Friendship and adjustment among adolescents

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Abstract

This study investigated the relation of friendship and emotional adjustment in adolescents. Both quantitative (popularity, mutual friendships, and number of friends) and qualitative dimensions (perceived positive friendship quality and conflict) of friendship were used. Participants were 618, mostly European American, 8th-, 10th-, and 12th-graders. Structural equation modeling showed that positive friendship quality was the only friendship variable that predicted adjustment. An examination of gender effects indicated that this relation held only for boys. The quantitative aspects of friendship had a small, indirect effect on adjustment through their effects on positive quality. Conflict had a negative effect on positive quality and this effect was stronger for girls than for boys. The role of adolescents’ perception in adjustment was highlighted and suggestions for future research were made.

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Keywords: Friendship; Adjustment; Friendship quality

Introduction

Friendship experiences of children and adolescents have consistently been shown to be related to different indices of adjustment: self-esteem, loneliness, and depressed mood (Berndt & Keefe, 1995; Bukowski, Hoza, & Boivin, 1993; Nangle, Erdley, Newman, Mason, & Carpenter, 2003; Parker & Asher, 1993). However, friendship is a complex construct, and we still do not fully understand how various components of friendship are related to adjustment. Therefore, the goal of this study was to explore the association between different dimensions of friendship and emotional adjustment.

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Before discussing the relevant literature on friendship and adjustment it is important to consider what is meant by friendship. What dimensions of friendship are critical to the concept? In an attempt to clarify what constitutes a friendship, Bukowski and Hoza (1989) argued that there are at least two dimensions of peer relations: popularity, which is acceptance by the peer group, and friendship, the experience of a mutual relationship. Both dimensions can be considered as more objective than the adolescents’ reports of their number of friends because they incorporate information from friends as well as from the adolescent. These are quantitative dimensions reflecting how many peers choose the child as a friend, and how many of the friendship choices are mutual.

This emphasis on mutual friendships reflects a mistrust of the accuracy of adolescents’ reports of their friendships. However, adolescents’ perceptions of their friendships are interesting in their own right, and there is evidence of the importance of adolescents’ perceptions of friendship for adjustment in the literature. Panak and Garber (1992) as well as Boivin, Hymel, and Bukowski (1995) found that the adolescents’ interpretation of their peer experiences mediated the relation between rejection and depressed mood. Kistner, Balthazor, Riski, and Burton (1999) reported that perceived acceptance, but not actual acceptance, was related to dysphoria.

Another dimension of friendship is the adolescent’s assessment of the quality of the friendship. Research shows positive effects of high-quality friendships. Longitudinal studies have found that friendships perceived to be high in positive quality were associated with increases in self-esteem (Berndt & Keefe, 1995) and low levels of loneliness (Parker & Asher, 1993). Friendship quality has also been found to be negatively related to depression and delinquency (Windle, 1994).

Perceived conflict is still another aspect of friendship quality. Conflicts within social relationships are inevitable and may be both a danger to the relationship and an opportunity to improve it (Laursen, 1993). Both positive and negative effects of conflict have been found. Parker and Asher (1993) and Ladd, Kochenderfer, and Coleman (1996) reported higher loneliness among children who viewed their friendship as conflictual. Laursen (1993) found, however, that conflict in a relationship was associated with lower levels of negative affect.

Friendship, then, appears to have quantitative dimensions as well as qualitative dimensions. The quantitative dimensions investigated in this study were popularity (the number of peers who chose the adolescent as a friend), the number of mutual friendships, and the number of peers chosen by the adolescent as friends. These are, of course, correlated measures, because the number of mutual friendships is necessarily a subset of both acceptance and the number of peers the adolescent chooses as friends. The qualitative dimensions included in this study were perceived friendship quality and conflict.

This study used depressed mood and happiness as indices of adjustment. Depressed mood is a commonly studied adjustment outcome in the literature, whereas happiness has not been investigated as much. In previous decades, lack of psychopathology was considered a sign of adjustment. However, in their study of elementary school children, Greenspoon and Saklofske (2001) reported that there were children who were low both in pathology (e.g., depression) and in happiness. Absence of de-
pression, then, does not necessarily mean positive adjustment, and to better understand adjustment in children and adolescents it is important to examine positive as well as negative indices of adjustment. Attempts to decrease adolescents’ depression levels may not be optimal without understanding what makes them happy.

