Published in final edited form as:

Cognit Ther Res. 2009 ; 33(1): 126–137. doi:10.1007/s10608-007-9154-x.

Pretreatment Intervention Increases Treatment Outcomes for Patients with Anxiety Disorders

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Abstract

The current study evaluated the utility of a pretreatment intervention aimed at increasing treatment attendance. We extended past work by evaluating whether this intervention was associated with less impairment at termination. Given that patients with anxiety disorders demonstrate high rates of premature termination, we assessed whether these patients would be particularly likely to benefit. The sample included 172 patients at a community outpatient mental health clinic. Patients were assigned to the intervention condition (asked to imagine attending therapy sessions) or an information control condition. Number of sessions attended and termination Clinician Global Impressions (CGI) served as outcome variables. Contrary to prior work, the two conditions did not significantly differ on outcomes. Yet, patients with anxiety disorders in the intervention condition attended the most sessions and had least termination symptom severity. This intervention may provide a simple yet powerful method to increase treatment adherence and effectiveness for patients with anxiety disorders.

Keywords

Psychotherapy; Treatment dropout; Treatment compliance; Motivation; Anxiety disorders

Introduction

Despite the efficacy of empirically supported treatment options for patients with anxiety disorders (Nathan and Gorman 2002), a great many patients with anxiety disorders are not reaping the benefits of these treatments, and treatment refusal and attrition remain a significant problem. For instance, among patients with anxiety disorders, rates of treatment refusal average around 25% to 30% and treatment dropout rates range from 10% to 82% (Burstein 1986; Issakidis and Andrews 2004; Schruers et al. 2005). Given that anxiety disorders are among the most common psychiatric disorders (Kessler et al. 2005), treatment interventions aimed at increasing treatment attendance could benefit a substantial number of patients.

Despite well-documented problems with treatment refusal and dropout, surprisingly little empirical work has focused on methods of increasing treatment attendance among patients with anxiety disorders. One area that appears particularly promising is that of motivation. Motivation is posited as essential for behavioral change (Miller and Rollnick 2002; Ryan and Deci 2000). It therefore follows that motivation is key to increasing treatment attendance, and

in fact available data in this area, though sparse, suggest that this is the case for at least some patients. For instance, motivation to change anxiety-related behaviors appears to be a significant predictor of reduction of anxiety symptoms among patients with panic disorder (Beitman et al. 1994) and generalized anxiety disorder (Wilson et al., 1997). Treatments designed to increase motivation have been found to change pathological behaviors among patients with other Axis I pathology, such as bulimia nervosa (Treasure et al. 1999) and substance use disorders (Burke et al. 2003; Moyer et al. 2002). Thus, techniques that increase motivation for treatment adherence may result in decreased attrition and improved end-state functioning among patients.

The question then arises as to how to increase motivation for treatment. Pretreatment motivational enhancement therapies (MET) that incorporate techniques from motivational interviewing (Miller and Rollnick 2002) with existing cognitive-behavioral treatments (CBT) appear to increase treatment attendance among patients with eating disorders (Feld et al. 2001), as well as those with some anxiety disorders (Maltby and Tolin 2005; Westra and Dozois 2006). While MET is certainly promising for increasing motivation for CBT, there are a number of drawbacks to the utilization of one therapy to increase motivation for another form of treatment. One problem is the increased cost and time necessary to train therapists in the delivery of a second treatment protocol. Another potential drawback is that the incorporation of a second treatment into existing CBT protocols may increase the total amount of time in treatment necessary for demonstrable treatment gains. A third potential drawback lies in whether the addition of the second treatment will dilute the effects of the first treatment. There is some evidence suggesting that the incorporation of two treatments can result in decreased treatment efficacy. For instance, combining CBT for social anxiety disorder (SAD) with CBT for alcohol use disorders (AUD) has been found to produce worse treatment outcomes than CBT for AUD alone among patients with comorbid AUD and SAD (Randall et al. 2001).

