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Social Competence in the School Setting: Prospective Cross-Domain Associations among Inner-City Teens

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Abstract

LUTHAR, SUNIYA S. Social Competence in the School Setting: Prospective Cross-Domain Associations among Inner-City Teens. *CHILD DEVELOPMENT*, 1995, **66**, 416–429. In this 6-month prospective study of 138 ninth-grade inner-city students, associations among different aspects of school-based social competence were examined. In addition, links between initial emotional adjustment and subsequent social competence at school were explored. Aspects of social competence examined included academic achievement, peer reputation, and teacher-rated classroom behaviors. Emotional adjustment was measured based on self-reported internalizing and externalizing symptoms. Consonant with views positing continuity and coherence of development, high temporal consistency was found within each social competence domain. In addition, superior adjustment in one domain was sometimes associated with subsequent improvements in other spheres as well. Exceptions found to this pattern were that (a) both as an antecedent and as a consequent variable, peer-rated sociability was negatively linked with other indices of school-based functioning, and (b) among girls, high anxiety was related to improved performance at school over the year. Ecological influences in adolescent adjustment are discussed, and implications of the findings for future research are explored.

Structuralist-organizational views of child development hold that the successful negotiation of major developmental tasks is critical in determining subsequent levels of competence (Cicchetti & Schneider-Rosen, 1986; Masten & Braswell, 1990; Sroufe & Rutter, 1984). Achieving success at particular stage-salient tasks can give children a foundation of success or failure from which they approach future developmental challenges. In addition, success at meeting particular age-appropriate societal expectations—or high social competence—generally signals good underlying coping skills (Garmezy & Masten, 1986; Luthar & Zigler, 1991). Superior coping strategies, in turn, are likely to facilitate competence in other domains as well.

Continuity of Competence: Empirical Evidence

Several longitudinal studies provide support for such organizational theories of development. A 7-year follow-up study by Morison and Masten (1991) indicated that peer ratings of social competence during elementary school were significantly related to various

domains of social competence during adolescence. Among a sample of high-risk children living in poverty, Egeland and Kreutzer (1991) demonstrated that a history of social competence during infancy and the preschool years was protective for competence levels displayed on entry into first grade. Similarly, in her longitudinal study of high-risk children in Hawaii, Werner (1989) found that most individuals who had coped well with adversities as children also showed high social competence as adults.

In terms of “accrual of benefits,” the advantages of achieving high social competence have been established not only in terms of ontogenetic associations over time, but also in terms of cross-sectional links across different domains of competence. Research with school-age children, for example, has demonstrated that positive associations typically exist among different aspects of social competence in the school setting, that is, levels of academic success, acceptance by peers, and ratings by teachers of responsible classroom behaviors (Dishion, 1990; Feldhusen, Thurston, & Benning, 1970; Green, Forehand, Beck, & Vosk, 1980; Lambert & Nicholl, 1977; Taylor & Trickett, 1989; Vosk, Forehand, Parker, & Rickard, 1982; Wentzel, 1991).

Generalizations to Inner-City Adolescents

Most of the previously cited studies are based on data obtained with school-age children from relatively privileged families. Assumptions of positive associations among competence indices have become so integral to developmental psychology thinking, however, that they have been applied—somewhat unquestioningly—in recent studies involving minority, disadvantaged teenagers as well. For example, in research on social competence among inner-city adolescents, positive outcomes have been operationalized by either (a) positive peer reputation, (b) favorable ratings by teachers, or (c) high school grades (Luthar, 1991; Luthar, Doernberger, & Zigler, 1993). The underlying assumption is that doing well in anyone of these domains is a reflection of good “overall” adjustment.

The extent to which insights on competence derived from mainstream, middle-class psychology might apply among disadvantaged teenagers is questionable. Among these youngsters, the ethos in the peer group is often one that explicitly devalues academic success and conformity to authority (Garibaldi, 1992; Ogbu, 1991). Consistent with this claim, peer-rated sociability has generally been found to be unrelated to academic performance and to teacher ratings of classroom behaviors among inner-city teenagers (Luthar, 1991; Luthar et al., 1993). In the same vein, but more disconcerting, are findings reported by Cauce, Felner, and Primavera (1982) that among disadvantaged adolescent males, high levels of informal support from friends were *negatively* associated with academic achievement.

The implications of data such as these are considerable. If peer popularity might, in fact, lead to academic failure among disadvantaged youth or vice versa (as suggested in the cross-sectional trends noted by Cauce et al., 1982), we clearly need to reexamine our assumptions about the nature of social competence among these children. Aside from implications for theory, scrutinizing these assumptions could provide important clarifications for current thinking on preventive interventions. It has been suggested, for example, that among at-risk inner-city youth, some overall positive benefit can be gleaned from intervention programs

targeting a particular domain of competence such as positive peer reputation (Luthar, 1991). A critical, unanswered question is, in fostering positive peer status, might we inadvertently be facilitating other problems, such as academic failure, as well?

While the implications of these issues are serious, the empirical evidence, so far, is scant. In the present study, a 6-month prospective design was used to examine systematically associations among school-based competence indices among disadvantaged teenagers. The central issue examined was the extent to which over time, success in a particular domain of social competence in the school setting might be salutary for, unrelated to, or actually pernicious for performance in other competence domains.

