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**ADOLESCENTS' RECOLLECTION OF EARLY PHYSICAL
CONTACT: IMPLICATIONS FOR ATTACHMENT
AND INTIMACY**

by

Mark D. Oleson

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Family and Human Development

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ABSTRACT

Adolescents' Recollection of Early Physical Contact:
Implications for Attachment and Intimacy

by

Mark D. Oleson, Master of Science

Utah State University, 1996

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Department: Family and Human Development

Three hundred seventy-six college students responded to a measure designed to examine retrospective accounts of the physical affection received during early childhood. The study looked exclusively from the perspective of the adolescent. Assessing the importance of touch in human development, and the role it plays in adult attachment and the ability to form and maintain close and intimate relations with others was the purpose of the study.

Six separate measures were used to assess the role of touch in adolescent development: three items from Gupta and Schork to assess physical affection (touch); Simpson's attachment style measure; Gelsma, Arrindell, Van der Veen, and Emmelkamp's parental warmth measure; and Rosenthal, Gurney, and Moore's Erikson Psychosocial Inventory Scale to assess intimacy. Also, one-item measures to assess trust and parents' marital satisfaction were all

utilized in this study.

Results confirmed statistically significant relationships between parental warmth and touch, warmth and attachment, and intimacy and attachment. Related literature supported the findings of the study and point to the importance of parental warmth and touch in early childhood for competent social and emotional development during adolescence. Implications of the results and possible areas of future research are discussed.

(62 pages)

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CHAPTER I

INTRODUCTION

The creation of a home environment that will shape a well-adjusted, competent individual is one of the most difficult, yet important tasks for which anyone will ever have to take responsibility. It requires great devotion, much patience, and self-discipline. This home environment of love and affection can buffer a child against the hazards and insecurities of life (Kagan, 1978).

Harry Harlow (1958) was one of the first individuals to empirically analyze love and affection. He stated:

Love is a wondrous state, deep, tender, and rewarding. Because of its intimate and personal nature it is regarded by some as an improper topic for experimental research. . . our assigned mission as psychologists is to analyze all facets of human . . . behavior. So far as affection is concerned, psychologists have failed in this mission. . . they not only show no interest in the origin and development of love or affection, but they seem to be unaware of its very existence. (Harlow, 1958, p. 673)

Although touch is one of the most common forms (if not the most common) of love and affection, very little progress in regard to touch research has been made during the years following Harlow's observations. Researchers still attempt to side-step such "sensitive" issues. It is my attempt to bridge the gap that currently exists. The literature review goes into detail concerning the areas of touch, intimacy, and attachment research. To this point, however, nothing has been done specifically to link parents' physical affection with their children's development and how that directly affects their intimate relationships and attachment during adolescence and early adulthood.

This study will examine retrospective accounts of the physical affection received during early childhood as perceived and recalled by adolescents. The study will look exclusively at the perspective of the child, because it has been shown that even if the perceived results vary greatly from the parents' reports of affection, it is the child's perception that is ultimately more powerful (Blain, Thompson, & Whiffen, 1993). This means that even if the child's perception is not "reality-based," it becomes the child's reality. The primary theory used in the understanding of parent-child relations is the Parental Acceptance-Rejection Theory (PAR Theory). PAR Theory lays greater emphasis on a phenomenological rather than behaviorist approach. The theory makes the assumption that human behavior is affected more (not exclusively, however) by the way individuals perceive and interpret events than the actual events themselves. PAR Theory emphasizes the child's subjective experiences, rather than empirical "proof" of a parent's love or affection (Rohner, 1986). A study by Gecas and Schwalbe (1986) tested this perceptual hypothesis. They found little correspondence between parents' reports of their behavior and children's perceptions of this behavior, underscoring the point that reality is truly "in the eye of the beholder." They hold the view that perception is the central feature in defining situations that affect our attitudes and actions. These findings are very important in this particular study, since the study does take a retrospective look at touch rather than studying it longitudinally.

Few would argue that there are inherent benefits of parental touch and

affection; the questions regard the benefits and how they come about. This study examined the relationship between retrospective accounts of parental affection and the ability to maintain close, intimate relationships during adolescence.

Is there a relationship between the memories of affection received from one's parents and the ability to be intimate and close with others? Does this affection increase the likelihood of obtaining a greater degree of adult attachment with parents? The following hypotheses will address these and other relevant family issues.

1. H_0 : There is no relationship between trust and intimacy during adolescence.
2. H_0 : There is no relationship between recollections of parental warmth and recollections of touching during childhood.
3. H_0 : There is no relationship between recollections of parental warmth and adolescent attachment.
4. H_0 : There is no relationship between intimacy and attachment during adolescence.
5. H_0 : There is no relationship between perceptions of parents' marital satisfaction and intimacy during adolescence.

CHAPTER II

REVIEW OF LITERATURE

Touch

The origins of touch research are a blend of medical and psychological perspectives. The clinical literature begins with Spitz (1945), who noted the physical and emotional deterioration of institutionalized infants who were only rarely or briefly touched by nurses. In severe conditions, this situation of brief or no physical contact with nurses by institutionalized children was called marasmus, and the mortality rate for such infants was extraordinarily high. For the first time in history it was found that food and sanitary conditions alone could not adequately support life; touch had been identified as a biological necessity, not just a sentimental or romantic human desire (e.g., Casler, 1961; Korner & Grobstein, 1966).

The next major step in touch research was initiated by Harlow's (1958) famous studies on maternal deprivation and physical contact in rhesus monkeys, which provided the first scientific evidence about the role of touch in social and emotional development. Harlow's findings established the need for physical contact as a drive as basic as the need for food. It was Harlow's research that allowed contact to be intensively studied for its role as a major component of social bonding and mother-infant attachment (Ainsworth, 1979).

