THE EFFECTS OF DEVELOPMENTAL MENTORING AND HIGH SCHOOL MENTORS' ATTENDANCE ON THEIR YOUNGER MENTEES' SELF-ESTEEM, SOCIAL SKILLS, AND CONNECTEDNESS

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Far more has been written about the possible outcomes of cross-age mentoring than about actual outcomes and the processes that lead to change. This study examined the effect of mentors' attendance on their mentees' outcomes after six months of developmental mentoring. Developmental mentoring is a structured, cross-age peer mentoring program designed to promote children's development by facilitating connectedness. In this randomized study of 73 Caucasian, rural youth, multiple analyses of covariance revealed that connectedness to school and parents at posttest were significantly greater for mentees than for the comparison group. Regression analyses revealed that changes in self-esteem, social skills, and behavioral competence were highly related to mentors' attendance, suggesting relational processes accounted for more change than did exposure to program curricula. However, the relationship between mentors' inconsistent attendance and mentees' decline in self-esteem and behavioral competence suggests that absent mentors may do more harm than good. © 2005 Wiley Periodicals, Inc.

As many as a 2.5 million youth receive some form of mentoring each year in the United States (Rhodes, 2002). Despite many anecdotal reports of its effectiveness, our knowledge about the positive and negative effects of mentoring is limited (Rhodes, 2002). Less is known about peer mentoring. The present study examined the effects of peer mentoring.

Mentoring Best Practices

Typically, mentoring involves regular dyadic meetings between a child and an older person who provides the child guidance, support, attention, and caring over an extended period of time. Empirically derived best practices related to mentoring now are beginning to emerge in the literature. In a landmark meta-analysis of 55 mentoring studies, DuBois, Holloway, Valentine, and Cooper (2002) reported modest effect sizes ranging from .11 to .21, with effects varying according to the number of best practices employed. Some of the best practices of successful mentoring programs were (a) monitoring program implementation, (b) providing mentors ongoing training, (c) involving parents, (d) structuring activities for the mentors and mentees, and (e) clarifying expectations about frequency of meetings. DuBois et al. found that the presence of all five of these components doubled the effectiveness of mentoring programs.

Developmental mentoring is a structured approach to cross-age, school-based peer mentoring in which high school students work after school one-on-one with elementary school mentees (Karcher, 2000; Wright & Borland, 1992). In contrast to cross-age peer tutoring, which has as its primary goal to help children develop specific academic skills, in cross-age peer mentoring the focus is on the mentoring relationship, which is viewed as the main mechanism by which mentees' develop in the areas of self-esteem, connectedness, identity, and academic attitudes. Developmental mentoring encompasses all of the aforementioned best practices. In developmental mentoring, mentors are trained and supervised by school staff or university student coordinators. After school,

mentor–mentee meetings are scheduled, coordinated, and carefully monitored by program coordinators. Parents are involved through take-home activities and bimonthly Saturday events. The mentors' roles, boundaries, and volunteer commitment are the focus of monthly, during-school mentor supervision, and mentors are introduced to a connectedness curricula before the each meeting.

Promoting Connectedness

The content of the mentoring curricula and the mentor training in developmental mentoring reflects the primary goal of promoting youths' connectedness to school and connectedness to their parents. Derived from the attachment concept of a working model and secure base as well as from the social bonding theories of adolescent development (Ainsworth, 1989; Jessor & Jessor, 1977), *connectedness* reflects youths' *activity with* and *affection for* the people, places, and activities within their life (e.g., school, family, friends; Baumeister & Leary, 1995; Nakkula & Selman, 1991). Promoting connectedness is the primary goal of developmental mentoring because research reveals that success in school is increased and involvement in risk taking is decreased when adolescents' *activity in* and *affection for* conventional and future-oriented people, places, and activities are increased (Jessor & Jessor, 1977). For example, low connectedness to school has been found to predict adolescent depression, risk taking, underachievement, and alienation from peers, teachers, and parents (Bonny, Britto, Klostermann, Hornung, & Slap, 2000; Karcher, 2002; Kuperminc, Blatt, & Leadbeater, 1997). Conversely, connectedness to parents and to school have been found to reciprocally influence self-esteem, social skills, and identity development (Cooper, Grotevant, & Condon, 1983). Recent studies suggest that mentoring can affect social skills, school behavior, and self-esteem as well as mentees' connectedness to family and to school (Karcher, Davis, & Powell, 2002; King, Vidourek, Davis, & McClellan, 2002; Rhodes, Grossman, & Resch, 2000), although the processes by which this change occurs remains unclear.

