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Attachment Patterns Between Hearing Children and Deaf Primary Caregivers

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Attachment Patterns Between Hearing Children
and Deaf Primary Caregivers

BY

Bette L. Witcraft

1950-

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
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ATTACHMENT PATTERNS BETWEEN HEARING CHILDREN
AND DEAF PRIMARY CAREGIVERS

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in School Psychology
Eastern Illinois University
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ABSTRACT

This study extends previous research on attachment patterns, formed by infants with primary caregivers who noncontingently or inconsistently respond to the infant's attachment signals, to the population of hearing children of deaf primary caregivers. It was hypothesized that, due to the simple mechanical problem of the deaf primary caregiver's inability to hear the infant's attachment signals, e.g. crying, hearing adolescent children of deaf primary caregivers will demonstrate higher Anger Distress Scale scores as measured by the Adolescent Attachment Questionnaire than a control group. Results support the hypothesis. A sample of 19 hearing adolescents with deaf primary caregivers rated themselves significantly higher on the Anger Distress Scale than did the control group of adolescents with hearing parents ($p < .05$).

ATTACHMENT PATTERNS BETWEEN DEAF CHILDREN
AND HEARING MOTHERS

Introduction

Overview of Attachment Theory

Attachment theory, as first explained by John Bowlby (1969, 1973, 1980), posits a biologically based system of specific behaviors organized to maintain or restore safety through proximity to a special and preferred other (the attachment figure). Bowlby proposed that infants are predisposed to form an attachment to the caregiver, that the infant has a repertoire of attachment behaviors (e.g. sucking, crying, smiling, grasping) which facilitate this relationship, and that this attachment relationship serves a biological function – primarily the protection of the infant from harm. First attachments are usually formed by 7 months; attachments are formed to only a few persons; and virtually all infants become attached (Main, 1996).

The classic experimental design for assessing mother-infant attachment is the Ainsworth Strange Situation – a structured laboratory procedure designed to assess children's attachment on the basis of their responses to a stranger when they are with their mother, when they are left alone, and when they are reunited with their mothers (Ainsworth & Wittig, 1969). The researchers found that the way the child reacts to the return of the mother is the key element and that the responses fell into three categories: Anxious/avoidant, Secure, and Anxious/resistant-ambivalent.

Anxious/avoidant (A). During the time the mother and child are left alone together in the playroom, anxious/avoidant infants are more or less indifferent to where their mothers are sitting. They may or may not cry when their mothers leave the room. If they do become distressed, strangers are likely to be as effective at comforting them as their mothers. When the mother returns, these children may turn or look away from her instead of going to her to seek closeness and comfort. About 23 percent of U.S. middle-class children show this pattern of attachment (Cole & Cole, 1996).

Securely attached (B). As long as the mother is present, the securely attached child plays comfortably with the toys in the playroom and reacts positively to the stranger. These children become visibly and vocally upset when their mothers leave, and they are unlikely to be consoled by a stranger. When the mother reappears and they can climb into her arms, however, they quickly calm down and soon resume playing. This pattern of attachment is shown by about 65 percent of U.S. middle-class children (Cole & Cole, 1996).

Anxious/resistant-ambivalent (C). Anxious/resistant-ambivalent children have trouble from the start in the Strange Situation. They stay close to their mothers and appear anxious even when their mothers are near. They become very upset when the mother leaves, but are not comforted by her return. Instead, they simultaneously seek renewed contact with their mother and resist her efforts to comfort them.

They may cry angrily to be picked up with their arms outstretched, but they will struggle to climb down once they are in their mother's arms. These children do not readily resume playing after their mother returns. Instead, they keep a wary eye on her. About 12 percent of U.S middle-class children show this pattern of attachment (Cole & Cole, 1996).

More recently, researchers, working with maltreated and high-risk infants, have observed an additional fourth pattern of attachment behavior that does not fit into the original Strange Situation classification scheme. Researchers found a combination of avoidance and resistance characterized by children who lacked a coherent and organized strategy for dealing with the stress of separation from and reunion with the attachment figure (Crittenden, 1988; Main & Solomon, 1986, 1990). Main & Solomon (1986) described this lack of an organized strategy and these abnormal behavior patterns as a "Disorganized/disoriented" pattern of behavior.