Although topics like "physical contact," "hugging," and "touching" all

attract considerable attention in the media and are widely acknowledged as important in child development, very little can be found in research journals, particularly in regard to the family. *Contemporary Theories about the Family* by Burr, Hill, Nye, and Reiss (1979) and Christensen's *Handbook of Marriage and the Family* (1964) have no references in their indexes to touching or physical contact in the family. Thayer (1986) expressed his concern with the lack of touch research. "Only recently have behavioral scientists begun to analyze the role touch plays in human social interaction, physical health, and emotional well-being" (p. 7). He suggested this avoidance is likely due to the difficulty of expressing human emotion in words, the delicacy of the topic, and related measurement difficulties. To help us better understand the role of touch, Thayer posed questions asking what would happen if there were no touch between people:

What would be different in the way people deal with each other if touch were eliminated? What behavioral, affective, and cognitive consequences would follow for relationships. . .? Would behaviors emerge to replace absent touch, and what might these behaviors be? (p. 7)

One of the most tangible influences of touch is its positive effect on growth in infants. A study by Field et al. (1986) found greater weight gain as well as superior performance on developmental assessments as a result of a touch program with a group of newborn infants. Another example of the benefits of touch found by Field et al. (1994) showed decreases in depression, anxiety, and stress levels in children following increased touch. Children were found to

be happier with themselves and their lives. Larsen (1975) found that when learning motor skills, children benefit greatly from increased supportive behavior (i.e., statements of affection, smiles, and physical contact such as hand holding, embracing, or patting) by the teacher.

A number of studies of infant development have demonstrated that early touch stimulation is essential to both psychological and physical well-being in the beginning years of life (Montagu, 1986). Less is known, however, about the relationship of touch to well-being in later life, but, generally, the evidence supports the claim that humans need to touch and be touched throughout their adolescent and adult years (Banmen, 1986). Most of the touch research has focussed on who touches whom, where, and how often, while little is known about the meanings that are conveyed and the correlates of touching.

A study conducted by Fromme et al. (1989) reported that a child's comfort with touch was directly related to higher levels of socialization, self-confidence, assertiveness (and other forms of effective interpersonal skills), social competence, satisfaction with life, with oneself, and with one's childhood, as well as active rather than passive modes of coping with problems. Gupta and Schork (1995) have observed that when body boundaries have not been "consistently outlined [defined] by touch, caress, and secure holding, individuals in later life experience their body self and body image as disproportionate, misshapen, and overly large" (p. 186). In their retrospective account ($n = 173$), they found a direct correlation between a perception of relative deprivation of hugging during

early childhood and drive for thinness among females (but not males) in their sample (Pearson $r = .29$), suggesting the importance of touch in infancy for the development of self-esteem (body image) among females.

A study by Anisfeld, Casper, Nozyce, and Cunningham (1990) found that physical contact greatly affected later attachment between mother and infant. They found that the initial touch between mother and infant created a desire for further physical contact with the mother in later years. This physical contact led to contact of other sorts (i.e., emotional). Other correlational and observational studies have also identified close physical contact as an antecedent to attachment (e.g., Ainsworth, Blehar, Waters, & Wall, 1978; Egeland & Farber, 1984; Grossman, Grossman, Spangler, Suess, & Unzner, 1985).

Research on touch is fairly new and much is yet to be understood. Above all other communicative behaviors, "touch is the most immediate, most intimate, and most commanding because it is so closely tied to identity. . . sex, status, and aggression" (Thayer, 1986, pp. 10-11). Despite the seeming importance of touch, however, there is growing concern that children are being touched less because of potential accusations of sexual abuse (Field et al., 1994).

From the above findings, we can reasonably conclude that touch should be an important area of study (present and future). In addition, there are many aspects of nurturing that are closely linked to touch. Among these are parental warmth, affection, and parental support.

Parental Warmth

From the moment of birth, the infant is continually processing information. The child learns through its sense of touch, in particular, the parents' warmth (Baumrind, 1971). Being rocked, held, cuddled, and cared for are some of the most satisfying first impressions about life (Kagan, 1978). Research indicates that holding the newborn increases its ability to tolerate emotional stress in later life; held infants have also been found to develop faster both emotionally and physically (Kagan, 1978). Therefore, it appears evident that much of human development is related to how affectionate and warm one's parents were during infancy and childhood.

Although warmth is difficult to define, findings from almost every study discussing warmth suggest that it is an important aspect of parenting (e.g., Barber & Rollins, 1990; Egeland & Farber, 1984; Gecas & Schwalbe, 1986; MacDonald, 1992; Rohner, 1986). The most consistent findings in the warmth literature indicate that a continuing relationship of warmth and affection between parents and children results in the acceptance of adult values by the child, identification with the parent, and a generally higher level of compliance (Rollins & Thomas, 1979). These findings (that warmth of the model facilitates imitation and identification), however, have long been noted by social learning theorists (e.g., Bandura, 1977). As might be expected, parental warmth is also associated with the development of conscience and an internalized moral orientation. Lack of warmth during early childhood, on the other hand, is associated with

delinquency and aggression rather than relationships based on positive interaction (Grusec & Lytton, 1988). Low warmth is also characteristic of indifferent or neglectful parents. Jessor and Jessor (1974) found that adolescents with a relative absence of deviant behaviors (i.e., drug/alcohol use and sexual activity) were more likely to have parents who not only disapproved of these behaviors, but also exhibited both a reasonable degree of control and had an affectionate relationship with the child.

Affection

Many studies have demonstrated the benefits of parental affection in a child's self-esteem and coping skills (e.g., Barber & Rollins, 1990; Gecas & Seff, 1990). Adolescents whose parents exhibit affection, acceptance, and support are likely to report higher self-esteem, lower anxiety and depression, greater happiness and scholastic achievement, and fewer behavioral problems (e.g., Barnes & Farrell, 1992; Goodyer, 1990; Roberts & Bengtson, 1993). Roberts and Bengtson (1993) showed that the psychological benefits of parent-child affection do not diminish during a son's or daughter's late teens and early twenties. They suggest this is because parent-child affection bolsters self-efficacy, which in turn contributes to later well-being.

Parental Support

Gecas and Seff (1990) found a lack of parental support to be associated with negative socialization outcomes for adolescents—low self-esteem,

delinquency, deviance, drug abuse, and other problem behaviors. Barnes and Farrell (1992) found that parental support is an important predictor of adolescent outcomes. They likened support to praise, encouragement, physical affection, and any other acts that would indicate to the child that he or she is accepted and loved. High parental support was a key socialization factor in the prevention of adolescent deviant behavior.

Parental support is one of the most robust variables in the socialization literature. It is positively related to cognitive development, conformity to adult standards, moral behavior, internal locus of control, self-esteem, instrumental competence, and academic achievement of children and adolescents. . . . general label "social competence." The greater the amount of parental support, the greater the amount of children's social competence. (Gecas & Seff, 1990, p. 947)

These findings were consistent with other parental socialization literature (Baumrind, 1994).