Findings from social psychology research may provide a simple but potentially powerful method of enhancing motivation for treatment. The mental simulation literature indicates that imagining and/or explaining a hypothetical future behavior increases the likelihood that behavior will occur (Taylor and Pham 1996). This kind of mental rehearsal can involve either focusing on the desired outcome of the goal, the process involved in reaching a goal, or some combination of the two. There may be particular benefits involved in mental simulation. For instance, imagining future behaviors seems to increase rates of engagement in future behaviors (Sherman et al. 1981). Importantly, imagining future behaviors has been found to affect behavior several weeks after individuals engage in imagination tasks (Gregory et al. 1982), suggesting long-term effects of imagination tasks.

However, it may not be enough to simply imagine a future behavior. It appears that the content of imaginal situations affects the behavioral consequences of imagination techniques. Individuals who imagine the *actions* necessary to enact the future behavior appear to exhibit better outcomes than individuals who are merely asked to imagine the future behavior (Ratcliff et al. 1999). Thus, instructing individuals to imagine actions associated with the behavior of interest (e.g., attending treatment) may increase the likelihood the individual will engage in that behavior.

To our knowledge, only one study has investigated the specific role of imagination techniques to increase motivation for treatment attendance (Sherman and Anderson 1987). Treatment-seeking patients at an outpatient community mental health center were randomly assigned to one of two conditions. In the motivation enhancement condition, patients were instructed to imagine themselves (in detail) attending at least four sessions of treatment. They were then asked to explain, in writing, what qualities they possess that would result in their attendance of at least four therapy sessions. Patients in the control condition were asked to imagine then

explain an irrelevant (i.e., non-therapy) situation. Patients in the motivation enhancement condition demonstrated significantly lower drop-out rates than patients in the control condition.

These data have potentially important implications regarding increasing treatment attendance. One limitation to this study, however, is that treatment attendance served as the sole dependent variable. It is therefore unclear whether the imagine-then-explain intervention resulted in decreased symptomatology or functional impairment. Second, treatment attendance was not examined by diagnosis. There are several reasons why it could be important to examine the effects of this intervention for individuals with anxiety disorders in particular. For instance, exposure to feared objects and situations is a central but aversive component of most efficacious treatments for anxiety (Barlow 2002). Yet, patients receiving treatment for anxiety disorders may find that critical components of treatment (e.g., exposure) particularly arduous, thereby increasing the risk of treatment refusal or attrition. Given that avoidance is a hallmark feature of most anxiety disorders (American Psychiatric Association 2000), it is not surprising that many patients opt to avoid treatments that require them to confront their fears. An imagine-then-explain intervention may act as a type of imaginal exposure exercise in which the patient is exposed to a feared stimulus (i.e., treatment). This “virtual” exposure to treatment may be particularly useful for patients with anxiety disorders as it may decrease anticipatory anxiety about the therapeutic process thereby increasing the likelihood of the patient proceeding with the actual treatment.

The present study aims to contribute to our understanding of the utility of pretreatment imagination-based interventions in several ways. The first aim was an attempt to lend further support for the utility of an imagine-then-explain paradigm to decrease treatment drop-out rates (Sherman and Anderson 1987). Second, we extended prior work by examining whether engaging in this imagine-then-explain intervention resulted in less symptom severity at termination, in addition to greater number of sessions attended. Given that treatment attendance has been found to be associated with increased treatment outcome (e.g., Bovasso et al. 1999), it was expected that attending greater number of sessions would be related to less post-treatment symptom severity. Further, we examined whether anxiety disorder diagnoses moderated the relation between intervention condition and treatment outcome variables (i.e., number of sessions attended and termination symptom severity). It was hypothesized that the imagine-then-explain intervention would be particularly beneficial for patients with anxiety disorder diagnoses.

Method

Participants

Patients were invited to participate in this investigation when they contacted a university-affiliated community outpatient mental health clinic in northern Florida seeking mental health services. Patients were alternately assigned to treatment condition. Because the present study is concerned with the effects of the imagination intervention on voluntary treatment attendance, patients who contacted the clinic for psychological assessments and court-ordered clients were excluded from the analyses. Thus, the sample included 172 treatment-seeking individuals (*Imagination* condition $n = 80$; *Informational* condition $n = 92$). No eligible patient refused to participate. After a complete description of the study was provided to patients, written informed consent was obtained. Patients completed the task in the clinic waiting room, prior to meeting their therapist. Both patients and therapists were blind to the patients' condition. The study was approved by the Institutional Review Board of the university.