Bowlby's formulation suggests that developing attachments can be disrupted by conditions that interfere with adult responsiveness (Bowlby, 1971; van IJzendoorn, Goldberg, Kroonenberg, & Frenkel, 1992). Attachment writers from Bowlby on have conceived of attachment as embracing behaviors, affects, and cognitions that are organized or patterned in response to common variations of the caregiver's sensitivity to a child's signals for proximity (Ainsworth, Blehar, Waters, & Wall, 1978; Sroufe & Waters, 1977, emphasis added). The importance of the role of sensitive

responsiveness in the development of an attachment relationship has been documented in both correlational and experimental studies (van IJzendoorn, et al., 1992). In an early study of the antecedents of attachment, Ainsworth and Bell (1969) hypothesized that differences in the responsiveness of mothers to their infants' signals would result in different patterns of attachment. They found that the babies of mothers who responded quickly and appropriately to their cries when they were 3 months old and who were sensitive to their needs during feeding were likely to be evaluated as securely attached at 12 months.

Many studies have confirmed Ainsworth and Bell's findings. In comparison with mothers of insecurely attached infants, mothers of securely attached infants have been found to be more involved with their infants, more responsive to their signals, more appropriate in their responsiveness, and more positive in their emotional expression (Isabella, 1989). On the other hand, children raised by extremely insensitive mothers are especially likely to be rated as insecurely attached (Schneider-Rosen et al., 1985; van IJzendoorn et al., 1992). Inconsistent responsiveness has been shown to be related to insecure-resistant/ambivalent attachment status as assessed in the Strange Situation (Ainsworth et al., 1978). Mothers of infants deemed insecure-resistant/ambivalent in the Strange Situation were not rejecting, but were inept in holding, noncontingent in face-to-face interaction, and

unpredictable in their responses to their infant (Ainsworth, et al., 1978; Main, 1996).

In a meta-analysis of 34 clinical studies on attachment, the hypothesis was tested that maternal problems such as mental illness lead to more deviating attachment classification distributions as opposed to child problems (van IJzendoorn et al., 1992). Results showed that groups with a primary identification of maternal problems show attachment classification distributions highly divergent from the normal distribution. The data suggest that if mothers suffer from mental illness or engage in disturbed caregiving behavior, their children cannot compensate for the resulting lack of maternal responsiveness and are vulnerable to insecure forms of attachment (van IJzendoorn, et al., 1992).

This meta-analysis is consistent with the position advanced by attachment theorists that the mother plays a more important role than does the child in shaping the quality of relationships (van IJzendoorn, et al., 1992). Indeed, the aspects of maternal behavior that are shown to shape the relationship are precisely those that are geared to the needs and behaviors of the infant (i.e., sensitivity and responsiveness).

The literature does not appear to contain any published studies investigating the nature of the primary caregiver-infant attachment patterns between hearing children and deaf parents. This researcher asserts that the simple, basic, mechanical problem of the deaf primary caregiver - not

hearing the hearing infant's attachment signals - results in the kind of disrupted, noncontingent, and/or insensitive response behavior on the part of the primary caregiver that will result in higher than normal incidence of insecure-ambivalent/resistant attachments between the primary caregiver and infant.

Stability of Attachment Patterns over Time

Because this study is based on an attachment pattern formed in infancy but measures attachment in adolescence, the long term stability of attachment patterns requires discussion. Studies have investigated the stability of attachment patterns over time, comparing classifications in adolescence or young adulthood and the same individual's Strange Situation attachment classifications (Waters, Hamilton, & Weinfield, 2000). In a California study involving 17 year olds from 30 nontraditional families, 77% of the adolescents who were seen with their mother as infants in the Strange Situation assessments exhibited corresponding (secure v. insecure) mental states when measured as adolescents (Hamilton, 2000). In a Minnesota-based study involving 21 year olds from 50 middle-class families, the mental states of 78% of the young adults were predictable from infancy after individuals suffering negative life events were removed, leaving a 70% match with the full sample (Waters, Merrick, Treboux, Crowell, & Albersheim, 2000). Similar findings had been partially anticipated in a study of 77 Canadian mothers and their adult daughters in which a 75% match was obtained

between attachment as assessed when infants and attachment assessed as adults (Weinfield, Stroufe, & Egeland, 2000).