Other Correlates of Touch

The psychological significance of touch has been studied in social and emotional development (e.g., Harlow, 1958; Spitz, 1945); however, no studies have examined the role of parental touch and affection in intimate adolescent relationships. Thus it becomes necessary to look at studies involving affection and touch that have been done. One of the most intriguing breakthroughs in the study of physical contact was made by Harlow (1958). He found that rhesus monkeys have similar responses to humans in relation to affection, including contact and clinging. Therefore, the findings of Harlow can help us better

understand the role of affection in the lives of humans.

In child care, the role of touch in the child's development is understood, but child care professionals, like teachers, fear the possibility of lawsuits. Mazur and Pekor (1985) posed the question of who is being hurt more by this fear, the child or the teacher? "Warm moments spent with a child can be personally rewarding for teachers. The loss of spontaneous affection would be a serious detriment for both children and teachers" (p. 11). Appropriate physical contact between teachers and children plays an important role in any early childhood program. Hugs and physical caretaking are all part of the daily experiences shared between infants and their caregivers. This nurturance helps to create (as well as sustain) the relationships of trust that enable children to feel secure and to develop autonomy (Erikson, 1963).

Another area of relevant study has been that of physical contact between help providers and clients. Aguilera (1967) found that patients touched by nurses in a psychiatric ward talked more than those who were not. Thayer (1986) mentioned that it was these nurses who were among the first to notice how important touch seemed to be in promoting health and healing. Their observations provided the groundwork that allowed for later research on the health-promoting benefits of touch. Pattison (1973) and Whitcher and Fisher (1979) found that clients who were touched engaged in deeper self-exploration and self-disclosure. Hubble, Noble, and Robinson (1981) found that touched clients judged counselors to be significantly more expert than did nontouched

clients. Overwhelmingly, girls had more physical contact than boys (especially for hugging), and younger children had significantly more physical contact and positive outcomes.

Although the importance of touch in human development is well documented, it is apparent that more research is needed to better understand the specific role it plays in such aspects as adult attachment and the ability to form and maintain close and intimate relationships with others. Assessing these factors is the primary purpose of this study.

Attachment

For years, Bowlby (1969, 1982) and Ainsworth et al. (1978) have suggested that the child's relationship with the mother serves as the prototype for future relationships. Healthy parent-child attachment is critical for the individual's social and emotional development. In recent literature, there has been a trend to extend the definition of attachment beyond the mother-child dyad, to include any significant relationships throughout the lifespan (Blain et al., 1993). With this "new" definition, attachment theory has particularly important implications for adolescents. Developmentally, adolescence is a period during which individuals explore and initiate relationships. One of the primary tasks of adolescence is to learn to develop close, supportive, and intimate relationships outside the family (Garcia-Preto, 1988). For example, Collins and Read (1990) found that college students who were comfortable feeling close to others, and

who were able to depend on others (characteristics of secure attachment), reported greater satisfaction with the level of social support they received.

In recent years, the ideas of Bowlby and Ainsworth have become so widely accepted that "research and theory related to the human affectional system have been dominated by the attachment paradigm, and thus have yet to be studied adequately as separate entities. . . which they must" (MacDonald, 1992, p. 764). In his article, MacDonald discussed three key reasons for needing to make this research distinction: (1) Positive feelings of affection seem to result from a different biological system than do emotions that are central to attachment research, such as fear, distress, and anxiety. (2) Attachment occurs even in the face of abusive behavior by the caregiver. (3) Gender differences play a very instrumental role in social relationships throughout life. . . but there are no sex differences involved in security of attachment, however (p. 765). This consideration suggests the need to develop a conceptualization of touch and affection that is independent of attachment, yet will explore the apparent relationship between these two phenomena.

Gove and Crutchfield (1982) found that attachment between parent and child was one of the strongest inhibitors of adolescent delinquency. Gove and Crutchfield's findings support the earlier theoretical work conducted by Hirschi (1969). He suggested three reasons in defense of this hypothesis. First, attached children spend more time with their parents, leaving limited opportunity for delinquent action. Second, parents are more "psychologically present," even

in their physical absence, forcing the child to ask "What will my parents think?" (Hirschi, 1969, p. 90). Third, the child is used to sharing its life with parents because of former intimate communication, which in turn will enhance and increase the likelihood of future communication. Ultimately, the child cares what the parent thinks because there is mutual love and respect.

The relationship between mother and child is both dynamic and bi-directional (Goodyer, 1990). An active relationship emphasizing infant development and mutual satisfaction is the basis for Bowlby's attachment theory (Bowlby, 1969). Bowlby (1973) also stressed the importance of holding, reaching out, and hugging in the development of "bonds of attachment."

Sroufe and Fleeson (1988) have suggested that early secure attachments provide a learning experience through which individuals internalize relationships. This representation of relations is then carried forward to influence expectations and attitudes of self and others. Thus, they concluded that early parenting experiences exert a significant influence on later social interactions and relationships. Such findings provide support for Bowlby's (1969) notions of the importance for early attachment. They also support the hypothesis that failure to attach has negative consequences for the development of social competence. Hinde (1987) stated that the central purpose of family relations for children is to promote competent socio-emotional development.

Berman, Heiss, and Sperling (1994) found that continued attachment to parents correlated with measures of adjustment in both school settings and peer

situations through the transition to college. These findings are deemed important in the context of this studies hypotheses. If attachment to parents does in fact correlate with adjustment to school and peer situations in college, then there is likely a relationship between attachment and intimacy (a construct based on the ability to develop peer relations).

Intimacy

Using both family and individual theory, scholars have identified the ability to develop and maintain intimate relations as a primary developmental task for young adults. From a systems perspective, Carter and McGoldrick (1988) observed that a primary task for young adults is to separate from their family of origin, develop a sense of self, and find a spouse to form a new family subsystem. From a psychosocial perspective, Erikson (1968) used a psychodynamic approach to illustrate that establishing a sense of identity during adolescence serves as the foundation for developing intimate relationships in young adulthood.

Erikson's (1963) sixth stage of intimacy/isolation is designated as significant for resolution of the following issues: (a) the expansion of self-concept to include others, (b) the willingness to take risks in interpersonal relationships, and (c) the perception and practice of mutuality (Hamachek, 1990). The resolution of this stage requires a sense of sacrifice and compromise on the part of the individual to transcend conflicts that might arise

between individuals based on differences in values, roles, and experiences (Hamachek, 1990).