Table 1 details demographic information for the present study's participants. Diagnostic information was obtained during the intake session using semi-structured diagnostic interviews. Diagnostic decisions were made using a consensus approach in group supervision

sessions conducted by licensed clinical psychologists. The following diagnoses were assigned to the sample¹: substance use disorders ($n = 65$), major depressive disorder ($n = 45$), dysthymia ($n = 16$), schizophrenia spectrum disorders ($n = 7$), adjustment disorders ($n = 5$), eating disorders ($n = 4$), attention deficit hyperactivity disorder ($n = 2$), and bipolar disorder ($n = 3$). Concerning anxiety disorders, the following diagnoses were made: generalized anxiety disorder ($n = 19$), social anxiety disorder ($n = 10$), panic disorder ($n = 6$), post-traumatic stress disorder ($n = 6$), specific phobia ($n = 2$), and obsessive-compulsive disorder ($n = 2$). Concerning comorbidity, approximately 31% of the total sample ($n = 54$) received one comorbid Axis I diagnosis and 10% ($n = 17$) received more than one comorbid Axis I diagnosis.

We examined whether the two intervention conditions differed in regard to a variety of relevant variables. Given the multiple comparisons performed, Bonferroni corrections ($P < .01$) were utilized to control for Type 1 error. The intervention conditions did not differ on age ($t = -.88$, $P = .38$), gender ($\chi^2 = .01$, $P = .94$), race/ethnicity ($\chi^2 = .51$, $P = .97$), household income ($t = -1.66$, $P = .10$), educational attainment ($\chi^2 = 1.92$, $P = .86$), number of prior psychosocial treatments ($\chi^2 = 6.75$, $P = .15$), number of comorbid diagnoses ($\chi^2 = .10$, $P = .95$), intake Clinician Global Impressions (CGI) ($t = -1.20$, $P = .23$), anxiety diagnosis ($\chi^2 = 1.11$, $P = .29$), depressive disorder diagnosis ($\chi^2 = .20$, $P = .66$), or substance use disorder diagnosis ($\chi^2 = .32$, $P = .57$).

Approximately 28% of the sample ($n = 41$) was diagnosed with at least one anxiety disorder. In regards to comorbidity for the anxiety disordered subsample, 59% of patients with anxiety disorders ($n = 24$) received one comorbid Axis I diagnosis and 20% ($n = 8$) received more than one comorbid Axis I diagnosis. The most common comorbid diagnoses were¹: major-depressive disorder ($n = 15$), dysthymia ($n = 7$), and substance use disorders ($n = 3$).

We examined whether the two intervention conditions differed on relevant intake variables among patients with anxiety disorder diagnoses. Bonferroni corrections ($P < .01$) were again utilized to control for Type 1 error. Among patients with anxiety disorders, the intervention conditions did not differ on age ($t = -1.41$, $P = .17$), gender ($\chi^2 = .39$, $P = .53$), race/ethnicity ($\chi^2 = 1.47$, $P = .83$), household income ($t = -2.06$, $P = .05$), educational attainment ($\chi^2 = 6.93$, $P = .14$), number of prior psychosocial treatments intake ($\chi^2 = .19$, $P = .100$), number of comorbid diagnoses ($\chi^2 = .23$, $P = .89$), intake CGI ($t = 1.08$, $P = .29$), depressive disorder diagnosis ($\chi^2 = 1.10$, $P = .30$), or substance use disorder diagnosis ($\chi^2 = .22$, $P = .64$).

