Grant No. 199700057

SOCIAL NETWORKS AND SCHOOL ADAPTATION ACROSS THE CHILD TO

ADOLESCENT TRANSITION

Final Report
to
The Spencer Foundation
with
Addendum

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SOCIAL NETWORKS AND SCHOOL ADAPTATION ACROSS THE CHILD TO ADOLESCENT TRANSITION

Focus of the Research

This was a prospective study designed to shed light on the development of social networks across the transition from middle childhood to adolescence, with a focus on factors that contribute to the availability of support from specific sources (family members, friends, and others) and on school outcomes associated with variations in network structure and function. A total of 782 fourth and sixth grade African-American, European-American, and Hispanic-American children, from middle or low income schools, were interviewed in 1997. Of these, 695 (89%) were interviewed again in 1999, when most had transferred to middle schools. School attitude data were collected from parents and peers. School adaptation measures were obtained from teachers and school records.

Specific aims were (a) to study the development of social networks in a multicultural sample of children from middle and lower income families, identifying primary sources of support at different age levels, (b) to determine the role of family stress as a proximal factor accounting for intergroup and interindividual variation in social network structure and supportive functioning, and (c) to assess prospectively the impact of variations in the sources and quality of support on school adaptation, with a focus on the role of network member attitudes in interaction with support.

Findings

We have conducted a number of analyses with respect to the specific aims of the project. We have also addressed some corollary issues related to school adaptation that have arisen in the course of the project, including (a) the effects of immigrant status on social support and adaptation, (b) parent and peer compensatory support patterns, (c) parent and peer support and attitudes as predictors of aggressive and delinquent behaviors, (d) facilitating effects of teacher support, and (e) the role of grandparent support. Analyses relevant to these issues have been conducted in conjunction with thesis and dissertation projects. Several papers based on our findings have been presented at national conferences, a manuscript is under review, and another manuscript is in preparation. The findings regarding each aim and the corollary issues are described in the following sections. Associated papers are cited.

Aim 1. To study the development of social networks in a multicultural sample of children from middle and lower income families, identifying primary sources of support at different age levels.

Repeated measures analyses of variance were conducted to address this aim. Figure 1 shows the pattern of change over time in support from close family, extended family, and friends, for the two cohorts of children in the study. Support from close and extended family members increased moderately for the fourth grade cohort and remained relatively constant for the sixth grade cohort. Support from friends increased significantly for both groups.
This pattern was generally true for each ethnic group represented in the sample (Figure 2). At all ages, European-American students reported more support from close family members and friends, compared to African-American and Hispanic-American students. Higher levels of extended family support were reported for low income African-American students, whereas low income European- and Hispanic-Americans reported less support from extended family members. A reverse pattern was found for friend support. Low income European- and Hispanic-American students reported higher levels of support from friends and low income African-American students reported less friend support.

These longitudinal findings are consistent with our own cross-sectional research (Levitt, Guacci-Franco, & Levitt, 1993), and with that of Furman & Buhrmester (1992), indicating heightened reliance on friends for support across the transition to adolescence. They also illustrate the relatively prominent role of extended family support in middle to late childhood and the continuity of close family support suggested in our previous study. Patterns of change across time
were similar for each ethnic group, but there was variation by ethnicity and income level in the amount of support received from different sources. Lower levels of close family support for low income students appeared to be offset by higher levels of extended family support for African-Americans and friend support for European- and Hispanic-Americans. Proximal factors related to variation in social resources are addressed in the following section.

**Aim 2. To determine the role of family stress as a proximal factor accounting for intergroup and interindividual variation in social network structure and supportive functioning.**

We have presented a paper relevant to this aim (Levitt et al., 2000). An index of stressful familial life events was included as a predictor of social support across the adolescent transition, along with grade level, sex, ethnicity, school economic level, and immigrant status. Family stress was associated with diminished support from Time 1 to Time 2. However, the effect was quite modest and limited to the overall total support index. The stressful life events measure was not related significantly to changes in support from close family, extended family, or friend sources.

We have subsequently developed an index of risk that is a stronger predictor of support and adaptation outcomes than family stress alone. The risk index is a summary measure based on the following indicators: high family stress, low school economic level, mother or father absent from the home, participation in the federally-funded free lunch program, poor neighborhood conditions, and perceived economic hardship ("problems paying for things the family really needs"). We have presented a conference paper employing this index in a path analysis involving predictors of social support and well-being at Time 2 (Levitt et al., 2001). Risk was correlated with diminished support from all sources. Thus, a combination of family life stress with other ecological risk factors appears to affect the functioning of the child-adolescent social support system.

