



## Shorter communication

## Relation of depression to perceived social support: Results from a randomized adolescent depression prevention trial

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## ABSTRACT

Theorists posit that certain behaviors exhibited by depressed individuals (e.g., negative self-statements, dependency, reassurance seeking, inappropriate or premature disclosures, passivity, social withdrawal) reduce social support, yet there have been few experimental tests of this hypothesis. Using data from a randomized depression prevention trial ( $N = 253$ ) involving adolescents ( $M$  age = 15.5,  $SD = 1.2$ ), we tested whether a cognitive behavioral group intervention that significantly reduced depressive symptoms relative to bibliotherapy and educational brochure control conditions through 2-year follow-up produced improvements in perceived parental and friend social support and whether change in depressive symptoms mediated the effect on change in social support. Cognitive behavioral group participants showed significantly greater increases in perceived friend social support through 1-year follow-up relative to bibliotherapy and brochure controls, but there were no significant effects for perceived parental support. Further, change in depressive symptoms appeared to mediate the effects of the intervention on change in perceived friend support. Results provide experimental support for the theory that depressive symptoms are inversely related to perceived social support, but imply that this effect may be specific to friend vs. parental support for adolescents.

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The interpersonal theory of depression posits that the negative self-statements, excessive reassurance seeking, inappropriate or premature disclosures, passivity, negative feedback seeking, and social withdrawal exhibited by depressed individuals lead to an erosion of social support (Coyne, 1976; Jacobson & Anderson, 1982). Such processes characterize depressed individuals, may serve as vulnerability factors for future depression, and may contribute to the maintenance of this pernicious psychiatric condition (Joiner & Timmons, 2009).

Only a handful of prospective studies have tested whether depressive symptoms increase risk for future reductions in perceived social support. Depressive symptoms predicted decreases in perceived family, but not friend, support through 6-month follow-up in one study of 333 teens; however this effect emerged only for girls in the sample (Slavin & Rainer, 1990). Depressive symptoms and major depressive disorder predicted future decreases in perceived friend social support, but not perceived parental support, over a 2-year follow-up in a study of

496 female adolescents (Stice, Ragan, & Randall, 2004). However, depressive symptoms did not predict future decreases in familial social support over a 1-year follow-up in a study of 420 adolescents with no evidence of gender moderation (Sheeber, Hops, Alpert, Davis, & Andrews, 1997). Similarly, depressive symptoms did not predict increases in social rejection in a sample of 182 college students over a 3-week follow-up, again with no evidence of gender moderation (Joiner & Metalsky, 1995). The pattern of findings suggests that the relation of depressive symptoms to support erosion is stronger for females and younger adolescents. However, another potential explanation for the mixed findings is that the effects were typically small, causing some to be non-significant as a function of sampling variability.

These studies suggest that there may be a relation between depressive symptoms and subsequent reductions in social support. However, prospective naturalistic studies do not permit conclusive inferences because unknown third variables may explain the relations. For instance, personality disturbances (e.g., neuroticism) that result in reductions in social support may also be related to increased depressive symptoms. It may be difficult to observe prospective effects because such confounds are operating in longitudinal studies. Randomized experiments that manipulate

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independent variables permit stronger inferences because they reduce the possibility that a third variable explains the observed relations. The appeal of random assignment is that, assuming large enough cell sizes, it theoretically results in groups that are initially equivalent on all possible confounding variables, rendering them uncorrelated with treatment condition. Moreover, the use of a brochure control condition rules out the possibility that intervention effects are due to the passage of time, regression to the mean, or pretest sensitization, while the use of a credible alternative intervention control condition rules out the possibility that any apparent intervention effects are due to participant expectancies, demand characteristics, or other non-specific factors.

Experimental psychopathology studies have examined the relation of depression to social perceptions. When people interact with depressed or non-depressed research participants, the former are consistently more rejected and less accepted by both strangers and associates (e.g., Coyne, 1976; Nelson-Gray, Lin, & Torquato, 1991; Siegel & Alloy, 1990). These results align with the interpersonal theory of depression, yet these studies did not directly assess social support *per se*, as they assess only initial social impressions. In addition, these studies investigated reactions of unaffiliated peers, but not friends and family.

We reasoned that a randomized trial of a depression prevention program would afford a novel experimental test of the relation between depressive symptoms and social support. Thus, we included measures of perceived social support in a trial that evaluated three depression prevention programs relative to a control condition (Stice, Rohde, Seeley, & Gau, 2008). High-risk adolescents who reported subdiagnostic depressive symptoms were randomized to a cognitive behavioral (CB) group intervention, a supportive expressive group intervention, a bibliotherapy condition, or an educational brochure control condition. Those assigned to the three active interventions showed significantly greater reductions in depressive symptoms through 6-month follow-up relative to the brochure control condition (Stice et al., 2008). Further, group CB participants showed significantly larger reductions in depressive symptoms than supportive expressive and bibliotherapy participants. In a subsequent report on long-term effects, group CB participants showed significantly greater reductions in depressive symptoms than bibliotherapy and brochure control participants by 1- and 2-year follow-up, but not relative to supportive expressive participants (Stice, Rohde, Gau, & Wade, 2010).

The aim of the present report was to test whether participants assigned to the CB group showed significantly greater improvements in perceived social support from family and friends relative to both bibliotherapy participants and educational brochure controls through 2-year follow-up. We focused on participants assigned to these three conditions because the CB intervention produced significant reductions in depressive symptoms relative to the bibliotherapy and brochure conditions through 2-year follow-up, thereby providing an opportune test of whether reducing depressive symptoms results in improved perceived social support. Because participants in the CB intervention did not show greater reductions in depressive symptoms than supportive expressive participants through 1- and 2-year follow-up, data from the latter group were not germane for addressing the aim of this report. Based on the findings from our earlier naturalistic risk factor study (Stice et al., 2004), we theorized that parental support was less conditional upon the emotional state of the adolescent as compared to friends who can more easily withdraw from a depressed youth (Stice et al., 2004). Therefore, in the current study, we hypothesized that a reduction in depressive symptoms would result in an increase in perceived friend, but not parental, support.

## Methods

Participants were 253 high-school students (57% female) who ranged from 14 to 19 years of age ( $M = 15.5$ ;  $SD = 1.2$ ) at pretest. The sample was composed of 2% Asians, 10% African Americans, 46% Caucasians, 32% Hispanics, and 10% other/mixed heritage. Educational attainment of parents was 26% high school or less; 18% some college; 37% college graduate; 19% graduate degree. The sample was more ethnically diverse than the school district from which we sampled (7% African American, 18% Hispanic, 65% Caucasian) but was representative in terms of parental education (34% high-school graduate or less; 25% some college; 26% college graduate; 15% graduate degree) of the county in which the school district was located. Participants were recruited using mailings, handbills, and posters that invited students experiencing sadness to participate in a trial of interventions designed to improve current and future mood. Interested students who returned a signed consent form and scored 20 or above on the Center for Epidemiologic Studies-Depression scale (Radloff, 1977) were invited to complete a pretest assessment. Participants were randomized to condition. The CB group intervention consisted of six weekly 1-h sessions. Groups were facilitated by a clinical psychology graduate student and co-facilitated by an undergraduate psychology student. A detailed manual for the intervention was used to insure standardized implementation. Participants completed a survey (which included the measure of perceived social support) and blinded diagnostic interview (which included the depression interview) at pretest, posttest, and 6-month, 1-year, and 2-year follow-ups (they received \$20 for completing each assessment). The local Institutional Review Board approved this study. See Stice et al. (2008, 2010) for further details regarding recruitment, screening, eligibility criteria, facilitator training and supervision, assessor training, information on demographic factors and outcomes at pretest across groups, and ancillary treatment.

### *Group cognitive behavioral depression prevention intervention*

Six weekly 1-h sessions focused increasing participant involvement in pleasant activities, practicing cognitive restructuring techniques, and developing response plans for future life stressors. Homework was used to reinforce the skills taught in the sessions and help participants learn how to apply these skills to their daily life. We also used motivational enhancement exercises to maximize willingness to use the new skills and group activities to foster feelings of group cohesion.

### *Bibliotherapy intervention*

Participants in the bibliotherapy condition were given copies of *Feeling Good* (Burns, 1980), which is considered an effective self-help book for depression. It is written at a high-school reading level. When presented with the book, participants were encouraged to read it and told that it had been shown to be helpful.

### *Educational brochure control condition*

Participants were given a National Institute of Mental Health brochure that describes depression and recommends treatment for depressed youth ("Let's Talk About Depression" Pub. 01-4162) and information about local treatment options. They completed the same assessments as those in the other conditions, allowing us to monitor depression and suicidal ideation, and to contact parents and provide referrals as necessary (as was done in all conditions).

## Measures

### Depressive symptoms

Sixteen items assessing major depression symptoms based on the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 2000) were adapted from the Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS; Kaufman, Birmaher, Brent, Rao, & Ryan, 1996). Adolescents reported the peak severity of each symptom over their lifetime or since the last interview on a month-by-month basis with an expanded response format (response options: 1 = not at all to 4 = severe symptoms [with ratings of 3 and 4 reflecting diagnostic levels]). We averaged across the 16 severity items to form a continuous depressive symptom composite, which captured severity of symptoms over the past month for the baseline assessment, past 6-weeks for the posttest assessment, past 6 months for the 1-year follow-up and over the past 12 months for the 2-year follow-up. This version of the K-SADS has shown test–retest reliability ( $k = .63$ – $1.00$ ) and inter-rater reliability for depression diagnosis ( $k = .73$ – $1.00$ ), internal consistency ( $\alpha = .68$ – $.84$ ), and predictive validity (Nolen-Hoeksema, Stice, Wade, & Bohon, 2007). To assess the inter-rater reliability in the present trial, a randomly selected subset of participants (5% of all interviews) were re-interviewed within a 3-day period by a second assessor who was blind to the first diagnosis, resulting in high inter-rater agreement for the continuous symptom composite ( $r = .85$ ). Another randomly selected subset of participants (5% of all interviews) completed a second diagnostic interview with the same assessor 1 week later, resulting in high test–retest reliability for the continuous symptom composite ( $r = .93$ ). In the present trial the depressive symptom severity score showed internal consistency at pretest ( $\alpha = .75$ ).

### Perceived social support

We drew 12 items from the Network of Relationships Inventory (Furman, 1996), a self-report measure of perceived support, which assessed companionship, guidance, intimacy, affection, admiration, and reliable alliance from parents and friends (6 items each) for the current study. Items used a response format ranging from 1 = strongly disagree to 5 = strongly agree. These scales have high internal consistency ( $M r = .88$ ), test–retest reliability ( $M r = .69$ ), and predictive validity (Burton, Stice, & Seeley, 2004; Furman, 1996). Parental and friend social support subscales were used in the current study and showed good internal consistency at pretest ( $\alpha = .84$  and  $.88$ , respectively).

## Results

Participants assigned to the three conditions did not differ on demographic factors, treatment during the past year, or pretest versions of the outcomes, with the exception of depressive symptoms ( $F[2,251] = 7.54$ ,  $p < .001$ ,  $\eta^2 = .06$ ). Thus, analyses controlled for pretest depressive symptoms. Among CB participants, 44% attended all 6 sessions and 86% attended half of the sessions. Among bibliotherapy participants, 28% indicated they read at least half the book at posttest, 44% read less than a quarter, and 28% did not read any. Three percent of participants did not provide data at posttest, 9% at the 6-month follow-up, 15% at the 1-year follow-up, and 22% at the 2-year follow-up. Attrition was not significantly associated with any pretest outcomes, demographic factors, or condition (see Stice, Shaw, Bohon, Marti, & Rohde, 2009; Stice et al., 2010 for participant flow charts).

Mixed effects models (in SAS PROC MIXED) tested intervention effects at posttest, 6-month, 1-year, and 2-year follow-ups. These multilevel models of change are suited to the analysis of

longitudinal studies providing solutions to such common problems as missing data, irregular measurement occasions, and serial correlations (Gibbons et al., 1993). All four waves of post-intervention data were included as dependent variables. Independent variables included condition, wave, condition  $\times$  wave interaction, pretest level of the outcome, and pretest depressive symptoms. Two contrasts tested the effects at each of the follow-up assessments: group CB vs. brochure controls and group CB vs. bibliotherapy. These were examined with differences in estimated marginal means and standard errors that were adjusted for covariates. Table 1 provides the descriptive statistics for parent and friend social support scores at each assessment wave and Table 2 shows test statistics associated with the contrasts.

Group CB participants showed significantly greater friend social support ratings at the posttest, 6-month, and 1-year follow-up assessments compared to brochure controls. Relative to bibliotherapy participants, group CB participants showed significantly greater mean friend social support ratings at the posttest and 6-month assessments and marginal differences at 1-year follow-up. The average effect was an  $r = .24$ , which is a medium effect size. No significant group differences were detected for parent social support at any assessment point.

Because there were significant main effects for friend support, but not parental support, we tested whether change in depressive symptoms mediated the effects of the intervention on change in friend social support. Following Baron and Kenny (1986), we tested: (1) for a relation between intervention condition and change in the outcome, (2) for a relation between condition and change in the mediator, (3) for relation between change in the mediator and change in the outcome, and (4) whether the effect of condition on change in the outcome becomes non-significant (full mediation) or significantly decreases (partial mediation) when controlling for change in the mediator. We tested for mediation from pre- to posttest because this is typically when the most pronounced intervention effects occur and because it is also often the case that there are linear changes in the outcomes from pre- to posttest but the intervention effects level out or erode during follow-up, which makes testing for mediation more difficult.

To test whether intervention condition predicted change in the outcome (criterion 1) the friend social support change score (posttest minus pretest) was regressed on a dummy coded vector representing condition. Results confirmed (Table 3) that group CB participants showed significantly greater increases in friend social support compared to both control and bibliotherapy participants. To test whether condition predicted change in the mediator (criterion 2) the depression symptom change score was regressed

**Table 1**  
Descriptive statistics for parent and friend social support.

	Cognitive behavioral therapy ( $n = 89$ )		Bibliotherapy ( $n = 80$ )		Brochure control ( $n = 84$ )	
	Mean	SD	Mean	SD	Mean	SD
Parent social support						
Pretest	3.45	0.95	3.36	0.89	3.56	0.75
Posttest	3.45	0.94	3.22	0.90	3.38	0.88
6-Month	3.36	1.05	3.09	0.88	3.48	0.86
1-Year	3.45	1.10	3.43	0.88	3.46	0.84
2-Year	3.74	0.93	3.53	0.92	3.55	1.00
Friend social support						
Pretest	3.56	1.06	3.65	0.88	3.63	1.01
Posttest	3.90	0.89	3.51	0.96	3.58	0.98
6-Month	3.79	0.87	3.64	0.95	3.57	0.93
1-Year	3.70	1.10	3.81	0.86	3.65	0.90
2-Year	3.87	0.90	3.99	0.77	3.69	1.01

**Table 2**  
Differences in fixed effects of parent and social support at follow-up assessments.

	Parent social support						Friend social support							
	EST	SE	t-Value	p-Value	95% CI		r	EST	SE	t-Value	p-Value	95% CI		r
					UB	LB						UB	LB	
<i>Posttest</i>														
CB vs. bibliotherapy	-.151	.106	-1.42	.158	-.361	.059	.11	-.393	.102	-3.87	<.001	-.594	-.193	.29
CB vs. control	-.029	.103	-0.28	.781	-.232	.175	.02	-.327	.099	-3.32	.001	-.521	-.132	.25
<i>Six months</i>														
CB vs. bibliotherapy	-.144	.096	-1.51	.133	-.331	.044	.12	-.301	.092	-3.30	.001	-.482	-.121	.25
CB vs. control	-.048	.091	-0.52	.603	-.229	.133	.04	-.284	.088	-3.21	.002	-.458	-.109	.24
<i>1-Year</i>														
CB vs. bibliotherapy	-.134	.098	-1.37	.172	-.327	.059	.11	-.179	.096	-1.86	.064	-.367	.011	.14
CB vs. control	-.073	.094	-0.78	.434	-.258	.111	.06	-.226	.092	-2.45	.015	-.407	-.044	.18
<i>2-Year</i>														
CB vs. bibliotherapy	-.115	.151	-0.76	.449	-.413	.183	.06	.067	.151	0.44	.658	-.231	.364	.03
CB vs. control	-.125	.144	-0.87	.388	-.409	.160	.07	-.110	.144	-0.76	.447	-.394	.174	.06

CB = cognitive behavioral, EST = estimate, SE = standard error, UB = upper bound, LB = lower bound, CI = confidence interval.  
Notes. For all tests the degrees of freedom are 171 and 162 for CB vs. control and CB vs. bibliotherapy, respectively.