Studies of depression have been concerned mainly with popularity and rejection in the peer group and have typically found that rejection is associated with negative mood states (Boivin et al., 1995; Panak & Garber, 1992). However, friendship quality also seems to play an important role in depression. Feldman, Rubenstein, and Rubin (1988) found that adolescents who reported more depressive affect experienced lower levels of friendship quality (such as less supportive, loyal, and more stressful friendships). Studies that examined the relation of both popularity and quality with depression found that both popularity and quality uniquely predicted depression (Erdley, Nangle, Newman, & Carpenter, 2001; Oldenburg & Kerns, 1997; Townsend, McCracken, & Wilton, 1988). It is clear from these studies that popularity and friendship quality make unique contributions to adjustment, thus supporting the conceptual distinction between them.

Our knowledge of the relation between friendship and happiness is very limited. Studies on happiness in adults consistently reported that the number of friends reported is associated with happiness (Myers, 2000). Adolescent studies on happiness typically have used different measures. In a study of adolescents, Cheng and Furnham (2002) measured friendship by the reported interpersonal attraction and liking of the respondents towards their peers and found that friendship was a significant predictor of happiness. Larson and Richards (1991), using experience sampling, found that adolescents reported the most positive emotions when they were in the company of friends.

To our knowledge, no one has examined the relation between adjustment and friendship for gender differences. Previous research has reported inconsistent gender differences regarding the relations between friendship and depression. Rubin et al. (1992) reported that conflict with friends was associated with depressed mood only for adolescent boys. In another study, Oldenburg and Kerns (1997) reported that popularity was related to depressed mood among children only for girls. In contrast, Erdley et al. (2001) failed to report an association between popularity and depression for boys and girls, but reported that number of friendships and positive quality was related to depression only for boys.

In this study we used structural equation modeling (SEM) for the main analyses because, as Bukowski and Hoza (1989) argued, different dimensions of friendship may not be independent. Covariance techniques (analysis of covariance, regression) are limited in that the shared variance of predictors is not considered. This problem is dealt with by using SEM, which allows for the examination of simultaneous effects of multiple predictors on one or more outcome measures while taking the relation between the predictors into account.

To use SEM effectively one needs models to test with the data. How might these various friendship dimensions relate to adjustment? The first and simplest model is that they may simply all have independent, unique associations with adjustment. However, a number of more complex models are possible. Bukowski, Pizzamiglio,
Newcomb, and Hoza (1996) suggest that popularity is an affordance of friendship. They view popularity as being prior to friendship, so that being accepted by others provides the child with the opportunities for friendship. Using a complex model with path analysis, Bukowski et al. (1993) found that popularity was indirectly related to adjustment through its effect on friendship quality. Nangle et al. (2003) tested a model that built on this view. They reported that the effects of popularity on loneliness and depression were mediated by friendship, a latent variable made up of numbers of mutual friendships and the relationship quality.

The study of Nangle et al. (2003) combined the quantitative and qualitative dimensions of friendship into a single latent variable. Although their model fits their data, other models might have fit the data equally well. Kerns, Klepac, and Cole (1996) found that friendship quality was not related to peer acceptance (popularity) in their study, suggesting that quality tapped a distinct aspect of peer relationships. Erdley et al. (2001) also reported very low correlations between popularity and friendship quality. This raises the possibility that in an adolescent sample these two dimensions of friendship could be differentially related to adjustment outcomes.

We first examined whether the different dimensions of friendship we are studying are aspects of a single friendship dimension or separate dimensions of a more complex construct. Based on the outcome of this analysis, we examined models in which the effect of popularity on adjustment is mediated by other dimensions of friendship. More generally, we hoped to see whether the quantitative aspects of friendship act as affordances for relationships high in positive quality. Rather than hypothesizing a single model and testing its fit, we used SEM in a more exploratory manner, testing a series of related models to try to determine the relations between five dimensions of friendship and adjustment. Latent variables were used when possible to reduce error variance in the constructs we are examining. When a model that provided an adequate fit in the total sample was found, two-group analyses were run to test whether the model fit equally well for males and females.

Method

Participants

Students who participated in the Adolescent Peer Influence Project formed the sample of this study. The Adolescent Peer Influence Project was a longitudinal study examining peer influence in adolescent substance use. Two suburban school systems adjacent to a large Midwestern city were studied, and four waves of data were collected over 2 years.

Some of the variables of interest in this study were collected only in one of the systems in the last wave of the study. Therefore, the last wave in that system was used for these analyses. The sample consisted of 618 students (298 females, 320 males) attending 8th, 10th, and 12th grades. The mean age of the sample was 15.08, with a range from 12 to 19. The sample was predominantly (98%) Caucasian.
Parental education was measured on a 5-point scale from 1, “some high school education” to 5, “college education or more.” Mean parental education for mothers and fathers was 3.78 and 3.48, respectively.

The University Institutional Review Board permitted a passive-consent procedure. Consent forms were sent to parents, who were asked to return the consent form if they did not want their child to participate in the study. Adolescents were also asked to sign a consent form, which explained the study and assured them of confidentiality. The parental refusal rate varied from 1 to 3%. Less than 1% of participants refused to participate or gave unusable questionnaires. Approximately 6% of the students were absent on the study day. As a result, better than 90% of the adolescents in the study grades participated in the study.

**Measures**

**Friendship nominations**

Students were asked to write the names of their best friend and their closest friends in their school. Ten spaces were provided. Because participation was better than 90%, adolescents could be matched to their friends with confidence that the majority of their in-school friends were included. We could then identify the number of friendship choices an adolescent made, the number of mutual friendships an adolescent had, and the number of choices an adolescent received (popularity).

**The happiness scale**

Included in the Adolescent Peer Influence Project were questions from the “emotional tone” subscale of Offer’s Self-Image questionnaire (Patton & Noller, 1994). All of the questions were on a 5-point Likert scale ranging from “strongly agree” to “strongly disagree.” The three questions relating to happiness were combined into a single scale. The items were as follows: “most of the time I am happy,” “I enjoy life,” and “I often feel sad” (reverse scored). The reliability of the scale was adequate (α = .75). Convergent validity was tested using depressed mood and a dispositional construct (self-esteem) with which happiness has been associated in previous research (Myers & Diener, 1995). Our measure was negatively correlated with depressed mood (r = −.71, p < .01) and positively correlated with Harter’s (1988) self-esteem scale (r = .55, p < .01).

**Depressed mood**

A 7-item version of the 20-item Center for Epidemiological Studies scale (Radloff, 1977) was used in this study. This measure has been shown to be substantially correlated with Beck Depression Inventory among adolescents (Lewinshon, Hoberman, & Rosenbaum, 1988) and to separate depressed and nondepressed groups effectively (Radloff, 1977). It has been used among adolescents and has satisfactory construct validity and psychometric properties (Radloff, 1991). The seven items used in this study measured general feelings of failure and sadness, for example “I had crying spells.” Respondents were asked to rate the frequency of each feeling during the past week on a 4-point scale ranging from 1 (rarely or never) to 4 (most or all the time).
Higher scores represent higher depressed mood. The reliability of the shorter version of the scale was high ($\alpha = .86$). This value is very close to the original scale reliability ($\alpha = .91$) reported by Radloff (1977). It is important to emphasize that depressed mood used in this study is not the same as depression in the sense that it reflects moderate degrees of negative affect (Radloff, 1991). Nevertheless, depressed mood has been reported to predict clinical referrals among adolescents (Compas, Ey, & Grant, 1993).

**Friendship Qualities Scale**

This is a 23-item scale that measures five different friendship dimensions (Bukowski, Hoza, & Boivin, 1994)—companionship, help, security, closeness, and conflict—each on a 5-point Likert scale ranging from “strongly agree” to “strongly disagree.” Exploratory factor analyses showed two separate factors: one taping positive quality features and the other taping the negative feature, conflict. Thus, two subscales were created: positive quality and conflict. The reliability of all scales and subscales was high: positive quality ($\alpha = .89$), conflict ($\alpha = .86$), help subscale ($\alpha = .82$), security subscale ($\alpha = .73$), closeness subscale ($\alpha = .77$), and companionship subscale ($\alpha = .66$). High scores reflected friendships perceived to be high in the named dimension. The adolescents were asked to think of their best friend (the name they nominated first in the friendship list) when filling out the scale.