Frequency of Contact

One criticism of cross-age mentoring in schools is that adolescent mentors may not be mature enough to be consistently present or sufficiently attentive to their mentees. Although nearly half of all adult–child mentoring matches end within the first three months (Rhodes, 2002), the result of such premature terminations are only beginning to appear in the literature. No research has been conducted on the effects of adolescent mentors' absenteeism or premature termination.

A second criticism of school-based mentoring is that the limited duration of the matches, typically six to nine months, is likely to result in smaller effects than longer relationships established through community agencies. The largest study of any single mentoring program revealed significantly greater gains from long-term mentoring (e.g., 12–18 months; Grossman & Rhodes, 2002); however, smaller studies (DuBois & Neville, 1997) and even DuBois et al.'s (2002) meta-analysis were unable to detect a mediating effect of duration or longevity on mentoring outcomes. Both found that frequency of contact predicted positive outcomes better than the length of mentoring.

Frequency of contact may serve as a proxy for the dosage of attention the mentee receives. For example, a comparative study found significantly greater and lasting gains from academic skills training than social skills training on achievement, social skills, and relationships with teachers (Coie & Krehbiel, 1984). Yet, the authors qualified their study by saying that "the (academic skills) tutors spent almost three times as much time with their subjects as did the social skills trainer" (p. 1476). The authors acknowledged the likely impact that tutors' attention had on children's outcomes. Thus, even in structured, curriculum-based interventions, program effects may be attributable to the consistent presence of an idealized, older other person. In structured cross-age peer mentoring, therefore, it may be that interpersonal processes, such as the empathy and attention

received from a consistently present mentor, better explain program outcomes than does the content of the curriculum used to structure the program.

Self psychology theory (Kohut, 1977) posits that social connectedness results from two sequential steps in self-development. First, from the development of self-esteem and both self-management and social skills. Self-esteem, from this theoretical perspective, occurs when the child receives empathy, praise, and attention from *idealized others* within close dyadic relationships (e.g., first with parents, then with peers, teachers, and mentors). Skill developments result from the child's emulation of the skills of these idealized others when the youth views them as *consistently present* and competent. Second, growth in self-esteem, social skills, and self-management facilitate interpersonal connectedness and connectedness to the contexts (e.g., school) and activities (e.g., reading) in which these positive dyadic relationships occur.

In developmental cross-age peer mentoring, it is unclear whether the connectedness curricula or the consistent presence of the mentor best explains program effects. The present study tested three hypotheses about the processes by which developmental mentoring affects adolescent connectedness. In this study, first I tested whether youth randomly assigned to a developmental mentoring program report greater gains in connectedness in the areas of school, parents, and reading after participating than do youth in a comparison group. I also asked whether mentees' attendance or mentors' attendance best predict changes in connectedness. The alternative hypothesis was that the connectedness gains would be more highly related to the amount *of connectedness curricula* to which the mentees were exposed. Attendance was chosen as the measure of the mentees' *dose* of the curriculum (as well as their interest in the program).

Second, I examined mediating processes that might have contributed to change. Self psychology theory was used to hypothesize that mentors' attendance, which provided an observable and objective measure of the mentors' consistent presence in their mentees' lives, would predict changes in mentees' self-esteem, social skills, and self-management. A relationship between mentors' involvement and changes in self-esteem and social skills would support Kohut's (1977) first step in the self-development process. Second, these changes were hypothesized to enable or mediate overall program effects on connectedness to school, to parents, and to reading. If mentor attendance as well as increases in self-esteem and social skills predicted gains in connectedness, then a mediator model could be conducted to test the second step in Kohut's self development model: that the relationship between mentors' attendance and change in connectedness was mediated by improved self-esteem and social skills.

<div align="center">Method</div>

Design

A pre/post randomized experimental design was used that included an equivalent comparison group for both the high- and low-risk youth in the study. Using the theory-driven approach proposed by Chen (1990), both normative and causal evaluations were conducted. In a normative evaluation, between-group differences in connectedness were examined to test for an overall program effect. To determine the direct effects of six months of developmental mentoring, posttest between-group differences on self-reported measures of connectedness were computed using SPSS 9.0 MANCOVA. The children's pre-intervention total connectedness score and teacher-rated risk status were used as covariates.