The Adolescent Attachment Questionnaire

The Adolescent Attachment Questionnaire (AAQ), a brief questionnaire to assess attachment characteristics in adolescents, was developed and validated in a large normative sample ($n = 691$) and a sample of 133 adolescents in psychiatric treatment (West, Rose, Spreng, Sheldon-Keller, & Adam, 1998). The AAQ is a self-report questionnaire consisting of three three-item scales. The items are Likert-scaled with responses ranging from "strongly disagree" to "strongly agree" (see Appendix A). The AAQ was developed to assess attachment characteristics in adolescents and is based on dimensions identified as relevant to defining parent-adolescent attachment (Ainsworth, 1985; Weiss, 1982; West et al., 1998). Using a construct-oriented approach to scale development, the AAQ developers derived the scales of the AAQ a priori from theoretical considerations (West, et al., 1998). The instrument developers report that the scales conform closely to attachment theory and represent important constructs within the definition of attachment and that the scales demonstrate strong convergent validity with a widely used interview-based assessment of attachment, the Adult Attachment Interview.

AAQ Scales

Availability Scale. Attachment provides a unique relationship with another individual who is perceived as

available and responsive and who is turned to for emotional and instrumental support. Bowlby (1973) points out that not only must the attachment figure be available but that he or she also needs to be perceived as willing to act responsively and as dealing effectively with attachment-related distress and anxiety. To assess these aspects of an attachment relationship, the developers of the AAQ developed a scale to assess the extent to which the adolescent has confidence in the attachment figure as reliably accessible and responsive to most of his/her attachment needs. This scale is called Availability.

Angry Distress Scale. Bowlby identified anger directed toward an attachment figure as a reaction to the frustration of attachment desires and needs. As Bowlby (1973, p. 255) observed, "...being anxious, especially that an attachment figure may be inaccessible or unresponsive when wanted, increases hostility" (Bowlby, 1973, as cited in West et al, 1998). The AAQ developers include Angry Distress as a scale tapping negative affective responses to the perceived unavailability of the attachment figure.

Goal-Corrected Partnership Scale. In the development of the attachment bond, Bowlby (1969) and Marvin (1977) speak of progression to a "goal-corrected partnership" in which the child begins to perceive and respond to the attachment figure as someone with his/her own plans and goals. Empathetic to the attachment figure's needs and feelings, the child becomes

increasingly responsive to him or her as a separate individual (West, et al., 1998). The third scale, Goal-Corrected Partnership, involves the assessment of the extent to which the adolescent considers and has empathy for the needs and feelings of the attachment figure.

Psychometrics of the AAQ

All scales demonstrate satisfactory internal reliability and agreement between scores for adolescents from a normative sample who completed the AAQ twice (West et al., 1998). As reported by the AAQ developers; Cronbach's alpha ranged from .62 to .80, indicating a satisfactory degree of internal consistency. For all three scales, the mean difference score was close to zero (the value zero was contained in the 95% confidence interval), demonstrating agreement between scores at time one and time two (West et al., 1998).

Adolescents in the clinical sample also completed the Adult Attachment Interview (AAI). The Adult Attachment Interview (AAI), a semi-structured interview focused on attachment relationships and events in early childhood, is generally considered the "gold standard" for classifying attachment status in adolescents and adults (West et al., 1998). Discussion of the AAI and its convergent validity with the AAQ is further warranted by the fact that it provides a more direct theoretical link to the infant classifications as developed based on the Strange Situation and because the previously discussed longitudinal studies supporting the long

term stability of the infant attachment classifications all utilized the AAI to assess the adolescent and young adult participants.

The validity and reliability of the AAI has been established in a number of studies with high correlations between parental AAI and infant strange situation classifications reported retrospectively (Ainsworth and Eichberg, 1991; Grossman et al., 1988, Main et al., 1985) as well as prospectively (Benoit & Parker, 1994; Fonagy et al., 1991; Ward & Carlson, 1995). Attachment classifications derived from the AAI, autonomous-secure, dismissing, and preoccupied/enmeshed, parallel the infant-caregiver Strange Situation classifications of secure, insecure-avoidant, and insecure-resistant/ambivalent, respectively (see Appendix B).

The AAQ demonstrated high convergent validity with the AAI (West et al., 1998). Scale statistics, as reported by the AAQ developers, indicate that participants classified as secure on the AAI scored significantly different than other participants on the AAQ Availability scale; participants classified as preoccupied on the AAI scored significantly differently than other participants on the AAQ Anger Distress scale; and, participants classified as dismissing on the AAI scored significantly differently on the AAQ Goal-Corrected Partnership scale. These interscale correlations support the utilization of the Angry Distress scale alone as was done in the present study. Further, according to the instrument developers, the correspondence between the AAQ scales and the

primary classifications according to the AAI support the construct validity of the AAQ scales. Adolescents who were classified as secure according to the AAI reported more available responsiveness of the attachment figure. Adolescents who were classified as preoccupied with attachment issues according to the AAI reported more anger distress with their attachment figure. Adolescents who were classified as dismissing of attachment according to the AAI reported less partnership with their attachment figure (West et al., 1998).