Measures

In addition to providing comprehensive demographic and treatment history information, all patients were assessed for potential psychiatric disorders using the Mini International Neuropsychiatric Interview (MINI; Sheehan et al., 1998). Symptom severity was assessed with the Clinical Global Impressions (CGI; Guy, 1976). Patients' severity was rated by their therapists at the intake and termination sessions using a seven-point Likert scale ranging from normal (1) to among the most extremely ill patients (7). Diagnostic information and intake CGI scores were collected within the initial two appointments and termination CGI scores were collected at termination of treatment². Excellent inter-rater reliability of CGI ratings ($\alpha = 0.84$) have been reported for our clinic (Reardon et al. 2002). A continuous variable representing the total number of sessions attended was created for each patient. This number included intake,

¹The total number of diagnoses exceeds the number of study participants due to comorbidity. Similarly, the total number of anxiety diagnoses exceeds the number of patients with anxiety disorders because some patients received more than one anxiety disorder diagnosis and the total number of depressive disorder diagnoses exceeds the number of patients with depressive disorder because some patients received more than one depressive disorder diagnosis.

²Therapists failed to record termination CGI's for 62 patients (i.e., total number of termination CGI's recorded was 110). The vast majority of patients for whom termination CGI was not recorded attended 0–1 sessions (79.0%) and only 3% finished intake and began psychosocial treatment, thereby rendering the assessment of termination CGI impossible for the majority of these patients.

assessment, and therapy sessions. The primary dependent variables were total number of sessions attended and termination CGI.

Procedure

Upon contacting the clinic for therapeutic services, a consecutive series of patients was alternately assigned to one of two intervention conditions. Both conditions took on average approximately 10 min to complete. Similar to the procedure outlined by Sherman and Anderson (1987), those in the *Imagination* condition were asked to picture themselves acting out their first four therapy appointments. They were asked to spend a couple of minutes imagining a series of events from walking into the clinic and talking with their therapist to leaving and returning the following week. Next, patients were asked to explain reasons why they personally would continue with therapy for at least four sessions. These reasons were solicited in two ways. Patients were asked to select reasons from a list (e.g., I like to finish what I begin) as well as to write a paragraph listing traits and qualities about themselves that would explain why they would “stick” with therapy.

In the *Information* condition, patients were asked to read a short educational message from the clinic administration. This message thanked them for participating and provided information regarding the “dose-effect” relationship between therapy attendance and improvement. In light of research suggesting that spreading treatment sessions out over more months in therapy is related to poorer treatment response (Reardon et al. 2002), patients were told that attending therapy every week for a shorter period of time overall is likely to be more beneficial than attending the same number of sessions stretched over a greater span of time. This *Information* condition served to control for the effects of the act of using imagination from effects associated with instructions and/or information regarding treatment adherence. Insofar as it included information about therapy adherence, we view the Information condition as a reasonably stringent control.

Empirically supported treatments (Nathan and Gorman 2002) were administered by graduate student therapists in a doctoral clinical psychology program. Therapists attended weekly group supervision with doctoral-level psychologists.

Results

Zero-order correlations were conducted to determine the impact of demographic and other relevant intake variables on termination CGI and number of sessions attended. All categorical variables were coded for these analyses—for example, race/ethnicity (1 = Caucasian, 0 = non-Caucasian), gender (1 = female, 2 = male), depressive disorder diagnosis (0 = no depressive disorder, 1 = depressive disorder). Anxiety disorder diagnosis ($r = .33, P < .001$) and depressive disorder diagnosis ($r = .23, P = .004$) were positively associated with number of sessions attended. Race/ethnicity, gender, household income, education, number of prior psychosocial treatments, and substance use disorder diagnosis were unrelated to outcome variables (r 's $< .13, P$'s $> .10$). Number of sessions attended by ranged from 0 to 44 for the information condition ($M = 6.50, SD = 8.03$) and from 0–55 for the imagination condition ($M = 6.06, SD = 8.57$). Termination CGI scores ranged from 1 to 7 for patients in the information condition ($M = 2.75, SD = 1.57$) and ranged from 1 to 6 for patients in the imagination condition scores ($M = 3.19, SD = 1.50$).

