

Social Support: A Mediator between Child Maltreatment and Developmental Outcomes

Elise N. Pepin¹ and Victoria L. Banyard²

Received March 29, 2004; revised June 10, 2005; accepted July 11, 2005
Published online: 3 June 2006

The purpose of the current study was to investigate the relationship between child maltreatment, social support, and developmental outcomes in first-year college students. Participants were 202 undergraduate students (137 female, 65 male) who completed surveys at two time points: once before entering college and once during their first year of college. It was hypothesized that child maltreatment would predict poorer developmental outcomes in adolescence and early adulthood, but that social support would mediate this relationship. Results indicated that child maltreatment related negatively to developmental outcomes and to perceived social support; adolescent and young adult development related positively to perceived social support. In addition, a mediational model in which social support mediates child maltreatment and developmental outcomes was supported.

KEY WORDS: social support; child maltreatment; adolescent development; transition to college; child abuse.

The experience of child maltreatment is prevalent in a plethora of populations, including college student samples (e.g., Banyard *et al.*, 2000; Briere and Runtz, 1988). Furthermore, individuals who were abused as children can face considerable difficulties across the lifespan (e.g., Brooks, 1985; Cicchetti, 1996; Finkelhor, 1995; Mullen *et al.*, 1996; Thomlison, 1997), yet to date outcomes in the research literature have typically focused on mental health symptoms, with less attention to developmentally specific outcomes. The present research responds to calls for a more developmentally informed view of the effects of child maltreatment (e.g., Finkelhor, 1995)

Erik Erikson's (1963, 1968) theory of psychosocial development has influenced numerous investigations of adolescence and early adulthood (e.g., Craig-Bray *et al.*,

1988; Marcia, 1966). This period of life is characterized as a time of questioning and shaping one's identity as well as finding intimacy in social relationships. These life tasks underscore the importance of the interconnected roles of independence, inclusion in social interaction, and social support. Moreover, they highlight that the social support one receives during adolescence can positively affect development (e.g., Eccles *et al.*, 1993; Gottlieb, 1991; Herzberg *et al.*, 1999; Otto and Atkinson, 1997; Schultheiss and Blustein, 1994). This point has also been upheld in the child maltreatment literature, with survivors who report greater social support tending to fare better (Berliner and Conte, 1995; Everson *et al.*, 1989; Spaccarelli and Kim, 1995; Valentine and Feinauer, 1993).

Because there have been separate research efforts dedicated to the effects of social support on college-aged adolescents and on survivors of child abuse in general, it was of interest to investigate the effects of social support on the development of college students who have experienced child abuse. Specifically, the present research investigated the relationship between child maltreatment and adolescent/young adult development, as well as the relationship between child maltreatment and social support. The main hypothesis was that although child maltreatment predicts negative developmental outcomes

¹Assistant Professor, Departments of Psychology and Child Life, Utica College. This research was conducted while at the Department of Psychology, University of New Hampshire. Major research interests include adolescent development, development in adulthood, and child maltreatment. To whom correspondence should be addressed at Department of Psychology and Child Life, Division of Health and Human Studies Utica College, 1600 Burrstone Road, Utica, NY 13502; e-mail: epepin@utica.edu.

²Associate Professor, Department of Psychology, University of New Hampshire. Major research interests include long term mental health consequences of interpersonal violence.

in adolescence and early adulthood, social support mediates this relationship.

Before understanding the impact of child maltreatment on adolescents, it is necessary to examine developmental theory regarding this stage in the lifecycle. In his lifespan approach, Erikson (1968) described eight developmental stages in terms of conflicts leading to positive outcomes or and negative outcomes. At each stage the individual must reach a conclusion, positive or negative, in order for development to proceed.

College aged students are at a period of transition in their lives; they are approaching the end of their adolescent years and entering young adulthood. Thus, developmental theories related to both of these stages are likely to be relevant. Erikson (1968) defined adolescence as a time at which an individual develops his or her identity. Social interaction is an important means through which adolescents can actively find their identities. During adolescence, social interaction is mainly composed of relating with peers; parental interaction tends to be less frequent (Gottlieb, 1991). While providing an opportunity to search for identity, the time young adults spend in college is also a time to develop intimate commitments (Erikson, 1968). Therefore, it is important to understand the role of interpersonal relationships in early adulthood because they signify developmental accomplishment in addition to linking adolescence to adult development (Fischer *et al.*, 1996). Without intimacy, the young adult does not view life situations as opportunities to experiment with his or her identity and finds relationships shallow (Erikson, 1968).

Individuals explore identity and intimacy whether or not previous conflicts have been positively resolved. However, like all Eriksonian tasks, identity and intimacy development is more likely a positive experience when previous stages have been resolved positively (Erikson, 1968). Therefore, in the current study we focus on the stages explored during adolescence and young adulthood, but we also explore prior stages.

In Erikson's (1968) theory, life circumstances influence the formation of identity and intimacy during adolescence and early adulthood. In turn, the level of success an individual has in achieving identity and intimacy has an impact on his or her social interactions throughout life. Further, we can consider that many adolescents confront the tasks of identity formation and development of intimacy while also facing the trauma of child maltreatment. Physical cruelty, inappropriate sexual behavior, and neglect are experiences that are too common in children's lives (Mullen *et al.*, 1996). It has been estimated that 11.8% (826,000) of all children in the U.S. were victims of child abuse and neglect in 1999 (U.S. Department of Health and Human Services, 1999).

Studies have shown links between child maltreatment and survivors' problems with interpersonal relationships and psychosocial variables that can affect relationships. Briere and Runtz (1990) found that a history of physical and emotional abuse was related to anger, aggression, self-esteem, and dysfunctional sexual behavior in female undergraduates. Similarly, Mullen and colleagues (1996) found that women who reported experiencing sexual, physical, or psychological abuse during childhood were more likely to face difficulties with interpersonal relationships and sexual difficulties, in addition to mental health consequences, as adults.

We hypothesize that individuals abused as children will exhibit more difficulty in forming identity and achieving intimacy during the course of adolescence and early adulthood given the variety of other negative consequences associated with maltreatment (e.g., Brooks, 1985; Cicchetti, 1996; Finkelhor, 1995; Thomlison, 1997). To date, however, there has been little examination of the impact of child maltreatment on such specific developmental outcomes that are grounded in developmental theory. Rather, the focus has mainly been on mental health symptoms and behavior problems.

To understand both contextual factors influencing adolescent development equally as well as the specific experiences of abuse survivors, increasing attention has been paid to the concept of social support. In previous research, social support has been approached from many angles including examination of the source of support (e.g. family and peers). The main distinction has been whether to conceptualize support as the way one perceives available resources (*perceived support*) or as the actual receipt of aid or advice (*received support*; Sarason *et al.*, 1987; Wethington and Kessler, 1986). A number of researchers have incorporated this distinction in investigating the influence of social interactions on development. Otto and Atkinson (1997), for example, found that adolescents who reported greater perceived support – the availability of parents to discuss school matters – had higher grade point averages (GPAs). These were not the adolescents who reported the greatest received support – spending time with their parents. This finding illuminates the idea that it is the quality of the interaction, or the “connection” (p. 87), between parent and child that is important rather than the actual amount of time they spend together. In the current study we investigate both perceived and received social support in order to further this approach.