The level of intimacy that individuals experience within relationships has a profound effect on their social development, personal adjustment, and physical health (Moss & Schwebel, 1993). Specifically, intimacy plays a key role in individuals' successful completion of developmental stages (i.e., trust vs. mistrust), solidification of friendships, and attainment of marital happiness and satisfaction (Erikson, 1963; Schaefer & Olson, 1981). Failure to obtain satisfactory levels of intimacy in a romantic relationship has been identified as the largest category of problem behavior motivating people to obtain outpatient psychotherapy and is the most frequent reason given by couples for divorce (Waring, 1988).

The literature is replete with evidence testifying to the importance of relationships in our lives. Perlman and Duck (1987) mentioned a study that asked college students what made their lives meaningful-- 89% mentioned personal relationships. For many students, this was the only source of meaning they mentioned. It is such evidence that drives us to better understand the role that intimacy plays in our lives.

Summary

Although the importance of touch in human development is well documented, it is necessary to conduct more research to better understand the

specific roles that touch plays in such aspects as adult attachment and the ability to form and maintain close and intimate relationships with others. Assessing these aspects is the purpose of this study.

CHAPTER III

METHODS

Subjects

The data for this study were obtained from a questionnaire completed by 376 consenting college students, 312 single and 64 married, attending Utah State University during Fall Quarter 1996. For the purpose of this study, the 312 single students were examined. Examining married students would involve a separate study. The convenience sample was taken from one Psychology 101 and one Family and Human Development 120 class. Subject participation was voluntary, with extra credit being offered in both classes for participation. Freshman classes were selected with the intent of obtaining students that had left home recently. Out of the 312 single students examined, 74 were male (23.7%), 236 were female (75.6%), and 2 were unknown (missing information). One hundred twenty-eight (41.0%) were freshmen, 120 (38.5%) were sophomores, 55 (17.6%) were juniors, and 9 (2.9%) were seniors—mean age = 19.9. The sample was predominantly White (94.8%). A wide variety of college majors were represented in the sample. Forty-three different majors were represented, with the majority being elementary education (14.9%), psychology (8.4%), business (6.8%), family and human development (5.8%), or undecided (22%).

The sample consisted of college students currently attending Utah State

University. There are inherent weaknesses in this type of sampling strategy. It is a convenience sample; therefore, it is not a random sample and is not representative or generalizable to the larger population.

Description of Measures

The 49 items were randomly ordered and presented in a questionnaire format. Subjects were asked to provide demographic information and to respond to questions about parental warmth, physical affection, trust, perceptions of marital satisfaction, attachment, and intimacy on a 5-point Likert scale.

Demographics

Demographic data such as gender, race, age, marital status, and year in school were asked for descriptive purposes.

Physical Affection (Touch) Measure

The items related to physical affection were developed by Gupta and Schork (1995) to study the effects of touch deprivation. In it, the subjects responded on a 10-point scale. For standardization purposes, a 5-point Likert scale was used throughout this questionnaire. In addition, to reduce confusion regarding parental touch, the word "cuddled" was removed and "hugged" was used exclusively. The following is a list of the three items that were used in the questionnaire: "I have fond memories of being hugged by my parents/caregivers during my early childhood years"; "I wish I had been hugged more during my

childhood"; and "At the present time, I often wish I could get more hugs from others."

The need for touch is a need that varies a great deal from individual to individual. The adequacy of touch is therefore a largely subjective matter. Item 1 measures the recollections of being hugged during childhood. Item 2 measures the desire for touch, and Item 3 measures the current desire for touch.

In their article, Gupta and Schork (1995) failed to report reliability and validity for their measure, and due to the recency of their study, the study has yet to be replicated. In Gupta and Schork's study, they treated each item separately, reporting Pearson's r ranging from $-.23$ to $.30$. Therefore, it seems apparent that the three items are measuring different dimensions of touch, justifying their use of the three items as separate measures rather than collapsing them into a single scale.

Attachment Style Measure

Attachment style was assessed using a 13-item, "face valid" measure contained within the Simpson (1990) adult attachment measure. Face validity for the instrument is evidenced by the fact that the construct is extracted straight from the conceptual definitions of secure, avoidant, and anxious/ambivalent attachment provided by Hazan and Shaver (1987). All responses use a 5-point Likert scale ranging from "almost always true" (5) to "hardly ever true" (1). Subjects rated the items according to how they feel toward romantic partners in general. Since the attachment questions were originally directed toward

romantic partners, the questions from the original Simpson study were reworded to specify dating partners rather than using the term "other" to refer to the romantic partner. "I find it relatively easy to get close to my dating partner"; "I'm somewhat uncomfortable being too close to anyone"; and "My dating partner is often reluctant to get as close as I would like" are sample questions from secure, avoidant, and ambivalent attachment styles, respectively. Five items were taken from Simpson's "secure" description (Cronbach's alpha = .51). Higher scores reflect greater security. Four items were taken from the "avoidant" description (Cronbach's alpha = .79). Higher scores indicate greater avoidance. And four items were taken from the "anxious/ambivalent" description (Cronbach's alpha = .59). Higher scores reflect greater anxiousness.

Parental Warmth Measure

The questionnaire was extracted from a study (Gerlisma, Arrindell, Van der Veen, & Emmelkamp, 1991) that investigated whether the framework of the EMBU (Egna Minnen Beträffande Uppfostran [My Memories of Upbringing]), a questionnaire assessing adults' recollections of rearing styles, could be retrieved in a version adapted for adolescents, the EMBU-A.

A factor analysis of the original form of the EMBU (Strauss & Brown, 1978) found emotional warmth to be the highest-order factor. Subsequent analyses showed the EMBU scales ($N = 841$) to have high internal consistency, and to be cross-nationally invariant (e.g., Arrindell et al., 1986; Arrindell et al., 1988).

In designing the EMBU-A, all 81 items of the original EMBU were included. For the purpose of this study, however, the questions from the emotional warmth factor (19 items) were extracted. The alpha coefficient for emotional warmth shows high reliability ($\alpha = .88$) for the EMBU-A scale. Due to the large number of correlations involving the EMBU-A and PBI (Parental Bonding Instrument), the Bonferroni test for inequality was used to reduce the possibility of obtaining correlations from chance alone. The findings showed a positive correlation between the PBI and the EMBU-A emotional warmth scale ($r = .70$).

