

The Role of Parent and Peer Support in Predicting Adolescent Depression: A Longitudinal Community Study

Jami F. Young, Kathy Berenson, Patricia Cohen, and
Jesenia Garcia

Columbia University

This study examines whether perceived parent support, peer support, and the interaction between them predict depression symptoms and depression diagnosis 2 years later in a community sample of 389 adolescents. Controlling for Time 1 depression, parent support and anticipated peer support were not independently related to Time 2 depression in either linear or logistic regression analyses. However, there was a significant interaction between the two support variables, suggesting that parent support moderates the relationship between anticipated peer support and depression symptoms and diagnosis. Anticipated peer support is protective among adolescents with high parental support, but may act as a risk factor for adolescents with low parental support. Regarding developmental differences, low anticipated peer support at Time 1 was a stronger predictor of Time 2 depression symptoms among older, compared with younger, adolescents. These findings highlight the importance of parent and peer support in predicting future depression among community adolescents.

In the past two decades, there has been increasing recognition of the problem of adolescent depression. This has led to an effort to understand potential risk factors and sequelae of depression in this age group. One area that has received attention is the role that perceived interpersonal

support plays in contributing to or resulting from depressive symptoms. Several community and clinical studies have examined whether depressive symptoms or depressive disorders are associated with concurrent interpersonal support. These studies have almost consistently found that family support and peer support are inversely related to current depression (Armsden, McCauley, Greenberg, Burke, & Mitchell, 1990; Avison & McAlpine, 1992; Barrera & Garrison-Jones, 1992; Cole & McPherson, 1993; Feldman, Rubenstein, & Rubin, 1988; Laible, Carlo, & Raffaelli, 2000; Lewinsohn, Roberts, Seeley, Rohde, Gotlib, & Hops, 1994; Licitra-Kleckler & Waas, 1993; Puig-Antich, Kaufman, Ryan, Williamson, Dahl, & Lukens et al., 1993; Reinherz, Stewart-Berghauer, Pakiz, Frost, Moeykens, & Holmes, 1989; Rubin, Rubenstein, Stechler, Heeren, Halton, & Housman et al., 1992; Slavin & Rainer, 1990).

More interesting, however, is the question of what comes first, the interpersonal problems or the depressive symptoms. Several longitudinal community studies have found that low family support predicts later depression (e.g., Garrison, Jackson, Marsteller, McKeown, & Addy, 1990; Herman-Stahl & Petersen, 1999). In a more direct analysis of what comes first, Sheeber, Hops, Albert, Davis, and Andrews (1997) conducted a 1-year longitudinal study of depression and family variables in adolescents, aged 14–20. Family support at Time 1 significantly predicted Time 2 depression, with less support associated with more depressive symptoms. Time 1 depression did not significantly predict Time 2 family support. Rather than depression acting as a risk factor for low family support, these findings suggest that low family support is a risk factor for increasing depressive symptoms over time.

While there is some evidence that low parent and, to a lesser extent, peer support are associated with later depression, there is less information about whether this relationship differs as a function of gender or age. Because females are more relationship oriented than males (e.g., Gilligan, 1982), they may be more affected by parent and peer support than males. Research partially supports this contention. Several studies have found that the inverse relationship between supportive relationships and depressive symptoms is stronger among females than males (Avison & McAlpine, 1992; Licitra-Kleckler & Waas, 1993; Rubin et al., 1992; Slavin & Rainer, 1990; Windle, 1992). The same is true in a study that examined emotional problems more broadly (Helsen, Vollebergh, & Meeus, 2000). However, other studies (e.g., Sheeber et al., 1997) have found that the relationship between family and/or peer support and depression was similar across gender.

No studies that we know of have examined specifically whether the impact of parent support and peer support on adolescent depression

varies as a function of age. Based on the developmental literature (e.g., Erikson, 1968; Scholte, van Lieshout, & van Aken, 2001), one could postulate that low parent support might be more problematic for younger adolescents than older adolescents who have begun to individuate. One could also argue that low peer support would be increasingly related to depressive symptoms as adolescents get older, as peers become increasingly important in later adolescence (Erikson, 1968; Furman & Buhrmester, 1992; Helsen et al., 2000). Research examining general emotional problems and adjustment has found that the effect of parental support decreases as adolescents get older, but the effect of peer support does not increase as predicted (Helsen et al., 2000). Further research in this area is needed.

Very few studies have examined parent and peer support simultaneously to determine if they are differentially associated with depression or other emotional problems, and the studies that were conducted have been primarily cross-sectional (e.g., Barrera & Garrison-Jones, 1992; Helsen et al., 2000; Laible et al., 2000; Sheeber et al., 1997). While this limits the conclusions, the findings from these studies suggest that, although parent and peer support serve similar functions, there are differences between the two types of support. Laible et al. found that adolescent adjustment was more associated with peer support than with parent support in a small sample of adolescents with a mean age of 16. On the other hand, Helsen et al., in their study of adolescents aged 12–24 years, found that overall parental support was more strongly related to emotional problems than peer support, and that the association between peer support and depression depended somewhat on the level of parent support. Among adolescents with high parent support, peer support was associated with slightly lower levels of depression, whereas among adolescents with low parent support, peer support was associated with higher levels of depression. More research, particularly prospective studies, examining the relationship between these two types of support and depression will help elucidate their independent and combined effects.

To summarize, the literature to date suggests that adolescent depression is linked with individual differences in interpersonal support, but the research examining this link has had significant limitations. Most notably, the majority of studies are cross-sectional, rather than prospective, preventing an examination of the direction of the relationship between interpersonal relationships and depression (e.g., Armsden et al., 1990; Barrera & Garrison-Jones, 1992; Feldman et al., 1988). In addition, few studies assess family support and peer support simultaneously to determine whether one type of support is more important than the other and whether the importance differs as a function of age or gender (e.g., Barrera

& Garrison-Jones, 1992; Helsen et al., 2000; Laible et al., 2000; Sheeber et al., 1997). The current study attempts to address these limitations by conducting a prospective, community-based longitudinal study of adolescents that examined parent support, anticipated peer support, and depressive symptoms at two time points, 2 years apart.

We were interested in addressing the following questions: (1) Do parent support, anticipated support from peers, and the interaction between them predict depressive symptoms and depressive disorders 2 years later? (2) Do these associations differ as a function of age or gender? Additional analyses aimed to clarify the direction of support–depression relationships by examining the potential role of depression in reducing perceived adolescent support.

METHOD

Participants

The participants were 389 adolescents (47.6% male, 52.4% female) from a larger longitudinal community study originally cluster sampled from 100 randomly selected neighborhoods in two counties in upstate New York when they were less than 10 years of age (Kogan, Smith, & Jenkins, 1977). The sample was next assessed in 1983 when the adolescent sub-sample was between ages 11 and 16 ($M = 13.03$, $SD = 1.23$) and then again in 1985–1986 when the adolescents were 13–18 years old ($M = 15.39$, $SD = 1.36$). We refer to these assessments as Time 1 and Time 2.

At Time 1, 418 adolescents between the ages of 11 and 16 completed the evaluation. Twenty-nine of the 418 adolescents did not complete the Time 2 assessment so were not included in these analyses. We compared the 389 adolescents with data at both time points to the 29 adolescents with only Time 1 data on depression symptoms and diagnosis, parent support, anticipated peer support, and demographic variables. There were two significant differences. The 29 adolescents who did not complete the Time 2 assessment had significantly lower mean depression scores ($M = 7.6$, $SD = 5.2$) than the remaining 389 adolescents ($M = 11.8$, $SD = 8.4$), $t(416) = 2.68$, $p < .01$ and were significantly more likely to come from families of lower socioeconomic status, $p < .01$. The two groups did not differ on the other variables.

Interviews were conducted in the family home and the adolescents completed both interview and questionnaire measures separately from their parents. Parents and adolescents provided written informed consent and assent. Lay interviewers, who received extensive training and supervision, conducted the assessments of psychiatric symptoms and peer

relationships. Adolescents completed a self-report questionnaire about parental support.

Measures

Adolescent reports of parent support. At both time points, adolescents reported on perceived support from their primary maternal and paternal figures (whether or not these parents lived in the same household). Adolescents responded to 19 questionnaire items measuring communication (e.g., "He/she really wants me to tell him/her how I feel about things"), affection (e.g., "He/she frequently shows his/her love for me"), supportiveness ("He/she helps me with things I don't understand"), and availability ("He/she is always available when I need him/her"). Items came from the Child Report of Parent Behavior (CRPB; Schaefer, 1965) and other support items developed by Avgar, Bronfenbrenner, and Henderson (1977), which were combined to form a single scale on the basis of their high intercorrelations. Because preliminary analyses suggested that maternal and paternal support were acting similarly in their association with adolescent depression symptoms, they were standardized and then averaged to form a single parental support scale, with a coefficient α of .89. When the adolescent reported that they had only one parent figure (e.g., because of parental death or estrangement), their parent support score represents perceived support from that parent. To account for differences associated with family status, we included a dummy variable (1 = one parent, 0 = two parents) as a covariate in the analyses.

