

## **The Nature and Importance of Attachment Relationships to Parents and Peers During Adolescence**

**Mark T. Greenberg,<sup>1,4</sup> Judith M. Siegel,<sup>2</sup> and Cynthia J. Leitch<sup>3</sup>**

*Received October 12, 1982*

*The nature and quality of adolescents' attachments to peers and parents were assessed with the newly developed Inventory of Adolescent Attachments. The relative influence on measures of self-esteem and life satisfaction of relations with peers and with parents was then investigated in a hierarchical regression model. The sample consisted of 213 adolescents ranging from 12 to 19 years of age. Two hypotheses were tested: (1) The quality of perceived attachments both to parents and peers would be related to well-being, and (2) the quality of parental relationships would be a more powerful predictor of well-being than would the quality of peer relationships. Confirming the study's hypotheses, the perceived quality of the adolescents' relationships to both peers and parents, their frequency of utilization of peers, and their degree of negative life change were significantly related to both measures of well-being. The quality of attachment to parents was significantly more powerful than that to peers in predicting well-being. In addition, quality of attachment to parents showed a moderating effect under conditions of high life stress on the measures of self-esteem. The study suggests that it is useful to consider the quality of attachments to significant others as an important variable throughout the life span.*

<sup>1</sup>Department of Psychology, University of Washington. Received his Ph.D. from the University of Virginia. Major research interests are social development in normal and atypical children.

<sup>2</sup>School of Public Health, University of California, Los Angeles. Received her Ph.D. from the University of Washington. Major research interest include the study of stress and coping in adolescence.

<sup>3</sup>School of Nursing, University of Washington. Received her Ph.D. from the University of Utah. Research interests include the prediction of hypertension in adolescence.

<sup>4</sup>Correspondence should be sent to Mark T. Greenberg, Department of Psychology NI-25, University of Washington, Seattle, Washington 98195.

## INTRODUCTION

There has been increasing interest in life-span approaches to the study of attachments (Kahn and Antonucci, 1980; Lerner and Ryff, 1978). Investigations in infancy have shown that individual differences in infant-parent attachment can be reliably assessed and demonstrate substantial stability during the second year of life (Ainsworth *et al.*, 1978; Waters, 1978).

Recent reviews also have shown that the existence and perceived quality of intimate relationships during the adult years affect such outcomes as mental health, physical health, and reactions to traumatic life events (Gottlieb, 1981; Mueller, 1980). In addition to showing a direct relationship between attachments and health, a growing body of literature suggests that attachments may also buffer the relationship between stress and illness (Nuckolls *et al.*, 1972) and job loss (Gore, 1978). Henderson (1977) has shown the efficacy of using Bowlby's model of attachment (1969, 1973a, 1973b) to explain such phenomena.

While these research domains have demonstrated the crucial nature of attachments in both infancy and adulthood, little research has focused on the effects of intimate attachments in adolescence (Hill, 1980). In this report, we examine the differential effects of the perceived quality of adolescents' relationships with parents and peers in relation to their self-concept. These relationships are examined for both early and middle adolescence.

While substantial change occurs in adolescence, questions surrounding the extent and nature of these changes have focused on two related topics: (1) viewing adolescence as a period of significant turmoil versus one of gradual transition, and (2) determining the relative impact/influence of peers and parents during the adolescent process. Beginning with G. Stanley Hall (1904) and supported by psychoanalytic theory (Freud, 1958; Blos, 1972), adolescence has been characterized as a period of intense intrapsychic struggle between the dependency needs of childhood and the striving for independence and autonomy. Psychoanalytic theory posits a renewal of intense Oedipal feelings from early childhood which are resolved through the use of particular defense mechanisms (Freud, 1966) and a shift in libidinal focus from one's parents to relationships within the peer group. However, a series of recent longitudinal studies has found adolescence to be a period of gradual change that is not defined by either significant instability or by regression of ego functions (Bandura, 1969; Douvan and Adelson, 1966; Offer and Offer, 1975; Rutter, 1980). Adelson and Doehrman (1980) suggested that theories of storm and stress were usually supported by clinical case studies of pathological adolescents, and such evidence was inappropriately generalized to normal adolescents.

