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Psychotic Depression, Posttraumatic Stress Disorder, and Engagement in Cognitive-Behavioral Therapy within an Outpatient Sample of Adults with Serious Mental Illness

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Abstract

Depression with psychotic features afflicts a substantial number of people, and has been characterized by significantly greater impairment, higher levels of dysfunctional beliefs, and poorer response to psychopharmacological and psychosocial interventions than non-psychotic depression. Those with psychotic depression also experience a host of co-occurring disorders, including post-traumatic stress disorder (PTSD), which is not surprising, given the established relationships between trauma exposure and increased rates of psychosis, and between PTSD and major depression.

To date, there has been very limited research on the psychosocial treatment of psychotic depression, and even less is known about those who also suffer from PTSD. The purpose of this study was to better understand the rates and clinical correlates of psychotic depression in those with PTSD. Clinical and symptom characteristics of 20 individuals with psychotic depression and 46 with non-psychotic depression, all with PTSD, were compared prior to receiving CBT for PTSD treatment or TAU. Patients with psychotic depression exhibited significantly higher levels of depression and anxiety, a weaker perceived therapeutic alliance with their case managers, more exposure to traumatic events and more negative beliefs related to their traumatic experiences, as well as increased levels of maladaptive cognitions about themselves and the world, compared to participants without psychosis. Implications for CBT treatment aimed at dysfunctional thinking for this population are discussed.

Introduction

Major depression is a common disorder, with a lifetime prevalence rate of about 16% in the general population (1). The prevalence of the psychotic depression subtype (2) is less well established, although studies of inpatients indicate between 15 and 25 percent of those with major depression experience psychotic symptoms (3,4). Psychotic major depression (PMD),

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characterized by the presence of hallucinations and/or delusions during an episode of depression, is often under-diagnosed or misdiagnosed (5). Individuals with PMD may underreport their psychotic symptoms, and these symptoms may also be more subtle in patients with depression than in those with schizophrenia-spectrum diagnoses. Furthermore, patients with PMD often have other co-occurring psychiatric disorders, which makes differential diagnosis difficult (6).

Despite the potential difficulty in detection, PMD has been found to be associated with greater severity and impairment than nonpsychotic major depression (NPD) (7,8). Research suggests that those with PMD tend to have higher rates of vegetative symptoms such as appetite disturbance, weight loss, insomnia, fatigue, and psychomotor agitation or retardation. These patients also have greater severity of depressed mood, concentration difficulties, guilt, feelings of worthlessness, hopelessness, suicidal ideation (6), and maladaptive cognitions. Gaudiano and colleagues (9) reported that after statistically controlling for depression severity and demographic characteristics that the endorsement of dysfunctional beliefs was the strongest clinical feature that discriminated patients with PMD from NPD. The most distinguishing thoughts were those related to increased suicidal ideation and poorer overall functioning. Not surprisingly, individuals with PMD tend to have higher relapse and hospitalization rates than those with NPD (10,11). All of these aforementioned poor prognostic variable outcomes are related to an overall poorer response to pharmacologic treatment (12).

Complicating the treatment and prognostic picture for those with PMD is the increased rate of co-occurring disorders, such as cluster A personality disorders (6,11) and anxiety disorders, including phobias (3,13,14), obsessive-compulsive disorder (OCD) (Gaudiano et al, 2009), and posttraumatic stress disorder (PTSD) (14,15).

The problem of PTSD is a particular concern for people with PMD. Major depression is the most common comorbid disorder with PTSD (16,17), and trauma exposure is an established predictor of psychotic symptoms in epidemiological surveys (18-20). Not surprisingly, persons with severe mental illness are much more likely to have been exposed to traumatic events over their lifetime (21-24) and to have PTSD compared to the general population (25-30). In fact, Zimmerman & Mattia (15) found that individuals with major depression who also experience auditory hallucinations are four times more likely to have co-occurring PTSD than those with nonpsychotic depression. Comorbid PTSD in people with severe mental illness has been linked to a range of worse outcomes, including increased symptom severity, inpatient hospitalizations, and homelessness, greater functional impairment, higher levels of associated distress, and poorer overall health (31,32). Taken together, it has been suggested that there may be a causal pathway from early traumatic events and the subsequent development of a psychotic spectrum disorder, including PMD (33).