There has been much research devoted to investigating the influence of parent and peer social support on adolescent development. For example, adolescents whose parents encouraged their formation of relationships were higher achievers at school and had better ego-resiliency

(Best *et al.*, 1997). Steinberg, Dornbusch, and Brown (1998) assessed parental warmth, autonomy fostering, and behavioral control, and found that adolescents accomplished more in school than their peers when their parents were democratic in the home, showed warmth but were also firm. Other research has shown that hostile opposition within the family is associated with negative outcomes such as problems establishing autonomy and relatedness, in adolescent development (Allen *et al.*, 1996). Such work supports the theory that positive interactions between parents and their children contribute positively to adolescent development. College-aged students are also affected by parental interaction and involvement. Schultheiss and Blustein (1994) found that female college students who were emotionally attached to their parents were more academically independent. Similarly, Herzberg *et al.* (1999) found that females in late adolescence (i.e., post-high school, in college and other occupations) had a greater sense of security when they received higher levels of social support.

During the adolescent and young adult periods, peer support impacts development in addition to family support. Researchers have demonstrated that the quality of relationships with peers, as well as with parents, was related to adolescents' self-esteem, satisfaction with life, and satisfaction with friendships (Greenberg *et al.*, 1983; Moore and Boldero, 1991). Thus, the developmental literature points to the importance of social support to development in general.

Researchers have furthered investigation of the role of the social environment to study of child abuse survivors. Social support of a victim of child abuse has been shown to greatly impact their functioning (Brown *et al.*, 1999; Mullen *et al.*, 1996; Thomlison, 1997; Wind and Silvern, 1994). Depending on the type of social transactions a victim experiences following child abuse, his or her adjustment may be improved or harmed (e.g., Spaccarelli and Kim, 1995). Valentine and Feinauer (1993), for example, found that support networks of family, friends, and religious groups significantly predicted their abilities to find life to be meaningful and to maintain an internal locus of control.

Family support is one of the factors most commonly associated with better functioning for children following abusive situations (Berliner and Conte, 1995; Everson *et al.*, 1989; Spaccarelli and Kim, 1995). Parental support in particular is a factor that has been found to promote positive outcomes following abuse. Survivors whose mothers provide emotional support tend to fare better psychologically (Egeland *et al.*, 1993; Everson *et al.*, 1989; Jellinek *et al.*, 1992) and developmentally (Finkelhor, 1995). Jellinek *et al.* (1992) and Everson and

colleagues (1989) found that child abuse victims who had opportunities to develop attachments of trust and love experienced lower levels of emotional stress and emotional illness. Similarly, Egeland *et al.* (1993) reported that psychologically responsive, protective caregivers can serve to protect children from the harsh effects of harmful developmental environments and that resilience can result even in the face of poverty, child abuse, and stress in the family.

In sum, it appears that more successful adjustment and development following child abuse are positively related to the level of support offered within the family and society both before and after abuse experiences. In this way the findings mirror those in the broader literature on adolescent and adult development. To date, however, connections between these areas of inquiry have been scarce. For example, most studies of social support among maltreated children have focused on mental health or justice system procedural outcomes rather than the impact of abuse and support on developmentally specific skills and outcomes. Furthermore, greater attention has been paid to young children and adults rather than to the transition from adolescence to young adulthood.

The current study sought to bring together research on adolescent and early adult development, social support, and child maltreatment. The goal was to investigate the relationship between social support and the developmental outcomes of child abuse survivors as they adapt to college. It was hypothesized that individuals who reported higher social support quality would have better developmental outcomes than those who reported less support, regardless of abuse history. Child abuse survivors were hypothesized to have less positive developmental outcomes than those who did not experience abuse. Furthermore, it was predicted that survivors of maltreatment would report lower levels of family and peer support than those who did not experience abuse. Finally, the experience of social support during adolescence was hypothesized to mediate the relationship between abuse and developmental outcomes.

METHOD

This study utilized a pretest-posttest self-report survey. Entering first-year university students participated in a survey during orientation in the month of June prior to their first semester of college (Time 1) and again during their first year of college (Time 2). Although not longitudinal in design, data were collected at two time points in order to assess perceived family and friend support prior to leaving the home environment and high school setting. Physical and psychological forms of maltreatment were also assessed at Time 1 to obtain responses regarding family conflict tactics while participants still were living

within their families-of-origin. Developmental outcomes and additional maltreatment experiences were assessed during participants' first year at college.

Participants and Procedure

At Time 1, 647 adolescents preparing to enter a New England university volunteered to complete anonymous surveys during an unstructured period of time between university orientation activities. Following the completion of the informed consent form, they spent about 15 min completing a Time 1 survey. At this time, participants were informed that, with their consent, they would be contacted during their first year of college to complete their participation. Of these participants, 92.9% ($n = 601$) indicated their willingness to complete another survey by providing their names and signing separate consent forms. To ensure confidentiality, participants' names were recorded on consent forms separate from the surveys, and no personally identifiable data were included on the survey.³

All participants who consented at Time 1 and enrolled in Introductory Psychology courses were contacted via electronic mail or phone during their first year at college (Time 2; $n = 284$; 47.3% of Time 1 participants). This was done for convenience because such students had the opportunity to receive partial course credit for their participation in the study, providing an incentive for participation. Most completed surveys during the Fall semester (88.1%) and the remaining 11.9% during the Spring semester. Contact information such as email addresses and telephone numbers students consented to be published by the university in a public directory was used because during June orientation students were not privy to what their email addresses or phone numbers would be following enrollment. Of those contacted, 82.0% ($n = 233$; 36.0% of Time 1 participants) completed Time 2 surveys.⁴ Similar to Time 1, participants were informed that the questionnaire contained potentially sensitive questions, and they could withdraw at any time without penalty.

In comparing the groups of participants who were included in the present study (i.e., those to whom Time

1 and Time 2 measures were administered) to all participants who completed a survey at Time 1, the only demographic variable the two groups differed on was participant sex. The proportion of the Time 2 sample composed of males (30.5%) was significantly lower than that of all Time 1 participants (48.4%, $p < .001$). There were no other significant differences between the participants who completed Time 2 surveys and those who did not on demographics (i.e., place of residence, race, parents' education and marital status, family income, high school GPA) or on measures of interest collected at Time 1 (i.e., perceived friend support, perceived family support, family hardiness, psychological aggression, and physical assault). Therefore, the convenience sample appears to be an unbiased subgroup of all Time 1 participants.

Similarly, when comparing participants who completed Time 2 surveys in the fall of their first year of college to those who participated during the spring (second semester) of their first year of college, the two groups differ in the proportions of the sexes. The proportion of the spring Time 2 sample composed of males (46.4%) was significantly higher than that of fall participants (27.7%, $p < .05$). There were no significant differences on the measures of interest in this study completed by participants who volunteered during their first semester of college and those who completed the questionnaire in the second semester.