Theories concerning the relative and shifting influence of parents and peers, while influenced by psychoanalytic theories of the adolescent process, have been derived primarily from sociological research on the salience of peer and parent reference groups (Coleman, 1961). Early findings presented a picture of a major shift from parent to peer saliency, but research has considerably revised this depiction. First, simultaneous parent and peer influence are not contradictory (Bowerman and Kinch, 1959; Kandel and Lesser, 1972). Second, parents' counsel is more often preferred to that of peers in important situations involving values and future decision making (Musgrove, 1963; Rosenberg, 1965; Smith, 1976; Wan *et al.*, 1969). Third, adolescents are more likely to seek help from peers when they perceive their parents as rejecting or indifferent (Bowerman and Kinch, 1959; Iacovetta, 1975; Larson, 1972a, 1972b; Smith, 1976). Rosenberg (1979) reported that parents ranked higher than peers in interpersonal significance throughout adolescence.

Research on measures of self-concept in both childhood and adolescence have also demonstrated the crucial nature of family relationships (Coopersmith, 1967; Gecas, 1972; Kandel and Lesser, 1972). Furthermore, self-concept appears to be a valid dependent measure in adolescence as it is quite stable during this period (Dusek and Flaherty, 1981; Mortimer and Lorence, 1980) and is related to adjustment and mental health (Offer and Offer, 1975).

While the parent-adolescent relationship is predictive of self-concept, there has been little research examining the relative influence of parent and peer relationships. Furthermore, there has been no examination of how the relative importance of peer and parent relationships might change during adolescence. Burke and Weir (1978, 1979) examined adolescents' (ages 13 to 20) psychological health and its relationship to satisfaction with help from parents and peers. While adolescents were more likely to go to peers for help, satisfaction with help from parents was more related to their psychological health and well-being than was satisfaction with help from peers. However, the effect of age was not examined. O'Donnell (1976) reported that for both eighth- and eleventh-graders, feelings toward parents were more highly correlated with scores on the Tennessee Self Concept Scale (TSCS; Fitts, 1965) than were feelings toward peers (both being significant predictors). However, in both studies, significant correlations were found between feelings toward parents and peers. Therefore, due to their multicollinearity, the relative influence of parent and peer relationships has remained unclear.

The present study used a multiple regression model to compare the influence on adolescent self-concept of the perceived quality of attachments to parents and to peers. Utilizing Bowlby's theory (1969, 1973a, 1973b), a measure was developed to assess the affective attachment of adolescents

toward their peers and parents. Following the theoretical formulations of the ethological-organizational view of attachment (Bowlby, 1973a, 1973b; Sroufe and Waters, 1977), it was hypothesized that there were two separate dimensions of attachment relationships: (1) felt security, operationalized as the quality of affect towards such figures, and (2) proximity seeking, the degree to which youth seek out such figures in times of stress and need. Extrapolating from the literature on infant attachment (Ainsworth *et al.*, 1978) and Bowlby's (1973a) theorizing, the relationship between these dimensions may vary with unique styles of attachment. Thus, while an avoidant attachment may be characterized as low in proximity seeking and felt security, and anxious attachment might show high proximity seeking and low felt security, and a secure attachment would be indicated by high felt security and moderate amounts of proximity seeking. The following hypotheses were tested: First, the quality of the attachment relationships to both parents and peers would be significantly related to measures of self-concept and life satisfaction. Second, the quality of relationships with parents would account for more variance than would the quality of relationships with peers. The second hypothesis was based on both the adolescent literature and the assertion that the developmental priority and constancy of the parent-child relationship would have greater impact.

In order to test these hypotheses, a hierarchical regression model was utilized in which the two indices of peer relationships were entered prior to that of the parent measures. Additionally, because age (Rosenberg, 1965), sex (Maccoby and Jacklin, 1974), and life stress (Gad and Johnson, 1980) have all been shown to be related to measures of self-concept or psychological well-being in adolescence, these variables were controlled statistically prior to examining the effects of peer and parent attachments.