Adolescent reports of anticipated support from peers. Anticipated support from peers was assessed at both time points through six interview questions that were answered "yes" or "no." Adolescents responded to four questions about the availability of support from friends. These items were: "Do you have one or more friends who. . . (1) you can talk to about almost anything, (2) will stick up for you no matter what, (3) would turn to you for advice or help, (4) really understands you?" Adolescents were also asked: "Have you had a friend for at least 1 year?" and "Do you make friends easily?" Because each of these items had a fairly low frequency of "no" responses, they were combined to form one dichotomous variable. An adolescent was coded as having low anticipated support from peers if s/he answered no to any of these six items. The remaining adolescents were coded as having high anticipated support from peers. At Time 1, 131

of the 389 (31.1%) reported low anticipated peer support. At Time 2, 84 (21.6%) reported low peer support.¹

Depression. At both time points, adolescents were interviewed with an unpublished modified version of the Diagnostic Interview Schedule for Children (DISC and DISC-P; Costello, Edelbrock, & Costello, 1985) to assess psychiatric symptoms. Depression was assessed using 39 items that covered the diagnostic criteria for major depression in the DSM-III-R (American Psychiatric Association, 1987). Some of these items were scored on a three-point scale (0 = no, 1 = somewhat or sometimes, 2 = yes), and the remaining items were scored yes/no. Adolescents were asked all 39 items. We constructed continuous measures of depression symptoms at each time point by summing the 39 items, yielding scales with a possible range of 0–66. The scale assessed current depressive symptoms at the Time 1 assessment and depressive symptoms within the past year at the Time 2 assessment. The depression scale had a coefficient α of .82 at Time 1, and a coefficient α of .92 at Time 2. At Time 1, the range of depression scores was 0–47 ($M = 11.8$, $SD = 8.4$). At Time 2, scores ranged from 0 to 53, ($M = 9.0$, $SD = 10.4$). For the logistic regression analyses, adolescents were coded as having a major depressive episode (MDD) if they reported sufficient symptoms to meet DSM-III-R diagnostic criteria. Eight adolescents (2%) met criteria for MDD at Time 1 and 18 (5%) at Time 2.

Demographics. Because of the consistent findings that gender and age are related to depression and our interest in their interactions with support, we included these two demographic variables in the regression analyses.

¹ The following is a list of items used to assess anticipated support from peers and the percentage of adolescents who responded “no” to each item at Time 1:

| | |
|--|-------|
| Do you have a friend you can talk to about almost anything? | 4.4% |
| Do you have a friend who will stick up for you no matter what? | 6.5% |
| Do you have a friend who would turn to you for advice or help? | 9.0% |
| Do you have a friend who really understands you? | 8.0% |
| Have you had a friend for at least 1 year? | 1.5% |
| Do you make friends easily? | 13.6% |
| At least 1 “no” response | 31.1% |
| At least 2 “no” responses | 9.3% |
| At least 3 “no” responses | 2.1% |

Analyses

We used linear regression analyses to examine whether Time 1 parent support and anticipated support from peers predict depressive symptoms at Time 2, controlling for Time 1 depression. In addition, the interaction between parent support and anticipated peer support and the interactions of the support variables with gender and age were included in the analyses. The continuous independent variable, parent support, was standardized for ease of interpretation. Thus, the regression coefficient represents the increase in depression symptoms related to a one standard deviation change in parent support. Dichotomous variables (gender and anticipated support from peers) and age were centered at each time point. We conducted logistic regression analyses to examine the relationship between the Time 1 support variables and major depression diagnosis at Time 2. Because such analyses have limited statistical power, we only included main effects (gender, age, parent support, anticipated peer support) and the interaction of parent and peer support in the final model.

To better answer the question of what comes first, the lack of support or depression, we conducted supplemental analyses predicting Time 2 support variables from Time 1 depression symptoms. More specifically, linear regression analyses examined whether Time 1 depression symptoms predict Time 2 parent support and logistic regression analyses examined whether Time 1 symptoms predict anticipated peer support at Time 2.

RESULTS

Preliminary Analyses

The intercorrelations of the support variables and depression symptoms are presented in Table 1. Parent support and anticipated peer support were significantly correlated at both time points. Time 1 parent and anticipated peer support and Time 2 anticipated peer support were significantly correlated with concurrent depression. However, neither of the Time 1 support variables was significantly correlated with Time 2 depression. We conducted *t*-tests to examine possible gender differences in depression symptoms at the two time points. There was no significant difference in depression symptoms at Time 1 (females: $M = 12.4$, $SD = 9.3$; males: $M = 11.1$, $SD = 7.2$), $t(378) = 1.47$. But at Time 2, females had significantly higher depression scores ($M = 10.8$, $SD = 11.8$) than males ($M = 7.0$, $SD = 8.1$), $t(360) = 3.66$, $p < .001$. Regarding the support variables, there were no significant gender differences in parent support at either time point, or in anticipated peer support at Time 2. However, males

TABLE 1
Intercorrelations between Depression Symptoms and Predictor Variables

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------------------------------|------|------|------|------|------|------|------|---|
| 1. Sex | — | | | | | | | |
| 2. Age | -.09 | — | | | | | | |
| 3. T1 parent support | -.02 | -.14 | — | | | | | |
| 4. T1 anticipated peer support | -.25 | .04 | .15 | — | | | | |
| 5. T1 depression symptoms | -.07 | .06 | -.28 | -.16 | — | | | |
| 6. T2 parent support | -.05 | -.03 | .59 | .14 | -.23 | — | | |
| 7. T2 anticipated peer support | -.08 | .01 | .10 | .24 | -.16 | .18 | — | |
| 8. T2 depression symptoms | -.18 | .09 | -.07 | .00 | .36 | -.08 | -.15 | — |

Note. Correlation coefficients equal to or greater than .10 are significant at $p < .05$.

were significantly more likely to be classified as having low anticipated peer support than females at Time 1, $\chi^2(1, N = 389) = 24.25, p < .001$.

Predicting Time 2 Depression from Time 1 Support

Linear regression analyses were conducted to determine whether Time 1 parent support and anticipated peer support variables predict depression symptoms 2 years later, controlling for Time 1 depression. As seen in Table 2, the entire model accounted for 20% of the variance in depression scores.

Time 1 depression symptoms significantly predicted Time 2 symptoms, $t = 7.79, p < .001$, and made the largest contribution to Time 2 depression scores. Gender, $t = -2.51, p < .05$, was a significant predictor of Time 2 depression scores, such that being female was associated with higher depression scores. Parent support and peer support were not independently related to Time 2 depression symptoms, controlling for Time 1 symptoms. However, there was a significant interaction between parent support and peer support, $t = -3.35, p < .01$. In addition, the effects of anticipated peer support differed with the age of the participant, $t = -2.55, p < .05$.

To visualize the interaction between Time 1 parent support and anticipated support from peers, we established a high (1 SD above the mean) and low (1 SD below the mean) value of parent support and then plotted the relationship between anticipated peer support and depression symptoms for these different values of parent support (see Figure 1). We then conducted an analysis of the simple slopes of the relationship between anticipated peer support and depressive symptoms at Time 2 for adolescents with high or low parent support. Both of the slopes significantly

TABLE 2
Multivariate Linear Regression Model Predicting Time 2 Depression Symptoms from Time 1 Variables

| | <i>B</i> | <i>SE B</i> | β | <i>R</i> ² Cumulative Per Step |
|------------------------------|----------|-------------|---------|---|
| Gender | -2.53 | 1.01 | -.12* | .032 |
| Age | .47 | .40 | .06 | .039 |
| Time 1 depression (centered) | .48 | .06 | .39*** | .158 |
| Parent support | .41 | .56 | .04 | .159 |
| Anticipated peer support | .55 | 1.11 | .03 | .159 |
| Parent × Peer support | -3.91 | 1.17 | -.17** | .177 |
| Age × Peer support | -2.18 | .86 | -.12* | .188 |
| Age × Parent support | .16 | .44 | .02 | .188 |
| Gender × Peer support | -3.97 | 2.22 | -.09 | .196 |
| Gender × Parent support | -.93 | 1.12 | -.04 | .198 |

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

differed from zero. For adolescents with high parent support, high anticipated peer support at Time 1 was associated with a decrease of 3.36 points on the Time 2 depression scale, *t* = -2.08, *p* < .05. For adolescents with

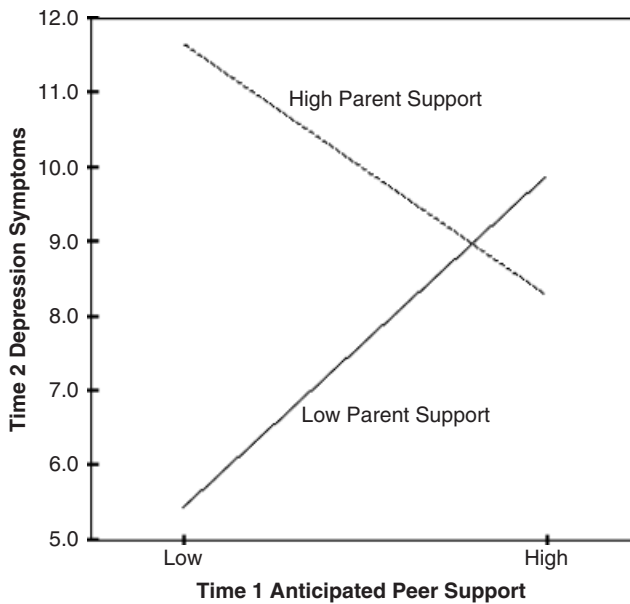


FIGURE 1 Time 2 depression symptoms as a function of Time 1 parent support and anticipated peer support, controlling for symptoms at Time 1.

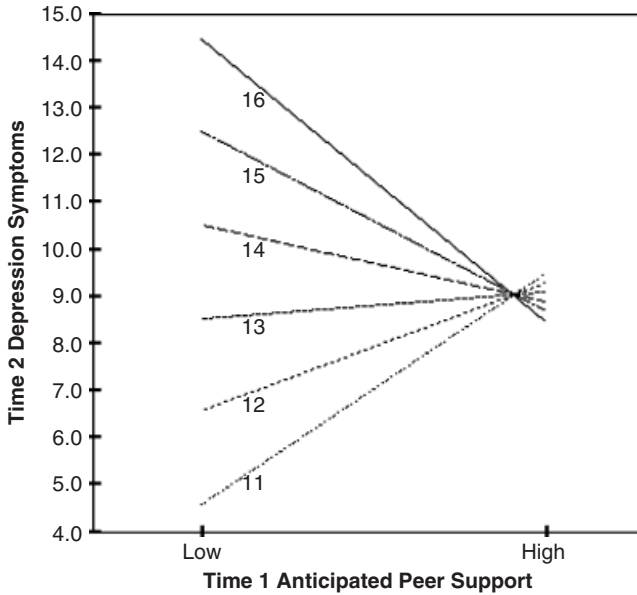


FIGURE 2 Time 2 depression symptoms as a function of age and Time 1 anticipated peer support, controlling for symptoms at Time 1.

low parent support at Time 1, high anticipated peer support at Time 1 was associated with an increase of 4.47 points on the depression scale, $t = 2.76$, $p < .01$.

As indicated by the significant interaction term, the effect of anticipated support from peers also varied with age. To graph this interaction, we plotted the relationship between anticipated peer support and depression symptoms for adolescents at different ages, 11–16 years old at Time 1 (see Figure 2). An analysis of the simple slopes of the relationship between anticipated peer support and Time 2 depressive symptoms for the different ages indicated that two of the trajectories significantly differed from zero, age 11, and age 16 (11 year olds $B = 4.91$, $t = 2.37$, $p < .05$; 16-year-olds $B = -5.98$, $t = -2.16$, $p < .05$). Low anticipated peer support at Time 1 was associated with higher Time 2 depression scores in older adolescents than younger adolescents.

Predicting Time 2 Major Depression Diagnosis from Time 1 Support

We supplemented these linear regression findings with a logistic regression analysis examining the effect of Time 1 support variables on

TABLE 3
Multivariate Logistic Regression Model Predicting Time 2 Major Depression Diagnosis from Time 1 Variables

| | <i>B</i> | <i>SE B</i> | <i>AOR</i> | <i>95% CI</i> |
|-----------------------------|----------|-------------|------------|---------------|
| Gender | -1.66 | .68 | .19 | .05-.72* |
| Age | -.11 | .20 | .89 | .60-1.33 |
| Time 1 depression diagnosis | 1.64 | .99 | 5.13 | .74-35.48 |
| Parent support | -.41 | .28 | .67 | .38-1.16 |
| Anticipated peer support | -.58 | .58 | .56 | .18-1.73 |
| Parent × Peer support | -1.24 | .58 | .29 | .09-.90* |

* $p < .05$.

depression diagnosis 2 years later, controlling for Time 1 depression diagnosis. The findings are listed in Table 3. Controlling for gender, and age, as well as earlier diagnosis, the interaction of Time 1 parent support and anticipated peer support emerged as a significant predictor of Time 2 depression diagnosis ($B = -1.24$, odds ratio = .29, 95% confidence interval = .09-.90, $p < .05$). The significant interaction indicates that the effect of anticipated peer support on later depression diagnosis was dependent upon parent support. Among adolescents with high parent support, those who had low anticipated peer support were at 6.19 times greater risk for having a depression diagnosis than those who anticipated having high peer support. By contrast, anticipated peer support had less of an impact on subsequent MDD in adolescents with low parent support, with low anticipated support from peers increasing the risk of depression diagnosis by a factor of 1.93.

The effect of gender was also significant ($B = -1.66$, odds ratio = .19, 95% confidence interval = .05-.72, $p < .05$) indicating that net of Time 1 support, diagnosis, and age, girls were 5.26 times more likely than boys to have a depression diagnosis at Time 2. No other effects in the model were statistically significant.

Predicting Time 2 Support From Time 1 Depression

To help answer the question of what comes first, low support or depression symptoms, we conducted supplemental analyses to examine whether Time 1 depression symptoms predict Time 2 parent support and/or Time 2 anticipated support from peers. To make these analyses as comparable as possible to those conducted for the prediction of depression, we included

age, gender, Time 1 depression score, and Time 1 support variables in all analyses. For the prediction of Time 2 parent support, we also included the interactions of age and gender with anticipated peer support, and for the prediction of Time 2 anticipated support from peers, we included the interactions of age and gender with parent support.

Time 1 depression did not emerge as a significant predictor of Time 2 parent support or anticipated peer support. In a linear regression analysis, the only significant predictor of Time 2 parent support was Time 1 parent support, $B = -.60$, $t = 12.95$, $p < .001$. In a logistic regression analysis, the only significant predictor of Time 2 anticipated peer support was Time 1 anticipated peer support ($B = 1.09$, odds ratio = 2.98, 95% confidence interval = 1.73–5.11, $p < .001$). Therefore, although there are significant univariate associations between Time 1 depression with Time 2 parent and peer support (as shown in Table 1), these associations are accounted for by other variables in our multivariate models. Specifically, the associations are no longer significant when Time 1 support is included in the models, suggesting that Time 1 depression is associated with Time 1 support, which in turn predicts Time 2 support.

DISCUSSION

The aim of the study was to examine the importance of parent and peer support in predicting later depression and to determine whether these relationships differ as a function of age or gender. Contrary to our hypothesis and prior research (e.g., Lewinsohn et al., 1994; Garrison et al., 1990; Herman-Stahl & Petersen, 1999; Sheeber et al., 1997), neither parent support nor anticipated peer support at Time 1 directly predicted depression scores or depression diagnosis at Time 2. One fundamental difference between the current study and the earlier research is that the current study followed participants over a 2-year period, rather than a 1-year period. Perhaps the longitudinal effects of support on depression decrease after 1 year. Consistent with this interpretation, Garrison et al. followed subjects over both a 1- and 2-year period and found that, unlike at the 1-year follow-up, initial levels of family support did not significantly predict depression scores at the 2-year follow-up. More studies with longer follow-up periods are needed to clarify this issue.

Despite the lack of main effects for parent support and anticipated support from peers, there was a significant interaction between these two variables in the prediction of future depressive symptoms and depression diagnosis, which indicates that parent and anticipated peer support, at least in combination, continue to impact depression 2 years later.

Specifically, the impact of peer support on subsequent depression symptoms was moderated by the level of parent support, as was found in earlier cross-sectional studies (Helsen et al., 2000, Scholte et al., 2001). For adolescents with high parent support, high anticipated peer support was associated with lower levels of depression at Time 2. However, for adolescents with low support from parents, high anticipated support from peers was associated with more depressive symptoms 2 years later. This suggests that when relationships with parents are nonsupportive, adolescents may turn to peers for support but these relationships do not buffer them from mental health difficulties. This may be because these adolescents are affiliating with deviant peers, as has been suggested in the literature (e.g., Kaplan, 1986; Scholte et al., 2001).

Low anticipated peer support combined with high parent support was also problematic in our sample. That is, among adolescents with high parent support, low anticipated peer support at Time 1 predicted higher depression scores and more MDD diagnoses at Time 2, controlling for Time 1 depression. This supports Laible et al.'s (2000) finding that adolescents classified as having high parent and low peer support had significant adjustment difficulties. These longitudinal findings, taken in conjunction with those of previous research (e.g., Helsen et al., 2000; Laible et al., 2000) suggest that parent support and peer support do interact and should be considered together when considering the potential risk for depression.

The interaction between anticipated peer support and age was also a significant predictor of depression symptoms at Time 2, suggesting that age moderates the impact of peer support on depression. Low anticipated support from peers at Time 1 was associated with a greater number of depression symptoms at Time 2 in older adolescents than younger adolescents. This finding is in line with our hypothesis and suggests that, as adolescents get older, anticipated peer support is increasingly related to adolescents' well-being, particularly for the exacerbation of their depressive symptoms. Studies have found that levels of peer support increase in early adolescence and peak around age 16 (Furman & Buhrmester, 1992; Helsen et al., 2000). Not surprisingly, this is the age at which the relationship between peer support and depression reached significance. Our findings suggest that adolescents who do not receive support from peers during this developmental phase may be at increased risk for depression.

Contrary to our hypothesis and the cross-sectional findings of Helsen et al. (2000), we did not find evidence of an interaction between age and parental support on depression symptoms. This may be because of the somewhat restricted age range studied. As compared to Helsen et al. (2000) who studied adolescents from 12–24, the current sample included

adolescents who were 11–16 years old at Time 1. The majority of adolescents had not reached the age range (14–18) where decreases in support from parents are likely to occur (Furman & Buhrmester, 1992; Helsen et al., 2000; Scholte et al., 2001). Future longitudinal studies should examine possible age by support interactions across adolescence and into early adulthood.

Although gender directly impacted depression as we anticipated, there were no significant interactions between gender and the support variables in the prediction of later depression as we had hypothesized. This differs from some of the cross-sectional results discussed earlier (Avison & McAlpine, 1992; Helsen et al., 2000; Windle, 1992), but is in line with longitudinal studies (e.g., Sheeber et al., 1997) that have found no gender differences in the relationship of support to subsequent depression. Although our findings suggest that supportive relationships with parents and peers may be as important for boys as they are for girls, the inconsistencies in the literature merit future research.