**Emotional adjustment**

We had originally intended to examine happiness and depression as separate adjustment variables. However, the high correlations ($r = .71$) and item similarity between the two constructs suggested that they might be better investigated as indicators of a latent variable named as emotional adjustment.

**Results**

The correlations among the variables, along with means and standard deviations, are shown in Table 1. Correlations for girls are above the diagonal and those for boys are below. Structural equation modeling was conducted with the Mplus v.1 (Muthen & Muthen, 1998) program. Maximum likelihood estimation was used to evaluate the relations among the variables.

**Friendship**

We first examined a measurement model for friendship including the three quantitative measures, popularity, mutual friendships, and number of friends named, as well as the qualitative friendship variables, positive quality and conflict as indicators of a single latent variable, friendship. Because in large samples the $\chi^2$ statistic is often significant, Tabachnick and Fidell (2001) suggest using criteria of a comparative fit index (CFI) above .95 and the root mean square error of approximation (RMSEA) less than .10 to indicate adequate model fit. According to these criteria, the fit of the
Table 1
Means, standard deviations, and zero-order correlations among the study variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<tr>
<td>1 Depressed mood</td>
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<td>-.73*</td>
<td>-.04</td>
<td>-.05</td>
<td>-.04</td>
<td>-.09</td>
<td>-.20*</td>
<td>-.01</td>
<td>1.60</td>
<td>1.76</td>
<td>.57</td>
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<td>2 Happiness</td>
<td>-.65*</td>
<td>—</td>
<td>.10</td>
<td>.09</td>
<td>.06</td>
<td>.11</td>
<td>-.22*</td>
<td>-.04</td>
<td>3.86</td>
<td>3.74</td>
<td>.72</td>
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<tr>
<td>3 Number of friends</td>
<td>-.12**</td>
<td>.14**</td>
<td>—</td>
<td>.58*</td>
<td>.48*</td>
<td>.18'</td>
<td>-.17*</td>
<td>-.33*</td>
<td>6.04</td>
<td>7.77</td>
<td>3.13</td>
</tr>
<tr>
<td>4 Number of mutual friends</td>
<td>-.10</td>
<td>.04</td>
<td>.58*</td>
<td>—</td>
<td>.81*</td>
<td>.09</td>
<td>-.08</td>
<td>-.18*</td>
<td>2.24</td>
<td>3.96</td>
<td>2.01</td>
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<td>5 Popularity</td>
<td>-.08</td>
<td>.06</td>
<td>.39*</td>
<td>.69*</td>
<td>—</td>
<td>.06</td>
<td>-.03</td>
<td>-.29*</td>
<td>5.13</td>
<td>6.43</td>
<td>4.01</td>
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<tr>
<td>6 Friendship quality</td>
<td>-.25*</td>
<td>.36*</td>
<td>.08</td>
<td>.12**</td>
<td>.13**</td>
<td>—</td>
<td>-.39*</td>
<td>-.02</td>
<td>3.72</td>
<td>4.03</td>
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<tr>
<td>7 Friendship conflict</td>
<td>.18*</td>
<td>-.19*</td>
<td>.04</td>
<td>.02</td>
<td>.07</td>
<td>-.22*</td>
<td>—</td>
<td>.10</td>
<td>2.68</td>
<td>2.27</td>
<td>.88</td>
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<tr>
<td>8 Grade</td>
<td>-.07</td>
<td>.04</td>
<td>-.25*</td>
<td>-.06</td>
<td>-.15*</td>
<td>.09</td>
<td>.04</td>
<td>—</td>
<td>9.99</td>
<td>9.97</td>
<td>1.66</td>
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Note. Correlations for girls \(n = 290\) are reported above the diagonal, boys \(n = 290\) below the diagonal.

\* \(p < .01\).

\** \(p < .05\).
measurement model was poor, \( \chi^2 (5, n = 551) = 89.57, \quad \text{CFI} = .89, \quad \text{RMSEA} = .175 \). The standardized loadings of the indicators on the latent factor were popularity, .74; mutual choices, 1.01; number of friends listed, .65; positive quality, .10; and conflict, -.07. The loading for conflict was not significant. An examination of the residuals suggested that the lack of fit stemmed from both quality variables. Accordingly, we decided to treat positive quality and conflict as separate variables. Positive quality was treated as a latent variable with the four positive subscales as indicators. Conflict was modeled as a manifest variable because the four items comprising the scale were so highly correlated that no subscales could be computed.

We wanted to replicate models in which the effects of popularity were mediated by mutual friendships and/or positive quality (Bukowski et al., 1993; Nangle et al., 2003). However, in our data, popularity did not have a significant bivariate correlation with emotional adjustment. Because a significant correlation with the outcome is a prerequisite for examining mediation, we concluded that popularity had no independent effect on emotional adjustment and so included it with the other quantitative variables in a single latent variable in the analyses described under Measurement model. We examined the possibility that this latent variable, a combination of several ways to count friendships, would be an affordance for quality friendships and that its effect on adjustment would be mediated by positive quality. These analyses are described under Measurement model.

**Measurement model**

The measurement model was examined first. The indicators for the latent variable Emotional Adjustment were the happiness and depression scales with the items for the depression scale reverse coded. The four positive subscales of friendship quality were used as the indicators for the latent variable Quality; the number of friendship choices made, the number received, and the number of mutual choices were the indicators for the latent variable Quantitative Friendship. The measurement model fit the data well, \( \chi^2 (24, n = 618) = 88.27, \quad \text{CFI} = .97, \quad \text{RMSEA} = .08 \). All indicators loaded significantly on their latent variable, with no standardized indicator loading below .55. The factor loadings can be seen in Table 2.

The structural model for the whole sample was examined next. Two models were tested, one with independent effects and one with mediated effects. The model in which Friendship, Positive Quality, and Conflict all had independent paths to Emotional Adjustment was tested first. This model fit the data well, \( \chi^2 (30, n = 618) = 164.53, \quad \text{CFI} = .95, \quad \text{RMSEA} = .08 \). The coefficient of the path from Quantitative Friendship to Emotional Adjustment was not significant (.04), nor was the path from conflict to Adjustment (.01). The path from Positive Quality (.16) to adjustment was significant at \( p < .01 \). Next we tested a model in which Positive Quality mediates the effect of Quantitative Friendship on Emotional Adjustment. Modification indices for this model suggested adding a path from Conflict to Positive Quality. This model fit better, although not significantly better, than the independent effects model, \( \chi^2 (30, n = 618) = 163.01, \quad \text{CFI} = .95, \quad \text{RMSEA} = .07 \). Friendship had a significant path to Positive Quality (.13), but not to Emotional Adjustment. As in the
independent effects model, the path from Positive Quality to Emotional Adjustment was significant (.16), as was the path from Conflict to Positive Quality (−.37).

The lack of a significant path from Quantitative Friendship to Emotional Adjustment was surprising, so we replicated these models using the individual quantitative friendship variables instead of the latent variable Quantitative Friendship in case one of the components was related, but the effect was masked by the others. None of the Quantitative Friendship variables had significant paths to Emotional Adjustment.

Gender differences

Despite the only marginal improvement in fit, we decided to use the more complex model in the two-group analysis examining the gender differences. Gender differences in the pattern of relations among the variables were assessed with multigroup SEM. First, factor loadings were constrained to be equal for the boys and girls. This produced no decrement in fit compared to a model in which these parameters were free. Models with various structural parameters constrained were compared to the model with all free structural parameters. Constraining the path from Positive Quality to Emotional Adjustment to be equal for males and females produced a significant decrement in fit, $\Delta \chi^2(1) = 10.34, p < .05$. In addition, constraining the path from Conflict to Positive Quality produced an additional significant decrement in fit $\Delta \chi^2(1) = 6.47, p < .05$. None of the other paths when constrained significantly decreased the fit. The model with the path coefficients is shown in Fig. 1. Coefficients for females are above the path line, and coefficients for males are below.

In summary, quality had an effect on emotional adjustment only for boys. The quantitative aspect of friendship affected quality for both boys and girls, and had an indirect effect on adjustment only for boys. Conflict also had an indirect negative effect on adjustment through its negative effect on quality. This effect was almost twice as large for girls as it was for boys.
This study investigated the relation between several different dimensions of friendship and emotional adjustment among middle and late adolescents. We used structural equation modeling in an exploratory manner, testing a series of related models to examine the relation between the five dimensions of friendship and emotional adjustment.