## METHOD

### Sample

The sample consisted of 213 adolescents attending junior and senior high schools in the metropolitan area of Tacoma, Washington. The sample ranged from age 12 to 19 ( $\bar{X} = 15.4$ ). With the exception of 2 college students, all of the participants were in the seventh through twelfth grades. The sample included 123 males and 79 females. The adolescents were predominately Caucasian (91%), and most lived in middle class homes. The data presented here are part of a larger study of cardiovascular risk factors in adolescence (Siegel and Leitch, 1981). As a result of health department blood pressure screenings, 516 adolescents, half with normal and half with

high blood pressure, were asked to participate in this investigation. A total of 224 adolescents and their parents signed the consent form, but 11 subjects did not participate due to illness or no longer being enrolled as full-time students. Of this sample, 118 had normal blood pressure and 95 had systolic or diastolic readings at or above the 90th percentile (age and sex specific).

### Procedure

All data collection was carried out in 1 of 14 schools which the subjects attended. The complete protocol involved the drawing of blood, a physical exam, an interview, and the completion of questionnaires. The present report concerns results from the Life Events Checklist (Gad and Johnson, 1980), the Tennessee Self Concept Scale (Fitts, 1965), a single question about life satisfaction, and the newly developed Inventory of Adolescent Attachments. These measures are described below.

*The Life Events Checklist.* This measure (Johnson and McCutcheon, 1980) is an adaptation for adolescents of the Life Experiences Survey (Sarason *et al.*, 1978). It consists of a list of 47 life events to which an individual responds by indicating if the event occurred (during the previous six months), if the event was positive or negative in impact, and the degree of its impact (no, some, moderate, or great effect). Separate positive and negative life event scores are obtained by assigning the values of 0 to 3 to the four impact categories, and separately summing the scores for positive and negative events. The separation of positive and negative scores is methodologically necessary, as only negative life events have shown consistent relationships to physical and psychosocial problems (Sarason *et al.*, 1978; Vinokur and Selzer, 1975). Brand and Johnson (1982) report two-week test-retest reliability of 0.71 for positive and 0.66 for negative events.

*Self-Concept and Life Satisfaction.* To assess the adolescent's psychological health, a measure of self-esteem, The Tennessee Self Concept Scale (TSCS), and a global measure of life satisfaction were obtained. The TSCS (Fitts, 1965) consists of 100 self-referent statements to which an individual responds on a 5-point scale, ranging from completely false to completely true. The Total Self-Esteem Score is composed of 90 scale items and is an index of overall self-esteem. In the present sample, the scale demonstrated high internal consistency: Cronbach's alpha was 0.94. Psychometric data indicate that two-week test-retest reliability on the two scales averages 0.84 (Fitts, 1965). Numerous studies have demonstrated the validity of the TSCS, including high correlations with the Taylor Anxiety Scale, the MMPI, and a variety of personality variables (Bentler, 1972). The Life Satisfaction measure, constructed for this study, was a single question that asked the respondent how he/she feels about his/her life in general.

The response categories were: very dissatisfied (scored as 1), a little dissatisfied, neither satisfied nor dissatisfied, well satisfied, and completely satisfied (scored as 5). In a study of late adolescents, two-week test-retest reliability was 0.81 (Greenberg, 1982).

*Inventory of Adolescent Attachments (IAA).* The IAA, developed by the first author, consists of two sections.<sup>5</sup> First, 10 true-false and 7 Likert-type items were utilized to assess the affective quality (felt security) of the adolescents' relationships with their parents and peers. Second, using a matrix completion format, the respondents were asked to note how frequently (never, sometimes, often) they would talk to the following persons (mother, father, male friends, female friends, steady boy- or girl-friend, siblings, and other adults) in five different situations: alone or depressed, anxious or scared about something, feeling extremely critical of myself and needing a boost, feeling happy or having good news, and having just experienced a tragedy (e.g., car accident or death of family member or friend).

The questions were selected from an original pool of 50 items on the dimensions of content validity and readability after evaluation by a group of 17 persons, including graduate students in clinical psychology and nursing and therapists working with adolescents. Subscales of the IAA were created using a three-step procedure (Nunnally, 1967). First, using data from the present subjects, exploratory factor analysis was conducted using a principal components analysis with Varimax rotation. Four factors emerged with eigenvalues greater than 1. These factors confirmed the hypothesis that relations with peers and with parents load on separate dimensions of affect and of utilization or proximity seeking. Second, items that loaded 0.30 or greater on each factor were summed to create four subscales: quality of affect toward parents, family utilization, quality of affect toward peers, and peer utilization. Third, internal consistency of the scales was assessed using Cronbach's alpha, and items that reduced the internal consistency of the construct were deleted. The Quality of Affect Toward Parents subscale consisted of four items ( $\alpha = 0.70$ ): Although I trust my parents, sometimes I have my doubts; It bothers me that my parents have so much control over me; My parents understand me; I wish I had different parents. The Quality of Affect Toward Peers subscale consists of four items ( $\alpha = 0.51$ ): Although I trust my friends, sometimes I have my doubts; My friends understand me; I feel angry with my friends; I wish I had different friends. The Family Utilization subscale consisted of the sum of the frequency with which the respondents went to their mother, father,