A few minor adjustments were made from the original EMBU-A warmth scale to better meet the needs of this particular study. Questions were reworded to statements, and adjusted from second to first person. For example, "Does your father/mother show that he/she loves you" was changed to "My parents/caregivers show that they love me." Finally, the original EMBU-A asked about mother-father separately; however, their findings concluded that the youth rated their parents in much the same way on all scales, so wording has been amended from "father/mother" to "parents/caregivers."

Intimacy Measure

The Erikson Psychosocial Inventory Scale (EPSI), developed by Rosenthal, Gurney, and Moore (1981), has six subscales based on the first six of Erikson's stages (trust vs. mistrust, autonomy vs. shame, initiative vs. guilt, industry vs. inferiority, identity vs. identity confusion, and intimacy vs. isolation).

Each subscale has 12 items, half of which reflect successful and half unsuccessful resolution of the "crisis" of the stage. For purposes of this study, the 12-item intimacy subscale was extracted. No adjustments were made to the wording of the questions, as had been the case with the other measures.

Reliability estimates provided by the developers of the instrument (Rosenthal et al., 1981) show adequate to high alpha coefficients for each subscale (alpha = .57 to .75, $n = 622$) (alpha for intimacy = .63). As might be expected, trust correlated highest with intimacy ($r = .41$). This is likely the case because in order to develop close, intimate relationships, there needs to be a high level of trust present. To test this hypothesis, the following trust question was formulated: "I am always able to put trust in my parents/caregivers."

Rosenthal et al. (1981) assessed construct validity in two ways. First, scores on the EPSI were correlated with scores on Greenberger and Sorensen's (1974) Psychosocial Maturity Instrument (a self-report attitude inventory). Correlations were positive and significant. Second, age and sex differences in students' scores on the EPSI were examined. As expected, 11-year-olds showed higher scores than 9-year-olds, and males had higher scores than females on the Autonomy, Initiative, and Identity subscales; females scored higher than males on the Intimacy subscale. This is consistent with the current thought regarding gender differences in instrumentality and expressiveness that exist in our culture (Waterman, 1992). It was concluded that the EPSI is a useful measure for researchers interested in development from early adolescence and

in mapping changes as a function of life events (Isapa, Thornburg, & Gray, 1990).

Trust and Marital Satisfaction Measure

From the previous discussion on intimacy, it would be expected that trust would correlate highest [among Erikson's stages] with intimacy ($r = .41$). This is likely the case because in order to develop close, intimate relationships, there needs to be a high level of trust present. To test this hypothesis, the following trust question was formulated: "I am always able to put trust in my parents/caregivers." To assess marital satisfaction, subjects were asked: "My parents/caregivers were satisfied with their marital relationship while I was growing up." To keep the questionnaire at a reasonable length, however, only one question was asked of trust and marital satisfaction. In future studies, it would be beneficial to include larger measures.

Questionnaire

The questionnaire (see Appendix A) was approved by the Institutional Review Board at Utah State University (Appendix B).

Research Design Limitations

History

In a correlational design (with no control group utilized), it is impossible to eliminate the "possible threat of history." There is always a possibility that an

extraneous variable occurring prior to or simultaneously with the study may alter the outcome.

Maturation

Although in most studies this is a valid concern, it is not in this particular study. The questionnaire is short and concise, and was only administered once, with no follow-up study.

Pretest Sensitization

Pretest sensitization was not a problem because there was no pretest.

Demand Characteristics

Demand characteristics are always a possible threat. Subjects will always try to guess the nature of study involved and many will alter their behavior/responses accordingly. I think this occurs to a degree even with the implementation of single/double blind experiments.

Novelty Effects

Given the characteristics of this particular study—a questionnaire administered to college students in a classroom setting (the most common type of study done)—I do not feel this was a problem. Thus, novelty effects were most likely minimal.

Biased Assignment of Subjects to Conditions

Because this is a correlational study, biased assignment of subjects to

conditions is not applicable.

Differential Attrition

Differential attrition is not applicable because there was only one group; however, attrition in general (loss of subjects from the study over time) should be considered as a possibility.

Experimental Confounds

Differential treatment of subjects is always a concern and danger to be aware of. This, however, was not considered a problem in this study because the questionnaire was administered with written instructions for each student to follow, and the same instructions were used in each classroom setting.

Experimenter Expectancy Effects

Experimenter expectancy effects is not a concern since this study did not involve perception, judgment-based decisions, observations, or other qualitative assessment methods; rather, a quantitative study was used to evaluate responses provided in a questionnaire.

Diffusion/Imitation of Treatment

Diffusion/imitation of treatment is not applicable because it is a correlational study involving only one group.

Procedures

These measures were filled out by the students outside of the classroom. Extra credit was offered by the professors as incentive to complete the survey. No verbal explanation for the questionnaire was given. The students were informed that the instructions were located at the top of the questionnaire. The instructions for section one read as follows: "Please indicate how you typically feel toward romantic (dating) partners in general. Keep in mind that there are no right or wrong answers. Use the 5-point scale provided below and circle the appropriate number that best represents your own personal feelings. All responses will remain anonymous. Thank you for your participation in this study." The only instructional change made for section two was its emphasis on parental rather than romantic relationships.

CHAPTER IV

RESULTS

Following the procedures outlined in the Methods section, a statistical examination was made of the data to determine possible relationships between intimacy, attachment, parental warmth, physical affection, trust, and marital satisfaction. First, the psychometric properties of the measures are presented. Next, results for each of the research questions are presented. Finally, the findings are summarized.

Psychometric Properties of Instruments

Erikson Psychosocial Inventory Scale (EPSI) Intimacy Subscale

Reliability was estimated using Cronbach's alpha, an indicator of internal consistency within subscales. As shown in Table 1, the reliability coefficient for intimacy was .72, notably higher than that reported by Rosenthal et al. (1981)-- (.63). This may be the case because the EPSI was originally designed for 13- to 17-year-old adolescents; however, this study involved college students who (as Erikson would argue) have obtained higher levels of intimacy, due to advanced development.