To address the first aim of the study, hierarchical multiple linear regression equations were conducted to examine the incremental predictive ability of intervention condition (Imagination versus Information) on treatment outcome variables above and beyond intake CGI. Dependent variables were number of sessions attended and termination CGI. In these models, intake CGI was entered into the first level of the model to control for symptom severity at intake.

Intervention condition was entered at the second level. This analytic model allowed an evaluation of the unique variance accounted for by the intervention condition after controlling for the variance accounted for by intake CGI (Cohen and Cohen 1983). However, there was no significant difference between conditions on either outcome variable (Table 2).

To examine the potential interactive effects of intervention condition and anxiety disorder diagnosis (0 = no anxiety disorder, 1 = anxiety disorder) on treatment outcome variables, additional hierarchical linear regressions were performed to test the incremental predictive validity of each of the predictor variables on the dependent measures (Baron and Kenny 1986). Total number of sessions attended and termination CGI served as dependent variables. Given the high rates of comorbid anxiety and depressive disorders in the current sample as well as the significant association between depressive disorders and number of sessions attended, depressive disorder diagnosis (i.e., major depressive disorder and dysthymia) was entered into the model as a covariate. The predictive variables were the main effects of intervention condition and anxiety diagnosis and the interaction of anxiety diagnosis $\times$ intervention condition. Predictor variables were divided into three levels in the hierarchy: (a) intake CGI and depressive disorder diagnosis were entered at level 1, (b) the main effects of each variable in the interaction were entered at level 2, and (c) the interaction term was entered at level 3. This model ensured that observed effects for the interactions at level 3 cannot be attributed to shared variance with the variables at levels 1 or 2 (Cohen and Cohen 1983).

Consistent with prediction, anxiety diagnosis moderated the relationship between intervention condition and number of sessions attended (Table 3). Regression analyses suggest that the predictor variables together predicted 23.6% of the overall variance, $F(1, 104) = 4.50, P < .05$, with an associated f^2 effect size of .13, a medium effect (Cohen 1988). The moderational model for termination CGI was also significant, $F(1, 91) = 4.04, P = .05$, with an associated f^2 effect size of .12, a medium effect (Cohen 1988).

Based on the recommendations of Cohen and Cohen (1983), the form of these significant interactions was examined (Fig. 1). To test whether this significant interaction reflected significant differences between patients with and without anxiety disorder diagnoses for each intervention condition, we conducted one-way analyses of covariance (ANCOVAs) in which anxiety disorder group served as the independent variable with intake CGI and mood disorder diagnosis as covariates. Separate ANCOVAs were performed for each intervention condition. Among patients in the information condition, there was no significance difference between the number of sessions attended by patients with anxiety disorders relative to patients without anxiety disorders, $F(1, 45) = .07, P = .79$. However, among patients in the imagination condition, patients with anxiety disorders attended a significantly greater number of sessions relative to patients without anxiety disorders, $F(1, 47) = 5.92, P = .02$.

Figure 2 depicts the form of the interaction when considering the termination CGI ratings as the dependent variable. To test whether this interaction reflected significant differences between patients with and without anxiety disorder diagnoses for each condition we conducted additional one-way ANCOVAs for each intervention condition. Among patients in the information condition, there was no significance difference between among patients with and without anxiety disorders in regard to termination symptom severity, $F(1, 44) = 1.15, P = .29$. However, among patients in the imagination condition, patients with anxiety disorders demonstrated significantly less symptom severity at termination relative to patients without anxiety disorders, $F(1, 45) = 4.59, P = .04$.

Given that number of sessions attended predicted termination CGI even after controlling for intake CGI and depressive symptoms ($t = -5.85, P < .01$), the mediational role of number of sessions on this moderational relation was examined. The Sobel test revealed that number of

sessions attended significantly mediated the association between anxiety $\times$ intervention condition and termination CGI ($z = 2.00$, $P < .05$).