Thirty-one participants who completed surveys at Time 2 were excluded from analyses. For 10 participants, Time 1 and Time 2 data could not be matched. An additional 21 participants were excluded because of an excessive amount of incomplete data on the measures of interest (20% or more). When missing data did not exceed 20% of the items on a single instrument, missing data was accounted for using the mean replacement technique.

In comparing participants who were excluded because of missing data to those who were included in the present study, the only demographic variable the two groups differed on was participant sex. In the group of participants included in further analyses, the proportion of males (32.2%) was significantly lower than it was in the group of participants excluded in further analyses (9.5%, $p < .05$). There were no other significant differences between the participants who were excluded and included on demographics (i.e., place of residence, race, parents' education and marital status, family income, high school GPA) or on measures of interest to this study.

Therefore, the participants included in the present study were 202 first-year undergraduate students. A majority completed participation during their first semester of college (88.1%) and the others did so during the second semester of their first year (11.9%). The

³ Identification labels for purposes of matching Time 1 data to Time 2 data were constructed based on the day of birth of the participant (1-31), the participant's mother's maiden name, and the square root of the last four digits of the participant's student Social Security number; this is information that can be reproduced easily by a participant but attaches no identity to a participant's data.

⁴ Of the students who were contacted but did not participate at Time 2, most had previously completed the partial course credit that they would have received as a benefit from this study (10.6% of those contacted), and others either were unavailable to attend survey sessions (4.6%) or did not respond when contacted (2.8%).

average participant was approximately 18 years of age ($M = 18.22$, $SD = .47$) and Caucasian (96.5%); others were African-American, Asian, Native American, or Hispanic (2.0%) or multi-racial (1.0%). The sample was 67.8% female and 32.2% male.

Materials (Time 1)

Perceived Social Support

Perceived support was measured using two 20-item surveys, the Perceived Social Support from Friends and the Perceived Social Support from Family surveys (PSS-Fr and PSS-Fa; Procidano and Heller, 1983). Most of the items on the two surveys are identical except for the target group of family or friends. Responses to the items on both measures are provided on a 5-point Likert-type scale ranging from 1, *Almost never or Never true*, to 5, *Almost always or Always true*. Higher scores indicate higher perceived support. Internal consistency reliability (Cronbach's α) for the PSS-Fr was .92 ($M = 76.81$, $SD = 11.86$), and for the PSS-Fa was .95 ($M = 74.55$, $SD = 16.24$) for the current sample.

Child Abuse

The Parent-Child Conflict Tactics Scale (CTSPC; Straus, Hamby, Finkelhor, Moore and Runyan, 1998) was used to measure the frequency and prevalence of minor, severe, and very severe physical abuse, as well as psychological aggression and non-violent discipline. It contains a list of 22 actions that might be taken by a family member in family conflict situations, and participants respond on a 7-point scale ranging from 0 (*never, has not occurred in the past year*) to 6 (*more than 20 times in the past year*). There is also an option (7) for indicating whether the action has not occurred in the past year but has occurred prior to the past year. Internal consistency for the current sample was higher than that reported for previous samples at $\alpha = .86$.

Data on maltreatment variables were skewed. Therefore, dichotomous variables were created for each type of abuse examined indicating whether or not each type of conflict tactic was experienced. The two physical abuse variables of interest in this study were severe and very severe physical assault. Physical abuse was defined using the "severe physical assault" and "very severe physical assault" subscales designated by Straus *et al.* (1998). For 15.3% of the participants, severe physical assault had been used by their parents either in the past year or before that timeframe, and 6.9% reported very severe assault. In all,

16.3% of the sample ($N = 33$) was in the group of those who had experienced physical abuse. Most of the participants in this sample (87.6%) reported that their parents had used psychological aggression as a conflict tactic either in the past year or before.

Questionnaires regarding demographic information were also included.

Materials (Time 2)

Developmental Achievement

The Erikson Psychological Stage Inventory (EPSI; Rosenthal *et al.*, 1981) was used to assess developmental achievement. The EPSI is an inventory designed to measure the first six of Erikson's eight psychosocial stages: trust vs. mistrust, autonomy vs. shame and doubt, initiative vs. guilt, industry vs. inferiority, identity vs. identity confusion, and intimacy vs. isolation. For each of these subscales, it includes 12 items scored on a 5-point Likert-type rating scale anchored at 1, *hardly ever true of me*, and 5, *almost always true of me*. Two items were removed from the full scale based on the recommendation of Rosenthal *et al.* (1981), one from the trust subscale and the other from the initiative subscale. Higher scores indicate higher levels of development. For the present study, scores on all subscales were of interest as outcome measures, as early stages are key building blocks for later stages according to Erikson's (1968) theory: trust ($M = 39.26$, $SD = 5.46$; $\alpha = .77$), autonomy ($M = 45.93$, $SD = 5.17$; $\alpha = .76$), initiative ($M = 40.86$, $SD = 5.22$; $\alpha = .78$), industry ($M = 44.97$, $SD = 6.06$; $\alpha = .83$), identity ($M = 42.66$, $SD = 6.62$, $\alpha = .83$), intimacy ($M = 46.07$, $SD = 5.81$, $\alpha = .73$), and the sum score for all stages ($M = 259.74$, $SD = 27.75$, $\alpha = .94$).

Received Social Support

Receipt of supportive behaviors was measured using the Inventory of Socially Supportive Behaviors (ISSB; Barrera *et al.*, 1981). This questionnaire is a 40-item survey designed to assess socially supportive behaviors in a respondent's life. It measures support in a variety of areas: emotional support, sharing tasks, giving advice, teaching skills, and providing material aid, and has been validated for use as a unidimensional measure (Barrera *et al.*, 1981; Stokes and Wilson, 1984). Ratings are made on a 5-point Likert-type scale that ranges from 1, *not at all*, to 5, *about every day*. Therefore, higher scores indicate higher levels of received support ($M = 65.58$, $SD = 22.91$). The reliability coefficient for this sample was $\alpha = .93$.

Child neglect

The Multidimensional Neglect Scale – Form A20 (MNS – A20; Straus *et al.*, 1995) was used to measure child neglect. It is designed to measure neglect of 4 basic developmental needs: (1) emotional needs such as affection, companionship, and support; (2) physical needs such as food, clothing, shelter, and medical care; (3) cognitive needs such as being read to and having things explained; and (4) supervisory needs such as setting limits and responding to misbehavior. Participants respond on a 4-point Likert-type scale (1, *strongly agree*, to 4, *strongly disagree*). Scores were reversed so that higher scores indicated more neglect reported ($M = 27.91$, $SD = 7.11$). The internal consistency coefficient was .91 for the current sample. Twenty participants (9.9%) scored higher than 2 standard deviations away from the mean on the physical neglect and/or supervisory neglect measure. These individuals were, for the purposes of this study, considered to have experienced neglect.

Child Sexual Abuse (CSA)

An abbreviated version of Finkelhor's (1979) Sexual Abuse Questionnaire was used to assess CSA. This measure was developed to assess experiences of child sexual experiences ranging from indecent exposure to fondling and intercourse. The questionnaire includes items about intrafamilial and extrafamilial abuse with perpetrators of all ages, and was designed for administration within a college-aged population. For the present study, sexual abuse included reports of sexual experiences involving a child of age 12 years or younger with a person over 16 years old, and was coded dichotomously as whether or not such abuse is reported. Child sexual abuse (CSA), occurring before the age of 13 with a person at least 4 years older than them at the time, was reported by 17 individuals (8.4%).