on condition; effects confirmed that group CB participants showed significantly greater reductions in depression symptoms compared to both control and bibliotherapy participants. To test whether there was a relation between change in the mediator and change in the outcome (criterion 3) the friend social support change score was regressed on the depression symptoms change score; results confirmed that a decrease in depression symptoms from pretest to posttest was significantly associated with an increase in friend social support from pretest to posttest. To assess whether the predictive effects of condition on change in the outcome was significantly reduced when change in the mediator was statistically partialled (criterion 4), the friend support change score was regressed on condition, controlling for the depression symptom change score, with the null hypothesis that the difference in parameter estimates from criterion 1 and criterion 4 would be equal to zero. The estimate was divided by a standard error developed by Freedman and Schatzkin (1992) and compared with a *t* distribution to test for significance. The effect of condition on change in friend social support was significantly reduced when change in the mediator was statistically controlled for group CB

participants compared to both control and bibliotherapy participants. Controlling for depression change resulted in partial mediation of the CB group effect relative to bibliotherapy and full mediation relative to brochure control. The percent reduction in the correlation coefficients was 37% for the CB group compared to the bibliotherapy group and 50% for the CB group compared to the control group.

## Discussion

The objective of this report was to use data from a randomized prevention trial to test whether an indicated depression prevention program that produced reductions in depressive symptoms also resulted in increases in perceived social support. Results indicated that group CB participants showed significantly greater improvements in perceived friend social support through 1-year follow-up relative to both bibliotherapy and brochure controls, but that there were no significant intervention effects for perceived parental support. The significant effects for friend support at 6-month and 1-year follow-up were medium to small in magnitude (Cohen,

**Table 3**  
Test of depression symptoms as a mediator of perceived friend social support.

Criteria	Fixed effects test statistics					
	$\beta$	SE	t-Ratio	df	p-Value	r
1. Effect of the treatment on change in outcome (friend social support)						
CB vs. bibliotherapy	.481	.132	3.66	167	<.001	.27
CB vs. control	.378	.127	2.98	171	.003	.22
2. Effect of the treatment on change in the mediator (depression symptoms)						
CB vs. bibliotherapy	-.275	.058	-4.71	167	<.001	.34
CB vs. control	-.241	.052	-4.66	171	<.001	.34
3. Relation between change in mediator on change in the outcome						
CB vs. bibliotherapy	-.817	.158	-5.16	167	<.001	.37
CB vs. control	-.870	.169	-5.14	171	<.001	.37
4a. Effect of treatment on outcome controlling for change in mediator (pr)						
CB vs. bibliotherapy	.291	.134	2.18	166	.031	.17
CB vs. control	.191	.129	1.49	170	.139	.11
4b. Effect of treatment on outcome, controlling for change in mediator significantly reduced or eliminated compared to effect of the treatment on the outcome						
CB vs. bibliotherapy			4.06	167	<.001	.37
CB vs. control			4.13	171	<.001	.50

Notes. CB = cognitive behavioral,  $\beta$  = beta coefficient; SE = standard error; pr = partial regression coefficient.

1988). Given that the depression prevention intervention increased perceived friend support, but not perceived parental support, we tested whether changes in depressive symptoms mediated the effects of the intervention on changes in perceived friend social support. As hypothesized, we found that intervention condition predicted pre- to post-intervention change in both depressive symptoms and perceived friend support, that change in depressive symptoms predicted change in perceived friend support, and that the effect of CB group on improvements in friend social support was significantly reduced when we controlled for change in depressive symptoms. Results suggested that change in depressive symptoms fully mediated the effects of the CB intervention relative to the control condition, but only partially mediated the effect of the CB intervention relative to bibliotherapy.

The present results extend findings from a prospective risk factor study that found that elevated depressive symptoms predicted a reduction in perceived social support from friends but not parents (Stice et al., 2004). Findings from these two studies support the hypothesis that depression has a more pronounced effect on friend support than on parental support, theoretically because parental support is more unconditional than friend support. It is also possible that the social withdrawal and passivity associated with depression drives away friend support, but has less of an impact on parental support because some modicum of social contact with parents typically remains; also because parents probably perceive a sense of responsibility for providing care for their depressed child, which is not evoked for friends. The means shown in Table 1 confirm that perceived parental support was more stable than perceived friend support. Post hoc analyses confirmed that the 6-week test–retest reliability from pretest to posttest in the control condition was somewhat higher for parental support ( $r = .79$ ) than for friend support ( $r = .75$ ). The fact that effects of the group CB depression prevention program were specific to friend and not parental support also provides evidence that the significant effects are not solely due to demand characteristics, as one would anticipate that these would have been similar for perceived support from both parents and friends.