To understand the mechanisms by which gains in connectedness might be achieved, a causal evaluation was conducted. Pearson correlations were computed to estimate the relationships between the percentage of both mentor and mentee attendance and the change scores on self-management, social skills, self-esteem, and connectedness. Change scores were used for two reasons. First, in

the case where pre- and posttest scale standard deviations differ, change scores provide a useful measure of change (Zimmerman & Williams, 1998). Second, each group included high- and low-risk youth, but the numbers of each changed from Time 1 to Time 2, making the use of residuals as a measure of change less accurate.

Program modeling concepts were used to identify and to test these proximal, enabling, and distal outcomes (Borich & Jemelka, 1982). In this study, attendance served as the proximal, or first-order, outcome*: How often did the mentor attend? How often was the mentee present?* The enabling, or mediating, outcomes [those theoretically specified changes that result from first-order (proximal) outcomes] were gains in self-esteem, self-management, and social skills. Hierarchical regression was used to test whether these enabling outcomes mediated the relationship between attendance and changes in connectedness.

Participants

The study included 77 children who were randomly assigned to mentoring or an alternative treatment (a tutoring program that did not begin until after the present study was completed). To reduce possible iatrogenic "deviancy training" effects (i.e., negative peer influence; see Dishion, McCord, & Poulin, 1999), a balance of high-risk youth and low-risk children were sought. Teachers in Grades 4 and 5 were asked to assess the risk status of their students. Youth whom teachers rated 2 or lower on all risk categories were identified as *low risk*. These categories were used primarily to stratify the sample, and then risk indicators were used as a covariate in the study.

Permission forms were sent to all youth in Grades 4 and 5 ($n = 198$), and two extra mailings and follow-up phone calls were made by the program coordinators to parents of the high-risk youth to increase their enrollment. The middle school, including Grades 4 through 8, had 478 students. Fully informed, active consent was obtained from 73 parents (37% response rate) (39 for students at high risk and 34 for those at low risk). Based on the number of available mentors, 33 youth were randomly assigned to the group mentoring (17 high-risk and 16 low-risk youth).

Mentees.   Originally, 33 mentees (21 male and 12 female) in the fourth and fifth grades were assigned to mentoring. Of the original 33 children, 17 were high risk. Three high-risk boys left the program in the second month, stating that it was boring, and two others moved during the study. There were 28 youth in the mentoring group at posttest. Complete pre/post data was collected from only 24 of the 28 youth who completed the six months of mentoring.

Comparison youth.   Complete pre/post data was collected from 30 of the 40 youth originally assigned to the comparison group. The attrition of 10 reflected children who either were absent at either the pre- or postassessment or withdrew from the project. Of the original 40 comparison youth, 20 were boys. The mentees and comparison group only differed on mean number of academic risks. Because academic risks were higher for the mentoring group than the comparison group at pretest, this risk status was used as a covariate in comparative analyses.

Mentors.   Thirty-three mentors (22 female and 14 male) were recruited by announcements in the high school. Six eighth-graders were nominated by their middle school counselor. Mentors were from Grades 8 ($n = 6$), 9 ($n = 7$), 10 ($n = 8$), 11 ($n = 9$), and 12 ($n = 6$). One was biracial, one was Hispanic, and the rest were Caucasian. All participated in eight hours of training, and most participated in two hours of monthly supervision. Nearly half also were involved in a sport, drama, or band as an extracurricular activity at school. Two mentors discontinued after two months because of conflicts due to their extracurricular involvement.

Measures

Teacher-rated risk status. Based on the most common and important risks identified in the risk and protective factor literature (Institute of Medicine, 1994), and in collaboration with the teachers, indicators of three domains of risk were identified: family, academic, and school/peer behavioral risks. For each risk domain, several indicators were used. Family risk factors included poverty, history of abuse, moved recently or living with relatives, divorce/single family home, and currently or previously in foster care. Academic risk indicators included poor grades ("below potential"), frequent tardiness, absenteeism, learning disability, and lack of interest in school. Behavioral risks indicators included inadequate social skills, few friends, emotional/behavioral problems, difficulty getting along with others, and problems with authority. A checklist was developed, and one teacher rated each child for the presence of each of the 15 indicators. Students for whom teachers assessed a majority of risks (e.g., a total of three or more risks on at least one category of risk) were identified as *high risk*. Evidence of validity was present in the correlations between teacher-rated risk scores and scores of the Primary Mental Health Project Child Rating Scale (CRS; Cowen et al., 1996) completed by the youth. Scores on total risk and academic risk (used as a covariate in analyses) were correlated at the .01 level of significance with CRS Total Child Rating ($-.55$, $-.43$) and CRS School Interest ($-.48$, $-.42$), and at the .05 level with CRS Rule Compliance ($-.26$, $-.32$).