To address the specific aims of this research, a maltreatment composite variable was examined. The maltreatment composite used in all analyses represented the sum calculated from dichotomous scores of physical abuse, CSA, and neglect, forming a scale of 0–3 types of abuse experienced.⁵

⁵ Analyses were initially performed that also included participants who experienced psychological aggression. However, to make the maltreatment composite more exclusive, psychological aggression was excluded from the composite. Results of initial analyses including all four types of maltreatment (psychological aggression, neglect, CSA, and physical abuse) mimic those reported here.

Questionnaires regarding demographic and background information were also included.

Sequence of Administration (Times 1 and 2)

In order to avoid the possibility that students' reflecting on past negative experiences (i.e., measures of maltreatment) may influence their reports of current functioning, the questionnaires were presented in the order that appears in this methods section. That is, at both Time 1 and Time 2, all measures of social support and the dependent variable of developmental outcomes were assessed via surveys administered prior to administration of surveys inquiring about childhood experiences of abuse.

The reasoning for the different types of maltreatment assessed measured at different time points is twofold. First, the time available during June orientation was limited. Participants were to adhere to a schedule that allowed for a small number of questionnaires to be completed. Second, researchers did not want to interfere with one goal of the orientation program: to allow students to become acquainted with their future school, classmates, and home in a positive manner while completing necessary tasks for registration. It was for these reasons that we did not include questions regarding sexual abuse in the Time 1 materials.

Data Analysis

The analyses for this research tested whether social support took on a mediational role in explaining the impact of child maltreatment on developmental outcomes. If social support behaved as a mediator, then the relationship between child maltreatment and developmental outcomes would be explained, or partially explained, by the inclusion of social support.

As recommended by Barron and Kenny (1986) in investigating mediation, regression analyses were performed following examination of variable correlations. In order to test for mediation, correlations between all variables in the model must reach significance. Then the independent variable, child maltreatment in the current study, is regressed on both the proposed mediator, in this case social support (step 1) and the dependent variable, in this case the measure of developmental achievement (step 2). Finally, the independent variable and the proposed mediator are regressed simultaneously on the outcome variable (step 3). If the relationship between the independent and outcome variables is reduced to an effect of no significance, whereas the relationship between the

proposed mediator and outcome variables is significant, then full mediation is demonstrated.

RESULTS

A series of initial analyses were performed to examine relationships between demographic variables and outcomes to identify any important covariates. Participant sex was related to maltreatment and social support. Males reported significantly more physical abuse, with 24.6% experiencing “severe” or “very severe” assault; 12.4% of females reported physical abuse ($\chi^2 = 4.806, p < .05$). There were no significant sex differences in reporting of neglect, CSA, or psychological aggression. Males also reported more types of maltreatment experienced, with a mean score of .48 ($SD = .69$) on the maltreatment composite with a scale of 0 to 3 types of abuse (physical assault, neglect, CSA; range: 0–2). The mean score for females on this scale was .28 ($SD = .50; t(200) = -2.255, p < .05$).

Females reported significantly higher perceived friend support, received support, and total perceived social support than males. Females’ scores on the PSS-Fr averaged 79.29 ($SD = 11.56$), whereas for males the average score was 71.58 ($SD = 10.81; t(200) = 4.520, p < .001$). Female participants scored significantly higher ($M = 155.24, SD = 22.93$) than males ($M = 143.20, SD = 22.03; t(200) = 3.599, p < .001$) on the total perceived support score (sum of PSS-Fr and PSS-Fam scores). Females also reported higher levels of received support on the ISSB, with an average score of 68.53 for females ($SD = 21.79$) and 59.37 for males ($SD = 24.13; t(200) = 2.694, p < .01$). Therefore, sex was controlled for in all further analyses.

Higher Social Support is Related to Better Development

The first hypothesis was that individuals with higher levels of social support would demonstrate better developmental outcomes. To investigate this relationship, correlations between types of social support and developmental outcomes were examined. As shown by the pattern of significant, positive correlations in Table I perceived social support from friends, perceived family support, and total perceived support were overall highly related to developmental outcomes across all stages measured by the EPSI (trust, autonomy, initiative, industry, identity, intimacy, and the total development score). These forms of support were more predictive of development than was re-

ceived supportive behaviors, which correlated only with the intimacy and total EPSI scores.

Abuse Survivors have Less Positive Developmental Outcomes

The next phase of analysis was to examine relationships between childhood maltreatment and developmental outcomes, testing the hypothesis that survivors of childhood maltreatment would show lower developmental achievement. Bivariate correlations between the maltreatment composite and developmental outcomes demonstrate that maltreatment negatively related with developmental outcomes. The maltreatment composite was significantly negatively related to the full EPSI measure ($r(201) = -.15, p < .05$) and the trust ($r(201) = -.16, p < .05$) and intimacy ($r(201) = -.16, p < .05$) subscales.

Abuse Survivors Report Lower Social Support

The hypothesis that survivors of child maltreatment would have lower social support was subsequently examined. Bivariate correlations between the maltreatment composite and social support indicated that the maltreatment composite was significantly negatively related with perceived friend ($r = -.15, p < .05$), family support ($r = -.18, p < .05$), and total perceived support ($r = -.20, p < .01$). Received support was not significantly related maltreatment.

Social Support Mediates the Relationship between Maltreatment and Development

Results indicated that maltreatment was related to perceived social support and to development, and that perceived support was related to developmental outcomes. Therefore, the final phase of data analysis examined the extent to which perceived support mediated the relationship between maltreatment and development. The final hypothesis predicted that accounting for social support would better explain developmental outcomes than maltreatment alone. The series of multiple regressions suggested by Baron and Kenny (1986), outlined previously, were performed to test mediation. Dependent variables in the regressions were the developmental outcome measures that correlated significantly with maltreatment and social support: the full EPSI measure of developmental outcomes and the six subscales. Participant sex was controlled for in all regression analyses by including it as an independent variable. Therefore, any variance in the dependent variables that could be accounted for by sex was

Table I. Correlation Matrix of Social Support with Developmental Outcomes

| Variable | Trust | Autonomy | Initiative | Industry | Identity | Intimacy | Total ^a |
|--------------------------|--------|----------|------------|----------|----------|----------|--------------------|
| Perceived friend support | .26*** | .25*** | .25*** | .21*** | .26*** | .58*** | .38*** |
| Perceived family support | .31*** | .29*** | .27*** | .34*** | .34*** | .32*** | .39*** |
| Received support | .06 | .09 | .09 | .09 | .08 | .28*** | .14* |
| Perceived support total | .36*** | .33*** | .33*** | .34*** | .38*** | .55*** | .47*** |

* $p < .05$; ** $p < .01$; *** $p < .001$.

^a Score on full EPSI.

not artificially attributed to the independent variables of interest that were also entered into the regression.