**Aim 3. To assess prospectively the impact of variations in the sources and quality of support on school adaptation, with a focus on the role of network member attitudes in interaction with support.**

We have conducted multiple regression analyses relevant to this aim, as outlined in our proposal, and these results are reported first in this section. However, recent developments in the field (Magnusson & Cairns, 1996) suggest that our focus on average levels of support may be masking significant patterns of variation in support provision. Thus, we have recently sought to identify unique patterns of support as these may relate to academic and personal adaptation. The results of our support pattern analyses are also presented in this section.

**Regression Analyses.** Two relevant papers based on analyses of the Time 1 data were included in our 1999 report. We refer briefly to these papers because their findings have been largely replicated in current prospective analyses. Both papers have been accepted for inclusion in the ERIC Clearinghouse database and the Resources in Education abstract journal. In Levitt et al. (1998), we reported that the associations of ethnicity and school economic level to adjustment were mediated by family stress, perceived economic hardship, and parental and peer support. In Levitt et al. (1999), we assessed the relation of parent and peer support and school attitudes to several indicators of achievement. Both parent and peer support and attitudes were related to achievement.
Several analyses including Time 2 data have been completed. As indicated in the preceding section, regression analyses were used to trace the paths between personal demographic characteristics, risk, total support at Time 2, and adjustment at Time 2 (Levitt et al., 2001). The results were consistent with a mediational model. Ethnic minority status, masculine gender, and ecological risk were associated with diminished support, which, in turn, predicted poorer adjustment over time. Risk was a partial mediator of the association of ethnicity and support; the association of ethnicity with support was less pronounced when risk was included as a predictor. The link between ethnicity and adjustment over time was fully mediated by risk and support.

Thus, it seems the extent to which children experienced adjustment problems in early adolescence depended on their exposure to ecological risk factors and the availability of support. These findings are similar to those in the Levitt et al. (1998) Time 1 paper, and they suggest that both ecological risk and social support are proximal predictors of personal adjustment over the transition to adolescence. Comparable findings have been obtained in analyses of achievement at Time 2, controlling for achievement at Time 1 (Table 1). For these analyses, we employed an aggregate (z-score) index of achievement that included classroom grades, Stanford Achievement Test Scores, and teacher ratings of school adaptation and academic competence. The first stage of analysis included Time 1 achievement, gender, grade, and ethnicity; the second stage included risk; and the third stage included the total support measure and an aggregate index of parent and peer school attitudes.

<table>
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<tr>
<th>Stages/Predictors</th>
<th>Time 2 Achievement</th>
<th>( b )</th>
<th>( r^2 )</th>
<th>( F )</th>
<th>( R^2 )</th>
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<tr>
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</table>

***p < .0001. **p < .001. *p < .01. \( p < .01 \).

In keeping with the general literature on achievement, girls showed some improvement over time, but achievement generally declined at higher grade levels. The significant link between African-American ethnicity and achievement decline disappeared, however, when risk was included as a predictor, suggesting that risk is a mediator of achievement for this group. Furthermore, the
significant association of risk to achievement decline also disappeared when the support and attitude variables were added. Thus, the extent to which risk predicts lower achievement appears to depend on the availability of support and the attitudes of support providers. As in the Time 1 analyses, both support and support provider attitudes contributed to achievement outcomes.

In sum, the current results are largely consistent with our initial hypotheses. Children subjected to family, economic, and neighborhood stressors are at risk for poorer adjustment and lower achievement in the transition to adolescence. However, this risk is mediated by the availability of social support and, with respect to achievement, by the attitudes toward school of parents and peers. This research extends our previously reported findings regarding links between social support, self concept, and achievement (Levitt et al., 1994).

Pattern Analyses. We have also endeavored to define meaningful patterns of variation in the social networks of children and adolescents by undertaking cluster analyses of individual scores on the close family, extended family, and friend support variables. We have identified three distinct social support patterns: (1) a close family and friend support cluster, (2) a low support cluster, and (3) a close and extended family support cluster. Figure 3 shows the clusters generated for the sample as a whole, but the same patterns emerged for both cohorts of children at each time period. Note that the normative increase in friend support at adolescence can be seen for all three patterns.

At both time periods, but especially at Time 2, participants in the low support cluster were higher in risk factors (M = 2.41, SD = 1.60) than those in either the family cluster (M = 1.74, SD = 1.56) or the family-friend cluster (M = 1.76, SD = 1.52), F (2, 692) = 14.98, p < .0001. Multivariate analyses of variance were conducted to determine whether the adaptation measures differed by support pattern (Table 2). In general, students in either the close family-friend or the close-extended family cluster were better adjusted and higher in achievement, than those in the low support cluster.

Based on these analyses, we draw two initial conclusions. First, the identified patterns appear to represent a meaningful differentiation of social support networks in late childhood and early adolescence. Based on an alternative model and methodology, in an entirely different cultural setting (Japan), Takahashi has also identified family-focused, friend-focused, and low support types of social networks (Takahashi & Mahima, 1994; Takahashi & Tokoro, 2001). Second, in our research, and in that of Takahashi, the availability of support is more important to adjustment than the specific sources from which the support is derived. In general, multiple sources of support appear to be beneficial.
These findings have both theoretical and practical importance. Theoretically, they emphasize the diversity of child-adolescent support systems, affirming our view that we must move beyond a narrow focus on parents as arbiters of school adaptation. Practically, they suggest that we are closer to being able to identify social network deficiencies that may be ameliorated by school-based intervention. A conference paper based on these findings was presented (Levitt, 2001) as part of a symposium that also included related research by Takahashi and others. A manuscript has been accepted for publication.

<table>
<thead>
<tr>
<th>Table 2. Differences in Adjustment at Times 1 and 2 by Support Pattern</th>
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<td>Loneliness</td>
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<td>CBCL Internalizing</td>
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<td>Time 2 Adjustment</td>
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<td>CBCL External.</td>
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<td>Grade Pt. Average</td>
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</table>

*Indicates means that were significantly different in TukeyHSD post hoc comparisons at p < .05.

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

Corollary Issues

The effects of immigrant status on social support and adaptation. Our initial sample included 172 immigrant children, primarily from Afro-Caribbean and Latin American countries. Of these, 153 were reinterviewed at Time 2. We have presented three papers on this subsample with our student collaborator, G. Bustos (Bustos & Levitt, 2000a,b; Bustos & Levitt, 2001). A master’s thesis and doctoral dissertation have been completed by G. Bustos (2000). At both time periods, immigrant children were lonelier and more depressed, and they received less support, especially from siblings and grandparents, compared to nonimmigrants. Support was lower for both Afro-Caribbean and Hispanic immigrants. Furthermore, low support, immigration problems, and acculturation conflict were associated with poorer emotional adjustment in the immigrant group.

High risk immigrants also showed a decline in grades and an increase in school problems over time, relative to low risk immigrants and nonimmigrants. Although prior research regarding academic adjustment has yielded mixed results, our findings suggest that taking risk status into account may clarify this issue. In general, our findings indicate that more systematic research on the school adaptation of immigrant children and adolescents is warranted.

Parent versus peer support effects. Two of our doctoral students have focused their research specifically on issues of parent versus peer support in relation to emotional and academic adjustment. As a doctoral dissertation, N. Crooks is addressing the extent to which support from parents or peers may serve a compensatory function. Other researchers have studied compensatory effects of peer support, but Crooks is interested in whether support and monitoring from parents
who discourage peer association may buffer high risk, low income students with respect to academic and personal adjustment problems. A preliminary paper was presented on parent monitoring and support in relation to cognitive, social, and general self-concepts at Time 2 (Crooks, Levitt, & Rheam, 2000). Both monitoring and support contributed to each self-concept domain.

Another doctoral student, P. Telan, has conducted analyses of parental versus peer support and family life stress as predictors of childhood depression and social withdrawal at school. Two papers have been presented (Telan et al., 1999; Telan & Levitt, 2000a) and a master’s thesis has been completed (Telan, 2000). High family stress and low parental support were linked to both depression and social withdrawal. Low peer support was correlated with withdrawal, but not independently of parental support. Of particular interest was an association of school-related stress with depression and withdrawal that was buffered by parent, but not peer, support. Overall, the Crooks and Telan results affirm the continued importance of parental support as children embark on the transition to adolescence.

**Parental and peer support and attitudes as predictors of aggressive and delinquent behaviors.** Doctoral student J. Hodgetts-Barber completed a master’s thesis on this issue. Two papers have been presented (Hodgetts-Barber & Levitt, 2000; Hodgetts-Barber, 2001). Positive attitudes toward aggression in children nominated as friends by the participants predicted increases in teacher-rated aggressive and delinquent behavior at Time 2. Low parent support combined with high friend support at Time 1 also predicted increases in delinquent behavior at Time 2. Parent support was lower for high risk children. Thus, in line with our original hypotheses, family stress and other ecological risk factors that diminish the support available from parents may lead children to turn to peers for support. This dynamic may account, to some extent, for the banding together of aggressive, delinquency-prone adolescents observed by other researchers (Cairns & Cairns, 1994; Hartup & Stevens, 1997).

