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Research paper

Longitudinal social-interpersonal functioning among higher-risk responders to acute-phase cognitive therapy for recurrent major depressive disorder

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ABSTRACT

Background: Social-interpersonal dysfunction increases disability in major depressive disorder (MDD). Here we clarified the durability of improvements in social-interpersonal functioning made during acute-phase cognitive therapy (CT), whether continuation CT (C-CT) or fluoxetine (FLX) further improved functioning, and relations of functioning with depressive symptoms and relapse/recurrence.
Method: Adult outpatients ($N=241$) with recurrent MDD who responded to acute-phase CT with higher risk of relapse (due to unstable or partial remission) were randomized to 8 months of C-CT, FLX, or pill placebo plus clinical management (PBO) and followed 24 additional months. We analyzed repeated measures of patients' social adjustment, interpersonal problems, dyadic adjustment, depressive symptoms, and major depressive relapse/recurrence.
Results: Large improvements in social-interpersonal functioning occurring during acute-phase CT (median $d=1.4$) were maintained, with many patients (median=66%) scoring in normal ranges for 32 months. Social-interpersonal functioning did not differ significantly among C-CT, FLX, and PBO arms. Beyond concurrently measured residual symptoms, deterioration in social-interpersonal functioning preceded and predicted upticks in depressive symptoms and major depressive relapse/recurrence.
Limitations: Results may not generalize to other patient populations, treatment protocols, or measures of social-interpersonal functioning. Mechanisms of risk connecting poorer social-interpersonal functioning with depression were not studied.
Conclusions: Average improvements in social-interpersonal functioning among higher-risk responders to acute phase CT are durable for 32 months. After acute-phase CT, C-CT or FLX may not further improve social-interpersonal functioning. Among acute-phase CT responders, deteriorating social-interpersonal functioning provides a clear, measurable signal of risk for impending major depressive relapse/recurrence and opportunity for preemptive intervention.

1. Introduction

Major depressive disorder (MDD) a leading cause of disability worldwide, partly due to social-interpersonal dysfunction (e.g., difficulty fulfilling social roles as a worker, parent, or friend) accompanying depressive episodes and residual symptoms (American Psychiatric Association, 2013; Collins et al., 2011; Kessler et al., 2014). During acute-phase cognitive therapy (CT) or pharmacotherapy, social-interpersonal functioning improves, but only about half to three-quarters as much as depressive symptoms decrease (e.g., Hirschfeld et al., 2002; Lin et al., 2015; Renner et al., 2014; Vittengl et al., 2004; Zu et al., 2014). After acute-phase treatment for MDD, continuation and maintenance treatments reduce depressive relapse and recurrence, respectively (Biesheuvel-Leliefeld et al., 2015; Borges et al., 2014; Jarrett et al., 2013a). However, relatively few social-interpersonal functioning data are available after acute-phase treatment ends. Here we analyzed social-interpersonal functioning among 241 adult outpatients with recurrent MDD who responded to acute-phase CT with higher risk of relapse (due to unstable or partial remission) and were randomized to 8 months of continuation CT (C-CT),

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fluoxetine (FLX), or pill placebo with clinical management (PBO) and followed 24 additional months (Jarrett et al., 2013a). We aimed to clarify the durability of initial improvements in social-interpersonal functioning, effects of continuation treatments on functioning, and relations of functioning with depressive symptoms and relapse/recurrence.

Relations between social-interpersonal functioning and depression likely are bidirectional. Depressive symptoms may produce functional impairment via several processes. For example, neurocognitive deficits in depression, including poor attention and memory (Lam et al., 2014) and impaired social cognition (Weightman et al., 2014), may inhibit or disrupt social-interpersonal functioning. In addition, low positive emotionality (e.g., low energy, diminished enthusiasm), which is characteristic of depression, may reduce reinforcement-seeking behaviors such as socializing and working (Watson et al., 1992). Lower positive emotionality was a risk factor for poorer long-term outcomes among acute-phase CT responders in a previous trial (Vittengl et al., 2010) and in the current dataset (Vittengl et al., 2015).

Social-interpersonal dysfunction may also lead to onset and maintenance of depression. For example, the absence or end of high-quality social relationships (e.g., due to bereavement, divorce, geographic relocation) predicts poorer physical and mental health (Baumeister and Leary, 1995; Baumeister, 2012) and increased risk for suicide (Tsai et al., 2015). Similarly, social skills deficits (e.g., in speech content and style, facial expressions, gaze) may precede depression and be important treatment targets (Segrin, 2000, 2011). Moreover, social-interpersonal rejection reduces self-esteem (Leary, 2012), which correlates substantially with depression (Sowislo and Orth, 2013). Finally, pre-treatment social-interpersonal dysfunction predicted non-response to acute-phase CT in the current dataset (Jarrett et al., 2013b).

Social-interpersonal functioning improves less, and more slowly, and do depressive symptoms during acute-phase cognitive therapy (Vittengl et al., 2004) or pharmacotherapy (Lin et al., 2015; Zu et al., 2014) for depression. For example, medians of 27% of patients entered and 63% exited acute-phase CT with normal-range social-interpersonal functioning in a previous trial (Vittengl et al., 2004). Further, reductions in depressive symptoms account for most of the pre-post change in social-interpersonal functioning in both acute-phase CT and pharmacotherapy (Hirschfeld et al., 2002; Vittengl et al., 2004). Similar patterns were apparent during acute phase CT in the current dataset (Dunn et al., 2012). In sum, many patients continue to experience significant social-interpersonal impairment at the end of acute-phase CT or pharmacotherapy for depression (Hirschfeld et al., 2002; Kennedy et al., 2007; Vittengl et al., 2004), and this impairment predicts poorer longer-term outcomes (e.g., Solomon et al., 2004; Vittengl et al., 2010).

Less is known about patients' social-interpersonal functioning months-years after acute-phase treatment for depression, including the effects of continuation and maintenance treatments. Maintenance pharmacotherapy has improved social-interpersonal functioning relative to pill placebo in several trials (e.g., Sambunaris et al., 2014; Trivedi et al., 2010). But maintenance pharmacotherapy infrequently produced normal-range social-interpersonal functioning among patients with chronic depression in one trial (Kocsis et al., 2002). Moreover, patients switched from combined treatment (interpersonal psychotherapy plus pharmacotherapy) to maintenance monotherapy (psychotherapy or pharmacotherapy alone) experienced deteriorating functioning (Lenze et al., 2002). Finally, in a prior study of acute-phase CT responders, improved functioning endured for two years, on average. Among these acute-phase CT responders, C-CT did not improve functioning relative to assessment control, and social-interpersonal functioning deteriorated before major depressive relapse/recurrence (Vittengl et al., 2004, 2009).

In this context, the current analyses aimed to clarify social-interpersonal functioning after response to acute-phase CT for depression. We analyzed data from 241 patients with recurrent MDD who responded to acute-phase CT, were judged to be at increased risk for relapse due to unstable or partial remission, were randomized to 8 months of continuation treatment (C-CT, FLX or PBO), and were assessed up to 24 additional months (Jarrett et al., 2013a). We tested (1) durability of improvements in social-interpersonal functioning made during acute-phase CT, including the proportion of patients with "healthy" or normal-range functioning; (2) whether continuation treatment with CCT or FLX further improved functioning relative to PBO; and (3) whether social-interpersonal dysfunction was a leading indicator of upticks (i.e., "blips" or small increases) in depressive symptoms and of major depressive relapse/recurrence.

2. Method

2.1. Participants

A two-site randomized clinical trial described in detail by Jarrett and Thase (2010) and Jarrett et al. (2013a) provided data in accordance with ethical standards and institutional review board approvals. Outpatients participated if they (a) provided written informed consent; (b) met criteria for recurrent MDD (American Psychiatric Association, 2000) on the Structured Clinical Interview (First et al., 1996); (c) had remitted between previous depressive episodes, had ≥ 1 depressive episode with complete inter-episode recovery, or had antecedent dysthymic disorder; (d) had 17-item Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960) scores ≥ 14[1]; and (e) were ≥ 18 and ≤ 70 years old. Exclusionary criteria were (a) poorly controlled or severe concurrent medical disorders possibly causing depression; (b) organic or psychotic mental disorders, active substance dependence, bipolar disorder, or primary eating or obsessive-compulsive disorders; (c) inability to complete questionnaires in English; (d) active suicide risk; (e) history of non-response to ≥ 8 weeks of CT or 6 weeks of fluoxetine; or (f) current pregnancy or planned pregnancy within 11 months after intake.

The current analyses focused on 241 responders to acute phase CT, who were judged to be at increased risk for relapse/recurrence (Jarrett and Thase, 2010), and who consented to an experimental continuation treatment protocol described following. These 241 patients were $M=43$ ($SD=12$) years old and had completed $M=16$ ($SD=3$) years of education; 67% were women; 85% were white, 8% black, and 8% other ethnicities. Patients' mean age of MDD onset was 21 ($SD=10$) years, and their major depressive episode had lasted $M=24$ (median $=9$, $SD=44$) months at intake.

2.2. Acute phase

Patients were withdrawn from any psychotropic medications before, and were not prescribed medications during, the acute phase. Cognitive therapists ($N=16$) completed ≥ 1 year of CT training and demonstrated competence via Cognitive Therapy Scale (Young and Beck, 1980) scores ≥ 40. Therapists submitted session videotapes for review and participated in weekly group supervision/feedback sessions. The acute-phase CT protocol included 16 or 20 CT sessions over 12 weeks, with 2 additional weeks allowed for rescheduling. Participants first received

[1] Two patients erroneously entered CT with HRSD = 13 at one of two diagnostic visits due to a scoring error. One patient responded and one dropped out during CT. Following Data Safety and Monitoring Board (DSMB) recommendations, the two patients are analyzed here as they were treated during data collection.