Attachment Measure

As was the case with intimacy, the reliability coefficient for attachment was higher (.74) for this study than the original study conducted by Simpson

Table 1

Reliability Coefficients and Interscale Correlations Depicting the Psychometric Properties of Measures

Measures	-1-	-2-	-3-	-4-	-5-	-6-
1. Intimacy	(.72)					
2. Attachment	.66**	(.74)				
3. Par. Warmth	.26**	.26**	(.95)			
4. Affection (touch)	.13	.17*	.58**	(.64)		
5. Trust	.13	.22**	.69**	.36**	(***)	
6. Marital Satis.	.08	.13	.41**	.25**	.35**	(***)

Note. Diagonal elements depict Cronbach alpha coefficients.

* $p < .05$, ** $p < .01$, *** single-item scale. ($N = 293$)

(1990) -- (.62). I would argue that it would be higher for reasons similar to those noted in the intimacy measure section. Because we are examining college students, it may be assumed that because of their greater number of life experiences and relationships that they would have obtained increased levels of attachment.

Parental Warmth Measure

By far the largest reliability coefficient belonged to parental warmth (.95),

surpassing the coefficient in the original use of the EMBU-A by Gerlisma et al. (1991) – (.88). The disparity can likely be explained by taking a closer look at the samples being studied. The sample in the study by Gerlisma et al. (1991) consisted of high school students, whereas this study examined college students (primarily freshmen in their first quarter of school) who have just left home—a phenomenon that is likely to polarize the subjects' feelings. They either want to be with their family, or they are happy to be away from them.

Physical Affection (Touch) Measure

Although Gupta and Schork (1995) failed to report reliability and validity for their measure (and due to the recency of the study, it has yet to be replicated), from the reliability coefficients provided in Table 1 (.64), it appears that this is an adequate measure for examining hugging and physical affection (aspects of touch).

Trust and Marital Satisfaction Measures

Because each of these measures consisted of one question each, internal consistency (reliability coefficients) could not be calculated.

Validity

Looking at the interscale correlations found in Table 1, one can see that the measures behave as had been anticipated. For example, the correlation between perceived marital satisfaction and parental warmth was $r = .41$,

indicating that the two scales share 16.8% variance (83.2% unique). This degree of overlap is not surprising given that both scales tap quality of relationships within the family environment. On the other hand, marital satisfaction and attachment correlated at $r = .13$, indicating a relatively small degree of shared variability between these two constructs (1.7%) with much uniqueness (98.3%). Conceptually, the two constructs should be unrelated given that level of attachment is achieved long before any perceptions of marital satisfaction develop. On the other hand, trust ($r = .22$) and physical affection (i.e., hugging) ($r = .17$) both play a much larger and apparent role in the attachment process. In regards to intimacy, parental warmth plays a large role ($r = .26$), sharing 6.8% of the explained variance. This positive relationship would be expected, since both intimacy and parental warmth imply strong, close relationships. Psychometric tests attest to the appropriateness of using the selected measures to address the research questions posed in this study—reliabilities ranged from .64 to .95. Correlations evidenced that similar concepts were empirically related in the expected, positive directions.

Research Questions

Each hypothesis is restated and the method of statistical analysis given. Presentation of related statistics and comments on relevant findings follow. Conclusions about the meaning of the results are provided in the following section.

The first hypothesis states that there is no relationship between trust and intimacy during adolescence. To test this hypothesis, a correlation coefficient was generated between the Trust and Intimacy subscales from the Rosenthal et al. (1981) EPSI. The result from this analysis yielded an $r = .13$; $p > .05$, indicating no statistically significant relationship between the two constructs. Based upon the results from this analysis, the null hypothesis (stating no relationship) was retained.

The second hypothesis states that there is no relationship between recollections of parental warmth and recollections of touching during childhood. To test this, a correlation coefficient was generated between Gerlisma et al.'s (1991) Parental Warmth subscale and Gupta and Schork's (1994) Physical Affection (Touch) scale. The results yielded an $r = .58$; $p < .01$, indicating a statistically significant relationship between parental warmth and touch. Based upon the results from this analysis, the null hypothesis (no relationship) was rejected. The accepted alternative hypothesis indicates a positive relationship between parental warmth and touch.

The third hypothesis states that there is no relationship between recollections of parental warmth during childhood and adolescent attachment. To test this hypothesis, a correlation coefficient was generated between Gerlisma et al.'s (1991) Parental Warmth subscale and Simpson's (1990) Attachment scale. The results found $r = .26$; $p < .01$, indicating a statistically significant relationship between parental warmth and attachment. Based upon these

results, the null hypothesis (no relationship) was rejected. The alternative hypothesis states that a positive relationship exists between parental warmth and attachment.

The fourth hypothesis states that there is no relationship between intimacy and attachment during adolescence. To test this hypothesis, a correlation coefficient was calculated between Rosenthal et al.'s (1981) Intimacy subscale and Simpson's (1990) Attachment subscale. The results of the analysis yielded an $r = .66$; $p < .01$, indicating a statistically significant relationship between intimacy and attachment. Based upon these findings, the null hypothesis (no relationship) was rejected. The accepted alternative hypothesis indicates that a positive relationship exists between intimacy and attachment.

The fifth hypothesis states that there is no relationship between perceptions of parents' marital satisfaction and intimacy during adolescence. To test this hypothesis, a correlation coefficient was generated between perceptions of marital satisfaction and Rosenthal et al.'s (1981) Intimacy subscale. The results yielded an $r = .08$; $p > .05$, indicating that there is no statistically significant relationship between adolescents' perceptions of their parents' marital satisfaction and intimacy. Based on the results of this examination, the null hypothesis (no relationship) was retained.

Summary of Findings

Hypothesis testing yielded statistically significant relationships for three of the five research questions. Specifically, the results showed strong, positive relationships between parental warmth and touch (hypothesis 2); parental warmth and attachment (hypothesis 3); and intimacy and attachment (hypothesis 4). No relationships were found between trust and intimacy (hypothesis 1), or perceptions of marital satisfaction and intimacy (hypothesis 5).

CHAPTER V

DISCUSSION

Results from this study have shown that parental warmth, parents' marital satisfaction, physical affection (touch), trust, and attachment are all related to intimacy. The following synopsis reviews aspects of the sample and issues in measurement. Observations about the hypotheses are presented along with the limitations of the study. Potential application and practical implications of current findings in regard to intervention and future family study are discussed.