The impact of childhood maltreatment on the hypothesized mediators (perceived friend support, perceived family support, and total perceived support) was examined in the first step of this analysis (see Tables II–IV). Maltreatment accounted for a significant proportion of the variance (4–10%) in the social support variables entered as proposed mediators. According to Baron and Kenny (1986), this was the first step necessary for testing mediation.

In the next step necessary for testing mediation (Baron and Kenny, 1986), maltreatment was regressed on each of the EPSI developmental outcome subscales. Only significant relationships are reported here (see Tables II–IV). There was a significant relationship between the independent maltreatment variable and three developmental outcomes in each respective regression (i.e., the full EPSI, and Trust and Intimacy subscales), indicating that maltreatment was a significant predictor of poorer developmental outcomes. Maltreatment accounted for 3–4% of the variance in each of the measures.

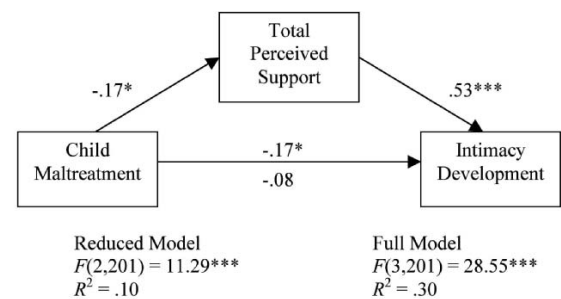
Tables II–IV indicate the results of the regressions of developmental outcomes on both social support and maltreatment, satisfying the final step described by Baron and Kenny (1986). In this step, child maltreatment and social support types were regressed simultaneously on developmental outcomes. As hypothesized, evidence was found for the mediational role of social support between maltreatment and development as measured by the full EPSI. This result was also found for the trust and intimacy subscales. Child maltreatment became a nonsignificant predictor of each of the developmental outcomes after entering all social support types. An exception to this general finding is the relation between EPSI Trust and maltreatment ($\beta = -.18$; $p < .01$), which remained significant but was weakened with the inclusion of the influence of perceived support from friends ($\beta = -.15$, $p < .05$). This demonstrates partial mediation.

For example, support was found for the mediational role of perceived social support between maltreatment and intimacy development. As hypothesized, the first step in testing for mediation demonstrated that maltreatment was

significantly related to total perceived support ($\beta = -.17$, $p < .05$; see Fig. 1). In the second step, maltreatment was regressed on intimacy development. Maltreatment predicted a significant proportion of variance in and had a significant relationship with development measured by the EPSI intimacy subscale ($\beta = -.17$, $p < .05$). Finally, maltreatment and total perceived support were regressed simultaneously on intimacy development. The relationship between perceived social support and development remained significant ($\beta = .53$, $p < .001$), whereas the relationship between the independent and outcome variables became non-significant ($\beta = -.08$, $p > .05$).

DISCUSSION

In this examination of the relationship between childhood maltreatment, social support, and developmental outcomes, the findings corroborate and broaden analyses from previous studies (e.g., Berliner and Conte, 1995; Eccles *et al.*, 1993; Otto and Atkinson, 1997; Valentine and Feinauer, 1993). Overall, perceived social support was related to higher levels of developmental achievement



* $p < .05$; *** $p < .001$

Fig. 1. Summary of mediating regression analysis for Intimacy Development, including β -weights, F values, and R^2 's for the model before the proposed mediator Total Perceived Support is included (Reduced Model) and then including the mediator (Full Model). The β -weight of the initial path from Child Maltreatment to Intimacy Development is above the line connecting Child Maltreatment and Intimacy Development. The β -weight below the line connecting Child Maltreatment and Total Perceived Support to Development represents that found after Total Perceived Support is included in the model.

Table II. Summary of Regression Analyses for Perceived Social Support (Family, Friends, Total) as a Mediator of the Relationship between Child Maltreatment and Developmental Status

| Model | F Value (2,201) | R ² | β |
|--|-----------------|----------------|--------|
| Perceived Friend Support | | | |
| Step 1 | | | |
| Maltreatment → Friend Support | 11.44*** | .10 | -.10 |
| Step 2 | | | |
| Maltreatment → EPSI Total (Development) | 2.66 | .03 | -.16* |
| Step 3 | | | |
| Friend Support → EPSI Total (Development) | 14.51*** | .18 | .42*** |
| Maltreatment → EPSI Total (Development) | | | -.12 |
| Perceived Family Support | | | |
| Step 1 | | | |
| Maltreatment → Family Support | 4.19** | .04 | -.16* |
| Step 2 | | | |
| Maltreatment → EPSI Total (Development) | 2.66 | .03 | -.16* |
| Step 3 | | | |
| Family Support → EPSI Total (Development) | 13.34*** | .17 | .39*** |
| Maltreatment → EPSI Total (Development) | | | -.10 |
| Overall Perceived Support | | | |
| Step 1 | | | |
| Maltreatment → Overall Support | 9.60*** | .09 | -.17* |
| Step 2 | | | |
| Maltreatment → EPSI Total (Development) | 2.66 | .03 | -.16* |
| Step 3 | | | |
| Overall Support → EPSI Total (Development) | 22.37*** | .25 | .50*** |
| Maltreatment → EPSI Total (Development) | | | -.08 |

Note. The components of each model are depicted as predictor → outcome. Maltreatment includes neglect, physical abuse, and CSA; Overall Perceived Support is a composite of Perceived Friend Support and Perceived Family Support. Only significant models are reported.

p* < .05. *p* < .01. ****p* < .001.

as measured in terms of Erikson’s psychosocial stages; received supportive behaviors did not demonstrate this relationship. Exposure to maltreatment was also associated with perceptions of lesser social support and with lower levels of developmental achievement. The relation between maltreatment and development was explained by the relation between maltreatment and perceived social support. Therefore, as hypothesized, the current study demonstrated that perceived social support appears to mediate the relation between maltreatment and development.

As expected, a pattern emerges demonstrating that young adults with greater perceived social support from friends and greater perceived support from family demonstrate more successful navigation of Eriksonian conflicts; this relationship is not observed with respect to received support. Therefore, the current research fortifies and expands two research perspectives: (1) development in adolescence is inseparable from the concept of perceived social support, and (2) received supportive behaviors and perceived support available are necessarily distinct concepts in measurement and in function.

Highlighting the importance of the feeling or perception that friends and family are available to offer support if and when the individual perceives a need for it, rather than the quantity of supportive behaviors performed by these individuals, this study demonstrates that the quantity of received support is comparatively less important in predicting developmental achievement than is perceived support. This distinction supports past findings honing in on the distinct functions of perceived and received support of individuals at different points in the lifecycle (Cohen and Wills, 1985; Sarason, Shearin, Pierce, and Sarason, 1987; Wethington and Kessler, 1986). The perception that one’s supportive network is prepared to act can be more important than received supportive behaviors such as the offering of advice or monetary assistance. Thus, the current study bolsters previous work with adults in the broader social support literature. It extends these findings in its demonstration that, similar to adults, adolescents benefit from the knowledge that their families and friends are available with support.