The associations between trauma, severe mental illness, depression, psychosis, and PTSD raise the question of whether people with PMD have consistently higher rates of PTSD than those with NPD. In addition to the Zimmerman and Mattia (15) study, in an additional investigation with outpatients with clinical depression, those with PMD had significantly higher rates of PTSD than did the NPD group (57% versus 25%, respectively) (14). More recently, Gaudiano and Zimmerman (34) examined clinical characteristics of three groups: those with PMD and co-occurring PTSD, those with NPD and PTSD, and those with PMD without PTSD. Between the PMD PTSD group and the NPD PTSD group, they found greater overall clinical severity in the PMD with PTSD group, including greater (and more chronic) depression, higher levels of suicidal ideation, past suicide attempts, and more past psychiatric hospitalizations. Greater functional impairment in the PMD with PTSD was evidenced as well by lower GAF scores, more chronic work impairment, and poorer social

functioning. While neither severity of PTSD symptoms between the NPD and PTSD groups nor degree of trauma exposure were measured, no significant group difference in type of trauma experienced was found. The Gaudiano and Zimmerman study further exemplifies the severe impairment experienced by those with have co-occurring PTSD and PMD, compared to those with non-psychotic depression. However, more research is needed to evaluate the extent to which PMD is present in patients with serious mental illness and PTSD, its clinical correlates, and whether these individuals respond differentially to treatments for PTSD.

To date, there has been very limited research into psychosocial treatment of PMD. Results from a short-term Acceptance and Commitment Therapy (ACT) pilot study of a small sample of PMD inpatients (n=9) suggested clinically significant reductions in overall symptom severity, mood symptoms, and hallucination-related distress, but no improvements in the severity of psychotic symptoms (35). In another study, Gaudiano and colleagues (36) pooled data from two randomized controlled trials of treatment for major depression testing combined pharmacotherapy and psychotherapy in which patients received either standard cognitive-behavioral therapy, social skills training, or family therapy in conjunction with medications. At post-treatment, the subgroup of PMD patients (all of whom had received combined pharmacotherapy and one of the psychotherapy conditions) had four times the level of depression and suicidality compared to those without psychosis. This dramatic difference has lead some researchers to suggest that current combined treatment approaches, although robust in their success with NPD, may be less effective for those with PMD. A call has been made for the development and testing of specially-tailored treatments to meet the unique needs of this population (36). While development of new psychosocial interventions may be helpful, Gaudiano's finding that patients with PMD had higher levels of dysfunctional beliefs, which are predictive of a poorer outcome, suggests that cognitive-behavioral interventions that explicitly target dysfunctional thinking styles may be of particular benefit.

In addition to examining the effects of particular treatment approaches for those with PMD, it is also important to evaluate the degree to which these patients accept, or engage in, these interventions. While there have not been, to our knowledge, systematic statistical evaluations of overall dropout rates in CBT, a few earlier studies examining CBT for (non-psychotic) depression provide data about engagement rates. Hollon and colleagues (1992) (37) found that approximately 36% of their sample of depressed patients ended CBT prematurely. Similarly, results from the NIH Treatment of Depression Collaborative Research Program (38) revealed that 32% of their sample with major depressive disorder discontinued CBT prior to the designated end of treatment. There is less known regarding treatment engagement for those with psychotic depression (in large part because there has been limited investigation into psychosocial interventions for this population). Within the pooled RCT study described above (36), rates of dropout within the PMD (14%) versus NPD (15%) groups were not significantly different; and within the small ACT study (35), engagement rates were not reported. Given these limited data on effective psychosocial treatments for PMD (and especially for those who have co-occurring PTSD) and these patients' acceptance of such interventions, it is clear that further investigation in this area is warranted.