One of the first things we did was examine the relation among the various friendship variables. After examining a measurement model that attempted to use both qualitative perceptions of the best friend relationship and quantitative aspects of friendships (popularity, number of mutual friends, and number of friends listed) as indicators of a single friendship latent variable, we concluded that the quantitative and qualitative dimensions of friendship were relatively independent dimensions in this sample. Similar findings also have been reported by Kerns et al. (1996). The three quantitative indicators of friendship did fit well as a single dimension with high positive loadings for each indicator.

We did not find that popularity, by itself, had a path—mediated or otherwise—to our adjustment measure, as did Nangle et al. (2003) for loneliness and depression. There are several possible reasons for the difference. First, our measure differed from that of Nangle et al. Our latent variable included indicators of both positive and negative affect, whereas their adjustment measures were loneliness and depression. Second, the participants in our sample were older. Previous research supporting a mediational model was done with children (Nangle et al., 2003) or young or early adolescents (Bukowski et al., 1993), whereas our sample was mid- to late-adolescents. It may be that, as Sullivan (1953) argued, concern for the acceptance in the peer group may wane and dyadic features of friendship may become more important as children enter adolescence. In Nangle’s study, it is also possible that the inclusion of both number of mutual friends and friendship quality in the friendship variable mediated the effects of popularity on depression accounted for the difference. Because number of mutual friends is a subset of popularity, popularity is highly likely

**Fig. 1. Final model linking friendship variables to emotional adjustment. Note. Coefficients for females are above the path line and coefficients for males are below. Only significant paths are shown. *Significant at p < .01.**

**Discussion**

This study investigated the relation between several different dimensions of friendship and emotional adjustment among middle and late adolescents. We used structural equation modeling in an exploratory manner, testing a series of related models to examine the relation between the five dimensions of friendship and emotional adjustment.

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to have a path to friendship. Because the friendship variable also included relationship quality, the quality component may have been responsible for the relation of friendship to loneliness and depression.

Previous research does not provide clear guidance about what to expect in the relation between popularity and the quality of friendships. Bukowski et al. (1996) and Nangle et al. (2003) argued that popularity is an affordance for friendship and that children who are popular (who are also likely to have social skills) are likely to form mutual friendships high in quality. There is evidence supporting this view (Asher, Parker, & Walker, 1996; Parker & Asher, 1993). In contrast, others have argued that there is no persuasive reason that popular children should have high-quality friendships. Eckert (1989) observed that the popular adolescents in high school were less apt to have supportive relationships with their friends than were the unpopular adolescents. The findings of this study showed that popularity and friendship quality were quite independent, thus lending support to the second view.

Although we failed to find a direct link between popularity and adjustment, we found that quantitative friendship (popularity, number of mutual friends, and number of friends one claims to have) was indirectly related to emotional adjustment through its effect on friendship quality. The effect was small, but the result for the total sample was of a magnitude similar to Bukowski et al.’s (1993) results. They found the link between popularity and quality to be .16 and the link from quality to loneliness to be .15 in a path analysis.

The finding that our quantitative friendship latent variable had a significant path to positive quality suggests that the number of friendships an adolescent has (however counted) may provide the conditions for a high-quality relationship. We must caution, however, that some might argue that adolescents who are able to create a high-quality relationship with one individual are probably capable of creating relationships with multiple individuals, and so the arrow should be drawn from quality to quantity. Most probably both arguments have merit, and the relation between quantitative and qualitative dimensions of friendship is bidirectional.

Conflict had no direct path to adjustment in this sample. Its effect on adjustment appears to be indirect. Although we had not initially anticipated it, the best-fitting model had a path from conflict to positive qualities. For both boys and girls, perceiving high conflict in the relationship was associated with lower levels of perceived quality. Although research shows that relationships with friends are likely to continue after a conflict and the relationships are likely to improve (Laursen, 1993), perception of positive quality with the best friend seems to be affected, at least for a time, when adolescents experience conflict. Laursen’s study considered whether or not the friendship was enduring after conflict and did not examine change in perceived quality.