Summary of Findings

Hypothesis 1

There is no relationship between trust and intimacy during adolescence. As stated in Chapter IV, the relationship between trust and intimacy was found to be statistically insignificant ($r = .13$). A closer look at the writings of Erikson will shed light on these findings. Trust is associated with stage one in the developmental process, a stage occurring during the ages of 0 - 2. Intimacy, on the other hand, does not occur until stage six, postadolescence and the beginning of young adulthood. The difference in age during stage development may be one explanation for the weak relationship found. Another explanation is evident by examining the results of Rosenthal et al. (1981). Her findings showed a relationship between trust and intimacy of $r = .41$. The trust scale used by Rosenthal et al., however, is a 12-item scale, whereas the scale used in

this study is a single-item scale. Thus, the relationship could also be attributable to different measures of trust.

Hypothesis 2

There is no relationship between recollections of parental warmth and touching during childhood. As mentioned prior, a statistically significant ($r = .58$) relationship was shown between recollections of parental warmth and touch. As discussed by Ainsworth (1979), touch is a major component of social bonding and mother-infant attachment. Physical contact creates a desire not only for physical contact with the parents in later years (Anisfeld et al., 1990), but also to seek contact of other sorts (i.e., emotional). Jessor and Jessor (1974) found that adolescents with a relative absence of deviant behaviors (i.e., drug/alcohol use and sexual activity) were more likely to have parents who not only exhibited parental warmth, but also had an affectionate relationship with the child. Although it is difficult (if not impossible) to determine a causal relationship (does parental warmth lead to increased touch, or does touch lead to increased parental warmth?), it is apparent that parental warmth and touch are both integral in optimal child-rearing and that there is a strong relationship between the two.

Hypothesis 3

There is no relationship between recollections of parental warmth during childhood and adolescent attachment. Although a smaller relationship exists

between parental warmth and attachment ($r = .26$) than parental warmth and touch ($r = .58$), the relationship is statistically significant ($p < .01$). The attachment literature is replete with evidence to support this hypothesis. For years, Bowlby (1982) and Ainsworth et al. (1978) have emphasized that parental warmth (particularly the mother) and attachment go hand in hand, suggesting that the child's relationship with the parent serves as a prototype for future relationships. The development of these two factors is critical for the individual's social and emotional development. Bowlby (1973) also stressed the importance of holding, reaching out, and hugging (factors of exhibited parental warmth) in the development of attachment bonds. Collins and Read (1990) found that college students who were comfortable feeling close to others, and who were able to depend on others (characteristics of secure attachment), reported greater satisfaction with the level of support they received from both social and parental sources. Such evidence supports the findings of this study (a significant relationship exists between parental warmth and attachment), and emphasizes the importance of their formation in early childhood for competent social and emotional development (Hinde, 1987).

Hypothesis 4

There is no relationship between intimacy and attachment during adolescence. The strongest correlation among the five hypotheses existed between intimacy and attachment ($r = .66$). The findings of Berman et al. (1994), that continued attachment to parents correlated with measures of adjustment in

both school settings and peer situations through the transition to college, are particularly relevant in the context of this particular hypothesis. If attachment to parents does in fact correlate with adjustment to school and peer situations in college, then there is likely a relationship between attachment and intimacy (a construct that is based on the ability to develop peer relations). Once again, the question is raised in regards to cause-effect. Does intimacy lead to attachment or attachment lead to intimacy? Arguments could be made in both instances. Sroufe and Fleeson (1988) found that early parenting experiences exert a significant influence on later social interactions and relationships. Recent literature (Blain et al., 1993) has extended the definition of attachment beyond the mother-child dyad to include any significant relationships throughout the lifespan. Such claims open the door of opportunity to conduct further research to uncover specific ways that attachment and intimacy are related.

Hypothesis 5

There is no relationship between perceptions of parents' marital satisfaction and intimacy during adolescence. Findings revealed a statistically insignificant (weak) relationship between perceptions of parents' marital satisfaction and intimacy ($r = .08$). There are several possibilities for explaining why no relationship exists between the variables. The first explanation involves the prior hypothesis. Attachment shares a large portion of the variance (43.6%) with intimacy, leaving lesser relationships to be shared (with intimacy). Second, only one question is asked in regards to marital satisfaction, and it asks for the

subjects' "perception." Many of the students' parents had been divorced prior. Which marital relationship do they respond to? Most (as indicated in the "additional comments" section) responded to the better relationship of the two. In addition, "perception" may leave too much room for individual interpretation. Although there appears to be a weak relationship between perceptions of parents marital satisfaction and intimacy, it would be difficult to argue their "separate" importance in the development of the child (Carter & McGoldrick, 1988).

Limitations and Recommendations for Future Reference

It is crucial to discuss and address the limitations involved in exploratory research. As the various threats to validity are dealt with appropriately, greater confidence can be placed in the findings and greater success will be encountered by those who utilize these findings in better understanding the role of the parents in the development of their child's intimacy and attachment.

In a correlational design (with no control group utilized), it is impossible to eliminate the possible threat of history. There is always a possibility that an extraneous variable occurring prior to or simultaneously with the study may alter the outcome. In addition, memory distortion is a very likely problem. Subjects either remember what they want to remember (which may or may not be accurate), or they remember the most recent occurrence.

Demand characteristics are always a potential problem. Subjects will

always try to guess the nature of study involved and many will change their behavior and/or responses accordingly. Even though the questionnaire was anonymous, many students will want to look or sound good, and thus answer questions according to how they "should be," rather than how they really are (social desirability).

The study was also a cross-sectional sample of the population, which only takes a look at one group at one point in time. A much better study would be designed to assess the students over time (longitudinally). It is recommended that future studies select from the desired population the subjects for the study and go to their home and observe both the child and parent in regard to the variables being studied (in this case intimacy, parental warmth, marital satisfaction, trust, touch, and attachment), and then assess the same individuals upon their entrance in college.

Another limitation in this study is its self-report format. Self-report may not truly reflect the underlying behaviors and interactions that occur on a daily basis between parents and their children. Future studies should seek the perception of the parents in addition to the perception of the child.

In addition, only single students were examined. In future studies, it would be beneficial to look at the relationships developed by married students, and how their results compare with those found for single students.