This study was based on the hypothesis that hearing children of deaf primary caregivers will demonstrate evidence in adolescence consistent with an insecure-ambivalent pattern of attachment formed in infancy. More specifically, the purpose of this study will be to test the hypothesis that adolescent hearing children of a deaf primary caregiver will score higher on the Anger Distress scale as measured by the AAQ than will a control group consisting of hearing adolescents with hearing primary caregivers.

METHOD

Participants

This study included a sample of 19 hearing adolescents between the ages of 14 and 18 who had a deaf primary caregiver (hereinafter referred to as the "deaf" sample). In addition to age, inclusion criteria included status as a hearing child of a profoundly deaf primary caregiver - the mother in all instances here. Seven of the participants were

male and 12 were female, all but one were Caucasian and one was African-American. Of the 19 participants in the deaf sample only eight families were represented, as participants averaged 2-3 siblings from an individual family. Five of the deaf sample reported being first born. All participants in the deaf group were living at the time of the study with their nuclear families and attending middle or high schools in the Champaign-Urbana, Illinois area.

A control group consisted of 18 hearing adolescents, between the ages of 15 and 18, of hearing primary caregivers (hereinafter referred to as the "hearing" sample). Twelve of the hearing group were female and six were male. The hearing group contained four Afro-Americans, one Hispanic and thirteen Caucasian participants. Of the 18 participants in the hearing sample, only two were siblings. Six reported themselves as first borns. All participants in the hearing group were living at the time of the study with their nuclear families and attending a high school in the Asheville, North Carolina area.

Informed consent and home telephone numbers were obtained from each participant's parent.

Procedure

Participants were called at home in the evening during the school week and orally administered the brief self-report AAQ instrument along with a brief demographics questionnaire. Demographic information gathered included age, birth-order, the identity of the primary caregiver, and whether this

caregiver was hearing impaired. Responses were coded in order to provide confidentiality. Although the Angry Distress scale was the only measurement of interest, the entire Questionnaire was administered. Potential possible responses ranged from 1 (Strongly Disagree) to 5 (Strongly Agree) for each item. The Angry Distress scale, as does each AAQ scale, consists of three items. The highest total Angry Distress scale score possible was 15. Because the statements that make up the Angry Distress scale are worded negatively, the higher the score, the more perceived anger indicated.

Results

Analysis of the data indicated that the adolescents in the deaf sample scored significantly higher on the Angry Distress scale than did the adolescents in the hearing sample, $t(35) = 2.38$, $p < .05$). The descriptive statistics for the Angry Distress Scale for both groups are shown in Table 1.

Table 1. Descriptive statistics on the Angry Distress Scale.

	<u>Deaf Sample</u>	<u>Hearing Sample</u>
<u>By item:</u>		
Item 1 Mean	3.26	3.17
Item 4 Mean	3.63	2.83
Item 7 Mean	3.53	2.67
<u>Overall Scale:</u>		
Mean	10.42	8.67
SD	2.19	2.28
95% confidence interval	9.36-11.48	7.54-9.80

DISCUSSION

As hypothesized, the results of this study found that hearing adolescents of deaf primary caregivers demonstrated some evidence consistent with insecure-resistant/ambivalent attachments of infancy. It is proposed that this may be due to the limitation on consistent responsiveness to the infant's attachment signals imposed by the primary caregiver's inability to hear said signals. Results suggest that hearing impaired parents should be included in the population of parents who may have difficulty in fostering secure attachments in their infants.

Two aspects of the study warrant further discussion as they may be reflected in the results. First, it was initially hoped to obtain a sample of only first born hearing adolescents of profoundly deaf caregivers as it is likely that the first born, with no older siblings to assist the deaf caregiver, would experience the purest form of the lack of consistent responsiveness. Due to difficulty in locating a substantial number of first-borns, all willing adolescents who qualified were included in the study, regardless of birth order. It is possible that results may be even more significant with a first-born only sample.

Secondly, it must be noted, as described above, that out of the 19 subjects, only 8 families were represented. This raises the issue of representation and consequently, generalization of these results as it is possible that each group of siblings represented the same experience 2-3 times

rather than 2-3 discrete experiences. Therefore, it may be that the true sample size was closer to 8 (the number of families) than 19. There are certainly family dynamics and environmental variables, beyond the hearing of the primary caregiver, that may explain similar experiences among family members. A better test, in terms of generalizability, may be a study of a larger number of participants, each from a different family and all first born.