It is interesting that the association between conflict and positive quality was almost twice as strong for girls as it was for boys. Consistent with this finding, it has been reported that girls were more sensitive than boys to the potential costs of conflict with friends (Collins & Laursen, 1992). Girls typically are socialized to avoid conflict and so may find it more distressing than boys. Because girls value intimacy more and report their relationships to be more intimate (Buhrmester, 1996), conflict
may be perceived as damaging to the intimacy. Thus, conflict experienced with their best friends may lead girls to perceive their friendships as low in quality. We must note that this is a cross-sectional study and the direction of the relation cannot be established with confidence. A model with the relation bidirectional or reversed in direction is likely to fit as well as the model we accepted. For example, an adolescent girl dissatisfied with the amount of intimacy with her best friend may get into conflicts with her over the issue. Longitudinal research will help to clarify such issues.

Positive friendship quality was the best predictor of adjustment. In the total sample the effect was fairly small but consistent in magnitude with the findings of Erdley et al. (2001) and Oldenburg and Kerns (1997). The findings are consistent with Sullivan’s (1953) theory. He suggested that close dyadic relationships become more important than acceptance in the peer group as children enter adolescence. Supporting his views, previous research has found that features of dyadic relationships such as intimacy and closeness become more salient as children enter adolescence (Bukowski, Newcomb, & Hoza, 1987).

The finding that perceived positive qualities in the best friendship were associated with emotional adjustment for boys but not for girls is interesting and a little puzzling. The effect was quite strong for boys and small and nonsignificant for girls. This result is consistent with some previous research on depression (Erdley et al., 2001), but inconsistent with other studies that reported an effect for both genders (Nangle et al., 2003; Oldenburg & Kerns, 1997). It has been reported that girls’ friendships are more intimate and involve more interpersonal disclosure than do boys’ friendships (Buhrmester, 1996). This leads to the expectation that friendship experiences might be more important for the adjustment of girls than for boys (Burks, Dodge, & Price, 1995). The data here are not consistent with this view. The argument that girls’ emotional adjustment is more affected by negative experiences than by positive ones (Leadbeater, Blatt, & Quinlan, 1995) is also not supported because we did not find a link from conflict to adjustment for either boys or girls. Considering the inconsistent findings regarding gender differences, Erdley et al. (2001) called for more research to investigate gender effects. We agree with them and argue that investigation of gender effects with regard to friendship should be a priority in future research.

Before discussing the implications of our results, we need to consider the limitations of the study. First, the friendship variables investigated accounted for only small amounts of variance in the adjustment. This makes it clear that, even for adolescents, for whom friendships and their quality are highly salient (Hartup & Stevens, 1997; Sullivan, 1953), other variables contribute as much as or more than friendship to their adjustment. It is the task of future research to consider other pertinent factors in the lives of adolescents, such as family relationships and school problems together with friendship experiences, to get a clearer picture of adolescent adjustment. Second, this study was cross-sectional in nature. As we have mentioned previously, the direction of effects can be ambiguous in cross-sectional research. Follow-up studies with longitudinal data are necessary. Third, the sample was predominantly Caucasian and generalization to other ethnic groups must be done with caution. Finally, the present investigation studied only the in-school friends of the adolescent. If the adolescent’s closest friends are not in his or her school, the results may be misleading.
The results of this study suggest that teaching conflict resolution skills is an important task because it directly affects perceived quality for both boys and girls and indirectly affects adjustment for boys. Another implication of this study is that adolescents’ perceptions of their friendships appear to be important in adolescent adjustment. Considering this, we suggest that different types of measures may be appropriate for different outcomes. For subjectively measured outcome measures (such as happiness and/or depression), subjective predictors may be appropriate. This could result in less costly data gathering for friendship variables. Data could be gathered only from the adolescent without the need to collect data from friends to corroborate the friendships the adolescent claims. In contrast, when the outcome is objective, such as how much of an adolescent’s alcohol use is influenced by friends, it is important to gather data from the peer group as well as from the adolescent. Peer group data are not completely free from subjective biases either, but research suggests that adolescents’ estimates of their friend’s substance use are systematically biased (Bauman & Fisher, 1986; Urberg, Cheng, & Shyu, 1991). More systematic research on the appropriateness of various types of measures for different types of outcomes would be helpful.

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References