Emotional Adjustment and Social Competence

Typically, consistency is seen not only among overt facets of social competence such as those displayed in the school setting, but also between such indices and more covert aspects of adaptation, that is, emotional adjustment. Depression and other affective disturbances often interfere with the mastery and unfolding of age-appropriate developmental tasks (Kovacs, 1989). These disorders can disrupt academic performance and learning (Bashir, Russell, & Johnson, 1987; Kovacs & Goldston, 1991; Nolen-Hoeksema, Girgus, & Seligman, 1992). Similarly, emotional distress often is associated with disruptions in interpersonal relations (e.g., Altman & Gotlib, 1988; Hymel, Rubin, Rowden, & LeMare, 1990; Strauss, 1988). Studies have shown that depression and anxiety are each associated with relatively negative perceptions by the peer group (Kennedy, Spence, & Hensley, 1989; Strauss, Frame, & Forehand, 1987).

Again, most of the studies cited on emotional distress and school-based competence have been conducted with school-age children from middle- and upper-class backgrounds. Several factors indicate the importance of studying these issues among teenagers living in disadvantaged circumstances. The many life changes that occur during adolescence—including “normative” changes such as transitioning to high school—can lead to heightened distress during this developmental period (Compas, 1992; Compas & Wagner, 1991). The unique stressors associated with life in underprivileged circumstances may further exacerbate vulnerability to emotional difficulties among inner-city teenagers. Finally, research has shown that lower socioeconomic, minority group youngsters are often poorly motivated at school (Connell, Spencer, & Aber, 1994; Luthar & Zigler, 1992; Ogbu, 1978, 1982). Given the links between symptomatology and poor school-based competence found among other samples, systematic study of these associations can, again, yield important information on a group at high risk for academic failure.

In view of the preceding discussions, a second issue addressed in this study was ways in which emotional distress might relate to social competence in the school setting among disadvantaged teenagers. These associations, again, were examined prospectively over 6 months during the same academic year.

Operationalization of Constructs

Domains of school-based social competence examined in this study included academic performance, peer relations, and behavior patterns in the classroom. Following earlier research in the area (Garmezy, Masten, & Tellegen, 1984; Luthar, 1991), a multimethod approach was used in operationalizing these constructs, with assessments based on school grades and ratings by classroom peers as well as by teachers. Feelings of subjective distress were assessed via self-reports of overall internalizing and externalizing problems, as well as the more specific internalizing symptoms of depression and anxiety. An in-depth examination of self-rated internalizing symptoms was considered necessary because many of the symptoms in these realms—such as feelings of helplessness, dread, or fear—are subjective feelings and self-perceptions that can often go undetected by others (Kazdin, 1990; Reynolds & Graves, 1989), particularly among older children and adolescents (Ollendick & King, 1991). Conversely, problems of an externalizing nature are, by definition, visible to those who interact with a child regularly, and thus were expected to be captured not only by the self-report measures, but also in part by ratings of the child by peers and teachers.

In summary, this 6-month prospective study had a two-pronged focus in examining school-based social competence among inner-city teenagers. Areas of focus included (1) associations over time of different aspects of social competence with each other, and (2) associations between emotional distress early in the academic year and subsequent levels of school-based competence.

Method

Sample Characteristics

To enhance comparability with prior findings, recruitment of the sample in this study followed procedures employed by Luthar (1991). In both cases, participants were students in an inner-city public school in Connecticut. In the school sampled, students are placed in five “gate” levels, with curricula of varying difficulty. Subjects were drawn from 10 ninth-grade classrooms with two classes randomly selected from each gate level. Use of this procedure led to a recruitment of 144 children by Luthar (1991), and in this study, a total of 164 students were recruited to participate in baseline (Time 1) assessments.

At Time 1, the sample consisted of 84 girls and 80 boys, with a mean age of 15.2 years ($SD = 1.0$). Complete data were obtained for 92% of the students in the classes sampled. Four students refused to participate, four were absent on all three days of data collection, and seven were eliminated due to incomplete data. At Time 2, 26 children from the Time 1 sample were not included, leaving a prospective sample of 138 (76 girls, 62 boys) children. Of the 26 missing children, 15 had dropped out of school, six were absent all days of data collection, two had moved away from the area, two had changed classes, and one refused to participate.

Eighty-four percent of the sample belonged to minority groups, including 40% African-Americans, 27% Hispanics, 9% Asians, and 8% of mixed heritage. Proportions of girls and

boys in the different ethnic groups were comparable ($\chi^2 = 3.23, p < .5$). According to the Hollingshead Two-Factor Index of Social Position (Hollingshead & Redlich, 1958), the mean SES for families was 51.8 (SD = 14.3), which falls in the second lowest of the five Hollingshead categories.

