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The Bi-Directional Relationship Between Parent–Child Conflict and Treatment Outcome in Treatment-Resistant Adolescent Depression

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Abstract

Objective—To examine the bidirectional relationship between parent–child discord and treatment outcome for adolescent treatment-resistant depression.

Method—Depressed youth who had not responded to an adequate course of a selective serotonin reuptake inhibitor (SSRI) were randomized to either a switch to another SSRI or venlafaxine, with or without the addition of cognitive behavior therapy (CBT) in the Treatment of SSRI-Resistant Depression in Adolescents (TORDIA) study. The Conflict Behavior Questionnaire was used to assess adolescent (CBQ-A) and parent-reported (CBQ-P) parent–child discord. The impact of remission on parent–child conflict, and the differential impact of medication and CBT on the CBQ-A and CBQ-P, were assessed using generalized linear models.

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Results—Although there were no differential treatment effects on parent or adolescent-report of conflict, remission was associated with improvement in the CBQ-P. In general, intake family conflict did not predict remission, except in the sub-group of participants whose parents reported clinically significant parent-child conflict at intake, for whom high levels of parent-reported conflict predicted a lower likelihood of remission. Conflict also did not moderate treatment response.

Conclusions—Remission of depression may be sufficient to reduce parent-reported parent-child conflict. However, higher parent-reported conflict, in the clinically significant range, predicts a lower likelihood of remission from depression. Clinical trial registration information—Treatment of SSRI-Resistant Depression in Adolescents (TORDIA); <http://clinicaltrials.gov/NCT00018902>.

Keywords

parent-child conflict; selective serotonin reuptake inhibitor (SSRI); cognitive behavior therapy (CBT); venlafaxine; depression

Parent-child conflict has been shown to be related to the onset, persistence, and recurrence of depressive disorders in childhood and adolescence.^{1,2} Conversely, the onset of depressive symptoms in a family member increases the likelihood of intra-familial interpersonal conflict.³⁻⁸ In fact, longitudinal studies support a bi-directional relationship between family conflict and depressive symptoms.⁹ Since family conflict is so intimately related to the course of depressive disorder in youth, a better understanding of its role in treatment response could be helpful in improving treatment outcome of depressed adolescents.

The extant treatment literature provides support for a bi-directional relationship between family climate and depressive outcomes. High family conflict and low family cohesion predict a poorer response to the treatment of depression, and a greater likelihood of suicidal events.^{4,10-14} Interventions that target family interactions have been shown to decrease depressive symptomatology in unipolar and bipolar depressed youth,¹⁵⁻¹⁸ with some evidence that improvement in family climate mediates the impact of treatment and that higher levels of family conflict can be positive moderators of treatment outcome.¹⁹⁻²¹ Conversely, improvements in child and adolescent depressive symptomatology can reduce parent-child conflict, even when the intervention does not specifically target family interactions.⁵⁻⁷ In addition, family conflict can be a negative moderator of treatment outcome. Specifically, in the Treatment of Adolescent Depression Study (TADS), an unfavorable adolescent-reported family environment negatively moderated cognitive behavior therapy (CBT) treatment response.¹³

Most of the treatment studies that have examined the role of family conflict with respect to depressive outcome have reported only on baseline family conflict, rather than exploring the longitudinal inter-relationship of family conflict and youth depression over time. Therefore, we sought to examine the longitudinal inter-relationship between the course of depression and family conflict over time in the Treatment of Selective Serotonin Reuptake Inhibitor (SSRI)-Resistant Depression in Adolescents study (TOR-DIA).²² In this study, 334 depressed adolescents who had not responded to an adequate trial with an SSRI were randomized to a switch either to another SSRI or to venlafaxine, with or without the addition of cognitive behavior therapy (CBT). In TORDIA, we found that the addition of CBT to either medication switch was associated with a higher response rate, but there was no differential effect of medication.²² Predictors and correlates of poorer treatment response included more severe depressive symptomatology, history of non-suicidal self-injury, high or increasing alcohol or drug use during treatment, and subsyndromal manic symptoms.^{10,23,24} A history of maltreatment was a negative moderator of CBT response,

whereas the greater the number of comorbid diagnoses, the greater the advantage conveyed by the addition of CBT to medication.^{10,25} Relevant to this study, adolescent-reported family conflict at intake was a predictor of poorer clinical response, suicidal events, and suicidal attempts.^{11,26} However, the interrelationship between treatment response and adolescent and parent reported family conflict over time has not yet been examined in this sample.