**Teacher support as a facilitator of school adaptation.** We included a scale of teacher support at Time 2 to provide data for the doctoral dissertation of P. Telan (2001). Two papers have been presented (Telan & Levitt, 2000b; Telan & Crooks, 2001). Teacher support and teacher-child relations have been investigated primarily in younger children, but our findings suggest that teachers may continue to play a supportive role in adolescence. Teacher support was associated with both emotional and academic adjustment. Adolescents with more teacher support were less lonely and depressed and they had more positive self-concepts, better school attitudes, and fewer problems in school. Those who were generally happy with their relationship with an important teacher also had higher grades and were rated higher on a school adaptation scale. Overall satisfaction with the teacher and the provision by the teacher of rewards and compliments for student performance were the most salient predictors of adjustment. These results were largely consistent across ethnic groups.

**Grandparents as support agents in adolescence.** Some research has shown that grandparent support is beneficial in infancy and early childhood, but little is known about the significance of grandparents for older children and adolescents. We have conducted analyses with the Time 2 data bearing on this topic, in conjunction with an undergraduate honor’s thesis undertaken by E. Barlos. Findings were presented at a recent conference (Barlos, 2001). Over half of the participants received support from grandparents, mostly in the areas of reassurance, sick care, and
self-affirmation. However, many children also saw grandparents as confidants and providers of companionship and homework assistance. Adolescents with higher levels of grandparent support had more positive self-concepts, better grades, and higher Stanford test scores, and they were less lonely, compared to those with less support from grandparents. Beneficial effects of grandparent support were consistent across ethnic groups. In general, grandparent effects were surprisingly robust in this study, indicating a need for more research in this area.

**Summary and Conclusions**

The findings from this project are generally consistent with the stated aims of the study. The following conclusions can be drawn from the data:

(1) Family life stress, economic hardship, and poor neighborhood conditions are risk factors that diminish the social support available to children and adolescents. The availability of support and the school attitudes of support providers impact on social and academic adaptation across the transition to middle school.

(2) Although there is a normative trend toward increased support from peers in adolescence, there are varied patterns of support provision. Some students receive most of their support from close and extended family members, others draw support principally from close family members and friends. Parents are not always available for support, but grandparents, teachers, and others may be support providers. Thus, a priori conclusions about sources of support for a child should be avoided.

(3) Regardless of the specific sources of support, low levels of support are associated with less favorable personal and academic outcomes.

Based on these findings, we believe that the following recommendations can be made with regard to educational policy:

(1) The current focus on parent involvement should be broadened to include other potential sources of support. As a simple example, schools might institute “family night” rather than “parent night” and welcome any family member with an interest in the student’s educational progress.

(2) The efficacy of social network assessment as a diagnostic tool for counselors should be investigated. Social network assessment may provide a basis (a) for identifying nonparental sources of support when parent support is compromised and (b) for targeting school-based intervention resources toward students whose support networks are seriously deficient.

(3) Broad-based intervention programs designed to improve student performance should include or enhance programs to bolster social support resources. Programs involving social intervention, mentoring, peer counseling, and the like should be considered essential to student progress and evaluated along with curricular programs to identify those that are most promising.
Addendum

A near-final report on this project was submitted previously, pending approval of a request for a no-cost extension. The present report has been updated to include recent accomplishments based on the project. The principal advances are: (1) all of the six conference papers listed as submitted in the last report were accepted for presentation at the Society for Research in Child Development meeting in Minneapolis, (2) a manuscript based on our support pattern analyses has been accepted for publication, and (3) a master’s thesis (G. Bustos) and two doctoral dissertations (G. Bustos, P. Telan) based on the project have been completed. A manuscript detailing our findings with respect to the interrelation of ecological risk, social support, and school adaptation is in progress.

The research conducted in conjunction with this project has led to our current focus on the school adaptation of newly immigrant children. A no-cost extension of the current funding has allowed us to continue analysis and dissemination of research findings and afforded the means to translate our principal social network and adaptation measures into Haitian Creole and Spanish languages. Translations and back-translations were conducted by groups of student translators under the close direction of Gastón Bustos, who has considerable expertise in translation of measures related to the project. The decision to use closely supervised student translators followed some brief experience with paid outside translators who tend to be technically proficient, but less able to capture the precise tone and meaning of the instructions and indices employed in our research. The translations will be useful to us in our continued work and to other researchers involved in comparable work.
Recent Papers Based on Project


Other References