<sup>5</sup>A copy of the measure may be obtained from the first author.

and sibling(s) in the five previously discussed situations ( $\alpha = 0.78$ ). Similarly, the Peer Utilization subscale consisted of the frequency of use of male friends, female friends, and steady boy- or girlfriends under the same five situations ( $\alpha = 0.77$ ). Test-retest reliability was assessed by administering the measure twice to late adolescents ( $\bar{X} = 18.5$  years) with two weeks between administrations. Reliability on the four factors ranged from 0.70 to 0.89 (Greenberg, 1982).

## RESULTS

In order to examine age, sex, and blood pressure group differences on the IAA factor scores, a series of 2 (Age dichotomized at the median of 15.4) by 2 (Sex) by 2 (high vs. normal blood pressure) ANOVAs were performed. There were no significant effects for age, sex, group status, or their interaction on any of the four factor scores. In addition, since no differences were shown in previous analysis of the present sample on the TSCS or Life Satisfaction as a function of blood pressure status (Siegel and Leitch, 1981), risk and nonrisks groups were combined for all analyses. To examine the effects of parental education and marital status on the IAA factor scores, TSCS, and life satisfaction measures, a series of analyses of covariance were performed with maternal education, paternal education (both trichotomized as less than high school graduate, high school graduate, college education) and marital status (single vs. married) as between-groups factors and sex and age as covariates. There were no significant main effects on any variables.

Table I presents the correlations between the four parent and peer factors. The quality of affect towards parents is significantly, but only somewhat related (0.24) to how often an adolescent would seek out his parents in times of need. A similarly significant but low correlation was found between affect toward peers and peer utilization. Additionally, affect toward parents was not related to either peer variable, and affect towards peers was not related to either peer variable nor to either parent variable. However, frequency of parent utilization (proximity seeking) was moderately related to peer utilization (0.41). Thus, while the affective nature of peer and parent relationships appear independent, utilization of attachment figures across groups showed stability (see Table I).

To test the study hypotheses, a hierarchical multiple regression model was utilized.<sup>6</sup> Two separate analyses were computed with Total Self-Esteem

<sup>6</sup>This analysis was selected instead of least squares regression because specific hypotheses were tested and significant multicollinearity was present within and between covariate and predictor variables (Kerlinger and Pedhazur, 1973).

Table I. Relationship Between Parent and Peer Factors

	Quality of affect toward parents	Family utilization	Quality of affect toward peers
Family utilization	0.24 <sup>b</sup>		
Quality of affect toward peers	0.11	0.03	
Peer utilization	0.00	0.41 <sup>b</sup>	0.15 <sup>a</sup>

<sup>a</sup>*p* = 0.01.

<sup>b</sup>*p* = 0.001.

Score from the TSCS, and the index of Life Satisfaction as the criterion variables. In each analysis, three sets of variables were entered. First, the following variables were entered simultaneously as covariates: sex, height/weight percentile for age and sex, positive life events score, and negative life events score. These covariates were entered prior to the predictors because of their known or presumed relationships to the criterion variables. Second, the four predictor variables of parent and peer attachment were entered in the following hierarchical order: quality of affect toward peers, peer utilization, parent utilization, and quality of affect toward parents. Given the multicollinearity of the predictors, the parent variables were entered last in order to bias against their explanatory power (e.g., to examine what additional variance they would account for after examining and controlling for the effects of peer relationships). Additionally, parent affect was entered after parent utilization to examine if quality of affective relationships with parents would have explanatory power after controlling for how often parents are utilized. Third, in order to examine possible age and sex interactions with the four predictor variables, eight interaction variables (age by each predictor and sex by each predictor) were entered in the last step of the equation.