Hemingway: Measure of Preadolescent Connectedness (Version 3, Karcher, 2001). This assessment was developed to measure the effectiveness of prevention programs (Karcher, 1999). Adolescent connectedness reflects the concepts of conventionality and time orientation to explain adolescents' involvement in their widening social ecology. Conventional activities and relationships are those that encourage adult-sanctioned behaviors, goals, and attitudes (Jessor & Jessor, 1977). Some ecological worlds of connectedness are characterized as conventional (e.g., school, family) and others as unconventional (e.g., friends). Some worlds are future oriented (e.g., school; the *world* of books, reading) while others are present focused (e.g., friends).

The *Hemingway* includes 40 statements about preadolescents' degree of involvement/activity with and attitude/affection for their parents, friends, school, and reading. A sample item for activity/involvement is "I work hard at school." A sample item for attitude/affection is "I enjoy spending time with my friends." The measure uses an interval scale ranging from 1 (*not true*) to 4 (*very true*). The interitem reliability, using Cronbach's alpha, for the subscales included in the study were: Reading ($\alpha = .89$), Friends ($\alpha = .73$), School ($\alpha = .85$), and Parents ($\alpha = .82$). Total Connectedness reflected the average of all three subscales. Good evidence of concurrent and discriminant validity have been reported with U.S. and non-U.S. samples (Karcher, 2001; Karcher & Lee, 2002).

Harter Self-Perception Scale for Children (Harter, 1985). This 36-item self-report scale measures self-esteem in the domains of behavioral conduct, friendships, global self-worth, physical appearance (attractiveness), and scholastic competence. The interitem reliability, Cronbach's alpha, for subscales was good: School Competence ($\alpha = .79$), Behavioral ($\alpha = 80$), Attractiveness ($\alpha = .81$), Social Competence ($\alpha = .76$), and Global ($\alpha = .76$). This is a commonly used measure of self-esteem with good properties of reliability and validity (Harter, 1985). Evidence of convergent validity for the scales also has been reported (Hagborg, 1993).

Primary Mental Health Project (PMHP) Child Rating Scale (Cowen et al., 1996). The PMHP Child Rating Scale (CRS) is a 24-item self-report measure of four domains of social and school competence: Rule Compliance/Acting Out, Anxiety/Withdrawal, Peer Social Skills, and School Interest. The anxiety scale was not included in the study because it did not relate to any of

the hypothesized mentoring effects or processes. The CRS uses a scale ranging from 1 (*usually yes*) to 3 (*usually no*). This measure is computer scored and has been used for many years as the primary evaluation tool for Cowen et al.'s (1996) Primary Mental Health Project. Although the interitem reliability in this study was not provided by the computer-generated scores, test-retest and alpha reliabilities are reported to fall between .69 and .74, and the scale has demonstrated criterion-based validity evidence (Hightower, Cowen, Spinell, & Lotyczewski, 1987).

Attendance.   The mentoring continued for six months, such that there were 48 after-school meetings and six Saturday meetings for a total of 144 contact hours. Attendance was calculated as the percentage of the total number of days that the mentors and mentees attended.

Procedures

The Developmental Mentoring Program.   Mentoring was conducted one-on-one in a group format twice weekly after school for two hours at the middle school (which included Grades 4–8). Mentees and mentors self-selected each other after a six-hour Saturday orientation, with almost 90% of mentees receiving their first or second choice.

The sequence of daily after-school activities included an "icebreaker," a connectedness curriculum activity, a snack, and a group game or recreational activity (e.g., playing tag, doing artwork, playing basketball). While mentors and mentees were paired for most of the meeting time, the group format allowed children whose partners could not attend to nevertheless participate fully within a small-group setting. If one partner was absent, the other usually stayed and participated with others in the program.

A two-year connectedness curriculum was developed that included activities to promote connectedness to peers, friends, family, self, parents, school, and reading. The two connectedness components implemented during the first six months of this study were teacher interviews and reading and role-playing stories from moral dilemma books. For the teacher interview activity, mentees planned a teacher interview, rehearsed it with their mentors, conducted it with a teacher, discussed their interview with their mentors, then developed a poster and story about the teacher and presented it to their peers. The connectedness-to-reading activity used eight short children's books that mentors and mentees read together, and they then role-played alternative outcome scenarios in a peer-group format. The Developmental Mentoring program also included a monthly Saturday event in which parents were invited to spend time with their children's mentors, see the work their children had done, and participate in fun activities with their children and their mentors. Saturday events included a trip to the zoo, a picnic at a park, a mock carnival at the school, and other recreational activities that encouraged parents' interactions with their children and mentors.

Assessment.   Both pre- and postassessments were conducted in groups of roughly 15 to 20 youths at a time, including both mentees and comparison group youth together, and were monitored by teachers and school counselors when possible. All youth were told that the surveys were being conducted to help gather information needed to develop school programs. Students were told that they did not have to complete the surveys, in which case they would be provided a workbook of mazes, but that if they participated they would be entered into a lottery for a prize.

Results

Following the theory-driven evaluation approach described by Chen (1990), first a normative evaluation was conducted using MANCOVA, and second, a causal evaluation of intervening mechanisms (i.e., proximal and enabling outcomes) was conducted using correlations and regression analyses. An overall positive effect of program participation on connectedness to school and parents was found, but the hypothesized mediation model was not supported. Mentor attendance

was more highly related to changes in social skills, self-management, self-esteem, and changes in total connectedness than was mentee attendance, thereby ruling out the alternative hypothesis. However, because mentor attendance did not predict changes in connectedness to parents and school, the two-step self psychology mediation model was not supported by these data.

Normative Evaluation: Changes Related to Program Inputs

A normative evaluation assesses the link between what is done in the program and what results from the program (Chen, 1990). It was hypothesized that significant gains in connectedness to reading, school, and parents would result from participation in the mentoring program because the program utilized two conventional connectedness-promoting curricula and involved parents monthly. Results indicate there was a main effect of mentoring on two of four connectedness scales. A one-way MANCOVA using group (mentoring vs. comparison group) as the independent variable and the four connectedness scales as the dependent variables was conducted with two covariates (academic risk status and pretest total connectedness). The overall omnibus test was significant (Wilks's $\Gamma = .67$) at the .05 level, and the univariate one-way ANCOVAs revealed significant posttest mean differences between mentoring and comparison groups on connectedness to school and to parents, but not to reading or to friends (see Table 1). There was insufficient power to detect the small effect on reading ($\eta^2 = .06$).

Causal Evaluation: Processes Related to Hypothesized Changes

The causal evaluation was then conducted to test the hypothesized role of the proximal and enabling outcomes in explaining changes in connectedness (Chen, 1990). Hypothesized relations among the proximal, enabling, and distal outcomes variables were specified and tested as causal hypotheses using correlations and hierarchical regression analyses (Cohen & Cohen, 1983). Attendance was the first-order, proximal outcome. Changes in Rule Compliance (self-management), Social Skills, and Self-Perceptions were considered second-order outcomes that were hypothesized to enable changes in the third-order (distal) outcomes of Connectedness to School and Parents that were the focus of the mentoring curriculum.

Table 1

Adjusted Means and Standard Deviations for Multivariate and Univariate Analyses of Covariance Testing Between Group Differences in Postconnectedness Scores Controlling for Pretest Connectedness and Academic Risk Status

	Time 1				Time 2								Univariate ANCOVA for between-group posttest mean difference		
	Mentees		Comparison		Mentees		Comparison		Mentees		Comparison				
Variable	M	SD	M	SD	M	SD	M	SD	Δ	ΔSD	Δ	ΔSD	F(1,52)	η^2	Power
Reading	2.57	.58	2.43	.60	2.99	.79	2.68	.61	.69	.66	.28	.56	1.90	.06	.26
School	3.47	.55	3.45	.59	3.59	.36	3.30	.70	.02	.47	−.12	.34	7.46**	.20	.75
Parents	3.36	.44	3.33	.61	3.49	.40	3.36	.63	.00	.38	−.02	.37	6.39*	.18	.68
Friends	3.11	.55	3.18	.49	3.37	.41	3.34	.56	.12	.20	.08	.47	.13	.00	.05

Note. F ratios are Wilks's approximations of Fs. MANCOVA = multivariate analyses of covariance; ANCOVA = univariate analysis of covariance. MANCOVA omnibus test: $F(3, 49) = 3.39,$* $\eta^2 = .33$, Power = .78. Total connectedness at pretest and pretest level of Academic Risk (CRS Scale) were used as covariates in the MANCOVA. Pretest: Mentees ($n = 28$); Comparison ($n = 40$). Posttest: Mentees ($n = 24$); Comparison ($n = 30$). Δ = Change Score.

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

The first hypothesis asked whether mentor or mentee attendance better explained changes in self-management, social skills, and self-esteem. There were 48 meetings that occurred during the six and a half months of the study. Average attendance was similar for the mentors ($M = 71.92$, $SD = 20.02$, range = 24–94%) and the mentees ($M = 75.08$, $SD = 22.38$, range = 10–95%). Zero-order correlations between the attendance percentages and the mentees' change scores are presented in Table 2. Mentor attendance was positively related to changes in mentees' self-reported rule compliance (self-management), social skills, and self-esteem, specifically in self-perceptions of attractiveness. Mentor attendance also related positively to the total connectedness change score, but not the connectedness to school or parents change score. There were no significant linear relationships between mentees' attendance and any change scores. Conversely, regression analyses in which both attendance variables were entered simultaneously as predictors revealed mentor attendance was a significant predictor of changes in four of the five enabling outcomes (Table 3).

The second causal, theory-driven hypothesis was that gains in self-management, social skills, and self-esteem would mediate the relationship between attendance and the between-group post-test differences in connectedness. Pretest- minus posttest-derived change scores (presented in Table 2) were used as predictors rather than residual scores because of the large within-group variance in risk status rendering the intercept a less accurate baseline for estimating change (see Zimmerman & Williams, 1998). Only school connectedness was examined because of insufficient power to detect gains in connectedness to reading and the non-significant relationship between attendance and changes in connectedness to parents (see Table 2). Table 4 presents a regression model predicting posttest connectedness to school controlling for academic risk and pretest connectedness to school. Between-group differences remained significant even after attendance variables and enabling outcomes were entered as predictors. Therefore, the results did not support the hypothesis that these proximal and enabling outcomes would explain changes in connectedness to school.

Discussion

Developmental mentoring is a school-based approach to mentoring that views students as both recipients and providers of mentoring. This study suggests that positive gains in connectedness to parents and to school were made by mentees after six months of developmental mentoring.

Table 2
Means, Standard Deviations, and Intercorrelations Among Attendance and Social Skills, Rule Compliance, Self-Esteem, and Connectedness Change Scores for Mentees and Comparison Youth

Variable/Δ Score	M	SD	2	3	4	5	6	7	8	9	10	11
1. Mentee Attendance	75.08	22.38	.13	.06	.24	.45	.43	.41	.43	−.04	.28	.38
2. Mentor Attendance	71.92	20.02	–	.49*	.53*	.66***	.39	.50**	.44*	−.08	−.11	.50*
3. CRS Rule Compliance	−.046	2.02		–	.09	.73***	.23	.18	.25	.43	.29	.09
4. CRS Social Skills	−1.29	2.27	.05		–	.54*	.35	.31	−.12	−.27	−.13	.36
5. CRS Total	−3.17	5.22		.61***	.54***	–	.52*	.45	.37	.21	.09	.32
6. Self-Esteem: Behavioral	.29	.91		.31*	.10	.25	–	.47	.22	.12	−.07	.25
7. Self-Esteem: Appearance	−.14	.81		−.02	.00	.25	.39***	–	.73**	.14	.47	.36
8. Self-Esteem: Global Self-Worth	−.21	.73		.19	.07	.28	.29	.56***	–	.16	.36	.15
9. Parent Connectedness	.00	.38		.28	.09	.25	.04	.24	.26	–	.39	.57
10. School Connectedness	.05	.47		.39	−.09	.01	.24	.15	.14	.31	–	.36
11. Total Connectedness	.12	.20		.39*	.33	.28	.28	.16	.19	.48***	.42*	–

Note. Mentees (n = 24) are above the diagonal; All youth below the diagonal. Δ = Change Score. CRS = Primary Mental Health Project Child Rating Scale.
*p < .05. **p < .01. ***p < .005.

Table 3

Five Separate Analyses in Which Both Attendance Variables Were Simultaneously Regressed on Each Criterion Variable (n = 27)

Predictor variables	Criterion variables									
	Child Rating Scale (CRS)						Self-Perception			
	Rule Compliance		Social Skills		Total		Attractiveness		Global	
	β	T	β	T	β	T	β	T	β	T
Mentee Attendance	.01	.06	.15	.89	.29	1.86	.32	1.91	.27	1.83
Mentor Attendance	.35	1.93	.42	2.50*	.47	3.03***	.34	2.02*	.53	3.57***

*p < .05. ***p < .005.

Mentors' attendance also predicted changes in mentees' social skills and self-esteem, but not in school or parent connectedness. Thus, mentor attendance was a better predictor of mentee change than was mentee attendance, suggesting it was the experience with the mentor that best accounted for changes in the areas of self-management, self-esteem, and social skills and not solely exposure to the curricula. However, the absence of any significant relationships between changes in self-management, social skills, and self-esteem and the between-group posttest differences in connectedness leaves unanswered the question of what best explained the changes in connectedness that resulted from program participation. What was clear is that when adolescent mentors were inconsistent, it had a negative effect on their mentees.

This mentoring program promoted conventional connectedness in the form of positive attitudes and increased engagement to parents and school. Significant differences in mean levels of connectedness between the mentee and comparison groups were found at posttest on two of three conventional connectedness scales. This finding supports prior research suggesting that mentoring can promote mentees' conventional connectedness, such as to school and parents (Karcher et al., 2002; King et al., 2002). The size and direction of the effects found in this study of mentoring on school attitude, parent connectedness, and social development are consistent with other studies of mentoring (DuBois et al., 2002; Rhodes et al., 2000).

Table 4

Regression Analysis Summary for Variables Predicting Posttest Connectedness to School

Step/predictor variable	B	SE B	β	T
1. Group (mentee = 0)	−.17	.08	−.18	−2.06*
1. Connectedness to School (pre)	.73	.09	.69	8.50***
1. Academic Risk Status	−.04	.03	−.12	−1.4
2. Mentee Attendance	−.001	.002	−.05	−.53
2. Mentor Attendance	−.003	.003	−.09	−.96
3. Rule Compliance (CRS Δ)	.03	.03	.11	1.29
3. Social Skills (CRS Δ)	−.02	.02	−.09	−1.14
3. Attractiveness (SE Δ)	.06	.07	.07	.88

Note. R^2 = .53 (N = 54; ***p < .001), F(8,45) = 11.58 in Step 3. CRS = Child Rating Scale; SE = Self-Esteem; Δ = Change Score.
*p < .05. ***p < .001.

This study sheds some light on the mechanism of change from the perspective of self psychology, but the results are equivocal. On one hand, results supported the hypothesized influence of mentors' attendance on mentees' self-development. Mentees whose mentors were less consistent felt less attractive and saw themselves as less socially skilled and well behaved after the program than before. On the other hand, nonsignificant correlations between mentors' attendance and the mentees' gains in connectedness provided only partial support for the self psychology hypothesis about self-development as a two-stage, dyadic growth process. Although mentors' attendance, which presumably measured the consistent presence of a significant (perhaps even idealized) other person, was positively related to gains in social skills, self-management, and feelings of self-esteem and particularly of attractiveness, there was no evidence of a relationship between mentor attendance and changes in the specific domains of connectedness, only on overall connectedness. This leaves unclear the role that mentor and mentee attendance played in the overall program effects of connectedness.

What this study contributes to the mentoring literature uniquely is evidence that cross-age peer mentoring can be effective, and that mentors' attendance can have a direct effect on mentees' social skills, behavioral self-management, and self-esteem. This finding is important because structured mentoring is increasingly found to be a best practice in mentoring (DuBois et al., 2002), which may be interpreted by some as supporting a program emphasis on curricular content and distracting attention from the importance of mentors' consistency. The absence of any relationship between the mentees' attendance and their change scores does not support a *curriculum effect* or a duration effect that is independent of the mentors' presence, at least not within this six-month period. The quality of the mentoring relationship, as measured by the behavioral commitment of the mentor through consistent attendance, appeared to be a more important ingredient than the amount of exposure youth had to the program curricula. In addition, the nonsignificant correlation between attendance of the mentors and their mentees minimizes the likelihood that one partner's absence was reciprocated by the other's subsequent absence. Perhaps youth who felt less attractive and who demonstrated fewer social skills discouraged their mentors from attending. However, academic, family, or behavioral risk status did not relate to mentor attendance, making it unlikely that mentoring tough kids resulted in lower mentor attendance.

Prior studies have argued for the need to study the iatrogenic effects of peer-group interventions with at-risk youth (Dishion et al., 1999). Yet, few studies have examined mentoring processes or used data to test hypotheses about the self-attributions or behavioral consequences of an absent mentor. This study supports the idea that mentees make self-appraisals of their likeability, attractiveness, and behavioral self-management skills based on their mentors' availability and consistency of attendance. In the absence of their mentors, poorly supervised mentees in group-based mentoring may act out around their peers, thereby neither reaping the benefits of the structured activities nor having opportunities to emulate their mentors' more mature social skills. Thus, poor mentor attendance may undermine both mentees' self-esteem and social skills. A strength of the study is that it used a behavioral measure of mentors' commitment to mentoring. This is important because mentors may report being committed to mentoring and caring for their mentees (e.g., in self-report survey responses), but it is those mentors who actually show up who demonstrate this commitment to their mentees.