Based on the extant literature, we hypothesized the following: that higher levels of adolescent and parent-reported family conflict would predict lack of remission, and would negatively moderate CBT response; that remission would be associated with reductions in parent-child conflict; and that reductions in family conflict would be greatest in those who received a combination of CBT and medication.

METHOD

Participants

Participants consisted of 334 adolescents between 12 and 18 years of age enrolled in the Treatment of SSRI-Resistant Depression in Adolescents (TORDIA) study. The participants had to have a clinical diagnosis of major depressive disorder (MDD) or dysthymia by *DSM-IV* criteria,²⁷ moderate-to-severe depressive symptoms, (≥ 40 on the Children's Depression Rating Scale-Revised [CDRS-R],²⁸ and ≥ 4 on the Clinical Global Impression-Severity Subscale [CGI-S]^{28,29}) which persisted despite an 8-week trial with an SSRI.²² Informed assent/consent was obtained from participants and families as per the Institutional Review Boards of all six sites.

Study

Design Participants were randomly assigned to four treatment groups in a 2×2 balanced design, with a switch in medication to a either another SSRI ($n = 168$) or venlafaxine ($n = 166$), with or without receipt of cognitive behavior therapy (CBT). SSRIs included paroxetine ($n = 50$), citalopram ($n = 34$), and fluoxetine ($n = 84$). Randomization was balanced = both within and across the six sites based on: incoming treatment medication, comorbid anxiety, chronic depression (duration ≥ 24 months), and suicidal ideation (Beck Depression Inventory [BDI] item 9 ≥ 2).³⁰ Participants received 12 weeks of acute treatment; responders continued with the same treatment for an additional 12 weeks, whereas nonresponders received open treatment.

Assessment Measures

Age, sex, race/ethnicity, parental education, and income were assessed by parent and youth report. The School Age Schedule for Affective Disorders and Schizophrenia for School-Aged Children-Present and Lifetime Version (K-SADS)³¹ was used to assess for comorbid diagnosis, onset of current MDD episode, onset of first MDD episode, and duration of depression. Depression remission was defined as at least 3 consecutive weeks without clinically significant depressive symptoms, corresponding to a score of 1 on the Adolescent Longitudinal Interval Follow-Up Evaluation.³² Severity and clinical improvement were assessed using the Clinical Global Impressions-Severity (CGI-S) and Improvement Subscales (CGI-I).²⁹ Overall functioning was assessed using the Child Global Assessment Scale (C-GAS).³³ The 17-item, clinician-rated CDRS-R assessed depressive symptoms in the past 2 weeks, based on information collected from both youth and a parent.²⁸ Self-reported depression, hopelessness, suicidal ideation, alcohol and drug use, and anxiety were assessed using the Beck Depression Inventory (BDI),³⁰ Beck Hopelessness Scale (BHS),³⁴ Suicide Ideation Questionnaire-Junior (SIQ-Jr),³⁵ Drug Use Screening Inventory (DUSI),³⁶ and the Screen for Child Anxiety Related Disorders (SCARED),³⁷ respectively.

Adolescent and parent reports of parent–child conflict were assessed with a 20-item self-report, the Conflict Behavior Questionnaire (CBQ-A and CBQ-P, respectively).³⁸ The CBQ-A and CBQ-P identify family conflict or problems in communication in the past 2 weeks at the home setting with the parent with whom the adolescent had the greatest contact. Items on these two parallel instruments assessed argumentative difficulties, frustration in communication, parental empathy, and general relationship with the parent. The questionnaire was given to adolescent participants at weeks 0, 6, 12, and 24, with 333 adolescents completing at least one CBQ-A during the study. Parents completed the questionnaire at weeks 0, 12, and 24, with 327 parents completing at least one CBQ-P during the study. The Conflict Behavior Questionnaire showed good internal consistency in our sample, both in the adolescent (Cronbach's $\alpha = 0.93$, 95% confidence interval [CI] = 0.92–0.94) and the parent version (Cronbach's $\alpha = 0.92$, 95% CI 0.92–0.93).

In previous studies, CBQ-A's ≤ 9 were associated with clinically significant dyadic distress and recurrence of depression, whereas a CBQ-A ≥ 11 was associated with non-response.^{2,39} The CBQ-P has not been found to be related to depressive outcomes, but a score of ≥ 11 is associated with clinically significant distress in mother–child dyads.³⁹ Higher adolescent reported CBQ scores predicted a longer time to response and a greater risk of recurrence in one psychotherapy study of adolescent depression that compared cognitive, family, and supportive therapy.² In TORDIA, as noted above, the CBQ-A predicted a lower response rate and an increased risk of suicidal events and frank suicide attempts.^{10,26} A higher CBQ-A has been associated with a greater risk for suicidal ideation in pediatric bipolar patients, and with lower self-monitoring in a pediatric obesity study.^{40,41}

Data Analysis

The demographic and clinical correlates of CBQ-A and CBQ-P were examined using Pearson correlations for continuous variables and t tests for categorical variables. Variables that were related both to family conflict and either treatment outcome (CDRS-R trajectory or remission) were included as covariates in subsequent analyses. To examine the impact of baseline family conflict on remission, for example, we conducted logistic regression including relevant covariates, as noted above, the CBQ-A or P, and treatment variables, namely the effects of medication, CBT, and the interactions between treatment variables and conflict. We also conducted analogous analyses with the CDRS-R trajectory as the outcome, using mixed effects regression. Because these findings paralleled those using remission as an outcome, we only report on remission as an outcome.

To examine the effects of remission on family conflict, we conducted mixed effects linear regression with the CBQ-A/P as outcomes, testing for the effects of time, remission, and their interaction. Finally, to discern if there were differential treatment effects on family conflict, we examined the main effects of each treatment assignment, time, and each treatment by time interaction.

RESULTS

Range and Correlates of the CBQ

At entry, participants' scores on the CBQ-A ranged from 0 to 20 (mean 8.92, standard deviation [SD] = 6.21), with 50.5% in the clinically significant range (≥ 9). The CBQ-A was positively correlated with a number of indicators of clinical severity, including global severity (CGI-S), depression (CDRS-R, BDI), hopelessness (BHS), self-harm (SIQ, past attempt, non-suicidal self-harm), and comorbid conditions (alcohol/drug use, disruptive behavior disorders) (Tables 1 and 2). Of these, only the CDRS-R was related to outcome, and so we controlled for baseline CDRS-R in trying to understand the contribution of the

CBQ-A to treatment response. However, because the CDRS-R and the CBQ-A were assessed at the same time, we cannot say whether adolescent-reported family conflict led to greater depressive severity or vice versa.

The CBQ-P ranged from 0 to 20 (mean = 9.48, SD = 5.91), with 45.3% in the clinically significant range (≥ 11). The CBQ-P was related to adolescent reported drug and alcohol use, disruptive behavior disorders, age, and age of onset of depression, but not depression severity or functioning (Tables 1 and 2). However, none of these variables were related to remission, and therefore, were not controlled for in subsequent analyses.

The CBQ-A and CBQ-P were moderately intercorrelated, with inter-correlations of .35, .57, and .42 (p 's $< .001$) at baseline, week 12, and week 24, respectively. If each measure was dichotomized using clinically significant cut-offs, there were statistically significant concordances between the adolescent and parent reports at these three time points ($k = 0.27$, $k = .46$, and $k = .28$; p 's $< .001$).

Impact of Family Conflict on Treatment Outcome—Higher baseline CBQ-A was associated with a decreased likelihood of remission (odds ratio [OR] = 0.96, 95% CI = 0.93–0.99, $z = -2.03$, $p = .04$), but this effect was no longer statistically significant after controlling for baseline CDRS-R ($z = -1.48$, $p = .14$). There was no evidence of a moderating effect of baseline CBQ-A on the effects of medication (interaction, $z = -0.63$, $p = .53$) or CBT ($z = -1.52$, $p = .13$). Stratifying the sample by whether the baseline CBQ-A was clinically significant (≥ 9) did not change these results. The CBQ-P did not show a significant relationship with remission ($z = -0.73$, $p = .47$), nor did it moderate response to CBT or medication (interaction terms, p 's $> .50$). However, among those whose baseline CBQ-P was clinically significant (≥ 11), a higher intake CBQ-P predicted a decreased likelihood of remission (OR = 0.87, 95% CI = 0.77–0.99, $z = -2.15$, $p = .03$).

Impact of Remission on Family Conflict—There were significant main effects of remission on the CBQ-A ($z = -2.68$, $p = .007$), and on time ($z = -4.48$, $p < .001$), but no significant interaction between remission and time ($z = -0.65$, $p = .52$) (Figure 1a). Repeating these analyses after stratifying on whether the baseline CBQ-A was in the clinically significant range did not change these results (p 's $\geq .08$). In contrast, although remission showed a non-significant main effect on CBQ-P ($z = -1.77$, $p = .08$), there was a significant main effect of time ($z = -2.70$, $p = .007$), as well as a significant remission $\times$ time interaction ($z = -2.20$, $p = .03$), meaning that those who remitted showed a more rapid decline in parent-reported parent–child conflict (Figure 1b). This significant remission $\times$ time interaction was statistically significant, regardless of whether the baseline CBQ-P was above or below the clinically significant threshold (p 's $\geq .01$).

Impact of Medication and CBT on Family Conflict—There were no main effects of medication, CBT, or their interaction on CBQ-A, nor were there interactions between any of the treatment terms and time (p 's $> .20$) (Figure 2a). For the CBQ-P, there was a main effect of CBT ($z = -2.64$, $p = .008$), and time ($z = -3.07$, $p = .002$), but no significant main effect of medication or interactions with time (p 's $> .27$) (Figure 2b). These results mean that those assigned to CBT had higher baseline CBQ-P scores, but that there was no differential effect of CBT or of either medication on the change in CBQ-P over time.

DISCUSSION

In this article, we have examined the extent to which adolescent and parent-reported parent–child conflict predicted or moderated treatment response and, conversely, the degree to which treatments for depression affected parent–child conflict. We found that treatment

effects were relatively unaffected by parent–child conflict, as reported by either parent or adolescent. Adolescent-reported parent–child conflict at baseline did predict a lower likelihood of remission, but not after controlling for its correlation with greater initial depression severity. Among those whose parent-rated conflict was in the clinically significant range, higher parent-reported conflict predicted a lower probability of remission. There were no differential treatment effects of family conflict on treatment response. Conversely, there were no differential treatment effects on family conflict; but, overall, parents whose adolescents experienced remission from their depression reported a decrease in parent-reported parent–child conflict.

The most clinically significant finding in this secondary analysis was that the achievement of remission was associated with a greater reduction in parent-reported parent–child conflict, compared to those youths who did not attain remission. This was true regardless of whether the initial parental rating of conflict was or was not in the clinically significant range, and family conflict was reduced even in treatments, such as medication, that clearly did not target family interactions. Other treatment studies have also reported that a reduction in depressive symptoms was associated with a reduction in family conflict, even if the treatment was individually oriented CBT or antidepressant medication.^{5–7}

On the other hand, high levels of parent reported parent–child discord predicted a lower probability of remission, at least in the subgroup of participants whose parents reported clinically significant parent–child discord. This is consistent with other naturalistic and treatment studies showing a relationship between family conflict, and either poor response, or with continued depression.^{1,2,4,42} These findings are also consistent with studies showing that treatments that target parent–child dyadic conflict are most effective in higher-conflict families, and that improvements in parent–child relationships may mediate improvement in child depressive symptoms.^{19–21}

We did not find any differential effects of family conflict on treatment response. This is in contrast to a report from the TADS study, which found that an adverse adolescent-reported family climate had a somewhat greater negative impact on CBT response than on medication effects.¹³ There are several other studies in the literature showing that contextual factors, such as parental depression or a past history of abuse, can negatively and specifically affect the response of CBT.^{10,25,43–45} In contrast, in studies of interventions that directly target family discord, such as interpersonal therapy for adolescents or family-focused therapy for bipolar youth, when compared with an alternative condition, the effects of these treatments are actually stronger in those youths whose families have high levels of interpersonal conflict.^{19,21}

This study is one of the few that examines the impact of family conflict from both a parent and child perspective on treatment outcome, tests whether parent–child conflict moderates treatment response, and assesses the longitudinal impact of treatment on parent–child conflict as well. However, the study is limited by the assessment of parent–child conflict using one paper-and-pencil measure in contrast to observational measures. In addition, we did not assess other relevant measures of family climate, such as support, attachment, cohesion, expressed emotion, and adaptability, that have been linked to depressive and related clinical outcomes in youth.^{1,13,14,17,19,20,46}