Variables significantly related to the criterion variables of Self-Esteem score and Life Satisfaction are presented in Table II. For the Total Self-Esteem subscale, the predictors account for 27% of the variance. Of the covariates, both positive life events and negative life events are significant, accounting for 11% of the variance. While the quality of affect toward peers and peer utilization were both significant, together they accounted for only an additional 5% of the variance. Controlling for all the above variables, the quality of affect toward parents is highly significant and accounted for an additional 11% of the variance in self-esteem.

For the measure of Life Satisfaction, the predictors account for 20% of the variance. Of the covariates, sex (males report higher Life Satisfaction) and negative life events were significant, but jointly accounted for

**Table II.** Regression Statistics for Equations Predicting Adolescent Well-Being from Peer and Parent Factors

Predictor	$R^2$ <sup>a</sup>	$F$	$r$
Total Self-Esteem Score (TSCS)			
Positive life events	0.075	15.5 <sup>d</sup>	0.28
Negative life events	0.11	7.5 <sup>c</sup>	-0.10
Affect toward peers	0.14	5.7 <sup>b</sup>	0.22
Peer utilization	0.16	6.2 <sup>b</sup>	0.24
Affect toward parents	0.27	25.6 <sup>d</sup>	0.38
Life Satisfaction			
Sex	0.02	4.2 <sup>b</sup>	-0.15
Negative life events	0.04	4.3 <sup>b</sup>	-0.14
Affect toward peers	0.07	6.5 <sup>b</sup>	0.21
Peer utilization	0.094	4.0 <sup>b</sup>	0.12
Affect toward parents	0.192	13.2 <sup>d</sup>	0.29

<sup>a</sup>Reflects cumulative  $R^2$  values for each measure.

<sup>b</sup> $p < 0.05$ .

<sup>c</sup> $p < 0.01$ .

<sup>d</sup> $p < 0.001$ .

only 4% of the variance. Both quality of peer affect and peer utilization were significant, but once again they accounted for only 5% additional variance. Quality of affect toward parents was highly significant and accounted for an additional 10% of the variance. None of the age by peer or parent interaction variables reached significance on any of the criterion measures.

Significant effects for negative life events, quality of the parent relationship, and quality of the peer relationship were obtained in the above regression analysis. In order to examine the potential buffering or mediating affect of quality of parental affective relationship on the relationship between life stress and self concept, a 2 (high vs. low parent affect) by 2 (high vs. low negative life events) analysis of covariance test with age, sex, and positive life events as covariates was performed on the Total Self-Esteem Score. Negative life events and affect toward parents were dichotomized at their medians. A significant interaction effect,  $F(1, 190) = 6.1$ ,  $p < 0.02$ , was found, indicating that a high-quality affective

relationship with parents buffers the effect of life stress on the measure of self-concept. The group means follow: low affect, low stress, 328.6; low affect, high stress, 297.6; high affect, low stress, 339.1; high affect, high stress, 332.4. A similar analysis of covariance was performed substituting quality of affect toward peers for that of parents. No significant interaction was found between affect toward peers and negative life stress.

## DISCUSSION

As hypothesized, indices of an adolescent's relationship to both parents and peers were related to his/her perceived self-esteem and life satisfaction. For the peers, measures of both the quality of their affective attachments, as well as the frequency of their utilization, accounted for independent sources of variance on both measures of well-being. However, the overall effect of peer attachments on both measures, while statistically significant, accounted for little variance.

Second, as hypothesized, the effect of perceived quality of attachment to parents on the criterion measures was considerably greater than that of attachment to peers. While biasing against the hypothesis through the use of the hierarchical analytic model, the perceived quality of adolescents' affective attachments to their parents was highly related to their well-being.

Interestingly, the measure of frequency of parent utilization or proximity seeking was not significantly related to adolescent well-being. Scores on this measure were unusually high, indicating that most adolescents utilize their parents frequently. Thus, its highly skewed distribution may have reduced the sensitivity of this measure. Second, the low correlation between affect toward parents and utilization indicates that adolescents appear to utilize their parents even when they perceive their relationships as being nonoptimal or even unsatisfying. Such a finding during the adolescent period may be parallel to infant research indicating that both secure and anxious/ambivalent infants seek proximity, yet show a quite different organization of their attachment behavior. Bowlby (1977) has also described similar clinical patterns in adulthood that are not distinguishable by the amount of proximity seeking. Thus, with the exception of "avoidant" individuals, it may not be proximity per se, but its patterning and accompanying emotions and attributions, that is of critical importance (Hinde, 1979).

An important finding was the absence of main effects for age on the attachment variables, or age interactions in the regression analyses. Older adolescents were no more likely to report differences in utilization or in the quality of relationships with parents or peers than were younger adolescents. Such a finding was unexpected, since the sample spanned the

entire early and middle adolescence age range. Thus, while some studies have found a shift to greater use of peers as a reference group during middle adolescence (Coleman, 1961; Emmerich, 1978), the present study did not support this shift. Instead, the results confirm studies indicating that throughout high school, parents are highly valued for their nurturance and counsel (Offer, 1969; Smith, 1976). The findings are also supportive of research on high school and college students which demonstrates that warm relationships with parents are related to high self-concept and ego identity (Marcia, 1980; Mortimer and Lorence, 1980). In interpreting these effects, we find useful models of psychosocial maturity in which the development of ego autonomy and optimal adjustment are promoted by the development of independence in the context of warm relatedness to one's parents (Bowlby, 1973a; Greenberger & Sorenson, 1974; Murphey *et al.*, 1963).

The finding that amount of negative life change is significantly related to well-being in adolescence is consistent with previous studies (Bedell *et al.*, 1977; Gad and Johnson, 1980). The present study also found that the effects of high life stress were moderated by a positively perceived attachment to one's parents. The fact that quality of peer relationships did not moderate the effects of life stress is further substantiation for the more powerful effect of parent-adolescent relationships in this sample. These findings contrast with those of Gad and Johnson (1980), who reported that social support did not moderate life stress in adolescence. However, Gad and Johnson defined social support quite broadly and did not differentiate between support from parents versus peers.

Given the cross-sectional and correlational nature of this study, its interpretation should not presume causal influences. While it is intuitively reasonable, as well as supported by Bowlby's theory (1973a); that the quality of attachments to parents and peers would be causally related to well-being, these relationships may merely reflect the fact that adolescents with poorer personal adjustment perceive their relationships as being less satisfactory. Similarly, rather than negative life stress being causally related to well-being, adolescents with poorer adjustment may experience more life change. It also is possible that a third, unmeasured variables might account for the observed relationships. The research on early attachments to parents and on the effects of family on self-esteem in childhood (Coopersmith, 1967; Rosenberg, 1965), however, confirm the developmental hypothesis of causal influence from family relations to well-being. In order to address these issues of causality and to fully investigate age changes rather than age differences in the relationships among these measures, longitudinal research beginning in childhood is required.

The Inventory of Adolescent Attachments has been shown to be a reliable and valid measure of adolescent relationships (Greenberg, 1982). Confirming the findings of Kandel and Lesser (1972), there appears to be

little relationship between the perceived quality of relations with parents and with peers. However, because the measure assesses quality of attachments with linear scores, it is not possible to categorize individuals by the differential nature of their attachments in a manner isomorphic to Ainsworth's classification of individual differences (Ainsworth *et al.*, 1978). We believe that the development of such a measure with longitudinal findings is strongly indicated if we wish to fully understand the nature of adolescent attachments to significant others.