In summary, the literature suggests that there is much to be learned about the overlap between PMD and PTSD, as well as which interventions are most effective for treating these comorbid disorders. To address these questions, we compared the demographic and clinical characteristics of patients with PMD and PTSD to NPD patients with PTSD who were participating in a larger study of a cognitive-behavioral therapy program for PTSD in people with severe mental illness (39). This program is primarily based on cognitive restructuring, which has been found to be effective in the treatment of depression (38,40), PTSD (41-43),

and psychosis (44). We evaluated the hypothesis that at baseline, patients with PMD would have more severe PTSD and other psychiatric symptoms, more severe self-reported mental and physical health problems, more extensive exposure to traumatic events, more severe maladaptive trauma-related cognitions, less knowledge about PTSD, and a weaker therapeutic alliance with their primary outpatient clinician than patients with NPD.

Methods

The present study was part of a larger randomized controlled trial conducted to compare the cognitive-behavioral therapy (CBT) for PTSD intervention (39) with comprehensive mental health treatment as usual (TAU) in patients with severe mental illness who were receiving services at four publicly funded community mental health centers in the northeastern U.S. Assessments were conducted by blinded interviewers at baseline, following the 4-6 months treatment period for the CBT program, and 3- and 6-months later. Due to the relatively small sample size of this subgroup with major depression and some missing cases at follow-up, this paper presents baseline data and rates of engagement in treatment only, as opposed to post-treatment data.

Study Participants

All study participants (who gave written consent for participation) met criteria for severe mental illness defined by the states of New Hampshire or Vermont as having a DSM-IV Axis I disorder and persistent impairment in the areas of work, school, or the ability to care for oneself. The present report was restricted to patients with DSM-IV diagnosis of major depression. In addition, participants met the following inclusion criteria: 1) minimum age 18 years old; 2) current DSM-IV diagnosis of PTSD; 3) interested in participating in cognitive-behavioral treatment program for PTSD; and, 4) legally able and willing to provide informed consent to participate in the study.

Exclusion criteria for participation in the study were: 1) psychiatric hospitalization or suicide attempt within the past 3 months; and 2) current DSM-IV substance dependence. All study procedures were approved by the Human Subjects Institutional Review Boards of Dartmouth College and the State of New Hampshire.

Measures

Depression Diagnoses—Diagnosis of major depression was evaluated at baseline with the *Structured Clinical Interview for DSM-IV* (SCID-I) (45). Categorization of the Psychotic Major Depression subtype was made with the *Brief Psychiatric Rating Scale* (46), a widely used interview that taps a broad range of psychiatric symptoms (4). PMD was defined by endorsement of at least one of the psychosis items at a “moderate level” (score of 4 or higher) on the BPRS psychosis subscale described by Velligan and colleagues’ (48) factor structure, which includes the following six items: Hallucinations, Delusions, Unusual Thought Content, Grandiosity, Suspiciousness, and Conceptual Disorganization.

Trauma and PTSD—History of trauma exposure was evaluated with the *Trauma History Questionnaire* (49), which was previously adapted for persons with severe mental illness (29). PTSD diagnoses and symptom severity were based on the *Clinician Administered PTSD Scale* (CAPS) (50), a widely used, semi-structured interview for the assessment of PTSD. For each symptom, a frequency and intensity rating is provided, with overall severity scores computed by summing the frequency and intensity scores for all of the PTSD symptoms (CAPS-Total). Prior research indicates that the CAPS is a reliable and valid instrument for assessing PTSD in persons with severe mental illness (51).

Trauma-related cognitions were evaluated with the *Posttraumatic Cognitions Inventory* (52), a self-report measure of common negative beliefs about oneself, other people, and the world that frequently occur in individuals with PTSD. High scores correspond to greater endorsement of negative beliefs. Understanding of PTSD was assessed with the *PTSD Knowledge Test*, which contains 15 multiple choice questions about PTSD. This test has been shown to be sensitive to the effects of education about PTSD in patients with severe mental illness (53).

Other Symptoms—Overall psychiatric symptoms were assessed with the expanded BPRS (46). Self-reported depression and anxiety were rated with the *Beck Depression Inventory-II* (54) and the *Beck Anxiety Inventory* (55). Self-reported mental health and physical functioning were assessed with the *Short Form-12* (56), which is reliable and valid in patients with severe mental illness (57).

Working Alliance—The therapeutic alliance with the case manager (i.e., not the therapist providing CBT treatment) was rated using the patient version of the *Working Alliance Inventory* (58). This measure has been shown to be reliable and valid in patients with severe mental illness (59), with high scores corresponding to a stronger alliance.

All assessments were conducted by Masters or Ph.D. level trained clinical interviewers who were blind to treatment assignment. Regular reliability checks were conducted based on audiotaped interviews, with intraclass correlation coefficients of .97 for CAPS Total and .97 for BPRS Total, and $\kappa = .91$ for PTSD diagnosis based on the CAPS.

Treatments

All patients were receiving comprehensive treatment for their psychiatric illness at their local community mental health center. Comprehensive mental health treatment at these centers included pharmacological treatment and monitoring, case management, supportive counseling, and access to psychiatric rehabilitation programs such as vocational rehabilitation.

CBT for PTSD Program—The CBT program consisted of 12-16 manualized sessions which followed a structured format and included handouts, worksheets, and weekly homework assignments. Initial sessions consisted of orientation to the program, teaching of “breathing retraining” to manage anxiety symptoms, and psychoeducation about PTSD symptoms and related problems. The crux of the intervention consisted of the teaching and subsequent practice of cognitive restructuring. All sessions were conducted at clients’ local community mental health center, with regular contact and coordination between the CBT therapist and the treatment teams providing comprehensive mental health treatment. CBT was delivered by 7 clinicians, 5 female and 2 male, 6 with a Ph.D. and 1 with a Masters. Weekly supervision was provided. Fifteen percent of all sessions were randomly selected for fidelity monitoring using a standardized scale. Treatment exposure was defined *a priori* as completion of at least 6 sessions so as to ensure that there would be at least 3 sessions of cognitive restructuring, the presumed critical ingredient in the program. Specific details and an outline of this 12-16 session program can be found elsewhere (39).

Treatment as Usual (TAU): Clients assigned to TAU continued to receive the usual services they had been receiving before enrollment in the program. None of the mental health centers offered either cognitive restructuring or exposure therapy treatments for PTSD, although supportive counseling for trauma-related problems was available.

Procedures

Recruitment of study patients was conducted by providing orientation meetings to case managers and clinical staff at the community mental health centers, where the purposes and methods of the study were described, and clinical instruments for screening potentially eligible patients were provided. Clinicians then discussed the project with their patients who met screening eligibility criteria, and referred interested patients to a member of the research team. A research staff member reviewed the study procedures, obtained written informed consent, and scheduled the baseline interview, which was also used to confirm eligibility for the study. Patients were paid for participating in the assessments.

Statistical Analysis

Two-tailed t-tests and χ^2 analyses were used to compare baseline demographic and clinical differences between PMD and NPD groups. Descriptive analyses were done to yield engagement, exposure, and treatment outcome data for the clients with PMD who were assigned to the CBT condition.

Results

Of the 108 participants with PTSD who were randomized to either CBT or TAU, 66 (67%) were diagnosed with major depression, and within this subgroup, 20 (30%) were diagnosed with PMD and 46 (70%) were not. Additional details on participant study flow can be found elsewhere (39).

Within the PMD group, the most common psychotic symptoms were hallucinations (65%) and suspiciousness (40%), with less common symptoms including unusual thought content (5.3%), disorganization (5%), and grandiosity (5%). The average number of psychotic symptoms that patients in the PMD group had was 2.1 (SD=1.37, range: 1-6). Eleven out of the 20 PMD patients (55%) had more than one psychotic symptom. See Table 1 for demographic and clinical history characteristics of both groups.

As seen in Table 1, there were no significant group differences between the PMD and NPD groups in terms of age, marital status, age at first hospitalization, number of prior hospitalizations, substance use history, or current substance use. Comparisons between the groups indicated only one significant demographic difference: patients with PMD were less likely to have graduated from high school than did those with NPD, $\chi^2(1, N=66) = 6.30, p = .02$.