Few studies have looked at support variables and depression longitudinally (e.g., Garrison et al., 1990; Herman-Stahl & Petersen, 1999; Sheeber et al., 1997). Of these, only Sheeber et al. (1997) examined whether support predicts depression or depression predicts support. Our supplemental analyses confirm the findings by Sheeber et al. that low perceived support predicts later depression, rather than earlier depression leading to later problems with support. These supplemental analyses lend further credence to the importance of low parent and peer support as risk factors for later depression.

Limitations

This study was a large-scale longitudinal community study of adolescents over a 2-year period. Despite the strengths associated with this kind of research, there are limitations worth noting. First, the study relied exclusively on the adolescents' self-report of peer and parent support. We chose to focus on the adolescent's perceived support based on the social support literature suggesting that it is one's perception of support, rather than objective support, that is most highly correlated with well-being (e.g., Wetherington & Kessler, 1986). However, this needs to be considered when interpreting the data, particularly as relying exclusively on self-report measures may have artificially inflated the associations between support and depression. Second, the sample was predominately white, making it difficult to generalize these results to other ethnic and racial groups. Third, our measure of anticipated peer support, which was a

composite dichotomous variable, might have impacted our findings. This measure, which emphasizes judgments about one's peer network rather than actual support from peers, is not as strong as peer support measures used in other studies. As a result, the peer support findings should be interpreted cautiously. Fourth, the data from this study were collected in the 1980s, possibly limiting the generalizability of these results to current adolescents. Last, although we found significant predictors of future depression, only 20% of the variance in Time 2 depression was accounted for by the variables included in the model and the majority of the variance was accounted for by Time 1 depression. Thus, while parent support and anticipated support from peers, particularly in interaction, are important potential predictors of depression, other variables need to be considered.

Implications

Despite these limitations, there are important implications from this study. Although previous depression is the best predictor of future depression, support from parents and peers are important predictors of future depression symptoms and MDD. A number of groups have created preventive interventions targeting children with elevated depressive symptoms or children who are considered at risk for other reasons (e.g., Beardslee et al., 1993; Clarke, Hawkins, Murphy, Sheeber, Lewinsohn, & Seeley et al., 1995; Clarke, Hornbrook, Lynch, Polen, Gale, & Beardslee et al., 2001; Jaycox, Reivich, Gillham, & Seligman, 1994). While some of these interventions target relationships, interpersonal issues are not a major component of these programs. Our findings, taken in conjunction with other research in this area, suggest promise for a prevention program specifically designed to increase supportive relationships. One such possibility is a preventive intervention based on Interpersonal Psychotherapy for Depressed Adolescents (Mufson, Moreau, Weissman, & Klerman, 1993). The first author is currently conducting a pilot project of such a program, called Interpersonal Psychotherapy-Adolescent Skills Training, which attempts to address interpersonal problems in adolescents with elevated depressive symptoms. Other interventions, targeting improved parent and peer relationships, may also be beneficial and are worth exploring.

ACKNOWLEDGEMENTS

This study was supported by NIMH grant MH-36971 and MH-38916 to Dr. Patricia Cohen.

REFERENCES

- American Psychiatric Association (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed. revised.). Washington, DC: American Psychiatric Association.
- Armsden, G. C., McCauley, E., Greenberg, M. T., Burke, P. M., & Mitchell, J. R. (1990). Parent and peer attachment in early adolescent depression. *Journal of Abnormal Child Psychology*, *18*, 683–697.
- Avgar, A., Bronfenbrenner, U., & Henderson, C. R. (1977). Socialization practices of parents, teachers, and peers in Israel: Kibbut, moshav, and city. *Child Development*, *48*, 1219–1227.
- Avison, W. R., & McAlpine, D. D. (1992). Gender differences in symptoms of depression among adolescents. *Journal of Health and Social Behavior*, *33*, 77–96.
- Barrera, M. J., & Garrison-Jones, C. (1992). Family and peer social support as specific correlates of adolescent depressive symptoms. *Journal of Abnormal Child Psychology*, *20*, 1–16.
- Beardslee, W. R., Salt, P., Porterfield, K., Rothberg, P. C., Van De Velde, P., Swatling, J, et al. (1993). Comparison of preventative interventions for families with parental affective disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, *32*, 254–263.
- Beardslee, W. R., Wright, E. J., Salt, P., Drezner, K., Gladstone, T. R., & Versage, E.M, et al. (1997). Examination of children's responses to two preventive intervention strategies over time. *Journal of the American Academy of Child and Adolescent Psychiatry*, *36*, 197–204.
- Clarke, G. N., Hawkins, W., Murphy, M., Sheeber, L. B., Lewinsohn, P. M., & Seeley, J. R. (1995). Targeted prevention of unipolar depressive disorder in an at-risk sample of high school adolescents: A randomized trial of a group cognitive intervention. *Journal of the American Academy of Child and Adolescent Psychiatry*, *34*, 312–321.
- Clarke, G. N., Hornbrook, M., Lynch, F., Polen, M., Gale, J., & Beardslee, W, et al. (2001). A randomized trial of a group cognitive intervention for preventing depression in adolescent offspring of depressed parents. *Archives of General Psychiatry*, *58*, 1127–1134.
- Cole, D. A., & McPherson, A. E. (1993). Relation of family subsystems to adolescent depression: Implementing a new family assessment strategy. *Journal of Family Psychology*, *7*, 119–133.
- Costello, E. J., Edelbrock, C. S., & Costello, A. J. (1985). Validity of the NIMH Diagnostic Interview Schedule for Children: A comparison between psychiatric and pediatric referrals. *Journal of Abnormal Child Psychology*, *13*, 579–595.
- Erikson, E. H. (1968). *Identity, youth, and crisis*. New York: Norton Press.
- Feldman, S. S., Rubenstein, J. L., & Rubin, C. (1988). Depressive affect and restraint in early adolescents: Relationships with family structure, family process, and friendship support. *Journal of Early Adolescence*, *8*, 279–296.
- Furman, W., & Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development*, *63*, 103–115.
- Garrison, C. Z., Jackson, K. L., Marsteller, F., McKeown, R., & Addy, C. (1990). A longitudinal study of depressive symptomatology in young adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, *29*, 581–585.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Helsen, M., Vollebergh, W., & Meeus, W. (2000). Social support from parents and friends and emotional problems in adolescence. *Journal of Youth and Adolescence*, *29*, 319–335.
- Herman-Stahl, M., & Petersen, A. C. (1999). Depressive symptoms during adolescence: Direct and stress-buffering effects of coping, control beliefs, and family relationships. *Journal of Applied Developmental Psychology*, *20*, 45–62.
- Jaycox, L. H., Reivich, K. J., Gillham, J., & Seligman, M. E. P. (1994). Prevention of depressive symptoms in school children. *Behaviour Research and Therapy*, *32*, 801–816.