## REFERENCES

- Adelson, J., and Doehrman, M. J. (1980). The psychodynamic approach to adolescence. In Adelson, J. (ed.), *Handbook of Adolescent Psychology*, Wiley, New York.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., and Wall, S. (1978). *Patterns of Attachment*, Erlbaum, Hillsdale, N.J.
- Bandura, A. (1969). The stormy decade: Fact as fiction? In Rogers, D. (ed.), *Issues in Adolescent Psychology*, Appleton-Century-Crofts, New York.
- Bedell, J. R., Giordani, B., Armour, J. L., Tavormira, J., and Bill, T. (1977). Life stress and psychological and medical adjustment of chronically ill children. *J. Psychosomat. Res.* 21: 237-242.
- Bentler, P. M. (1972). Review of Tennessee Self Concept Scale. In Buros, O. (ed.), *The Seventh Mental Measurements Yearbook*, Gryphon Press, Highland Park, N.J.
- Blos, P. (1972). *On Adolescence*, Free Press, New York.
- Bowerman, C. E., and Kinch, J. W. (1959). Changes in family and peer orientation of children between the fourth and tenth grades. *Soc. Forces* 57: 206-211.
- Bowlby, J. (1969). *Attachment and Loss*, Vol. I; *Attachment*, Basic Books, New York.
- Bowlby, J. (1973a) *Attachment and Loss*, Vol. II: *Separation*, Basic Books, New York.
- Bowlby, J. (1973b). The self-reliant personality: Some conditions that promote it. In Gosling, R. (ed.), *Support, Innovation and Autonomy*, Tavistock, London.
- Bowlby, J. (1977). The making and breaking of affectional bonds. I. Aetiology and psychopathology in the light of attachment theory. *Br. J. Psychiat.* 130: 201-210.
- Brand, A. H., and Johnson, J. H. (1982). Notes on reliability of the Life Events Checklist. *Psychol. Rep.* 50: 1274.
- Burke, R. J., and Weir, T. (1978). Benefits to adolescents of informal helping relationships with parents and peers. *Psychol. Rep.* 42: 1175-1184.
- Burke, R. J., and Weir, T. (1979). Helping responses of parents and peers and adolescent well-being. *J. Psychol.* 102: 49-62.
- Coleman, J. S. (1961). *The Adolescent Society*, Free Press, New York.
- Coopersmith, S. (1967). *The Antecedents of Self-Esteem*, Freeman, San Francisco.
- Douvan, E., and Adelson, J. (1966). *The Adolescent Experience*, Wiley, New York.
- Dusek, J. B., and Flaherty, J. F. (1981). The development of self-concept during the adolescent years. *Monogr. Soc. Res. Child Dev.* 46(No. 191, 4).
- Emmerich, H. (1978). The influence of parents and peers on choices made by adolescents. *J. Youth Adoles.* 7: 175-180.
- Fitts, W. H. (1965). *Tennessee Self Concept Scale Manual*, Recordings and Tests, Nashville, Tenn.
- Freud, A. (1958). Adolescence. In Eissler, R. S. (ed.), *Psychoanalytic Study of the Child*, (Vol. XIII). International Universities Press, New York.
- Freud, A. (1966). Instinctual anxiety during puberty. *The Writings of Anna Freud: The Ego and the Mechanism of Defense*, International Universities Press, New York.
- Gad, M. T., and Johnson, J. H. (1980). Correlates of adolescent life stress as related to race, SES, and levels of perceived social support. *J. Clin. Child Psychol.* 9: 13-16.