Of further consideration is the admission by the AAQ developers that while the scales appear to relate in a meaningful way to the traditional three-category AAI classification system, it might not be reasonable to regard the scales as directly measuring security or insecurity in the relationship (West, et al., 1998). At issue is the nature of the self-report type of instrument. Attachment status derived from the AAI, requiring complex discourse analysis, is based on the evaluation of unconscious processes whereas self-report instruments, such as the AAQ, are more likely to reflect the mediating effect of conscious evaluation of self and social desirability of responses.

As the AAQ was developed to be a brief, efficient yet sound, theoretically and psychometrically, instrument, it is more suited to large scale studies. A more thorough investigation of the hypothesis tested here would be the utilization of the lengthy, expensive and more complicated AAI.

Finally, while not subjected to analysis, it is interesting to note the small difference in the means between the two groups on item number one of the Angry Distress Scale ("My parents only seem to notice me when I'm angry"). This raises the possibility that this item does not discriminate between attachment styles as posited by the developers but rather reflects an attitude or perception intrinsic to the "adolescent condition".

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Appendix A.

ADOLESCENT ATTACHMENT QUESTIONNAIRE SCALE ITEMS AND
ITEM/SCALE MATCH.

Strongly Agree	Somewhat Agree	Neither Agree or Disagree	Somewhat Disagree	Strongly Disagree
5	4	3	2	1
Item				Scale
1	My parents only seem to notice me when I am angry.			Angry Distress
2	I am confident that my parents will listen to me.			Availability
3	I enjoy helping my parent whenever I can.			Goal-Corrected Partnership
4	I often feel angry with my parent without knowing why.			Angry Distress
5	I am confident that my parent will try to understand my feelings.			Availability
6	I feel for my parent when he/she is upset.			Goal-Corrected Partnership
7	I get annoyed at my parent because it seems I have to demand his/her caring and support.			Angry Distress
8	I talk things over with my parent.			Availability
9	It makes me feel good to be able to do things for my parent.			Goal-Corrected Partnership

Appendix B

CORRESPONDENCE OF INFANT STRANGE SITUATION AND THE ADULT ATTACHMENT INTERVIEW
CLASSIFICATIONS AND THE ADOLESCENT ATTACHMENT QUESTIONNAIRE SCALES.

Infant Strange Situation	Adult Attachment Interview	Adolescent Attachment Questionnaire
<p><u>Secure (B)</u></p> <p>Shows signs of missing parent on first separation. Cries during second separation. Greets parent actively. After brief contact with parent, settles and returns to play.</p>	<p><u>Secure-Autonomous (F)</u></p> <p>Coherent collaborative discourse is maintained during description and evaluation of attachment-related experiences, whether these experiences are described as favorable or unfavorable. Speaker appears to value attachment while being objective regarding any particular experience or relationship.</p>	<p><u>Availability Scale</u></p> <p>Assesses the extent to which the adolescent has confidence in the attachment figure as reliably accessible and responsive to most of his/her needs.</p>
<p><u>Avoidant (B)</u></p> <p>Does not cry on separation. Attending to toys or environment throughout procedure. Actively avoids and ignores parent on reunion. Moving away, turning away, or leaning away, when picked up. Unemotional. Expressions of anger are absent.</p>	<p><u>Dismissing (D)</u></p> <p>Normalizing, positive descriptions of parents are unsupported or contradicted by specific memories. Negative experiences said to have no effect. Transcripts are short, often with insistence on lack of memory.</p>	<p><u>Goal-Corrected Partnership Scale</u></p> <p>Assesses the extent to which the adolescent considers and has empathy for the needs and feelings of the attachment figure.</p>

Resistant-Ambivalent (C)

Preoccupied with parent throughout procedure. May seem actively angry. Alternatively seeking and resisting parent, or may be passive. Fails to settle or return to exploration on reunion, and continues to focus on parent and cry.

Preoccupied (E)

Preoccupied with experiences. Seeming angry, confused, and passive, or overwhelmed. Some sentences grammatically entangled or filled with vague phrases. Transcripts are long, some responses irrelevant

Angry Distress Scale

Assesses negative affective responses to the perceived unavailability of the attachment figure.

Disorganized-Disoriented (D)

Disorganized or disoriented behaviors displayed in parent's presence.

Unresolved-Disorganized (U-d)

During discussions of loss or abuse, shows striking lapse in monitoring of reasoning or discourse. reasoning or discourse

No Equivalent Scale