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Cognitive-behavioral therapy plus motivational interviewing improves outcome for pediatric obsessive-compulsive disorder: A preliminary study

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Abstract

Lack of motivation may negatively impact cognitive behavioral therapy (CBT) response for pediatric patients with obsessive-compulsive disorder (OCD). Motivational interviewing is a method for interacting with patients in order to decrease their ambivalence and support their self-efficacy in their efforts at behavior change. This paper presents a preliminary randomized trial (N = 16) to evaluate the effectiveness of adding motivational interviewing (MI) as an adjunct to CBT. Patients aged 6–17 who were participating in intensive family-based CBT for OCD were randomized to receive either CBT plus MI or CBT plus extra psychoeducation sessions. Results indicated that after 4 sessions, the mean CY-BOCS score for the CBT+MI group was significantly lower than for the CBT +psychoeducation group ($t(14) = 2.51$, $p < .03$, Cohen's $d = 1.34$). In addition, the degree of reduction in CY-BOCS scores was significantly greater ($t(14) = 2.14$, $p = .05$, Cohen's $d = 1.02$) for the CBT +MI group (mean change = 16.75, $SD = 9.66$) than for the CBT+psychoeducation group (mean change = 8.13, $SD = 6.01$). This effect decreased over time, and scores at post-treatment were not significantly different. However, participants in the MI group completed treatment on average three sessions earlier than those in the psychoeducation group, providing support for the utility of MI in facilitating rapid improvement and minimizing the burden of treatment for families.

Keywords

Children; Anxiety; Treatment outcome; Psychotherapy

Introduction

Cognitive-behavioral therapy (CBT), alone or with concurrent pharmacotherapy, is the first-line treatment for pediatric obsessive-compulsive disorder (OCD; POTS, 2004); however, CBT is not effective for all youth. Positive treatment response has been associated with the patient's investment and participation in the therapeutic process (March, Franklin, Nelson, & Foa, 2001), but some children display less willingness to follow therapist instructions and others lack the self-confidence to attempt exposures and homework assignments. Research with adult OCD patients (Purdon, Rowa, & Antony, 2004) indicates that fears about treatment contribute to refusal and attrition. Clinical experience suggests that children with OCD feel their rituals keep them "safer" or make them "better" in some way, and many report experiencing secondary gain from their OCD symptoms. These patients may feel ambivalent about receiving treatment, as they perceive potential negative consequences.

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Motivational interviewing (MI) is a therapeutic intervention used to help patients resolve ambivalence and promote motivation for change (Miller & Rollnick, 2002). It has been utilized successfully as part of a "readiness intervention" to encourage treatment acceptance for adult OCD patients (Maltby & Tolin, 2005) and to improve treatment outcome for adults in CBT for mixed anxiety/depression (Westra, 2004). No published studies have examined the use of MI plus CBT for pediatric OCD patients; however, age differences may exist. For example, adult patients typically assume personal responsibility for attending treatment; whereas, pediatric patients are brought to sessions (sometimes unwillingly) by their parents. Thus, for children there is likely a greater need for MI related to treatment compliance once therapy has begun. This study examined the effectiveness of adding MI to a standard course of CBT for pediatric OCD.

Methods

Participants were 16 children (62.5% male) ranging in age from 6–17 years (M = 13.3; SD = 3.0), who were recruited from the general flow of pediatric OCD patients presenting for intensive CBT at a university-based clinic. Consistent with the clinic demographics, the sample included 13 Caucasian children (81.3%), 2 Hispanic children (12.5%), and 1 child of mixed racial background (6.3%). All children had a primary diagnosis of OCD made by the first or second author, using all available clinical information and confirmed by an independent evaluator (IE) using a standardized diagnostic interview. Specific inclusion criteria consisted of a Children's Yale-Brown Obsessive-Compulsive Scale (CY-BOCS) Total Score ≥ 16 and stability of psychotropic medication (if applicable) for at least eight weeks prior to baseline. Participants were excluded if they had a comorbid psychotic disorder, bipolar disorder, or autism, or if they were unable to complete the study questionnaires.

Several measures were included in the assessments. The Anxiety Disorders Interview Schedule for Children-Parent Version (ADIS-C/P: Silverman & Albano, 1996) is a structured interview that was used to confirm diagnoses of OCD and other common psychiatric disorders. The ADIS-C/P has demonstrated good reliability and validity (Wood, Piacentini, Bergman, McCracken, & Barrios, 2002). The Children's Yale-Brown Obsessive-Compulsive Scale (CY-BOCS: Scahill et al., 1997) is a clinician-administered, 10-item semi-structured measure that was used to assess obsession and compulsion severity over the previous week. The CY-BOCS has excellent psychometric properties (Scahill et al., 1997). The Clinical Global Impression-Severity scale (CGI-S: National Institute of Mental Health, 1985) is a clinician rating scale that was used to determine severity of OCD symptoms. Ratings range from 1 ("no illness") to 7 ("extremely severe"). Finally, the Clinical Global Improvement scale (CGI: Guy, 1976) is a 1-item, clinician rating that was used at post-treatment to determine treatment response on a 7-point scale ranging from 1 ("very much improved") to 7 ("very much worse").

All study procedures were approved by the local Institutional Review Board. After obtaining written informed consent and assent, families were randomized to either CBT+MI or CBT +psychoeducation, and an IE who was blind to study condition completed the assessment. Both treatment groups were administered all measures immediately before treatment and immediately after treatment. In addition, the CY-BOCS was administered at session 5 (after 1 week of intensive treatment) and after session 9 (after two weeks of intensive treatment) to track progress during treatment. Intensive family-based CBT was conducted by trained clinicians following the protocol described by Lewin et al. (2005). Supervision was provided by the first or second author following each session, in order to ensure adherence to the treatment protocol. All patients were allotted up to 14 sessions (90 minutes each) over three weeks. Sessions included psychoeducation, cognitive training, and exposure/response prevention exercises specific to each youth.

The experimental component of the study involved randomizing each child to receive either three MI sessions or three additional psychoeducational (control) sessions as an adjunct to their CBT. Both the MI sessions and the control sessions took place immediately before sessions 1, 4, and 8 and lasted 20–30 minutes. Adjunct sessions were provided before session 1 because many patients express significant hesitation when engaging in their first exposure, at session 4 because patients are given a great deal of "homework" exposures to practice on their own over the weekend (i.e., immediately following session 4), and before session 8, because it is at this point that most patients begin to reach the highest levels on their hierarchies. MI sessions were conducted by the first author, who has significant training and experience in this approach. Sessions focused on the patient's view of his OCD symptoms and treatment participation. Staging rulers assessing importance and confidence were utilized, along with decisional balance worksheets. When appropriate, participants were encouraged to develop a goal statement. MI interventions were tailored to meet the needs of each particular family, based on developmental considerations. Psychoeducational (control) sessions were conducted by the CBT therapist and followed a basic treatment manual developed for this study. Psychoeducational sessions focused on providing additional information about OCD and OCD symptoms.

Results

At baseline, there were no group differences in demographics or CY-BOCS total score. As seen in Table 1, at session 5, the mean CY-BOCS score for the MI group was significantly lower than for the psychoeducation group. The reduction from baseline to session 5 was significantly greater ($t(14) = 2.14$, $p = .05$, $d = 1.02$) for the MI group (mean change = 16.75, $SD = 9.66$) than for the psychoeducation group (mean change = 8.13, $SD = 6.01$). After session 9, the MI group's mean CY-BOCS score remained significantly lower than the psychoeducation group's score. The MI group also showed a trend ($t(14) = 1.82$, $p = .09$, $d = 0.97$) toward greater CY-BOCS reduction from baseline to session 9 (mean change = 21.38, $SD = 9.12$) relative to the psychoeducation group (mean change = 13.13, $SD = 9.01$).

At post-treatment, neither the mean CY-BOCS total scores nor the change scores for the two groups were significantly different. There was no significant difference in CGI-Severity score between the two groups, though the medium-sized effect favored the MI group ($t(14) = 0.91$, $p = .38$, $d = 0.49$). The MI group demonstrated a mean CGI-Severity score of 2.38 ($SD = 1.06$), and the psychoeducation group demonstrated a mean score of 2.88 ($SD = 1.13$). With regard to the CGI-Improvement scores, both groups displayed mean improvement ratings between 1 "very much improved" and 2 "much improved," with no significant difference. Total number of sessions attended ranged from 9–14 ($M = 12.25$, $SD = 2.02$). There was a significant difference between groups in the number of therapy sessions attended ($t(14) = 4.49$, $p < .001$, $d = 2.4$). On average, participants in the MI group attended 10.75 sessions ($SD = 1.75$); whereas, participants in the psychoeducation group attended an average of 13.75 sessions ($SD = 0.71$). It is noteworthy that no patients in the MI group discontinued treatment against the advice of their therapist; rather, some patients who achieved optimum treatment gains terminated early in order to save on cost. Because many patients traveled long distances, this allowed them to minimize costs associated with hotels, restaurants, extra therapy sessions, and time away from work/school.

Discussion

The results of this study, though preliminary in nature, have important implications for clinical practice. The data suggest that addressing pediatric patients' ambivalence about OCD treatment and supporting their self-efficacy to "fight" OCD may accelerate treatment progress. In addition, although OCD severity ratings at post-treatment were generally similar across groups,

it is notable that participants in the MI arm required an average of 3 fewer sessions than participants in the control condition to achieve treatment gains. Though results of the present study are promising, several limitations should be noted. First, given the small sample size, we did not have power to detect small group differences. However, effect sizes were relatively large for a number of analyses, which is particularly noteworthy when considering that two active treatments were being compared. Indeed, Kazdin and Bass (1989) have suggested that an effect size of 0.5 be considered clinically meaningful when comparing two active treatments. Second, although blinded to treatment condition, raters were aware that participants were receiving treatment. Third, as recruitment took place at only one clinic and the majority of youth were Caucasian, the generalizability of our findings may be limited. Finally, we did not employ a follow-up assessment to assess the durability of gains. Future research should assess how patients in the MI condition fare after treatment is discontinued. Within these limitations, the present study suggests that an adjunctive MI intervention has utility in improving outcome, facilitating more rapid improvement, and reducing the number of sessions needed by youth to achieve clinically relevant outcomes.

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Table 1

CY-BOCS Ratings Across Treatment

Group	Baseline		Session 5		Session 9		Post-Treatment	
	M	***(SD)***	***M***	***(SD)***	***M***	***(SD)***	***M***	***(SD)***
CBT+MI	31.00	(4.66)	14.25	(9.17)	9.63	(7.73)	9.38	(8.19)
CBT+ Psychoeducation	27.36	(11.78)	22.88	(3.23)	17.88	(7.16)	12.38	(7.89)
	$t(14) = 0.81$		$t(14) = 2.51$		$t(14) = 2.22$		$t(14) = -0.75$	
	$p = .43$		$p < .03$, $d = 1.34$		$p = .04$, $d = 1.18$		$p = .47$	

Note. CBT+MI = experimental group receiving cognitive behavioral therapy plus 3 sessions of motivational interviewing; CBT+Psychoeducation = attention control group receiving cognitive behavioral therapy plus 3 sessions of psychoeducation.