The evident importance of perceived social support holds true when examined across the six stages of

Table III. Summary of Regression Analyses for Perceived Social Support (Family, Friends, Total) as a Mediator of the Relationship between Child Maltreatment and Trust Status

| Model | F Value (2,201) | R ² | β |
|--------------------------------|-----------------|----------------|--------|
| Perceived Friend Support | | | |
| Step 1 | | | |
| Maltreatment → Friend Support | 11.44*** | .10 | -.10 |
| Step 2 | | | |
| Maltreatment → EPSI Trust | 4.41* | .04 | -.18** |
| Step 3 | | | |
| Friend Support → EPSI Trust | 9.58*** | .13 | .31*** |
| Maltreatment → EPSI Trust | | | -.15* |
| Perceived Family Support | | | |
| Step 1 | | | |
| Maltreatment → Family Support | 4.19** | .04 | -.16* |
| Step 2 | | | |
| Maltreatment → EPSI Trust | 4.41* | .04 | -.18** |
| Step 3 | | | |
| Family Support → EPSI Trust | 10.24*** | .13 | .31*** |
| Maltreatment → EPSI Trust | | | -.13 |
| Overall Perceived Support | | | |
| Step 1 | | | |
| Maltreatment → Overall Support | 9.60*** | .09 | -.17* |
| Step 2 | | | |
| Maltreatment → EPSI Trust | 4.41* | .04 | -.18** |
| Step 3 | | | |
| Overall Support → EPSI Trust | 14.44*** | .18 | .38*** |
| Maltreatment → EPSI Trust | | | -.12 |

Note. The components of each model are depicted as predictor → outcome. Maltreatment includes neglect, physical abuse, and CSA; Overall Perceived Support is a composite of Perceived Friend Support and Perceived Family Support. Only significant models are reported.

* $p < .05$. ** $p < .01$. *** $p < .001$.

development. Individuals who are more advanced in their developmental achievement are those who also perceive their families and friends to be more available with support (see Table I). Further, perceived social support accounts for a significant amount of the variance in college students' general developmental achievement, and, specifically, in their development of trust—an important building block for later developmental stages—and intimacy—an important current developmental task for older adolescents making the transition to young adulthood (Erikson, 1968). Despite the current finding that perceived support may not determine achievement at all stages measured by the EPSI, this finding is consistent with the theory that social support from family and peers is necessary for success in late adolescent and young adult development (Eccles *et al.*, 1993; Gottlieb, 1991; Herzberg *et al.*, 1999; Otto and Atkinson, 1997). As Erikson (1968) asserts, individuals must succeed during early stages in order to develop successfully at later stages.

Thus, perceived social support affects development both through lesser ability to resolve earlier conflicts such as trust as well as more persistent direct effects on later developmental tasks, such as intimacy. The present re-

search shows that feelings about parental and peer interactions positively influence development in college-aged students. This study also is consistent with the findings of but also expands upon previous research in that individuals who perceive lower levels of social support at home or with friends at the end of high school are less successful in negotiating developmental stages (see Table I; e.g., Schultheiss and Blustein, 1994).

As hypothesized, maltreatment is also associated with lower developmental achievement. These results support previous research (Banyard *et al.*, 2000; Brooks, 1985; Brown *et al.*, 1999; Finkelhor, 1995; Kendall-Tackett and Eckenrode, 1996; Roche, Runtz, and Hunter, 1999) and broaden the understanding of the aftermath of maltreatment from the heavy focus on mental health outcomes reported in the empirical literature to outcomes of adolescent and young adult development. Interestingly, in the current study, greater differences in maltreatment victims' and nonvictims' development are observed in the early stage reflecting the opportunity to become a trusting person. Greater differences, as expected, are also observed in later stages, typical of young adults' developing emotional closeness to others. Successful development

Table IV. Summary of Regression Analyses for Perceived Social Support (Family, Friends, Total) as a Mediator of the Relationship between Child Maltreatment and Intimacy Status

| Model | <i>F</i> Value (2,201) | <i>R</i> ² | <i>β</i> |
|---------------------------------|------------------------|-----------------------|----------|
| Perceived Friend Support | | | |
| Step 1 | | | |
| Maltreatment → Friend Support | 11.44*** | .10 | -.10 |
| Step 2 | | | |
| Maltreatment → EPSI Intimacy | 3.11* | .03 | -.17* |
| Step 3 | | | |
| Friend Support → EPSI Intimacy | 37.06*** | .36 | .61*** |
| Maltreatment → EPSI Intimacy | | | -.11 |
| Perceived Family Support | | | |
| Step 1 | | | |
| Maltreatment → Family Support | 4.19** | .04 | -.16* |
| Step 2 | | | |
| Maltreatment → EPSI Intimacy | 3.11* | .03 | -.17* |
| Step 3 | | | |
| Family Support → EPSI Intimacy | 8.57*** | .12 | .30*** |
| Maltreatment → EPSI Intimacy | | | -.12 |
| Overall Perceived Support | | | |
| Step 1 | | | |
| Maltreatment → Overall Support | 9.60*** | .09 | -.17* |
| Step 2 | | | |
| Maltreatment → EPSI Intimacy | 3.11* | .03 | -.17* |
| Step 3 | | | |
| Overall Support → EPSI Intimacy | 26.63*** | .29 | .53*** |
| Maltreatment → EPSI Intimacy | | | -.08 |

Note. The components of each model are depicted as predictor → outcome. Maltreatment includes neglect, physical abuse, and CSA; Overall Perceived Support is a composite of Perceived Friend Support and Perceived Family Support. Only significant models are reported.

p* < .05. *p* < .01. ****p* < .001.

throughout the lifespan is reliant on the successful development during earlier stages of life (Erikson, 1968). Thus, the findings of the present study may demonstrate that maltreatment affects development both through lesser ability to resolve earlier conflicts such as trust as well as more persistent direct effects on later developmental tasks such as intimacy.

Links between maltreatment and lower levels of developmental achievement were partially explained by lesser perceptions of social support by those who were abused. Because of the greater explanatory ability shown when social support is considered as a mediator (i.e., greater *R*² values, see Tables II–IV) the importance of considering relationships between and among childhood maltreatment experiences, adolescent development, and social support is apparent. In other words, when social support is taken into account in relation to child maltreatment and adolescent development, models are more descriptive. The amount of variance explained increase two-, three-, and fourfold when social support is included. Therefore, consideration of one or two constructs alone may be not be as accurate as consideration of them in

combination. Future research can benefit from this perspective.

Prospective research is needed to investigate such lines of inquiry further. For example, the relationship between a child's age at the time when maltreatment occurs and development may be key. Inclusion of such items in research would allow for examination of the impact of maltreatment at different points in life on stages of development. Perhaps it is the age at which physical abuse, CSA, psychological aggression, or neglect occurs that impacts certain Eriksonian stages. Similarly, it may be that social support and stability in the family or perceptions of support from peers and close friends take on a distinct pattern depending on the age at which maltreatment is experienced. Longitudinal or prospective data would certainly assist in assessing more exactly the points at which developmental achievement begins to show impairment and when maltreatment occurs. Such design improvements in future research can help to remove the limitation of retrospective self-report as well as assist in establishing the direction of causality that could not be ascertained in the current study.

There are a number of limitations to the current study that also suggest directions for future research. This study may be limited to some extent by the undergraduate sample. Samples of college students tend to consist of fewer people who may be of below average socioeconomic status or intelligence, in comparison to those who do not attend college (Finkelhor, 1979). It can be expected that fewer participants in the university sample were victims of maltreatment than would be found in a community or clinical sample. Research also suggests that college students may represent a more resilient group of survivors since they have shown adaptive functioning in order to achieve college admission or may have experienced overall a "less severe" range of maltreatment experiences (Banyard and LaPlant, 2002; Jumper, 1995). A related limitation is that the current sample was drawn from a university with a population comprised mostly of Caucasian students from middle-class families. Therefore, it is unknown how broadly the results may be generalized to diverse racial backgrounds. Future research would benefit from replication of this study with samples of students at colleges in other parts of the country, such as a university comprised of more racial and socioeconomic diversity or a university in a different region, where child maltreatment may be present in different proportions. Despite these limitations, the findings of the present study are clear. Prospective studies following maltreated children brought to the attention of child protective services (CPS) or medical professionals into adolescence and early adulthood might provide the most conclusive data.

Limitations of the present research also include the fact that the data are based on retrospective self-report surveys. It is almost certain that maltreatment was underreported by participants in this sample. Participants' responses, especially when requesting information regarding maltreatment that may have occurred in early childhood, were most likely shaped by their abilities or inabilities to remember such events. As a result of this potential constriction of the data, it may not be possible to generalize the results found here to populations with experiences of more severe maltreatment. It is not known whether the mediational relationships would be stronger or weaker in such cases. A related limitation is the fact that different types of maltreatment were evaluated at each of the time points data was collected. Therefore, the maltreatment composite was composed of a combination of variables assessed at Time 1 and others assessed at Time 2.

The current study does have a number of strengths which also suggest areas for future research. The present study followed high school seniors into their first year of college. Both males and females participated, extending findings of past research that has focused heavily on fe-

male survivors (e.g., Herzberg *et al.*, 1999). Relationships between perceived social support and maltreatment experiences were generally found in the expected direction. Physical abuse, psychological aggression, and neglect all tended to relate to lower perceived availability of supportive others and less family stability. This appears to be a robust finding, especially given that the sample used in the present study was obtained from a college population, it may be assumed that the individuals providing information are from more advantaged homes in which maltreatment takes place at a lower rate or in a less severe form than would be found in a community or clinical sample. Further, college students may represent survivors of maltreatment with greater resources and resilience, as they have demonstrated strength or experienced support enough to have been accepted to and enrolled in college.

The interest of the current study was based on examination of a composite of cumulative maltreatment experiences. The distinctive story of each type of maltreatment became lost to some extent in the composite utilized in the present study. In a sample with a higher reporting rate of a variety of types of maltreatment, more statistical power will allow for examination of each unique type of maltreatment. Different forms of child abuse can affect survivors in different ways (Briere and Runtz, 1988, 1990; Mullen *et al.*, 1996). Psychological abuse, physical abuse, and sexual abuse have each been linked with diverse outcomes in some past research. However, the degree to which specific forms of maltreatment are linked with clearly distinct configurations of effects is a research question to be further explored (Mullen *et al.*, 1996).

The present study demonstrates that perceived social support from friends and family is important in shaping psychosocial development. If this social support in adolescence is of such importance, and if the effects of maltreatment are mediated by such social support, then we must seize this as a chance to provide intervention. Adolescents must be encouraged to develop the ability to cognitively evaluate their social support networks, to recognize support when it is present. Parents and teachers, as well as team coaches, activity directors, and other important adults in their lives, can assist adolescents by promoting these evaluations, demonstrating the importance of social support while providing it. These interventions would clearly benefit college students such as those in the current sample.

The findings of this study have important implications for providing more effective therapies to survivors of child abuse and developing programming that promotes successful adjustment and development for students in high school and college. Additionally, interventions promoting successful development from childhood through

early adolescence are justified in the current study. Further, it shows the importance of bringing together the fields of developmental theory research, and child maltreatment research, generating new and interesting questions for inquiry. Social support in adolescence is evidently a central concept to appreciate the impact of maltreatment on development. Social support is also a clear correlate of more successful development in young adults in a more general population. By distinguishing between the different types of supports individual adolescents and young adults experience and lack, it may be possible to predict and accommodate future psychological functioning.

ACKNOWLEDGMENTS

The authors would like to thank Toni Bisconti, Carolyn Mebert, and Ellen Cohn for their feedback on the manuscript.

REFERENCES

- Allen, J. P., Hauser, S. T., O'Connor, T. G., Bell, K. L., and Eickholt, C. (1996). The connection of observed hostile family conflict to adolescents' developing autonomy and relatedness with parents. *Development and Psychopathology* 8: 425-442.
- Banyard, V. L., Arnold, S., and Smith, J. (2000). Childhood sexual abuse and dating experiences of undergraduate women. *Child Maltreatment* 5(1): 39-48.
- Banyard, V. L., and LaPlant, L. E. (2002). Exploring links between childhood maltreatment and empowerment. *Journal of Community Psychology* 30(6): 687-707.
- Baron, R. M., and Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology* 51(6): 1173-1182.
- Barrera, M., Sandler, I. N., and Ramsay, T. B. (1981). Preliminary development of a scale of social support: Studies on college students. *American Journal of Community Psychology* 9(4): 435-447.
- Basic Behavioral Science Task Force of the National Advisory Mental Health Council. (1996). Basic behavioral science research for mental health. *American Psychologist* 51(1): 22-28.
- Berliner, L., and Conte, J. R. (1995). The effects of disclosure and intervention on sexually abused children. *Child Abuse & Neglect* 19(3): 371-384.
- Best, K. M., Hauser, S. T., and Allen, J. P. (1997). Predicting young adult competencies: Adolescent era parent and individual influences. *Journal of Adolescent Research* 90(1): 90-112.
- Briere, J., and Runtz, M. (1988). Multivariate correlates of childhood psychological and physical maltreatment among university women. *Child Abuse & Neglect* 12: 331-341.
- Briere, J., and Runtz, M. (1990). Differential adult symptomatology associated with three types of child abuse histories. *Child Abuse & Neglect* 14: 357-364.
- Brooks, B. (1985). Sexually abused children and adolescent identity development. *American Journal of Psychotherapy* 39(3): 401-410.
- Brown, J., Cohen, P., Johnson, J. G., and Smailes, E. M. (1999). Childhood abuse and neglect: Specificity of effects on adolescent and young adult depression and suicidality. *Journal of the American Academy of Child and Adolescent Psychiatry* 38(12): 1490-1496.
- Cicchetti, D. (1996). Child maltreatment: Implications for developmental theory and research. *Human Development* 39: 18-39.
- Cohen, S., and Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin* 98(2): 310-357.
- Craig-Bray, L., Adams, G. R., and Dobson, W. R. (1988). Identity formation and social relations during late adolescence. *Journal of Youth and Adolescence* 17(2): 173-187.
- Eccles, J. S., Midgley, C., Wigfield, A., Miller Buchanan, C., Reuman, D., Flanagan, C., and Mac Iver, D. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. *American Psychologist* 48(2): 90-101.
- Egeland, B., Carlson, E., and Sroufe, L. A. (1993). Resilience as process. *Development and Psychopathology* 5: 517-528.
- Erikson, E. H. (1963). *Childhood and Society*. Second Edition. W.W. Norton and Company, Inc, New York.
- Erikson, E. H. (1968). *Identity: Youth and Crisis*. W. W. Norton and Company, New York.
- Everson, M. D., Hunter, W. M., Runyon, D. K., Edelson, G. A., and Coulter, M. L. (1989). Maternal support following disclosure of incest. *American Journal of Orthopsychiatry* 59(2): 197-207.
- Farber, E. A., and Egeland, B. (1987). Invulnerability among abused and neglected children. In Anthony, E. J., and Cohler, B. J. (eds.), *The invulnerable child*. The Guilford Press, New York.
- Finkelhor, D. (1979). *Sexually Victimized Children*. Free Press, New York.
- Finkelhor, D. (1995). The victimization of children: A developmental perspective. *American Journal of Orthopsychiatry* 65(2): 177-193.
- Fischer, J. L., Munsch, J., and Greene, S. M. (1996). Adolescence and intimacy. In Adams, G. R., Montemayor, R and Gullotta, T. P. (eds.), *Psychosocial Development During Adolescence: Progress in Developmental Contextualism*. Sage Publications, Thousand Oaks, CA.
- Gottlieb, B. H. (1991). Social support in adolescence. In Colten, M. E., and Gore, S. (eds.), *Adolescent Stress: Causes and Consequences*. Walter de Gruyter, New York.
- Greenberg, M. T., Siegel, J. M., and Leitch, C. J. (1983). The nature and importance of attachment relationships to parents and peers during adolescence. *Journal of Youth and Adolescence* 12(5): 373-386.
- Hauser, S. T. (1999). Understanding resilient outcomes: Adolescent lives across time and generations. *Journal of Research on Adolescence* 9(1): 1-24.
- Herzberg, D. S., Hammen, C., Burge, D., Daley, S. E., Davila, J., and Lindberg, N. (1999). Attachment cognitions predict perceived and enacted social support during late adolescence. *Journal of Adolescent Research* 14(4): 387-404.
- Jellinek, M. S., Murphy, J. M., Poitras, F., Quinn, D., Bishop, S. J., and Goshko, M. (1992). Serious child maltreatment in Massachusetts: The course of 206 children through the courts. *Child Abuse and Neglect* 16: 179-185.
- Jumper, S. A. (1995). A meta-analysis of the relationship of child sexual abuse to adult psychological adjustment. *Child Abuse & Neglect* 19: 715-728.
- Kendall-Tackett, K. A., and Eckenrode, J. (1996). The effects of neglect on academic achievement and disciplinary problems: A developmental perspective. *Child Abuse & Neglect* 20(3): 161-169.
- Luthar, S. S. (1993). Annotation: Methodological and conceptual issues in research on childhood resilience. *Journal of Child Psychological Psychiatry* 34(4): 441-453.
- Luthar, S. S., Cicchetti, D., and Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development* 71(3): 543-562.
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology* 3: 551-558.
- Moore, S., and Boldero, J. (1991). Psychosocial development and friendship functions in adolescence. *Sex Roles* 25: 521-536.
- Mullen, P. E., Martin, J. L., Anderson, J. C., Romans, S. E., and Herbison, G. P. (1996). The long-term impact of the physical, emotional, and sexual abuse of children: A community study. *Child Abuse & Neglect* 20(1): 7-21.

- Otto, L. B., and Atkinson, M. P. (1997). Parental involvement and adolescent development. *Journal of Adolescent Research* 12(1): 68–89.
- Procidano, M. E., and Heller, K. (1983). Measures of perceived social support from friends and from family: Three validation studies. *American Journal of Community Psychology* 11(1): 1–24.
- Roche, D. N., Runtz, M. G., and Hunter, M. A. (1999). Adult attachment: A mediator between child sexual abuse and later psychological adjustment. *Journal of Interpersonal Violence* 14(2): 184–207.
- Rosenthal, D. A., Gurney, R. M., and Moore, S. M. (1981). A new inventory for examining Erikson's stages of psychosocial development. *Journal of Youth and Adolescence* 10(6): 525–537.
- Sarason, B. R., Shearin, E. N., Pierce, G. R., and Sarason, I. G. (1987). Interrelations of social support measures: Theoretical and practical implications. *Journal of Personality and Social Psychology* 52(4): 813–832.
- Saywitz, K. J., Mannarino, A. P., Berliner, L., and Cohen, J. A. (2000). Treatment for sexually abused children and adolescents. *American Psychologist* 55(9): 1040–1049.
- Schultheiss, D. E., and Blustein, D. L. (1994). Role of adolescent-parent relationships in college student development and adjustment. *Journal of Counseling Psychology* 41(2): 248–255.
- Spaccarelli, S., and Kim, S. (1995). Resilience criteria and factors associated with resilience in sexually abused girls. *Child Abuse & Neglect* 19(9): 1171–1182.
- Steinberg, L., Dornbusch, S. M., and Brown, B. (1998). Ethnic differences in adolescent achievement: An ecological perspective. In Muuss, R. E., and Porton, H. D. (eds.), *Adolescent Behavior and Society: A Book of Readings*. 5th edition. The McGraw-Hill Companies, Boston, MA.
- Stokes, J. P., and Wilson, D. G. (1984). The Inventory of Socially Supportive Behaviors: Dimensionality, prediction, and gender differences. *American Journal of Community Psychology* 12(1): 53–69.
- Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W., and Runyan, D. (1998). Identification of child maltreatment with the Parent-Child Conflict Scales: Development and psychometric data for a national sample of American parents. *Child Abuse & Neglect* 22(4): 249–270.
- Straus, M. A., Kinard, E. M., and Williams, L. M. (1995). The Multidimensional Neglect Scale, Form A: Adolescent and adult-recall version. Paper presented at the Fourth International Conference on Family Violence Research, Durham, New Hampshire, July, 23, 1995.
- Thomlison, B. (1997). Risk and protective factors in child maltreatment. In Fraser, M. W. (ed.), *Risk and resilience in childhood: An ecological perspective*. National Association of Social Workers, Washington, D. C.
- U. S. Department of Health and Human Services. (n. d.). *Child Maltreatment 1999: Reports from the States to the National Child Abuse and Neglect Data System*. Retrieved April 24, 2002, from the National Clearing House on Child Abuse and Neglect Web site: <http://www.acf.dhhs.gov/programs/cb/publications/cm99/cpt2.htm>.
- Valentine, L., and Feinauer, L. L. (1993). Resilience factors associated with female survivors of childhood sexual abuse. *The American Journal of Family Therapy* 21(3): 216–224.
- Werner, E. E. (1989). High-risk children in young adulthood: A longitudinal study from birth to 32 years. *American Journal of Orthopsychiatry* 59(1): 72–81.
- Wethington, E., and Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. *Journal of Health and Social Behavior* 27: 78–89.
- Wind, T. W., and Silvern, L. (1994). Parenting and family stress as mediators of the long-term effects of child abuse. *Child Abuse & Neglect* 18(5): 439–453.