Discussion

The current study sought to replicate and extend prior work (Sherman and Anderson 1987) to further our understanding of the utility of an imagination intervention. Contrary to Sherman and Anderson, we did not find evidence for the efficacy of an imagination intervention for an unselected outpatient clinic sample as a whole. Rather, our findings revealed that an imagination exercise positively influenced treatment outcome only for patients with anxiety disorder diagnoses. It is noteworthy that the imagination intervention not only resulted in greater numbers of sessions attended but also resulted in less symptom severity at termination. Importantly, number of sessions mediated this effect, suggesting attending a greater number of sessions at least partially accounts for the superior treatment outcomes regarding symptom severity observed for patients with anxiety disorders in imagination intervention condition. Effect size analyses indicate that the impact of this intervention on attendance and termination symptom severity was not trivial for patients with anxiety disorder diagnoses.

The finding that an imagine-then-explain exercise, conducted before therapy starts, could have a positive influence on treatment outcome for patients with anxiety disorders has key implications in terms of increasing treatment adherence for these patients. Although there are several efficacious therapies for anxiety disorders (Nathan and Gorman 2002), many patients often refuse these treatments or terminate treatment prematurely (Burstein 1986; Issakidis and Andrews 2004; Schruers et al. 2005). As such, a substantial proportion of individuals suffering with anxiety disorders do not receive adequate help. The imagine-then-explain intervention represents a simple, time efficient, and cost effective therapeutic method that appears to increase therapy attendance among anxious patients. Importantly, the current study was conducted in a community outpatient clinic which speaks to the generalizability of our findings. Our data furthermore reveal that patients with anxiety disorders receiving this intervention demonstrate less severe symptomatology at termination, suggesting long-term implications of this pre-therapy intervention.

There are several noteworthy differences between our study and previous research (Sherman and Anderson 1987) that may contribute to the disparate findings between our studies. For instance, in the prior report, the diagnostic classification of the patients was not reported. Given the high prevalence of anxiety disorders (Kessler et al. 2005), it may be that the Sherman and Anderson sample contained a preponderance of individuals with anxiety disorders, which drove the effect. Second, in their control condition, Sherman and Anderson asked participants to imagine a non-therapy-related situation whereas in our study patients were given information related to treatment. In a recent report, information regarding treatment has been found to increase the number of sessions patients attended (Reis and Brown 2006). Thus, our “control” condition appears to have been given an active treatment that may have obfuscated the effects of the imagine-then-explain intervention for the patients with a depressive disorder.

The current study should be considered in light of limitations that point to future work in this area. First, therapists did not demarcate primary from secondary diagnoses. Although this approach may allow for the generalizability of our finding that the imagination intervention appears effective for patients suffering from anxiety disorders (regardless of whether the diagnosis is primary), an important next step would be to examine whether the differential effects of the imagination intervention are evident for patients with anxiety disorder diagnoses that are primary versus secondary. Second, we did not directly examine whether motivation for treatment increased treatment attendance. Future work is necessary to determine whether increased motivation served as an underlying mechanism for observed effects. Third, the

current study did not assess whether therapists and patients agreed upon a set number of sessions from the outset of treatment and whether patients terminated therapy prematurely. Given that different disorders may require different number of sessions for symptom reduction to occur, future work should investigate the utility of this pre-therapy intervention to decrease premature termination rates. Fourth, the exclusion of patients under 18 years of age limits generalizability of our study findings and future work is necessary to determine whether an imagination intervention is also effective in increasing treatment attendance and effectiveness among child and adolescent patients with anxiety disorder diagnoses. Similarly, given that our sample was predominantly Caucasian, further work is necessary to ascertain whether findings would generalize to samples that are predominantly comprised of members from other racial and ethnic backgrounds.

The present study serves as an important step toward the development of time- and cost-effective interventions to increase treatment attendance among patients with anxiety disorders. Our data suggest that the use of an imagine-then-explain exercise administered before treatment begins can result in significantly increased number of sessions attended and greater symptom reduction among patients with anxiety disorders. Future work is necessary to elucidate the mechanisms underlying these treatment gains to determine if interventions can be developed to increase treatment adherence for other patient groups. Work aimed at increasing motivation for treatment will go a long way in ensuring that patients receive efficacious treatments.