- Kaplan, H. B. (1986). *Social psychology of self-referent behavior*. New York: Plenum Press.
- Kogan, L. S., Smith, J., & Jenkins, S. (1977). Ecological validity of indicator data as predictors of survey findings. *Journal of Social Service Research, 1*, 117–132.
- Laible, D. J., Carlo, G., & Raffaelli, M. (2000). The differential relations of parent and peer attachment to adolescent adjustment. *Journal of Youth and Adolescence, 29*, 45–59.
- Lewinsohn, P. M., Roberts, R. E., Seeley, J. R., Rohde, P., Gotlib, I. H., & Hops, H. (1994). Adolescent psychopathology: II Psychosocial risk factors for depression. *Journal of Abnormal Psychology, 103*, 302–315.
- Licitra-Kleckler, D. M., & Waas, G. A. (1993). Perceived social support among high stress adolescent: The role of peers and family. *Journal of Adolescent Research, 8*, 381–402.
- Mufson, L., Moreau, D., Weissman, M. M., & Klerman, G. L. (1993). *Interpersonal psychotherapy for depressed adolescents*. New York: Guilford Press.
- Puig-Antich, J., Kaufman, J., Ryan, N. D., Williamson, D. E., Dahl, R. E., & Lukens, E., et al. (1993). The psychosocial functioning and family environment of depressed adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 32*, 244–253.
- Reinherz, H. Z., Stewart-Berghauer, G., Pakiz, B., Frost, A. B., Moeykens, B. A., & Holmes, W. M. (1989). The relationship of early risk and current mediators to depressive symptomatology in adolescence. *Journal of the American Academy of Child and Adolescent Psychiatry, 28*, 942–947.
- Rubin, C., Rubenstein, J. L., Stechler, G., Heeren, T., Halton, A., & Housman, D., et al. (1992). Depressive affect in "normal" adolescents: Relationship to life stress, family and friends. *American Journal of Orthopsychiatry, 62*, 430–441.
- Schaefer, E. S. (1965). Children's report of parent behavior: An inventory. *Child Development, 29*, 552–557.
- Scholte, R. H. J., van Lieshout, C. F. M., & van Aken, M. A. G. (2001). Perceived relational support in adolescence: Dimensions, configurations, and adolescent adjustment. *Journal of Research on Adolescence, 11*, 71–94.
- Sheeber, L., Hops, H., Alpert, A., Davis, B., & Andrews, J. (1997). Family support and conflict: Prospective relations to adolescent depression. *Journal of Abnormal Child Psychology, 25*, 333–344.
- Slavin, L. A., & Rainer, K. L. (1990). Gender differences in emotional support and depressive symptoms among adolescents: A prospective analysis. *American Journal of Community Psychology, 18*, 407–421.
- Wetherington, E., & Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. *Journal of Health and Social Behavior, 27*, 78–89.
- Windle, M. (1992). A longitudinal study of stress buffering for adolescent problem behaviors. *Developmental Psychology, 28*, 522–530.

This document is a scanned copy of a printed document. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material.