- Gecas, V. (1972). Parental behavior and contextual variations in adolescent self-esteem. *Sociometry* 5: 332-345.
- Gottlieb, B. H. (ed.) (1981). *Social Networks and Social Support*, Sage, Beverly Hills, Calif.
- Gore, S. (1978). The effects of social support in moderating the health consequences of unemployment. *J. Hlth Soc. Behav.* 19: 157-165.
- Greenberg, M. (1982). Reliability and validity of the Inventory of Adolescent Attachments. Unpublished manuscript.
- Greenberger, E., and Sorensen, A. B. (1974). Toward a concept of psychosocial maturity. *J. Youth Adoles.* 3: 329-358.
- Hall, G. S. (1904). *Adolescence: Its Psychology and Its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion, and Education*, Appleton, New York.
- Henderson, S. (1977). The social network, support and neuroses: The function of attachment in adult life. *Br. Psychiat.* 131: 185-191.
- Hill, J. (1980). The family. In Johnson, M. (ed.), *Toward Adolescence: The Middle School Years: Seventy-Ninth Yearbook of the National Society for the Study of Education*, University of Chicago Press, Chicago.
- Hinde, R. A. (1979). *Toward Understanding Relationships*, Academic Press, New York.
- Iacovetta, R. G. (1975). Adolescent-adult interaction and peer-group involvement. *Adolescence* 10: 327-336.
- Johnson, J. H., and McCutcheon, S. (1980). Assessing life events in older children and adolescents: Preliminary findings with the Life Events Checklist. In Sarason, I. G., and Spielberger, C. D. (eds.), *Stress and Anxiety*, Vol. VII, Hemisphere, Washington, D.C.
- Kahn, R. L., and Antonucci, T. C. (1980). Convoys over the life course: Attachments, roles, and social support. In Baltes, P. B. and Brim, O. G. (eds.), *Life-Span Development and Behavior*, Vol. III, Academic Press, New York.
- Kandel, D., and Lesser, G. S. (1972). *Youth in Two Worlds*, Jossey-Bass, San Francisco.
- Kerlinger, F. N., and Pedhazur, E. J. (1973). *Multiple Regression in Behavioral Research*, Holt, Rinehart & Winston, New York.
- Larson, L. E. (1972a). The influence of parents and peers during adolescence: The situation hypothesis revisited. *J. Marr. Fam.* 34: 67-74.
- Larson, L. E. (1972b). The relative influence of parent-adolescent affect in predicting the salience hierarchy among youth. *Pacific Sociol. Rev.* 15: 83-102.
- Lerner, R., and Ryff, C. (1978). Implementation of the life-span view of human development: The sample case of attachment. In Baltes, P. B. (ed.), *Life-Span Development and Behavior*, Vol. II, Academic Press, New York.
- Lieberman, A. (1977). Preschooler's competence with a peer: Relations with attachment and peer experience. *Child Dev.* 48: 1277-1287.
- Maccoby, E. E., and Jacklin, N. J. (1974). *The Psychology of Sex Differences*, Stanford University Press, Stanford, Calif.
- Marcia, J. F. (1980). Identity in adolescence. In Adelson, J. (ed.), *Handbook of Adolescent Psychology*, Wiley, New York.
- Mortimer, J. T., and Lorence, J. (1980). Self-concept stability and change from late adolescence to early adulthood. In Simmons, R. G. (ed.), *Research in Community and Mental Health*, JAI Press, Greenwich, Conn.
- Mueller, D. P. (1980). Social network: A promising direction for research on the relationship of the social environment to psychiatric disorder. *Soc. Sci. Med.* 40: 147-161.
- Murphey, E. B., Silber, E., Coelho, G. V., Hamburg, D., and Greenberg, I. (1963). Development of autonomy and parent-child interaction in late adolescence. *Am. J. Orthopsychiat.* 33: 643-652.
- Musgrove, F. (1963). Inter-generation attitudes. *Br. J. Soc. Clin. Psychol.* 2: 209-223.
- Nuckolls, K. B., Cassel, J., and Kaplan, B. H. (1972). Psychosocial assets, life crises, and the prognosis of pregnancy. *Am. J. Epidemiol.* 95: 431-441.
- Nunnally, J. C. (1967). *Psychometric Theory*, McGraw-Hill, New York.
- O'Donnell, W. J. (1976). Adolescent self-esteem related to feelings toward parents and peers. *J. Youth Adoles.* 5: 179-185.

- Offer, D. (1969). *The Psychological World of the Teenager*, Basic Books, New York.
- Offer, D., and Offer, J. B. (1975). *From Teenager to Young Manhood*, Basic Books, New York.
- Rosenberg, M. (1965). *Society and Adolescent Self-Image*, Princeton University Press, Princeton, N.J.
- Rosenberg, M. (1979). *Conceiving the Self*, Basic Books, New York.
- Rutter, M. (1980) *Changing Youth in a Changing Society*, Harvard University Press, Cambridge, Mass.
- Sarason, I. G., Johnson, J. H., and Siegel, J. (1978). Assessing the impact of life changes: Development of the Life Experiences Survey. *J. Counsel. Clin. Psychol.* 46: 932-946.
- Siegel, J. M., and Leitch, C. J. (1981). Behavioral factors and blood pressure in adolescence: Tacoma study. *Am. J. Epidemiol.* 113: 171-181.
- Smith, T. E. (1976). Push versus pull—Intra-family versus peer group variables as possible determinants of adolescent orientation toward parents. *Youth and Society* 8: 5-26.
- Sroufe, A., and Waters, E. (1977). Attachment as an organizational construct. *Child Dev.* 48: 1184-1199.
- Wan, G. Y., Yamamura, D. S., and Ikeda, K. (1969). The relationship of communication with parents and peers to deviant behavior of youth. *J. Marr. Fam.* 31: 43-47.
- Waters, E. (1978). The reliability and stability of individual differences in infant-mother attachment. *Child Dev.* 49: 483-494.