The sample itself contains many limitations. The sample was small ($N = 312$), primarily White (nearly 95%) college students at Utah State

University. It is a convenience sample, and therefore it is not random, and not representative or generalizable to the larger population. Ideally, the sample would be much larger, would ethnically represent the population, would be a random sample, and would include non-students as well as students, therefore being representative and generalizable to the population.

Although the research with touch is necessarily correlational in nature and thus does not permit causal inferences, it does suggest that touch has advantages not only for physical maturation but also for the development of positive social behaviors and self-confidence among young children.

It is now widely acknowledged that touch is of fundamental significance to human functioning, not only among children but also adults (Jones & Brown, 1996). This provides an opportunity for future research to conduct experiments in which social touch can be closely investigated. As discussed in the literature, touch is an all-encompassing issue. It leads to socialization, self-confidence, assertiveness, social competence, satisfaction with life, and attachment . . . all of which are keys in preventing adolescent deviant behavior. Therefore, skills training should not only be taught to professionals such as teachers, marital therapists, and family life educators, but should also be taught to parents.

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APPENDICES

PERSONAL OPINION SURVEY

Date of Birth: _____ Sex: Male _____ Female _____

Marital Status: Single _____ Married _____ Divorced _____

Year in School: Freshman _____ Sophomore _____ Junior _____ Senior _____

Ethnicity: _____ Major: _____

DIRECTIONS: Please indicate how you typically feel toward romantic (dating partners) in general. Keep in mind that there are no right or wrong answers. Use the 5-point scale provided below and circle the appropriate number that best represents your own personal feelings. All responses will remain anonymous. Thank you for your participation.

1 2 3 4 5

Hardly ever
True

Almost always
True

SECTION 1 (25 Q's)

- 1 2 3 4 5 1. I'm basically a loner.
- 1 2 3 4 5 2. I find it difficult to trust my dating partner completely.
- 1 2 3 4 5 3. I keep what I really think and feel to myself.
- 1 2 3 4 5 4. I'm comfortable having my dating partner depend on me.
- 1 2 3 4 5 5. I often worry that my boy/girl friend doesn't really love me.
- 1 2 3 4 5 6. I'm ready to get involved with a special person.
- 1 2 3 4 5 7. I think it's crazy to get too involved with people.

1 2 3 4 5

Hardly ever
True

Almost always
True

- 1 2 3 4 5 8. I have a close physical and/or emotional relationship with another person.
- 1 2 3 4 5 9. My dating partner is often reluctant to get as close as I would like.
- 1 2 3 4 5 10. I worry about my boy/girl friend leaving me.
- 1 2 3 4 5 11. I don't like my dating partner getting too close to me.
- 1 2 3 4 5 12. I prefer not to show too much of myself to others.
- 1 2 3 4 5 13. I find it easy to make close friends.
- 1 2 3 4 5 14. I care deeply for others.
- 1 2 3 4 5 15. I often want to merge completely with the people I date, and this desire sometimes scares them away.
- 1 2 3 4 5 16. My dating partner often wants me to be more intimate than I feel comfortable being.
- 1 2 3 4 5 17. I get embarrassed when someone begins to tell me personal things.
- 1 2 3 4 5 18. I'm nervous whenever anyone gets too close to me.
- 1 2 3 4 5 19. Being alone with other people makes me feel uncomfortable.
- 1 2 3 4 5 20. I find it relatively easy to get close to my dating partner.
- 1 2 3 4 5 21. I'm warm and friendly.

1	2	3	4	5
Hardly ever True				Almost always True

- 1 2 3 4 5 22. It's important to me to be completely open with my friends.
- 1 2 3 4 5 23. I worry about being abandoned by my dating partner.
- 1 2 3 4 5 24. I'm somewhat uncomfortable being too close to anyone.
- 1 2 3 4 5 25. I'm not very comfortable having to depend on my dating partner.

SECTION 2 (24 Q's)

DIRECTIONS: For this section, please indicate how you typically feel toward your parents/caregivers in general. Keep in mind that there are no right or wrong answers. Use the 5-point scale provided below and circle the appropriate number that best represents your own personal feelings. All responses will remain anonymous. Thank you.

1	2	3	4	5
Hardly ever True				Almost always True

- 1 2 3 4 5 1. My parents/caregivers make it clear that they love me.
- 1 2 3 4 5 2. My parents/caregivers show that they love me.
- 1 2 3 4 5 3. I feel that my parents/caregivers love me.
- 1 2 3 4 5 4. My parents/caregivers don't mind helping me if I have to do something difficult.

	1	2	3	4	5
	Hardly ever True			Almost always True	
1 2 3 4 5	5. I feel that my parents/caregivers are proud of me if I do something really well.				
1 2 3 4 5	6. I can count on help and understanding from my parents/caregivers if I'm unhappy.				
1 2 3 4 5	7. My parents/caregivers show that they love me, for example by giving me a hug.				
1 2 3 4 5	8. My parents/caregivers often pay me compliments.				
1 2 3 4 5	9. My parents/caregivers allow me to have different opinions from their own.				
1 2 3 4 5	10. My parents/caregivers were very satisfied with their marital relationship while I was growing up.				
1 2 3 4 5	11. My parents/caregivers are interested in my schooling.				
1 2 3 4 5	12. I wish I had been hugged more during my childhood.				
1 2 3 4 5	13. My parents/caregivers accept me just the way I am.				
1 2 3 4 5	14. I feel my parents/caregivers take my opinion into account.				
1 2 3 4 5	15. I feel my parents/caregivers like being with me.				
1 2 3 4 5	16. My parents/caregivers are interested in my hobbies and what I like doing.				
1 2 3 4 5	17. I have fond memories of being hugged by my parents/caregivers during my early childhood years.				

	1	2	3	4	5	
	Hardly ever True				Almost always True	
1 2 3 4 5	18. I believe my parents/caregivers tried to provide me with a happy youth during which I could learn about all sorts of different things (ie., through books and excursions and so on).					
1 2 3 4 5	19. At the present time, I often wish I could get more hugs from others.					
1 2 3 4 5	20. I feel that my parents/caregivers and I like each other.					
1 2 3 4 5	21. I am always able to put trust in my parents/caregivers.					
1 2 3 4 5	22. If things aren't going well for me, my parents/caregivers try to console or help me.					
1 2 3 4 5	23. My parents/caregivers hug me often.					
1 2 3 4 5	24. If I've done something stupid, I can make it up to my parents/caregivers.					

ADDITIONAL COMMENTS: