suggests that young and middle-aged adult siblings' relationships may differ, the correlations between the childhood sibling attachment variables (i.e., trust, communication, and alienation) and the support variables were to be examined separately for each age group. The young adult group was designated as between 18-39 years old and the middle-aged group as between 40-60 years. However, the data for the middle-aged adults was very limited due to the small sample size (n=20) and could not be analyzed or interpreted. Therefore, only the young adults (n=90) were included for the remainder of the analyses.

Analyses for Young Adult Sample

For a list of the pearson product-moment correlations among childhood sibling attachment subscales, social support, and geographic distance, see Table 2.

Correlation between childhood sibling attachment and social support.

The first hypothesis was that there would be a positive relationship between participants' perceived childhood sibling attachment and the degree of emotional support they provide each other in adulthood. Correlations were used to test this relationship. Results showed that the newly combined trust/communication subscale was significantly and positively correlated with the emotional support scale (r = .61, p< .001). That is, the greater the level of trust and communication between the siblings as children, the higher the level of emotional support they provided each other as young adults. Feelings of alienation between siblings
during childhood were not significantly correlated with the emotional support scale ($r = -0.16, p=ns$). The trust/communication subscale was also significantly and positively correlated with tangible assistance ($r = 0.61, p<0.001$). The greater the level of trust and communication between the siblings as children, the greater the level of tangible assistance the participants reported as young adults. The correlation between alienation in the childhood sibling attachment and current tangible assistance from their siblings indicated only a trend in the expected direction (i.e., the greater the feelings of alienation between siblings during childhood, the lower the reported level of tangible assistance they currently receive $r = -0.25, p=0.08$).

Correlation between distance and adult emotional support.

The second hypothesis was that a significant relationship between childhood sibling attachment and emotional support would not be affected by geographic distance. In order to test this hypothesis, the correlations between the IPPA subscales (i.e., trust, communication, and alienation) and the emotional support measure were examined for two distance groups. Distance was divided into 0-99 and 100 or more miles based on a review of this variable in the adult sibling literature. For the participants who lived between 0-99 miles from their siblings ($n=70$), there was a significant and positive correlation between the trust/communication subscale and emotional support ($r = 0.63, p<0.001$). That is, the higher the level of trust and
communication between siblings during childhood, the higher the level of emotional support during young adulthood. Alienation and emotional support were not significantly correlated for this distance group ($r = -.11, p=ns$). The results were similar for participants who lived 100 miles or more ($n=15$) from their siblings: there was a significant, positive correlation between the trust and communication subscales and emotional support ($r = .60, p<.05$) and no significant association between alienation and emotional support ($r = -.46, p=ns$, perhaps due to the small sample size for this analysis). Post-hoc Z-tests indicated that the correlations between the IPPA subscales and the emotional support scale were not significantly different for the participants who lived under 99 miles versus those who lived over 100 miles from their siblings.

It should be noted that twenty-eight participants lived in the same household with their siblings. This introduces a problem: could these twenty-eight participants have easier access to help and thus be qualitatively different than other participants? To test this idea, post-hoc correlational analyses were performed with these participants. For the 28 participants living in the same household, similar results were found. That is, there was a significant and positive correlation between levels of trust and communication and emotional support ($r = .61, p=.001$) and a nonsignificant correlation between alienation and emotional support ($r = -.09, p=ns$).
Multiple regression of childhood sibling attachment and geographic distance on adult tangible assistance.

The third hypothesis was that distance would serve as a moderator in the relationship between childhood sibling attachment and tangible assistance. In order to test this hypothesis, two multiple hierarchical regression analyses were run in which an IPPA variable (trust/communication or alienation) and distance were entered simultaneously on step 1 and the interaction between the IPPA variable and distance were entered simultaneously in step 2 (see Table 3). In the first regression, tangible assistance served as the dependent variable, the trust/communication subscale was the independent variable, geographical distance was the moderator, and interaction term between trust/communication and geographic distance was included. Trust/communication during childhood was a statistically significant predictor of tangible assistance, $F (3,46)=27.69, p<.05$. However, distance was not a statistically significant predictor of tangible assistance and the trust/communication x distance interaction was not statistically significant in the regression equation as well. The second regression was similar except that the alienation subscale served as the independent variable. Overall, the model was not significant $F (3,46)=2.56, p=ns$ (i.e., alienation, distance, and the interaction between the two all were not significant predictors of tangible assistance).
Chapter Four: Discussion

Linkages between Childhood Sibling Attachment and Emotional Support

The results of this study suggest that there is a positive relationship between young adult participants' perceived trust and communication with their sibling during childhood and their current perception of emotional support. However, although there was a trend indicating that alienation from siblings during childhood was related to lower levels of adult sibling emotional support, there was not a significant correlation between these two constructs. This implies that the trust and communication established in childhood between the siblings has remained over time; however, the alienation they reported during childhood may no longer be a factor in their current level of social support. These findings would support those of Gold (1989) who found that psychological involvement and acceptance or approval of the sibling was consistent over time. Thus, as previous researchers have suggested, the positive aspects of the internal working model established during the childhood sibling attachment may be carried over into adulthood (Bank & Kahn, 1992; Cicirelli, 1992; Teti & Ablard, 1989). The negative aspects (e.g., alienation), however, may be either forgotten or may become less salient during young adulthood.

The hypothesis that a positive relationship between childhood sibling attachment and emotional support would not be affected by geographical distance was supported by the findings for the young adults in this study. Similar relationships between their childhood sibling attachment and
current levels of emotional support were found whether they lived together, within 99 miles from each other, or over 100 miles apart. Again, the reported levels of trust and communication during childhood were the salient qualities in these analyses, while the alienation subscale was not significantly related to emotional support here. In other words, it may be that the positive qualities of childhood sibling attachment actually hold more importance across time and distance than the negative qualities, or perhaps the negative qualities (i.e., feelings of alienation) are more likely to be reinterpreted as the siblings grow older.

Linkages Between Childhood Sibling Attachment and Tangible Assistance

Moreover, a significant positive relationship also was found between participants' perceptions of the quality of their childhood sibling attachments and current tangible assistance they reported receiving from their sibling; however, here again it was found that trust and communication were the salient qualities of attachment and alienation was not significantly associated with the tangible assistance the young adult participants reported receiving from their sibling. One possible explanation for the insignificant correlation between alienation and tangible assistance is that fewer participants were available for these analyses due to a feature of the tangible assistance scale. That is, for the tangible assistance items there was an option for the participant to mark on the survey that they didn't need the assistance. If they marked this option for half or more of
the tangible assistance items, their data was not used. If the participant marked this "don’t need help" option for less than half of the total items on the scale, then their mean score was computed for this subscale. Of the participants in the young adult category, 41 out of 90 total participants were removed from the data due to their "overwhelming" choice of the "don’t need help" option (for the middle-aged adults, 11 out of 20 of the participants were removed for the same reason). Perhaps those participants who felt that they did need tangible assistance and weren’t receiving it were the ones to mark this option. Another interpretation of this choice to mark "don’t need help" may be that the young adults feel alienated from their siblings currently, so perhaps they do not even have contact with them currently or they do not expect help from them. This coincides with the literature (Bank & Kahn, 1992; Cicirelli, 1992) which suggests that siblings develop their internal working model through their expectations concerning each other’s availability and support. If they have learned not to expect support from their siblings as children, they may be more likely to report that they do not need support from their siblings as adults.

Marking "don’t need help" may also be a more socially desirable response than reporting that the sibling doesn’t provide help. Moreover, there might be a feeling of obligation toward a family member to provide tangible assistance regardless of any feelings of alienation. Alternatively, the adult siblings may find their help from others (e.g., spouse, friends) rather than their siblings. This idea would lead one to think that geographic distance
from siblings might be playing a role in who they choose to ask for assistance.

It was not found, however, that distance played any part in determining the amount of assistance provided to the young adults in this study. Nor was there any interaction between trust or communication and distance that could account for variance in the quality of tangible assistance. Again, the aspects of childhood sibling attachment alone (the trust and communication aspects) uniquely predicted the level of tangible assistance received from the sibling as a young adult. Perhaps the participants who had siblings who lived far away did not expect assistance from them and so rather than marking that they did not receive this assistance, they marked that they did not need it. The literature supports this finding saying that distancing characterizes the young and middle-aged adult sibling relationship (Bedford, 1989). Because this is a time when siblings develop their own family, they tend to reduce contact and actual exchange of practical support (White & Riedmann, 1992). However, regardless of a decrease in physical contact, thirty percent of siblings in White and Riedmann’s study would call their sibling in an emergency.

Limitations of Study

There are several limitations to this study that must be considered. First, a measurement of current adult sibling attachment was not included. This would have been useful in determining whether or not the childhood sibling attachment remained the same in adulthood which is what the internal
working model theorizes. For example, current feelings of alienation in the sibling relationship could have been assessed in association with the participants' response of "don't need help". Also, a general support measure could have been used in order to find out more precisely who the participants used as sources of social support. Perhaps if they received social support from people other than their siblings, they would feel they did not need their siblings help and report as such.

Another limitation to this study is the gender of the participants. This study only used female participants which may have biased the results. In the future, men also should be included in studies of sibling attachment and social support (White & Riedmann, 1992). Past research has shown sisters to be a predictor of higher emotional support which means that the results in this study may be skewed towards higher scores on emotional support.

Another major concern is the small sample size, especially for the middle-aged adult sample. Because there were not enough middle-aged adult participants, it was not possible to analyze or interpret their data. In the future, young adults should be compared to middle-aged adults to look for any differences between the two age groups in the linkages between childhood sibling attachment and adult social support.

Future Research Ideas

A longitudinal study of siblings would be useful to measure the process of the internal working model over time.
Because this study asked the adult participants to report their childhood experiences retrospectively, they may remember things with a new perspective. Another issue which has come up within this study involves the option on the tangible assistance measurement of "don't need help". This option led to some interesting results and problems, in the study which could be explored in future research. For example, how is the "don't need help" response related to childhood and current feelings of alienation from siblings.

Finally, the status variables that were assessed in the demographics section (i.e., whether the participants’ sibling was male or female, whether they were married or single, whether they had children or not) were not assessed in this study and need to be explored. In the literature (Connidis, 1989; Gold, 1989; White & Riedmann, 1992), some of these variables were found to be predictors of adult social support between siblings and may have some significance in this study as well.

Clinical Implications

The results of this study have supported the internal working model and the theory of attachment as applied to siblings. This is significant for the clinically community since the emphasis in clinical practice often is the attachment between the child and his/her caregiver, specifically on the mother. The importance of sibling attachment is often overlooked in therapy.

Furthermore, this study has practical implications for parents as well. The positive aspects of the relationship
between siblings are often overlooked in sibling research, with most researchers focusing on sibling rivalry and conflict. However, this study shows that trust and communication between childhood siblings are important for later adult social support. Therefore, parents should be encouraged to facilitate high levels of trust and good quality communication between their children, rather than just warning parents against sibling conflict.
## APPENDIX A: QUESTIONNAIRE RESULTS

### Table 1

**Means, Standard Deviations, & Ranges For All Study Measures**

<table>
<thead>
<tr>
<th>Measures</th>
<th>Young Adults</th>
<th>Middle-aged Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>(SD)</td>
</tr>
<tr>
<td>Trust</td>
<td>3.71</td>
<td>.90</td>
</tr>
<tr>
<td>Communication</td>
<td>3.43</td>
<td>.93</td>
</tr>
<tr>
<td>Alienation</td>
<td>2.57</td>
<td>.63</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>2.63</td>
<td>1.16</td>
</tr>
<tr>
<td>Tangible Assistance</td>
<td>2.30</td>
<td>1.08</td>
</tr>
<tr>
<td>Geographic Distance</td>
<td>293.2</td>
<td>953.6</td>
</tr>
</tbody>
</table>
Table 2

Pearson Product-Moment Correlations Among Childhood Sibling Attachment Subscales, Social Support, and Geographic Distance

<table>
<thead>
<tr>
<th>Scale</th>
<th>Childhood Sibling Attachment</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Trust/Communication</td>
<td>.61**</td>
<td>-.16</td>
</tr>
<tr>
<td></td>
<td>Alienation</td>
<td>.25</td>
<td>.46</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>.61**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tangible Assistance</td>
<td>.61**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geographic Distance (0-99 mi.)</td>
<td>.63**</td>
<td></td>
<td>.11</td>
</tr>
<tr>
<td>(100 or more mi.)</td>
<td>.60*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05  ***p<.001
Table 3

Predictors of Adult Sibling Tangible Assistance

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Adult Sibling Tangible Assistance</th>
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</thead>
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<tr>
<td></td>
<td>b</td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
</tr>
<tr>
<td>GEOGRAPHIC DISTANCE</td>
<td>.00</td>
</tr>
<tr>
<td>TRUST/COMMUNICATION</td>
<td>.35</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
</tr>
<tr>
<td>TRUST X GEOGRAPHIC DISTANCE</td>
<td>.00</td>
</tr>
</tbody>
</table>

F(3,46)=9.29***

R² = .38

Adjusted R² = .34

***p<.001.
References