Our findings suggest that the effects of medication and CBT for adolescent depression are relatively robust to the impact of parent–child discord, at least in youths with treatment-resistant depression. It also appears that improvements in depression symptoms per se may often be sufficient to relieve parent–child discord, at least from the parental perspective. This is clinically useful because often parents are distressed about parent–child discord

brought on in part by their adolescent's irritability. These data support trying to treat the adolescent's depression first, because often discord will decline along with symptom relief. However, these data suggest that one exception to this view is when there is very high parent-reported discord, in which case the child's depression is unlikely to remit, and therefore suggests the need to prioritize interventions that will ameliorate family climate. Moreover, these data, along with those from TADS, suggest that CBT, with its primary individual focus, is not likely to be effective in relieving high levels of parent-reported family discord. Future research to evaluate the role, timing, and sequencing of family interventions in the treatment of adolescent depression are indicated. &

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Clinical Guidance

- Adolescents with treatment-resistant depression were less likely to remit if their parents reported very high levels of conflict with their depressed adolescents.
- If the adolescents' depression did remit, there was a decline in parent-reported teen–parent conflict.
- This suggests that very high levels of parent–child discord should be addressed early in treatment, but that more moderate levels of discord may be a consequence of the adolescent's depression and may decline along with improvement in symptomatology.

FIGURE 1.

Impact of remission on family conflict. Note: Error bars: 95% confidence interval. CBQ-A Conflict Behavior Questionnaire–Adolescent³⁸; CBQ-P=Conflict Behavior Questionnaire–Parent³⁸.

FIGURE 2.

Impact of medication and cognitive behavioral therapy (CBT) on family conflict. Note: Error bars: 95% confidence interval. CBQ-A=Conflict Behavior Questionnaire–Adolescent³⁸; CBQ-P=Conflict Behavior Questionnaire–Parent³⁸; SSRI=selective serotonin reuptake inhibitor.

TABLE 1

Baseline Correlates of Baseline Family Conflict: Continuous Variables

Correlates of Conflict Behavior Questionnaire—Adolescent (CBQ-A)	Pearson r	p
Clinical Global Impressions–Severity Subscale (CGI-S) ²⁹	0.15	.006
Child Global Assessment Scale (CGAS) ³³	–0.23	<.001
Child Depression Rating Scale–Revised (CDRS-R) ²⁸	0.24	<.001
Beck Depression Inventory (BDI) ³⁰	0.37	<.001
Beck Hopelessness Scale (BHI) ³⁴	0.28	<.001
Suicide Ideation Questionnaire–Junior (SIQ-Jr) ³⁵	0.26	<.001
Alcohol/substance impairment ^a	0.18	.001
Correlates of Conflict Behavior Questionnaire–Parent (CBQ-P)	Pearson r	p
Age	–0.16	.003
Age at onset of major depressive disorder (MDD)	–0.18	.002

Note:

^a Assessed using the Drug Use Screening Inventory (DUSI).³⁶

TABLE 2

Baseline Correlates of Baseline Family Conflict: Dichotomous Variables

Correlates of Conflict Behavior Questionnaire–Adolescent (CBQ-A)	No^a	Yes^a	t	df	p
Gender (male)	7.8 (6.1)	9.4 (6.2)	−2.17	325	.03
Alcohol/substance use	7.5 (6.1)	10.0 (6.1)	−3.62	321	<.001
History of suicide attempts	8.4 (6.1)	10.6 (6.4)	−2.65	324	.008
History of non-suicidal self-injury	8.0 (6.2)	10.4 (6.1)	−3.41	320	.001
Disruptive behavior disorder	8.7 (6.2)	11.1 (6.1)	−2.05	321	.04
Correlates of Conflict Behavior Questionnaire–Parent (CBQ-P)	No^a	Yes^a	t	df	p
Alcohol/substance use ^b	8.5 (6.0)	10.3 (5.7)	−2.77	312	.006
Disruptive behavior disorder	9.0 (5.6)	13.5 (5.1)	−4.03	312	<.001

Note:

^aMean (SD) CBQ score for each group.^bAssessed using the Drug Use Screening Inventory (DUSI).³⁶