Acknowledgments

This research was supported in part by a National Research Service Award from the National Institute of Drug Abuse (F31 DA12457-01) awarded to Julia D. Buckner.

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Fig. 1.
Number therapy sessions attended among patients in each intervention condition based on anxiety disorder status

Fig. 2.
Termination CGI among patients in each intervention condition based on anxiety disorder status

Table 1

Demographic and diagnostic information across the two conditions

Variable	Information (<i>n</i> = 92)				Imagination (<i>n</i> = 80)			
	<i>n</i>	%	<i>M</i>	<i>SD</i>	<i>n</i>	%	<i>M</i>	<i>SD</i>
Age (years)								
Gender (female)	50	62.5	27.34	10.24	58	63.0	28.76	10.91
Race/ethnicity								
African American	4	5.0			6	6.5		
American Indian/Alaskan Native	1	1.3			2	2.2		
Asian/Pacific Islander	2	2.5			2	2.2		
Caucasian	65	81.3			70	76.1		
Hispanic	6	7.5			7	7.6		
Annual income			\$12,545.87	\$15,794.93			\$18,080.92	\$25,525.02
Educational attainment								
Elementary or middle school/junior high	7	8.8			5	5.4		
High School or equivalent	16	20.0			19	20.7		
Vocational/technical degree	2	2.5			1	1.1		
Some college	35	43.8			43	46.7		
College degree	14	17.5			14	15.2		
Graduate degree	6	7.5			10	10.9		
Number of prior psychosocial treatments								
None	32	40.0			36	39.1		
1—2	15	18.8			13	14.1		
3—4	9	11.3			16	17.4		
5—9	2	2.5			9	9.8		
10 or more	22	27.5			17	18.5		
Intake CGI			3.72	1.40			4.02	1.28
Anxiety disorder diagnosis	22	27.5			19	20.7		
Depressive disorder diagnosis	26	32.5			27	29.3		

Note. CGI = Clinical Global Impressions

Table 2

Relations between treatment condition and treatment outcome variables after controlling for intake CGI

	ΔR^2	t	β	sr^2	P
<i>Dependent variable: Number of sessions attended</i>					
Step 1		.040			<.05
Intake CGI		2.11	.20	.04	
Step 2	.001				>.10
Intervention Condition		-.35	-.03	.00	
<i>Dependent variable: Termination CGI</i>					
Step 1		.000			>.10
Intake CGI		.05	.00	.00	>.10
Step 2	.002				>.10
Intervention Condition		.45	.05	.00	>.10

Note. CGI = Clinical Global Impressions. β = standardized beta weight; sr^2 = squared semi-partial correlation. n = 80 (Imagination condition) and n = 92 (Information condition)

Table 3

Hierarchical multiple regression equations of the moderational role of anxiety disorder diagnosis predicting treatment outcome variables

	ΔR^2	t	β	f^2	p
<i>Dependent variable: Number of sessions attended</i>					
Step 1: Covariate	.129				<.05
Intake CGI		2.12	.36	.12	<.05
Depressive Disorder		.02	.00	.00	
Step 2: Main Effects	.003				ns
Treatment Condition		.24	.04	.00	ns
Anxiety Diagnosis		.27	.05	.00	ns
Step 3: Interaction Effect	.104				<.05
Intervention Condition $\times$ Anxiety Diagnosis		2.12	.50	.13	<.05
<i>Dependent variable: Termination CGI</i>					
Step 1: Covariate	.182				<.05
Intake CGI		-.95	-.16	.02	ns
Depressive Disorder		-2.09	-.34	.12	<.05
Step 2: Main Effects	.027				ns
Treatment Condition		-1.06	-.17	.03	ns
Anxiety Diagnosis		-.22	-.04	.00	ns
Step 3: Interaction Effect	.086				.05
Intervention Condition $\times$ Anxiety Diagnosis		-2.01	-.46	.12	.05

Note. CGI = Clinical Global Impression. β = standardized beta weight provided for multiple regression. $n = 80$ (Imagination condition) and $n = 92$ (Information condition)