This study presents data that provide only partial support for Kohut's (1977) theory of the two steps in self-development. He suggests the first step in self-development is the self-esteem that manifests within close dyadic relationships from the consistent presence of an idealized other who is attentive to the individual. In the second step, through the role modeling of this idealized other, self-management and social skills develop, extend to the wider social ecology, and promote a reciprocal connectedness. The small sample in the present study rendered the zero-order correlations

between gains in connectedness (the main intervention goal) and those second-order, or enabling, outcomes nonsignificant, but did reveal these enabling outcomes were related to mentor attendance. This suggests two areas for future research. First, the links between mentor attendance and changes in connectedness through mentoring warrant further investigation with larger samples. Second, the possibility that repeated absences by mentors may evoke misbehavior among their mentees, prompt feelings of being unattractive, and undermine growth in social skills also should be cross-validated with larger samples.

There are several limitations of this study that future researchers should attempt to address. First, all the outcome measures were self-report instruments. Even though DuBois et al. (2002) found that mentoring outcomes did not differ as a function of the data source, other indicators such as grades, behavioral referrals, and assessments from external sources would help determine the extent to which self-reported changes are manifested in observable behaviors. Second, the sample was small, as is common in the prevention, child intervention, and mentoring literature. Small samples raise both Type I error (e.g., by making means less stable) and Type II error (e.g., by providing limited power to detect actual effects; note the many nonsignificant, but moderate, correlations in Table 2). Third, limited power rendered the hypothesis testing inconclusive. The between-group program effects (i.e., changes in school and parent connectedness) were predicted neither by mentor attendance nor by changes on the self-esteem or behavioral competence scales. Adequately testing Kohut's sequence in self-development will require replication, larger samples, multiple assessments, and sequenced data collection. Fourth, this study included an ethnically homogeneous sample and should not be prematurely generalized to youth from ethnic minority groups or to cross-race relationships. Fifth, this study included no examination of how long the connectedness gains lasted. Sixth, five boys left the program, three of whom were high risk. Although I controlled for pretest scores and academic risk levels, these students suggested by their action that developmental mentoring may not provide a useful intervention for youth already very disconnected from school and that retaining such youth may require additional efforts. A final limitation is that no attention was paid to the experiences or qualities of mentors that may account for their absenteeism. Similarly, no attention was paid to the effects of mentoring on the mentors. The possibility of iatrogenic as well as positive effects for the mentors also deserves study (see Karcher & Lindwall, 2003).

Despite the limitations of the study, there are several implications from this research for the practice of mentoring in the schools. First, programs would do well to target developmental outcomes that are directly related to program practices, such as the connectedness curricula used in the present study to promote connectedness. Second, the findings suggest that school-based mentoring, even when it does not include tutoring or academic activities, can nevertheless affect changes in school-related attitudes and behaviors by using conventionally oriented activities. This study suggests that children are likely to make meaning and self-attributions in response to their mentors' absence or irregular attendance. Actions that may help attenuate the impact of tardy, absent, or inconsistent mentors include encouraging mentors' regular attendance and supporting mentees when their mentors are absent. Finally, these findings support prior research by suggesting that mentoring may affect connectedness to parents, especially when opportunities for parental participation are included. Mentoring programs would do well to provided multiple ways of including parents (see DuBois et al., 2002).

This study provides evidence that developmental mentoring can impact children's connectedness to school through a curricula-based, group-format, cross-age mentoring. It also suggests that while structuring mentoring in this way has benefits, it also poses challenges related to maintaining the quality of the mentoring relationships. Some mentors may not attend consistently. In the wake of this absence, their mentees may be left to wonder: "Why did my mentor not come to

see me today?" and ask "What does that say about how my mentor feels about me?" Such questioning, or simply the absence of a mentor to guide the mentees' participation, may undermine children's self-esteem and perceived attractiveness, facilitate behavioral problems, and indirectly minimize program effects on academic attitudes and self-reported social skills. These findings warrant future study of the iatrogenic effects that may result from unsuccessful mentoring. Nevertheless, the data support the use of after-school, cross-age mentoring and the further study of mentoring processes and practices.

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