The overall range of traumatic events endorsed on the Trauma History Questionnaire was between 2 and 44 events (out of a possible 47 events), with significantly more events reported by the PMD group than the NPD group, $t(2, 64) = 2.06, p = .04$. The most commonly reported traumatic event associated with PTSD across both PMD and NPD patients was childhood sexual abuse, which did not differ significantly between the groups. Patients with PMD were significantly less knowledgeable about PTSD than those with NPD, $t(2,63) = 2.11, p = .04$.

Baseline Clinical Characteristics

Table 2 summarizes comparisons of the clinical characteristics between groups.

In terms of PTSD symptom severity, there were no significant group differences at baseline in CAPS Total Score Severity, CAPS Total Score Frequency, or CAPS Total Score Intensity, with the exception of Hyperarousal Intensity [$t(2,64) = 2.17, p = .03$]. Despite the similarities in PTSD symptom severity between the two groups, compared to patients with

NPD, those with PMD endorsed overall stronger levels of negative beliefs related to their traumatic experiences on the PTCI Total Score and more maladaptive cognitions on the Cognitions About Self and Cognitions about World subscales. Although trauma-related self-blame was higher in the PMD group, this difference was not statistically significant.

Patients in the PMD group also had higher levels of overall psychopathology on the BPRS, higher ratings on the BPRS Depression subscale, and more severe self-reported depression (BDI-II) and self-reported anxiety (BAI) than patients in the NPD group. There were no significant differences on other BPRS subscales (Activation and Retardation) or self-reported mental and physical health (SF-12).

Finally, patients with PMD reported a weaker therapeutic working alliance in terms of shared therapy goals with their primary outpatient clinic clinician than did those with NPD (WAI Goal Subscale: $t(2, 59) = 2.30, p = .03$), but did not differ on WAI Total Score, WAI Bond Subscale, or WAI Tasks Subscale.

Treatment Engagement, Exposure, and Outcome

Individuals with PMD initially engaged in the CBT intervention (defined as having attended the first treatment session) at the same rate as those with NPD, and at the same rate as patients with other types of diagnoses in the study (i.e., bipolar disorder, schizoaffective disorder, etc). Of 8 PMD CBT participants assigned to CBT, one client did not attend the first treatment session (87.5% engagement rate). All of the 20 NPD CBT participants attended the first session (100% engagement rate), as did 43 of the 44 CBT clients in the remainder of the sample (97.7% engagement rate).

However, in terms of *exposure* to the CBT treatment (defined as participation in at least 6 CBT sessions, at which point participants would have received at least some elements of the cognitive restructuring skill, which is the crux of this CBT intervention), those with PMD had significantly less exposure than patients with NPD [$\chi^2(1, N=24) = 6.14, p = .03$], and less exposure than patients with other diagnoses as well [$\chi^2(1, N=44) = 6.17, p = .03$]. Of those with PMD assigned to the CBT intervention, 50% (4 of 8) were treatment exposed compared to 90% (18 out of 20) of NPD CBT participants and 86% (38 out of 44) of the remaining CBT clients in the study. In the PMD group, 3 participants attended 0–1 sessions, 1 attended 5 sessions, 1 attended 8 sessions, and 3 attended 15–16 sessions.

Unfortunately, post-treatment data was collected on only 3 of the 4 CBT-exposed PMD clients, and results were mixed. While 2 of the 3 improved in both PTSD (CAPS Severity score) and depression (BDI-II score) symptoms, the third client did not improve.

Discussion

Participants with PTSD, depression, and psychotic symptoms (PMD) tended to have more impaired clinical functioning than similar patients without psychotic symptoms (NPD). In keeping with previous research on patients with major depression (6), patients with PMD had more severe depression and anxiety than those with NPD. They also were less likely to have completed high school and had a weaker therapeutic relationship with their primary clinicians. As a result of their depression and their co-occurring PTSD, this overall sample of outpatients with a state-defined designation of “serious mental illness” already suffer from substantial impairment from distressing symptoms, maladaptive cognitions, relationship difficulties, and general social functioning difficulties: it is clinically significant that the subgroup of patients with depression and psychosis suffer more than those with depression alone. In addition, psychotic symptoms were related to significantly higher levels of depression and general anxiety on both the interview-based BPRS and self-report

instruments of depression and anxiety. This baseline level of impairment strongly suggests the need to develop more effective interventions for individuals who are coping simultaneously with severe depression and distressing psychotic symptoms.

Patients with PMD reported significantly higher levels of trauma exposure than those with NPD, in keeping with past research regarding the increased rates of trauma exposure in people with psychotic symptoms (19-21,23-25). Despite the greater trauma exposure, patients with PMD did not have more severe overall PTSD symptoms on the CAPS than patients with NPD, although they did have significantly more severe PTSD hyperarousal symptoms on the CAPS. At least three explanations may account for this association. First, it is possible that exposure to higher levels of trauma reflect cumulative stress that could increase vulnerability to psychotic symptoms, consistent with epidemiological surveys linking trauma exposure with psychotic symptoms (60), and consistent with the stress-vulnerability hypothesis. Second, severe hyperarousal symptoms in PTSD may provoke psychotic symptoms in persons with primary PTSD but not severe mental illness, as reported in several studies of PTSD and psychotic symptoms (61,62). Third, psychotic symptoms may lead to increased arousal. For instance, individuals with high levels of suspiciousness or paranoid ideation engage in hypervigilant behaviors such as extreme watchfulness, fear of danger, and accompanying safety behaviors.

Although PTSD symptom severity was not higher in the PMD group, negative cognitions *about* the traumatic experience and its effects were substantially more prominent. Those with psychosis reported having had more dysfunctional thoughts about themselves and the world following their traumatic experience. These results support Gaudiano and Miller's (9) finding that a higher level of dysfunctional cognitions was the most important characteristic that discriminated patients with psychotic major depression compared to those without psychotic symptoms.

Interestingly, although psychotic depression participants exhibited more overall maladaptive trauma-related cognitions, they did not have significantly higher levels of self-blame. The lack of group difference on self-blame could be related to the lack of significant difference that was found between groups on childhood sexual abuse rates, a type of trauma that is usually tied to thoughts of guilt and self-blame (63-65). Since this type of trauma was not more common in the psychosis group, it is consistent that commonly accompanying cognitions related to sexual abuse were not be more prevalent either. Nevertheless, the overall heightened maladaptive cognitive style in the PMD group suggests that cognitive-behavioral therapy may be beneficial for these patients.

Many of the findings from this current investigation are in keeping with the Gaudiano and Zimmerman (34) study examining clinical differences between those with PMD and co-occurring PTSD and those with NPD and PTSD, in regards to more severe depression symptoms and the lack of group difference in terms of type of trauma experienced. Nevertheless, there were some interesting differences in results, as well as some additional important findings from the current study that might bring into clearer focus the characteristics of those with co-occurring PMD and PTSD. For instance, Gaudiano and Zimmerman (34) found a greater number of prior psychiatric hospitalizations in PMD/PTSD subjects; however in this study, there was no significant group difference on this variable. In addition, the current study further elucidates the lack of distinction in severity of PTSD symptoms between PMD and NPD groups (as described above) as well as PMD with PTSD patients' experience of a weaker therapeutic alliance with their primary clinicians. To our knowledge, previous studies investigating PMD and PTSD have not examined the therapeutic relationship, which is crucial to understand, given treatment implications such as engagement in Cognitive-Behavioral Therapy or other types of psychotherapy.

Results regarding engagement and exposure suggest that while having PMD did not appear to prevent participants from initially engaging in CBT, their longer-term engagement in the intervention was less than their NPD counterparts (and the rest of the CBT sample). Thus, patients with PMD were less likely to be exposed to the cognitive restructuring component of the treatment program, and as cognitive restructuring is the presumed active ingredient of the program, they presumably received less benefit from the intervention. These results suggest that greater or different efforts may be required to successfully engage and retain patients with PMD in cognitive behavioral therapy for PTSD. Given the higher baseline levels of distress experienced by the PMD group, for this population, it may be necessary to truncate the psychoeducation portion of the program and move more quickly into the cognitive restructuring module, in order to more immediately teach skills to provide relief for these debilitating symptoms. Further investigation into this intervention's effects are needed in order to learn the most optimal way to use this CBT program to best help the PMD population.

The small sample size of this PMD subgroup limited our ability to assess more fine-grained patterns in session attendance and precluded statistical evaluation of treatment outcome. Therefore, solid inferences regarding the benefits of the treatment program for patients with PMD cannot be made. This cognitive-behavioral therapy program for PTSD has demonstrated promise as an effective treatment for the overall SMI sample (composed of individuals with mood disorders, schizophrenia-spectrum disorders, and borderline personality disorder) from the larger study discussed here, with benefits in reduced PTSD symptoms, other psychiatric symptoms, negative trauma-related beliefs, health, and working alliance with their case managers (39). These meaningful benefits, associated with this treatment program, coupled with the need for effective treatments for individuals with PMD, suggest the importance of evaluating the impact of the CBT for PTSD in SMI treatment model on a larger sample of patients with psychotic depression. A CBT-based intervention aimed at reducing dysfunctional cognitions, which has been demonstrated as a key distinguishing characteristic of those with psychotic depression (10) could be a viable intervention that could confer great benefit for this historically difficult-to-treat population.

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Table 1

Demographic and Clinical History Characteristics of Participants with Psychotic Major Depression (PMD) Versus Non-Psychotic Depression (NPD) N=66

	PMD		NPD	
	<i>N</i>	%	<i>N</i>	%
Gender				
Male	7	35	7	15
Female	13	65	39	85
Marital Status				
Never Married	6	30	16	34.8
Married	14	70	30	65.2
High School Graduate				
No	10	50	9	19.6
Yes	10	50	37	80.4
History of Drug/Alcohol Problems				
No	12	60	27	58.7
Yes	8	40	18	39.1
Current Substance Use				
No	19	95	42	91.3
Yes	1	5	4	8.7
Childhood Sexual Abuse				
No	14	70	30	65.2
Yes	6	30	16	34.8
	Mean	(SD)	Mean	(SD)
Age	45.43	11.94	45.40	9.95
Age at First Hospitalization	26.62	13.55	28.63	13.53
Number of Traumatic Events Experienced	21.41	10.25	27.10	10.39
Number of Prior Inpatient Hospitalizations	11.64	20.75	10.58	14.42

Table 2

Clinical Differences at Baseline between Participants with Psychotic Major Depression (PMD) and Non-Psychotic Depression (NPD) N=66

	PMD			NPD			t	df	p
	N	Mean	(SD)	N	Mean	(SD)			
CAPS: Severity Total	20	80.05	16.73	46	76.30	16.36	-.85	64	.40
Re-experiencing Severity	20	21.20	6.99	46	21.54	7.54	-.17	64	.86
Avoidance Severity	20	32.80	8.36	46	31.09	7.38	-.83	64	.41
Hyperarousal Severity	20	26.05	5.93	46	23.67	6.71	1.37	64	.18
BPRS: Total	18	48.50	5.47	43	42.16	6.49	3.63	59	.001***
Depression	20	3.67	.55	46	3.09	.74	-3.12	64	.003***
Activation	20	1.22	.24	46	1.16	.22	-.96	64	.34
Retardation	20	1.30	.34	46	1.21	.28	-1.03	64	.63
Psychosis	20	1.87	.42	46	1.20	.21	6.8	64	.000***
BAI	20	54.73	11.47	46	47.60	13.39	-2.07	64	.04*
BDI-II	20	39.25	13.25	46	30.24	12.84	-2.60	64	.01*
SF-12									
Physical	19	40.33	12.57	45	39.29	11.15	-.33	62	.74
Mental	19	26.25	10.21	45	29.58	8.54	1.4	62	.18
PTCI: Total	20	4.38	.86	46	3.61	1.03	-2.91	64	.005***
Cognitions about Self	20	4.36	1.02	46	3.55	1.13	-2.77	64	.007***
Cognitions about World	20	5.10	.77	46	4.25	1.33	-3.28	64	.002***
Self-Blame	20	3.39	1.03	46	2.94	1.29	-1.38	64	.17
WAI: Total	20	56.95	13.16	43	58.88	16.49	-.46	61	.65

*
p < .05**
p < .01***
p < .001