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Source: *Merrill-Palmer Quarterly*, January 1995, Vol. 41, No. 1 (January 1995), pp. 91-103

Published by: Wayne State University Press

Stable URL: <https://www.jstor.org/stable/23087456>

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Loneliness in Young Children and Infant-Mother Attachment: A Longitudinal Study

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Although investigators have begun recently to elucidate the correlates of childhood loneliness, few have addressed empirically the developmental precursors of loneliness. Attachment theory provides one perspective from which to consider the familial antecedents of childhood loneliness. The proposition was examined here that one precursor of early childhood loneliness is insecure attachment. It was expected that the most loneliness would be reported by children who, as infants, had been classified insecure-ambivalent. As predicted, the most loneliness in early childhood was reported by children classified insecure-ambivalent in infancy. The least loneliness was reported by children classified insecure-avoidant in infancy, and an intermediate level of loneliness was reported by children classified secure in infancy. Findings are discussed in terms of the relative contributions of infant-mother attachment and infant temperament, and parallels are drawn to the literature on loneliness in adults.

Few would dispute that loneliness, described by Weiss (1973) as a "gnawing . . . chronic distress without redeeming features" (p. 15), is a negative experience. Research on loneliness in both adults and children has revealed that most people endorse this description (e.g., Cassidy & Asher, 1992; Peplau & Perlman, 1982). Recent investigations of the social and psychological correlates of childhood loneliness have further illustrated the difficulties of lonely children. Studies of third- through sixth-grade children have indicated that children who report loneliness and social dissatisfaction are more likely than other children to be rejected by their peers (e.g., Asher & Wheeler, 1985) and to report low perceived self-competence (e.g., Rubin, Hymel, & Mills, 1989). Social withdrawal

Support for the research presented in this paper was provided by a grant from NICHD (RO1HD15496) and by a NIMH Research Scientist Development Award (KO2MH00486) to the third author. We thank Pamela Maxson, Ann Jackson, and Janet Welsh for their help with the data collection. Correspondence may be sent to Lisa Berlin, Center for Young Children and Families, Teachers College, Columbia University, Box 39, New York, NY 10027.

Merrill-Palmer Quarterly, January 1995, Vol. 41, No. 1, pp. 91–103.
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has been shown to be another correlate of loneliness. In several studies of subgroups of rejected children, withdrawn-rejected children have reported more loneliness than aggressive-rejected children (e.g., Boivin, Thomassin, & Alain, 1989; Parkhurst & Asher, 1992). Connections between loneliness and social withdrawal have been highlighted also by a longitudinal investigation in which measures of passive withdrawal, sensitivity/isolation, and isolation/withdrawal all predicted fourth- and fifth-grade loneliness (Rubin et al., 1989; Rubin & Mills, 1988).

Similar correlates of loneliness have been identified in kindergarten and first-grade children. In a recent study, young children who reported greater loneliness were more likely than others to be rejected by peers (Cassidy & Asher, 1992). Loneliness in these young children also was linked to problematic social behavior: high-lonely children were described by teachers and/or peers as more aggressive, more disruptive, more withdrawn, and less prosocial than low-lonely children (Cassidy & Asher, 1992).

Although these recent investigations have begun to define the correlates of childhood loneliness, there has been little empirical examination of the developmental precursors of loneliness. Some of the first to theorize about the antecedents of loneliness traced its origins to early family relationships (e.g., Sullivan, 1953; Weiss, 1973). Their hypotheses reflect a larger psychodynamic tradition in which early family processes are posited as important precursors of later relationships (e.g., Erikson, 1963; Freud, 1933/1965). Whereas associations between loneliness and family relationships have been examined and demonstrated in studies of loneliness in adolescents and adults (e.g., Lobdell & Perlman, 1986; Shaver & Rubenstein, 1980), researchers of childhood loneliness have just begun to address this connection by contemporaneously examining indices of childhood loneliness and different aspects of family functioning. For example, evidence of a connection between childhood loneliness and "family structure" has been revealed, with children living with both parents or one parent reporting less loneliness than children in "other" arrangements such as living with relatives or in foster care (Quay, 1992). Clearly, many questions about the familial correlates of childhood loneliness remain to be examined.

Attachment theory (Bowlby, 1969, 1973, 1982) provides one perspective from which to examine the familial antecedents of childhood loneliness. Bowlby asserted that an infant's repeated daily transactions with care givers contribute to the development of expectations. These expectations are, in turn, organized into cognitive "internal working models" of the care giver, the self, and, eventually, the quality of treatment anticipated in this and other close relationships. Although Bowlby

did not explicitly link attachment and loneliness, he did contend that infants who receive insensitive care develop insecure attachments and come to have internal working models of others as unavailable and untrustworthy, and complementary models of themselves as unworthy of sensitive treatment. As a result of these internal working models, insecure children will have trouble not only trusting and depending on others but also recognizing their own self-worth. These perceptions are likely to hinder the formation of supportive relationships and thus place insecure children at risk for some of the same socioemotional difficulties found to be experienced by lonely children, including poor peer relationships. Empirical evidence of a link between insecure infant-mother attachment and poor peer relationships has emerged, in fact, from several studies (e.g., Jacobson & Wille, 1986; LaFreniere & Sroufe, 1985; Pastor, 1981). Given these empirical connections between insecure attachment and poor peer relationships, along with the associations between poor peer relationships and loneliness, it was hypothesized that insecure attachment is an important antecedent of early childhood loneliness.

More specifically, it was expected that the most childhood loneliness would be reported by children who had been classified insecure-ambivalent in infancy. This proposition is consistent with Rubin and Lollis's (1988) developmental model of the antecedents and sequelae of social withdrawal, and rests on two sets of empirical findings. First, as discussed earlier, there is empirical evidence of an association between social withdrawal and loneliness (Boivin et al., 1989; Cassidy & Asher, 1992; Parkhurst & Asher, 1992; Rubin et al., 1989; Rubin & Mills, 1988). Second, there is evidence of a connection between the insecure-ambivalent pattern of attachment and later social difficulties characterized by social withdrawal and passivity. For example, compared to other toddlers, those who had been classified insecure-ambivalent in infancy made the fewest social offers to peers and were most likely to ignore the social offers of their peers (Pastor, 1981). Similarly, preschool children who had been classified insecure-ambivalent in infancy scored lower than other children on indices of agency such as confidence and assertiveness (Erickson, Sroufe, & Egeland, 1985), and on social participation and social dominance (LaFreniere & Sroufe, 1985). Finally, for boys, an association between the insecure-ambivalent pattern and social withdrawal has emerged from two investigations of attachment and child psychopathology. In one study, 6-year-old boys classified insecure-ambivalent in infancy scored higher than all other boys on the internalizing subscale of the Achenbach Child Behavior Profile and on four individual behavior problem scales including depression and social withdrawal (Lewis, Feiring, McGuffog, & Jaskir, 1984). In another inquiry,

seven of eight school-aged boys who were classified insecure-ambivalent as infants and who developed behavior problems were identified as passive-withdrawn (Renken, Egeland, Marvinney, Sroufe, & Mangelsdorf, 1989).

Although it was expected that the *most* childhood loneliness would be reported by children who had been insecure-ambivalent, it was unclear as to whether the *least* childhood loneliness would be reported by children who had been classified secure or by those who had been classified insecure-avoidant. On the one hand, given the research associating positive peer relationships with secure infant-mother attachment (e.g., Jacobson & Wille, 1986; LaFreniere & Sroufe, 1985; Pastor, 1981), one might expect that the least loneliness is experienced and, thus, reported by children who were classified secure in infancy. On the other hand, although problematic peer relationships appear to beset children who were insecure-avoidant as infants (e.g., Jacobson & Wille, 1986; LaFreniere & Sroufe, 1985; Pastor, 1981), the insecure-avoidant pattern of attachment also has been associated with defensive denial, idealization, and an inclination to curb the expression of negative affect (Ainsworth, Blehar, Waters, & Wall, 1978; Cassidy & Kobak, 1988; Main, 1981; Malatesta, Culver, Tesman, & Shephard, 1989). For example, in a longitudinal study of 3-year-olds in which most (81%) of the insecure subjects were insecure-avoidant, attachment group differences emerged in children's responses to losing a competitive game played with an experimenter (Lutkenhaus, Grossmann, & Grossmann, 1985). Even though the insecure children expressed sadness while losing, they subsequently shared (by means of facial expressions with eye contact) less sadness with the experimenter than did secure children. Thus, it seemed conceivable that the insecure-avoidant children in the present study would be the least likely to share any emotional vulnerability and, as a result, report the least loneliness. In the present study 12-month infant-mother attachment was examined as an antecedent of early childhood loneliness assessed at 5 to 7 years. It was predicted that the most loneliness would be reported by children who had been classified insecure-ambivalent in infancy.

METHOD

Subjects

Participants were 64 first-born 5- to 7-year-old children (36 boys and 28 girls) participating in a follow-up study of the second and third cohorts ($N = 184$) of the Pennsylvania Child and Family Development Project

(see Belsky, Gilstrap, & Rovine, 1984; Belsky, Rovine, & Fish, 1989). Of the 94 families who could be contacted, 68 (72%) agreed to participate; 12-month data were available for 64 of these subjects. Participants were white and came from middle- and working-class families living in central Pennsylvania.

Procedures and Measures

Infant-mother attachment. At 12 months, infants and their mothers visited the laboratory for the standard Strange Situation (Ainsworth & Wittig, 1969), a widely-used, 20-min, videotaped procedure which includes two infant-parent separations and reunions. Based largely upon the infant's response to the parent in the two reunion episodes, the classification system distinguishes three main patterns of infant-parent attachment (Ainsworth et al., 1978). Evidence of the reliability and validity of the Strange Situation has come from a number of investigations in which the three infant patterns have been linked to distinct patterns of antecedent infant-parent interactions as well as children's subsequent socioemotional functioning (see Belsky & Cassidy, in press, and Bretherton, 1985, for reviews).

All infants were classified either secure (Group B), insecure-avoidant (Group A), or insecure-ambivalent (Group C). All coders were trained by Dr. L. A. Sroufe or one of his trainees. Dr. B. Vaughn served as reliability coder. Interrater reliability was assessed on a randomly selected, independently coded 15% of the subjects. For each coder, intercoder agreement of at least 90% was achieved. All disagreements were resolved in conference. Of the 64 subjects included in the present follow-up report, 42 (66%) were classified secure, 8 (13%) were classified insecure-avoidant, and 14 (22%) were classified insecure-ambivalent.

Childhood loneliness. When the child was between the ages of 5 and 7 years, a female experimenter visited the home and administered the Loneliness and Social Dissatisfaction Questionnaire for Young Children (Cassidy & Asher, 1992). This 24-item scale consists of 16 items which assess children's feelings of loneliness and social dissatisfaction in the peer group at school, and eight filler items about hobbies and interests (see Table 1). The experimenter read the items to the child and, after each, the child answered "yes," "no," or "sometimes."

Responses were scored on a 3-point scale and summed to create a total loneliness score (possible range, 16 to 48) with higher scores indicating greater self-reported loneliness. Loneliness scores ranged from 16 to 30 ($M = 20.45$, $SD = 3.68$). Thus, loneliness and social dissatisfaction

Table 1. The Loneliness and Social Dissatisfaction Questionnaire for Young Children With Percentage of Children in Each Attachment Group Who Acknowledged Loneliness

<i>Item type</i>	<i>Item</i>	<i>% Children who acknowledged loneliness</i>		
		<i>Insecure-avoidant</i>	<i>Secure</i>	<i>Insecure-ambivalent</i>
	1. Is it easy for you to make new friends at school? [no]	0%	7%	43%
A	2. Do you like to read?			
	3. Do you have other kids to talk to at school? [no]	0%	7%	0%
	4. Are you good at working with other kids at school? [no]	0%	9%	0%
A	5. Do you watch TV a lot?			
B	6. Is it hard for you to make friends at school? [yes]	0%	12%	14%
A	7. Do you like school?			
	8. Do you have lots of friends at school? [no]	0%	7%	21%
B	9. Do you feel alone at school? [yes]	13%	7%	14%
	10. Can you find a friend when you need one? [no]	13%	2%	7%
A	11. Do you play sports a lot?			
B	12. Is it hard to get kids in school to like you? [yes]	0%	26%	7%
A	13. Do you like science?			
	14. Do you have kids to play with at school? [no]	0%	0%	0%
A	15. Do you like music?			
	16. Do you get along with other kids at school? [no]	0%	2%	7%
B	17. Do you feel left out of things at school? [yes]	0%	5%	0%
	18. Are there kids you can go to when you need help in school? [no]	0%	10%	14%
A	19. Do you like to paint and draw?			
B	20. Is it hard for you to get along with other kids at school? [yes]	13%	14%	7%
B	21. Are you lonely at school? [yes]	0%	5%	0%
	22. Do the kids at school like you? [no]	0%	0%	0%
A	23. Do you like playing card games?			
	24. Do you have friends at school? [no]	0%	2%	0%

Note. From Cassidy and Asher (1992). Children respond on a 3-point scale (yes, no, sometimes). For each of the principal loneliness items, the response consistent with the acknowledgement of loneliness is given in brackets. A = Filler items, addressing hobbies or interest; B = Items for which response order was reversed in scoring.

Table 2. Childhood Loneliness by Infant Attachment Classification

Loneliness	Attachment classification		
	Insecure-avoidant	Secure	Insecure-ambivalent
Less than median	6 (4)	23 (21)	3 (7)
More than median	2 (4)	19 (21)	11 (7)

Note. Expected values of number of children are given in parentheses.

were present, although limited, in this sample. The internal consistency for the 16 loneliness items (Cronbach’s $\alpha = .71$) was similar to that reported by Cassidy and Asher (1992; Cronbach’s $\alpha = .79$).

RESULTS

Preliminary analyses revealed that loneliness did not relate to either child age or sex. Therefore, data were collapsed across age and sex to examine the relation between early childhood loneliness and infant-mother attachment.

For each of the principal loneliness items, the number of children in each attachment group who acknowledged loneliness is illustrated in Table 1. A one-way analysis of variance (ANOVA) of loneliness in relation to the three attachment groups revealed a marginally significant relation between 5- to 7-year loneliness and 12-month attachment security, $F(2, 61) = 3.01, p < .06$. As predicted, the most loneliness was reported by children classified insecure-ambivalent at 12 months ($M = 22.29, SD = 4.07$). The least loneliness at 5 to 7 years was reported by the children who had been classified insecure-avoidant at 12 months ($M = 18.63, SD = 2.39$). Children who had been secure infants were intermediate on childhood loneliness ($M = 20.19, SD = 3.57$). A follow-up contrast analysis testing the linear trend of insecure-ambivalent > secure > insecure-avoidant was statistically significant, $F(1) = 5.35, p < .05$.

In light of the initial, marginally significant ANOVA, the relation between loneliness and attachment was re-examined with loneliness configured as a dichotomous variable. The sample was divided at the median of loneliness into two groups which could be considered to reflect the experiences of “more” and “less” loneliness. A chi-square analysis revealed a significant relation between loneliness and attachment, $\chi^2 (2, N = 64) = 6.95, p < .05$ (see Table 2). Findings were convergent with the parametric analyses: most (79%) of the children classified insecure-ambivalent as infants reported “more” loneliness and most (75%) of those classified insecure-avoidant reported “less” loneliness.

DISCUSSION

This investigation of the developmental antecedents of childhood loneliness showed a relation between self-reported loneliness at 5 to 7 years and infant-mother attachment assessed at 12 months. The association which emerged between loneliness and insecure-ambivalent attachment is congruent both with studies of childhood loneliness and with studies of infant-mother attachment which, considered together, have highlighted similarities in the social difficulties of lonely children and children who were insecure-ambivalent in infancy.

There are several possible explanations for the greater loneliness reported by children who had been classified insecure-ambivalent in infancy. One is that insecure-ambivalent attachment contributes to poor peer relationships and social withdrawal which, in turn, contribute to loneliness. To the extent that insecure-ambivalent children are rejected and spend considerable time alone, they may have fewer opportunities to participate in satisfying social interactions and, as a result, feel lonely.

Bowlby's (1973) notion of internal working models as operating to guide behavior provides a second explanation for the greater loneliness of insecure-ambivalent children. As discussed earlier, internal working models are thought to derive from early experiences with care givers. In light of research linking low or inconsistent maternal responsiveness to the insecure-ambivalent pattern of attachment (e.g., Ainsworth et al., 1978; Belsky, Rovine, & Taylor, 1984), it has been proposed that the working models of insecure-ambivalent individuals lead them to emphasize and magnify attachment-related information both to themselves and to others (Cassidy & Berlin, 1994; Main, 1990; Main & Solomon, 1986). This hypervigilance and hyperemotionality can be viewed as a strategy (Cassidy, 1994; Main, 1990). Initially adapted to engage the attention of attachment figures perceived as insufficiently attentive, this strategy is thought to be generalized to other relationships. For the insecure-ambivalent children in this sample, then, the reports of "more" loneliness might be understood as both an acutely painful awareness of dissatisfying peer relationships as well as an habitual inclination to emphasize emotional vulnerability.

A third explanation for the greater loneliness reported by the insecure-ambivalent children relates to child temperament. Kagan (1984), in particular, has argued that temperamentally based "vulnerability to becoming anxious in an unfamiliar situation" (p. 58) plays an important role in the Strange Situation behavior of infants classified insecure-ambivalent. More recently, researchers have focused on the temperamental dimension of "inhibition" which appears to be at least partly heritable (e.g., Buss & Plomin, 1984; Daniels & Plomin, 1985), stable over time (e.g.,

Broberg, Lamb, & Hwang, 1990; Kagan, Reznick, & Snidman, 1987), and predictive of some of the same outcomes as attachment security, such as peer interactions (e.g., Broberg et al., 1990). "Inhibited" certainly summarizes the social profiles of some of the most lonely children as well as children who were insecure-ambivalent infants.

Because a constitutionally based factor such as behavioral inhibition may well explain the association found between self-reported loneliness and infant-mother attachment, post hoc analyses of loneliness and infant temperament were conducted. Although the data set used for this study did not include assessments of infant inhibition, several infant characteristics were measured in the early phases of the study (see Belsky & Rovine, 1987). Consequently, loneliness at age 5 to 7 years was examined as a function of (a) infants' 7- or 10-day scores on the Neonatal Behavioral Assessment Scale (Brazelton, 1973); (b) mothers' reports of infant temperament at age 3 months on the four-factor Infant Characteristics Questionnaire (Bates, Freeland, & Lounsbury, 1979); and (c) fussiness observed in the home at age 3 months. No significant associations emerged.

A further consideration of infant-mother attachment also may illuminate the low levels of loneliness reported by children insecure-avoidant in infancy. In the same way that the internal working models of insecure-ambivalent children may lead them to experience as well as report loneliness, the internal working models of insecure-avoidant children can be viewed as operating to suppress the recognition and expression of emotional vulnerability, including loneliness. In light of research associating maternal rejection and the insecure-avoidant pattern of attachment (e.g., Ainsworth et al., 1978), several theorists have characterized the avoidant individual's internal working models as those which defensively exclude attachment-related information from both attention and memory (Ainsworth et al., 1978; Cassidy & Kobak, 1988; Main, 1981). This exclusion serves to prevent the activation of attachment behaviors which might be met with further rejection. For the insecure-avoidant children in this sample, then, not admitting loneliness might reflect an habitual inclination to deny emotional vulnerability either to themselves, to others (e.g., their interviewers), or both (Cassidy, 1994). These explanations rest on the assumptions that insecure-avoidant children are experiencing, in fact, social difficulties. Alternatively, the low loneliness scores of the insecure-avoidant children may simply reflect less loneliness.

It is noteworthy that the associations demonstrated in the present study are paralleled in several studies of adolescents and adults. For example, in investigations of adolescent and adult loneliness a connection has been found between self-reported loneliness and a parent-child

relationship characterized—either retrospectively or concurrently—as problematic (Hecht & Baum, 1984; Lobdell & Perlman, 1986; Shaver & Rubenstein, 1980). In addition, in a study based on attachment theory in which young adults were classified according to their self-reported patterns of attachment within romantic relationships, those identified as anxious-ambivalent reported significantly more state and trait loneliness than those classified secure (Hazan & Shaver, 1987). However, it is also important to note that an inquiry into peer relationships and attachment in college students found that at one of two times of measurement, avoidant (“dismissing”) students and *not* ambivalent (“preoccupied”) students were the ones who reported more loneliness than their “secure” counterparts (Kobak & Sceery, 1988). Further research comparing the connections between loneliness and attachment in adults and children should prove illuminating.

In conclusion, the present investigation can be viewed as making two important contributions. First, a theoretically predicted connection between loneliness in young children and infant-mother attachment was revealed and, in the process, the value of studying infant-mother attachment as a familial antecedent of early childhood loneliness was demonstrated. Second, although researchers frequently combine insecure-avoidant and insecure-ambivalent subjects into one insecure attachment group, in the present study the importance of examining the two insecure groups separately was illustrated, especially with regard to the expression of emotional vulnerability (see also Stevenson-Hinde & Shuldice, 1990). Consistent with a growing body of literature, the present data reveal a heterogeneity within the insecure group that would not have been apparent had the avoidant and ambivalent groups been merged: whereas insecure-avoidant individuals appear to suppress the expression of vulnerability, insecure-ambivalent individuals seem to accentuate their emotional vulnerability (Cassidy & Berlin, 1994; Cassidy & Kobak, 1988; Main & Solomon, 1986).

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