Measures of Competence

Teacher ratings.—The Teacher-Child Rating Scale (T-CRS; Hightower et al., 1986) was given to English teachers of all students. A 36-item scale, the T-CRS assesses behaviors within two domains, with three scores within each: *Problems* (Acting Out, Shy-Anxious, and Learning), and *Adjustment* (Frustration Tolerance, Assertive Social Skills, and Task Orientation). Acceptable psychometric properties have been reported for this measure (Hightower et al., 1986). In this sample, Cronbach's alpha coefficients for the six subscales ranged between .77 and .98 for girls (median .92) and between .81 and .98 for boys (median .94).

Peer ratings.—The Revised Class Play (RCP; Masten, Morison, & Pellegrini, 1985) was used to assess peer reputation. Among inner-city teenagers, RCP items have been found to fall into four major factors, two of which are negative—*Aggressive-Disruptive* and *Sensitive-Isolated*—and two positive—*Sociable* and *Leadership* (Luthar, 1991). Factor analyses with the present sample yielded results similar to those previously reported. Four RCP scores were therefore developed based on the RCP. Masten et al. (1985) report adequate coefficients of reliability and validity for the RCP, and acceptable reliability and validity levels for scores used in this study have also been demonstrated among disadvantaged teens (Luthar, 1990). In the present sample, Cronbach's alpha coefficients ranged between .83 and .92 for girls (median .88), and between .80 and .90 for boys (median .87).

School grades.—School records were used to ascertain grades. Marks collected for four academic courses were converted into grades using a grid developed by school officials, which made it possible to compare marks across the five grade levels (of varying curricula). Based on these four scores, mean grades were computed.

Measures of Emotional Distress

Internalizing/externalizing symptoms.—A measure consisting of 103 items rated on a three-point scale, the Youth Self-Report Child Behavior Checklist (YSR; Achenbach & Edelbrock, 1987) was used to assess children's perceptions of problems in the internalizing and the externalizing domains. Items on the internalizing scale assess fearful, inhibited, and overcontrolled behaviors, while the externalizing scale items cover aggressive, antisocial, and undercontrolled behaviors. Acceptable reliability and validity levels for the YSR are well documented (Boyle & Jones, 1985). In this sample, Cronbach's alpha reliability coefficients for the Internalizing subscale were .88 for both girls and boys, and coefficients for the Externalizing subscale were .85 for girls and .90 for boys.

Depression.—The Children's Depression Inventory (Kovacs, 1992), a 27-item self-report scale designed for school-age children and adolescents, was administered. Each item

consists of three choices, with scores ranging from 0 to 2. This measure has acceptable levels of internal consistency as well as criterion and concurrent validity (Kovacs, 1992; Saylor, Finch, Spirito, & Bennett, 1984). Internal reliability for this sample, using Cronbach's alpha coefficients, was .88 for girls and .83 for boys.

Anxiety—The total anxiety score yielded by the Revised Children's Manifest Anxiety Scale (Reynolds & Richmond, 1985) was used in this study. Items on this 37-item self-report measure are scored 0 or 1. Acceptable reliability and validity coefficients have been reported for this measure (Reynolds & Richmond, 1985). In this study, reliability coefficients (Cronbach's alpha) for overall anxiety were .85 for both girls and boys.

Procedure

Data were collected at two times in the same academic year, in November 1990 and May 1991. At each time of assessment, data for each student were collected during three 45-min class periods allocated for English, on 3 consecutive days. Testing of the children was done in groups of 10 to 20. To guard against biases due to reading difficulties, a member of the research team read each questionnaire aloud, and students marked their responses alongside. The order of administration of measures followed that used in earlier research involving similar instruments (Luthar, 1991), with the relatively structured, nonthreatening measures administered at the beginning and end of each session. To ensure maximal participation at each assessment time, an incentive of \$5 was offered to each student, and teachers were given \$1 for each student rating they completed.

Results

Data Reduction

A principal components factor analysis with varimax rotation was performed on standardized peer- and teacher-rating scores for data reduction of competence variables. At Time 1, the scree plot indicated three main factors, which together accounted for 72.5% of the total variance. Factor analyses conducted for Time 2, for boys and girls separately, yielded similar results to Time 1. Based on these analyses, and using item loadings of .60 or more, three composite scores of competence were developed with the following scoring operations (scales from which scores derive are in parentheses): *Assertiveness* (T-CRS) = Frustration tolerance + Task orientation + Assertive – Shy-anxious – Learning problems – Acting out; *Leadership* (RCP) = Leadership – Aggressive-Disruptive; *Sociability* (RCP) = Sociable – Sensitive-Isolated. School grades comprised a fourth competence variable.

Means and standard deviations on the composite competence scores, as well as the symptom indices, are presented in Table 1 separately for boys and girls and for Time 1 and Time 2.

Sample Attrition: Characteristics of Dropouts

Analyses were conducted to assess dimensions on which subjects missing at Time 2 differed from those who remained. The 26 subjects who participated at Time 1 but not Time 2 included significantly more males ($n = 18$) than females ($n = 8$). Comparisons of means on all Time 1 variables indicated that subjects excluded at Time 2 were older, and with the

exception of Sociability, had lower scores on the competence composites. The groups did not differ on any measure of distress.

To ascertain the relative significance of the variables in distinguishing between the groups, a multiple regression analysis was run on a dummy coded variable representing inclusion in/exclusion from the longitudinal sample. With all Time 1 variables considered as predictors, significant unique variance was explained by grades ($R^2 = .15$) and by age ($R^2 = .02$). Thus, when the variables examined in this study were considered together, they accounted for 17% of variance in distinguishing dropouts from others, and poor academic performance alone accounted for most of the overall variance explained.

Potential Confounds Involving Sociodemographic Variables

Preliminary correlational analyses were conducted to ascertain whether the sociodemographic variables of age and SES were related to the competence variables, and might thus operate as confounds in subsequent multivariate analyses. Results indicated significant associations involving only age, with grades (Time 1 $r = -.36$; Time 2 $r = -.23$) and with Assertiveness (Time 1 $r = -.27$; Time 2 $r = -.24$, all p values $< .01$).

Two multivariate analyses of variance were then conducted to ascertain potential effects associated with gender and ethnicity, as main effects, as well as in an interaction term. Criterion variables in these analyses included age, grades, Assertiveness, and the four symptom indices, each measured at both Time 1 and Time 2. The peer-rated variables of Leadership and Sociability were excluded since methodology associated with the RCP obscures gender differences (boys and girls are each rated in comparison only with other children of the same gender).

In the first MANOVA, ethnicity was defined simply in terms of minority group members versus Caucasians. This analysis indicated significant overall differences only for gender as a main effect, $F(17, 112) = 2.02$, $p < .02$ (values are based on Wilks' lambda). Follow-up univariate analyses indicated that girls were younger, and showed higher competence levels on both grades (at Time 1) and teacher-rated assertiveness (at both Time 1 and Time 2). At the same time, however, they had higher scores on anxiety at both assessments, and had higher levels of internalizing symptoms at Time 2. Nonsignificant results were obtained in this analysis for minority status, both as a main effect and in interaction with gender.

In the second MANOVA, differences on all variables were examined among the five ethnic groups considered separately (as opposed to minority vs. nonminority status), and for ethnic group by gender. In this case, significant effects were obtained for the main effect of ethnicity, but not for ethnicity $\times$ gender. Follow-up ANOVAs indicated group differences on none of the symptom variables, but on all four competence indices measured at both Time 1 and Time 2, with the exception of Time 1 Assertiveness. Newman-Keuls comparisons of means indicated that in all cases, differences lay essentially between Asians ($n = 12$) and all others. Asians scored the highest on all competence measures except Sociability, on which their scores were the lowest.

Cross-sectional Associations across Domains

Table 2 presents cross-sectional correlations of competence and symptom scores at Time 1 as well as Time 2. As seen in these tables, grades and Assertiveness were strongly associated with each other, and these variables showed somewhat weaker associations with Leadership. Sociability showed negative though nonsignificant associations with grades and Leadership.

With regard to correlations across competence indices and symptoms, Sociability was negatively associated with anxiety, depression, and internalizing symptoms, and all competence indices except Sociability showed modest negative associations with externalizing symptoms.

Prospective Correlations

Intercorrelations between variables measured at Time 1 and at Time 2 are presented in Table 3. In this table, variables along the diagonals reflect consistency of scores over the two assessment times. High levels of consistency were found for all variables, with values being somewhat higher for the competence indices ($r = .71$ to $.85$) than for the symptoms ($r = .58$ to $.76$).

The zero-order prospective associations in Table 3 among competence variables generally mirrored the cross-sectional ones in Table 2. Grades and Assertiveness showed strong bidirectional relations with each other across the two times, and more modest associations with Leadership. As an antecedent variable, Sociability showed a borderline negative association with grades.

Correlations pertinent to the second major goal of the study, that is, between symptoms at Time 1 and competence at Time 2, indicated some modest negative associations involving Time 2 Sociability scores. In addition, early externalizing symptoms were negatively associated with both grades and Leadership at Time 2.

Hierarchical Multiple Regression Analyses

Prospective associations involving aspects of competence were explored via hierarchical multiple regression analyses (Cohen & Cohen, 1983). Separate regressions were conducted (*a*) for the overall sample, and (*b*) for boys and girls individually, in order to assess the nature and strength of any gender differences in patterns of longitudinal associations. The results across all three analyses were generally similar. In the interest of brevity, therefore, results are presented in Table 4 for the overall sample, followed by a discussion of ways in which results for boys and girls deviated from these.

In conducting the regression analyses, the sociodemographic variables of gender (where applicable) and age were controlled for at the outset. Time 1 scores on the outcome variables in question were then entered before any other predictors, to enable ascertainment of variables significantly associated with changes in competence levels over time (see Cohen & Cohen, 1983).¹ The three social competence indices other than the one being predicted were then entered as a set, and were followed by the four symptom scores as a second set. The competence variables were given precedence over the symptom scores given the focus of

this research on school-based competence (Cohen & Cohen, 1983). Within each set of predictor variables, order of entry was allowed to vary in order of decreasing tolerance (Tabachnick & Fidell, 1989).

For all regression models tested, overall F values were statistically significant at $p < .0001$. As shown in Table 4, given the high consistency in scores across the two times of assessment, a high proportion of variance was accounted for in entering Time 1 scores in all the analyses. Even after controlling for Time 1 effects, however, a significant increase in R^2 was obtained for Sociability in predicting grades. As indicated by the valence of the beta weight, the direction of this effect was negative.

In predicting Assertiveness, effects in a positive direction were found for Time 1 grades and Leadership. Although the effect for Externalizing symptoms was also statistically significant, a positive valence was obtained for the beta weight which was contrary to all univariate correlations in Tables 2 and 3. This suggests the presence of a suppressor variable (Tabachnick & Fidell, 1989), and therefore qualifies the interpretability of the finding involving Externalizing symptoms in the multivariate analyses.

In the prediction of Time 2 Leadership, significant results were obtained for Sociability, Depression, and Externalizing symptoms, all in a negative direction. A single significant effect was obtained while predicting Time 2 Sociability, that is, Leadership, in a negative direction.²

Analyses by Gender Groups

When the analyses discussed above rerun using only the boys in the sample, findings were generally consistent with those in Table 4 in terms of both direction and magnitude of effects, although some changes in R^2 were no longer statistically significant. A single additional effect was also found among boys, that involving Time 1 Leadership in predicting Time 2 grades ($\beta = .13$, $R^2 = .02$, $p < .03$).

By contrast, when analyses were conducted only with girls in the sample, several significant effects were found apart from those reported in Table 4, and all these involved symptoms at Time 1. In addition to negative associations between early Depression and later Leadership, (a) Depression was negatively related to Time 2 grades ($\beta = -.14$, $R^2 = .02$, $p < .05$); (b) Internalizing symptoms were negatively linked with Leadership at Time 2 ($\beta = -.25$, $R^2 = .02$, $p < .08$); and (c) Anxiety was negatively associated with Time 2 Sociability ($\beta = -.23$, $R^2 = .02$, $p < .07$). In contrast with these findings, Time 1 Anxiety was found to be

¹In studying changes in a particular construct over two points in time, Cohen and Cohen (1983, pp. 414–423) state that it is inadvisable to use a simple algebraic difference score in analyses, that is, Time 1 – Time 2. The reliability of such difference scores is likely to be considerably lower than that of either the Time 1 or the Time 2 scores, and low reliability sharply constrains correlations with other variables. The authors suggest, instead, that change be studied by partialing Time 1 scores from Time 2 scores, in multiple regression analyses: the analysis of change can proceed as a special case of analysis of partial variance, where Y , the criterion, is the Time 2 score, and the Time 1 score serves as a covariate.

²In view of Cohen and Cohen's (1983) discussion on the merits of studying change over time via analysis of partial variance (APV) as opposed to simple difference scores (see n. 1), a series of exploratory correlations were run involving difference scores, corresponding to all significant effects in the APV analyses reported in Table 4. These correlations involved the relevant predictor variable and a (Time 2 – Time 1) score for the criterion. Results showed that the directionality of all correlation coefficients was identical to effects in Table 4 (e.g., r between Time 1 Sociability and (Time 2 – Time 1 grades) was $-.15$, $p < .08$). However, as suggested by Cohen and Cohen, the magnitude of correlations was, in fact, low in comparison with effects found in the APV analyses.

positively associated with grades at Time 2 ($\beta = .22, R^2 = .02, p < .02$) as well as with Leadership scores later in the academic year ($\beta = .20, R^2 = .02, p < .09$).

Strength of Gender Differences

The preceding discussion may be construed as suggesting areas of gender differences, inasmuch as ways in which results for girls and boys differed from those for the overall sample are noted. However, inferring gender differences based simply on the presence/absence of effects across the analyses may be misleading, since beta coefficients for boys and girls were generally not dramatically different. To assess the extent to which the associations differed significantly by gender, pairs of beta coefficients were subjected to significance testing (Cohen & Cohen, 1983) for each instance where an effect was obtained in one gender group but not the other. Results of 11 comparisons conducted were significant only in three cases, those involving early anxiety in predicting both grades and Sociability at Time 2 (only girls showed positive and negative associations, respectively), and early depression in predicting Time 2 grades (negative associations were found only among girls).

Potential Confounds Involving Ethnicity

Since ethnic group differences in competence variables were found in earlier analyses of variance—that is, Asians versus others—hierarchical regression analyses were run yet again, controlling first for ethnicity via dummy coded variables. (Sample sizes precluded running separate regressions for the different ethnic groups.) Results were very similar to those reported, indicating that ethnicity was unlikely to have been a confound in the associations reported.

Discussion

Results of this study provide several insights on continuities and discontinuities in adjustment among inner-city adolescents. First, within each domain of school-based social competence examined, a high level of stability was found across two assessments conducted 6 months apart. Second, superior adjustment in one competence domain was often associated with subsequent improvements in others. On the other hand, several instances were found where success in one area of school-based social competence was *negatively* associated with subsequent performance in others. Similarly, although early emotional distress was generally associated with subsequent decreases in school-based competence, among girls, high levels of anxiety were associated with *increases* in competence at school. The major findings on associations across adjustment domains are discussed in turn.

Findings Reflecting Consistency in Development

Adolescents' early academic success, and early peer perceptions of their leadership qualities, were each found to be linked with improvements in the children's classroom behaviors as rated by teachers. Consistent with theoretical views that posit coherence of social competence, these trends suggest that successful negotiation of a particular developmental task may often facilitate adolescents' success in other competence domains as well.

Viewed in the context of earlier research on minority students, the findings on teacher-rated assertiveness in this study are heartening. It has been previously noted that teachers in inner-city schools tend not to differentiate children on the basis of varying levels of performance (e.g., Ogbu, 1991). To the contrary, results of this study indicate that teachers' opinions did capture differences in students' performance, reflecting not only grades achieved early in the academic year, but also ratings by peers of qualities of responsibility and leadership.

With regard to associations involving emotional distress, in this study, two effects were found supporting views that difficulties in one domain are related to later problems in other areas. Early depression and externalizing symptoms were each negatively linked with subsequent peer ratings of adolescents' leadership qualities. These trends echo previous findings indicating that high levels of symptomatology can be particularly disruptive for functioning in the peer group setting. Kovacs (1989) and Nolen Hoeksema et al. (1992), for example, have indicated that depressed children are often relatively ineffective in interactions with their peers: they generally exhibit passivity and helplessness, and do not show persistence or mastery oriented behaviors in negotiating difficult situations with peers.

Negative Associations across Competence Domains

In contrast to previously described trends, there were several instances in which associations across adjustment domains were negative in direction. In the case of findings involving social competence indices, negative links almost invariably involved peer-rated Sociability, either as a predictor or as a dependent variable. Thus, adolescents who were initially rated as being friendly and easy to get along with were those who showed the *greatest declines* over time in both academic functioning, and in peer-rated qualities of leadership and dependability. Similarly, children who were viewed by peers early in the year as being responsible leaders were those who, by the end of the year, were rated by peers as among the lowest on gregarious, sociable behaviors. In sum, a reputation among peers of being highly sociable and friendly seemed to run counter both to academic success and to the maintenance of responsible classroom behaviors.

Precedents to these findings are seen in negative associations previously reported between informal social support among disadvantaged teenage boys, and concurrent levels of performance at school (Cauce et al., 1982). Results in both investigations are consistent with developmental trends on value conformity (e.g., Berndt, 1979). Among underprivileged youngsters in inner-city schools, academic success and conformity to authority are often devalued within the peer group (Garibaldi, 1992; Ogbu, 1991; Trotter, 1981), and children with high peer status may be particularly vulnerable to pressure to conform to group norms. In short, mores existing in inner-city teen groups partially may account for the present findings of deteriorating scholastic performance among teenagers who initially had high status in the peer group at school.

Negative Associations Involving Symptomatology

Another set of negative associations found in this study were those involving anxiety among girls. High levels of anxiety early in the academic year were associated with improvements in girls' grades over time, as well as in their peer ratings on leadership qualities. These

results might be explained partly by previously obtained insights on the construct of manifest anxiety. In an analysis of several studies, Saltz (1970) argued that individuals high on manifest anxiety are particularly susceptible to stress induced by personal failure. That is, they have a greater ego investment in demonstrating intellectual competence and satisfactory performance. Such motivational arguments might explain in part the improvements in school-based performance seen among highly anxious girls.

Another explanation for these findings is that the effects obtained may have been more strongly influenced by some domains of anxiety than others. In this study, anxiety was operationalized by an overall score comprised of subscores in the domains of physiological anxiety, worry, and social concerns. It is possible that while physiological anxiety and worry may be deleterious to academic performance, high levels of social concerns may be beneficial, since this domain pertains to concerns around gaining approval from others. The possibility that girls' high investment in approval underlies the findings on anxiety may also partly account for the gender-based specificity of these findings. This interpretation is consistent, for example, with findings of greater relational identity and investment in interpersonal relations among females than males (Gilligan, 1982; Green & Larson, 1991)

Interestingly, while high anxiety among girls was linked positively with subsequent levels of both grades and peer-rated leadership, it was negatively associated with later peer ratings of sociability. These findings once again are consonant with the argument made earlier, proposing that the cluster of indices associated with success at school (good grades, high peer ratings on leadership, and among girls, apparently, relatively high anxiety), are often antithetical to those associated with high sociability within the inner-city adolescent peer group.

Caveats and Limitations

In interpreting the findings of this study, it should be noted that many of the significant associations detected had modest effect sizes, with R^2 values ranging between 1% and 6%. Since magnitude of effects is related to stability of findings, replicatory research involving similar designs is important to establish the robustness of associations found here.

Limitations of this study include restrictions in sample size and in the amount of time between baseline and follow-up assessments. In future research, the use of a larger sample could provide greater statistical power and thus strengthen the data analyses. In addition, a larger sample could enable addressing potentially important questions on ethnicity, that is, ways in which antecedents of school-based competence might vary within different ethnic groups, and by ethnicity in interaction with gender.

In the context of possibly using longer time periods between baseline and follow-up assessments, problems of logistics can severely limit the feasibility of this strategy. In moving from one grade level to the next in high school, children initially in the same classroom are often distributed across several others. In studies such as this one, obtaining follow-up ratings from classmates and teachers for children scattered across different classrooms can present a daunting task. Furthermore, potential benefits of using a longer time interval must be weighed against possibly exacerbated problems of sample attrition. In

this sample, for example, almost 10% of the students were no longer at school even before the end of their freshman year.

Finally, this study reflected a problem commonly encountered in longitudinal research (Lefkowitz, Eron, Walder, & Huesmann, 1977), that is, selective attrition. Children absent at follow-up had relatively low scores on adjustment, and it is unclear whether the patterns detected here would be equally applicable among this group of youngsters who were at particularly high risk.

While some methodological features may qualify the conclusiveness of the present results, other aspects enhance their potential contributions. This is among the first studies of inner-city teens to use a prospective research design while examining associations across domains of competence in the school setting. Further, although conducting research with youngsters in inner-city high schools presents a variety of challenges, several factors attest to the veracity of the data reported here. Validity of assessments is buttressed by the use of multiple sources to operationalize central constructs, including data from teachers, peers, self-reports, and school records. Coefficients on psychometrics reported in this sample—on internal consistency and test-retest reliability—further attest to the reliability of the data on which this study is based.

Implications and Conclusions

Apart from yielding insights on different cross-domain associations involving disadvantaged teens' school-based competence, results of this study carry implications for research in the burgeoning area of childhood resilience. In most studies in this area, resilience has been defined as the successful negotiation of salient age-appropriate developmental tasks, in spite of conditions of high risk (Garmezy & Masten, 1986). Different aspects of social competence, such as those examined here, have typically been accorded comparable importance in representing successful negotiation of high-risk conditions. Thus, factors associated with positive peer perceptions, with good grades, or with positive ratings by adults have each been discussed in general terms as being protective against adversity (Luthar & Zigler, 1991).

Trends observed in this study add to accumulating evidence indicating the need for a more differentiated approach in defining resilience (Luthar, 1993). Consider the negative associations found between adolescents' sociability and subsequent levels of both grades and leadership. In spite of the stringency introduced in the analyses by controlling for Time 1 scores on the criterion variables (see DuBois, Felner, Brand, Adan, & Evans, 1992), early sociability was negatively associated with both these dependent variables. Moreover, although at odds with myriad findings obtained with other samples, the negative direction of associations found here is entirely consistent with previous sociological insights and cross-sectional psychological data based on samples similar to this one (Cauce et al., 1982; Garibaldi, 1992; Ogbu, 1991).

In a similar vein, low levels of anxiety are typically seen as reflecting positive adjustment. However, results obtained here showed that low anxiety among girls was significantly

related to increased difficulties at school. In spite of controls for initial adjustment, again, significant associations were found in two different domains (academic achievement and peer ratings of leadership), and in both cases, associations were negative in direction.

Put simply, then, the present results indicate that children who initially show the best interpersonal or emotional adjustment may also be among those most likely to obtain failing grades, or relatively disruptive classroom behaviors, later in the academic year. Findings such as these underscore the need for caution in selecting indices as indicators of resilience. Since success in one adjustment domain cannot just be unrelated to, but may actually *jeopardize* performance in others, it is critical that resilience be defined in terms of delimited spheres of adaptation. Discussions on positive outcomes should be presented in terms of the specific domains of successful coping (e.g., academic, social, or emotional resilience). Similarly, research-based attempts to understand antecedents of resilience must be framed separately within the context of individual spheres of successful coping: there are dangers involved in making claims about any ubiquitous mechanisms that presage an “overall,” across-the-board resilience.

In conclusion, some results of this study indicated coherence in the unfolding of adolescents’ school-based social competence over time. Success at a particular developmental task sometimes had salutary effects over time for other domains of competence. At the same time, however, exceptions were found, and these seemed to reflect consonance with mores in the sociocultural milieu. The negative associations found here—differing as they do from links found with other sociodemographic groups—resonate with Bronfenbrenner’s (1977, 1986) emphasis on the importance of considering contextual factors while studying child development.

The patterns observed in this study strongly endorse exhortations (Zaslow & Takanishi, 1993) for additional empirical research on normal developmental processes, particularly those related to school-based competence, among minority group adolescents. In the concluding section of a recent report on disadvantaged teens, the National Research Council’s Panel on High-Risk Youth (1993) notes, “Probably nothing derails an adolescent’s future more certainly than disconnecting from school, losing interest in learning, and ultimately, dropping out of school” (pp. 250). Contemporary social science researchers clearly need to accelerate their efforts toward understanding ways in which ontogeny and ecology interact in fostering scholastic success among sociodemographically disadvantaged teens.

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TABLE 1

MEANS AND STANDARD DEVIATIONS ON VARIABLES BY GENDER AT TIME 1 AND TIME 2

	Boys (<i>n</i> = 62)		Girls (<i>n</i> = 76)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age	15.25	1.03	14.88	.80*
Grades	5.68	2.70	6.66	2.39*
	5.47	2.81	6.11	2.94
Assertiveness	-.66	4.84	1.95	3.92**
	-.68	5.01	1.24	4.32*
Leadership	.23	1.54	.06	1.59
	.01	1.72	-.01	1.51
Sociability	-.03	1.58	-.04	1.65
	-.01	1.71	.05	1.58
Anxiety	11.91	6.08	13.93	5.34*
	10.82	4.88	12.53	4.80*
Depression	8.62	6.39	10.21	7.21
	9.31	6.88	10.43	6.07
Internalizing symptoms	25.87	12.95	26.97	11.93
	23.07	9.91	26.86	12.34*
Externalizing symptoms	21.42	11.86	21.69	9.40
	21.62	10.40	22.66	10.86

NOTE.—Results for Time 1 and Time 2 are presented in the top and bottom line, respectively, for each predictor variable. Boys' and girls' means are significantly different at

* $p < .05$,

** $p < .01$.

TABLE 2

INTERCORRELATION OF VARIABLES AT TIME 1 AND TIME 2 ($n = 138$)

	1	2	3	4	5	6	7
Competence:							
1. Grades							
2. Assertiveness	.67*						
	.70*						
3. Leadership	.23 ^a	.15					
	.33*	.30*					
4. Sociability	-.15	.00	-.16				
	-.15	-.07	-.19 ^a				
Symptoms:							
5. Anxiety	.07	.03	.08	-.35*			
	.10	.09	.00	-.35*			
6. Depression	-.02	-.07	-.10	-.18 ^a	.55*		
	-.04	-.04	-.11	-.16	.40*		
7. Internalizing symptoms	.08	.05	.12	-.34*	.76*	.60*	
	.11	.11	.02	-.19 ^a	.59*	.63*	
8. Externalizing symptoms	-.27*	-.19 ^a	-.26*	-.05	.47*	.49*	.54*
	-.20 ^a	-.05	-.30*	.03	.28*	.52*	.59*

NOTE.—Results for Time 1 and Time 2 are presented in the top and bottom lines, respectively, for each variable.

^aBorderline significance (without Bonferroni correction), $p < .05$.* $p < .003$, using multistage Bonferroni correction

TABLE 3INTERCORRELATION OF TIME 1 VARIABLES WITH TIME 2 VARIABLES ($n = 138$)

TIME 2 VARIABLES	TIME 1 VARIABLES							
	1	2	3	4	5	6	7	8
Competence:								
1. Grades	.85 ^a	.58 ^a	.26 ^a	-.20 ^a	.11	-.04	.10	-.25 ^a
2. Assertiveness	.70 ^a	.74 ^a	.26 ^a	-.05	.01	-.09	.06	-.16
3. Leadership	.24 ^a	.19 ^a	.71 ^a	-.22 ^a	.05	-.15	.03	-.35 ^a
4. Sociability	-.15	-.03	-.18 ^a	.76 ^a	-.36 ^a	-.22 ^a	-.32 ^a	-.03
Symptoms:								
5. Anxiety	.08	.03	.04	-.34 ^a	.58 ^a	.34 ^a	.55 ^a	.25 ^a
6. Depression	-.03	-.07	-.02	-.16	.48 ^a	.70 ^a	.50 ^a	.47 ^a
7. Internalizing symptoms	.09	.03	.07	-.18 ^a	.57 ^a	.55 ^a	.66 ^a	.43 ^a
8. Externalizing symptoms	-.20 ^a	-.15	-.18 ^a	.00	.30 ^a	.40 ^a	.39 ^a	.76 ^a

^aBorderline significance (without Bonferroni correction), $p < .05$;* $p < .001$ using multistage Bonferroni correction.

TABLE 4

Hierarchical Multiple Regression Analysis of Variables at Time 2 (*n* = 138)

Predictors (Time 1)	Grades						Criterion (Time 2)					
	Assertiveness			Leadership			Sociability					
	Step	β	R^2	Step	β	R^2	Step	β	R^2	Step	β	R^2
Gender	1	-.11	.01	1	-.19	.03*	1	.01	.00	1	-.04	.00
Age	2	-.22	.05*	2	-.21	.04*	2	.02	.00	2	.09	.01
Competence:												
Grades	3	.88	.67**	6	.36	.06**	6	.08	.00	6	-.05	.00
Assertiveness	6	.06	.00	3	.73	.47**	5	.09	.01	5	-.01	.00
Sociability	4	-.09	.01*	4	-.04	.00	4	-.12	.01*	3	.78	.60**
Leadership	5	.06	.00	5	.15	.02*	3	.72	.51**	4	-.09	.01+
Symptoms:												
Anxiety	9	.09	.00	9	-.06	.00	9	.07	.00	9	-.11	.01
Depression	7	-.03	.00	7	-.05	.00	7	-.12	.01*	7	-.08	.00
Internalizing symptoms	10	.00	.00	10	.05	.00	10	-.03	.00	10	.02	.00
Externalizing symptoms	8	.02	.00	8	.17	(.02 ^d)	8	-.14	.01+	8	-.01	.00
Total R^2			.75			.66			.57			.63

^aThis effect seems due to a suppressor variable, as suggested by the positive valence of the beta weight: all zero-order correlations involving the two variables concerned are negative in direction.

+ *p* < .10.

* *p* < .05

** *p* < .0001.