Results might be construed as providing experimental support for the theory that depressive symptoms are inversely related to perceived social support, in that this prevention program significantly reduced depressive symptoms. The fact that we randomly assigned participants to condition reduces the risk that some unknown confound explained the effects of the intervention on change in social support. The fact that group CB participants showed significantly greater increases in perceived friend support relative to bibliotherapy participants is noteworthy because this suggests that the results are not simply due to demand characteristics or expectancies, as these processes would have been operating in both intervention conditions. It should be noted in this context that we believe the group CB produced superior effects to bibliotherapy with regard to friend support because the former focused on increasing engagement in pleasant activities, including pleasant social activities, in addition to focusing on reducing negative cognitions, which contributed to the greater reductions in depressive symptoms. The findings from the present study and our prior study (Stice et al., 2004) suggest that at least for adolescents the support erosion effect of depression may be limited to perceived support from friends but not parents.

Limitations of this study should be considered. First, we relied on perceived social support rather than objectively measured social support or reports of social support by individuals blinded to experimental condition of the participants. Fortunately, perceived support has been found to correlate with enacted support (e.g., the correlation between perceived parental support and parent-report of support provided was .81 after disattenuating for unreliability;

McCaskill & Lakey, 2000). Further, the possibility that perceptual biases explain the findings is difficult to reconcile with the fact that intervention-related increases were observed in friend but not parental support. Second, we did not include direct measures of negative self-statements, dependency, reassurance seeking, inappropriate/premature disclosure, passivity, or social withdrawal, making it impossible to determine which interpersonal processes affected perceived friend support. Third, we did not conduct frequent assessments of the mediators, which precluded us from being able to determine whether change in depressive symptoms occurred before changes in perceived friend support. Fourth, the CB depression prevention program was relatively brief, which may have limited our ability to test for the effects of an intervention that reduces depressive symptoms on perceived social support. Nonetheless, this brief intervention did result in a reduction in depressive symptoms relative to the two control conditions that corresponded to a medium effect size ( $r = .34$ ), which should have made for a sensitive test of the hypothesis. Indeed, this effect size was larger than the average pre to post effect size for depression prevention programs ( $r = .15$ ) from a meta-analytic review (Stice et al., 2009).

Future studies should include measures of support provision by parents and friends or observational measures. It is possible that parental support that is provided would not be noted by the adolescent; a condition that has been termed “invisible support” by Bolger, Zuckerman, and Kessler (2000), who found that the provision of unnoticed support by a spouse in a married couple promoted positive adjustment to a major stressor. It would also be useful to assess social support provided by other sources, such as siblings and romantic partners. Research should also attempt to measure the specific behaviors that have been theorized to result in support erosion, to determine which of these processes drives the effects of the intervention on improvements in friend social support. It will be particularly important to determine whether decreases in negative behaviors (e.g., reassurance seeking, inappropriate disclosure) or increases in positive behaviors (e.g., social contact seeking, assertiveness) account for increases in social support so that even more effective interventions can be designed. Finally, future experiments might assess the effect of social skills training and interpersonally focused interventions on change in depressive symptoms and whether changes in perceived and received parental and friend support mediate these relations.

Clinically, our findings suggest that adolescents struggling with loneliness or interpersonal conflicts with friends may benefit from a CB intervention for depression. The lack of association between parental support and changes in depression found in this and our earlier study (Stice et al., 2004) may have dual implications. It is encouraging that parental support is not reactive to changes in their child’s depression level. Yet, our results also suggest that parental social support cannot be concurrently increased through improvements in the child’s emotional functioning. Thus it appears that friend social support issues may be at least partially addressed through the adolescent themselves; however, parental social support issues may need to be more directly addressed with the parents.

In conclusion, results from this randomized trial provide support for the theory that depressive symptoms are inversely related to perceived social support. However, findings imply that this process may be specific to friend vs. parental support during adolescence. Finally, we hope the present findings serve as an example of how randomized trials can be used to triangulate effects from naturalistic prospective studies, thereby increasing inferential confidence.

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