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A Randomized Controlled Trial of Telephone-Delivered Cognitive-Behavioral Therapy for Late-life Anxiety Disorders

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Abstract

Objectives—Older adults face a number of barriers to receiving psychotherapy, such as a lack of transportation and access to providers. One way to overcome such barriers is to provide treatment by telephone. The purpose of this study was to examine the effects of cognitive behavioral therapy delivered by telephone (CBT-T) to older adults diagnosed with an anxiety disorder.

Design—Randomized controlled trial.

Setting—Participants' homes.

Participants—Sixty participants ≥ 60 years of age with a diagnosis of Generalized Anxiety Disorder, Panic Disorder, or Anxiety Disorder Not Otherwise Specified.

Intervention—CBT-T vs. information-only comparison.

Measurements—Co-primary outcomes included worry (Penn State Worry Questionnaire) and general anxiety (State Trait Anxiety Inventory). Secondary outcomes included clinician-rated anxiety (Hamilton Anxiety Rating Scale), anxiety sensitivity (Anxiety Sensitivity Index), depressive symptoms (Beck Depression Inventory), quality of life (SF-36), and sleep (Insomnia Severity Index). Assessments were completed prior to randomization, immediately upon completion of treatment, and 6 months after completing treatment.

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Results—CBT-T was superior to information-only in reducing general anxiety (ES = 0.71), worry (ES = 0.61), anxiety sensitivity (ES = 0.85), and insomnia (ES = 0.82) at the post-treatment assessment; however, only the reductions in worry were maintained by the 6 month follow-up assessment (ES = 0.80).

Conclusions—These results suggest that CBT-T may be efficacious in reducing anxiety and worry in older adults, but additional sessions may be needed to maintain these effects.

Keywords

anxiety; cognitive-behavioral therapy; elderly; Generalized Anxiety Disorder; Panic Disorder; telephone-delivered psychotherapy

Objective

Anxiety is a significant problem for older adults. According to data from the National Comorbidity Survey-Replication, the lifetime prevalence of anxiety disorders among adults 60 years and older is 15.3% which exceeds the 11.9% prevalence rate of depressive disorders (1). Late-life anxiety disorders are associated with impaired quality of life (2), increased comorbidity (3), and sleep disturbances (4).

Cognitive behavioral therapy (CBT) is the most efficacious nonpharmacological treatment for anxiety disorders (5). Although effect sizes are smaller than for younger adults, CBT is superior to minimal contact or wait-list comparison conditions in reducing anxiety and coexistent symptoms (depression, sleep) among older adults (6–8). Nonetheless, some logistical aspects of traditional face-to-face delivery of psychotherapy may be less than ideal for older adults. Older adults may lack transportation to attend weekly appointments and those who live in rural areas may not have access to appropriately trained local providers and may be unwilling to travel long distances for appointments. The use of telephone delivered psychotherapy may be particularly appropriate for anxious older adults as it is conducted within the privacy of one's home and minimizes the need for regular transportation to weekly appointments. Also, trained geriatric cognitive-behavioral therapists are able to deliver treatment to people who would otherwise not have access to them. Thus, delivery of CBT by telephone may increase accessibility of treatment among older adults.

We conducted a randomized controlled trial comparing CBT delivered by telephone (CBT-T) with information-only for the treatment of late-life anxiety disorders. This is the first study to use a telephone-based intervention with no face-to-face sessions for the treatment of late-life anxiety disorders. We hypothesize that CBT-T will produce greater improvements in anxiety, worry, depressive symptoms, and quality of life than information-only.

Methods

Participants

Participants were 60 adults aged 60 years and older with a principal or co-principal diagnosis of Generalized Anxiety Disorder (GAD; n = 30), Panic Disorder (PD; n = 3), GAD and PD (n = 25), or Anxiety Disorder Not Otherwise Specified (ADNOS; n = 2) according to the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID; 9). Individuals with both GAD and PD were included because of their prevalence and association with significant morbidity, impaired quality of life, and disability. Individuals with ADNOS were also included as older adults may have significant symptoms of anxiety that are not easily classified by DSM-IV. Exclusion criteria included: 1) current psychotherapy; 2) current alcohol or substance abuse; 3) dementia or global cognitive

impairment (Mini-Mental Status Examination score < 24; 10); 4) psychotic symptoms; 5) active suicidal ideation; or 6) any change in psychotropic medications within the previous 3 months.

Participants were recruited through 2 academic primary care clinics (n = 5), advertisements in newspapers (n = 19) and newsletters (n = 4), mass mailing of flyers (n = 31), and physician referrals (n = 1). A 2-stage screening process was used. Participants were screened with the 2 anxiety questions from the Primary Care Evaluation of Mental Disorders (PRIME-MD; 11): “In the last 4 weeks, have you felt nervous, anxious, on edge, or worried?” and “In the last 4 weeks, have you had an anxiety attack when you suddenly felt fear or panic?” Participants who responded yes to either question were then given the option to complete a SCID by telephone (n = 34) or in person (n = 26). A total of 351 persons expressed interest in the study; SCIDs were conducted with 123 people and 60 participants were randomized into the study.

Treatment

CBT-T—Participants randomized to CBT-T received telephone therapy sessions and a treatment workbook. The workbook consisted of 8 chapters that addressed the treatment rationale, relaxation techniques, cognitive therapy, problem-solving, thought stopping, behavioral activation, in vivo exposure, and relapse prevention; 2 optional chapters focused on coping with pain and insomnia and were provided to participants who indicated problems with pain or sleep. Each chapter included the rationale for the technique, the steps for how to implement the technique, and a homework exercise to be completed daily in order to encourage the application of these techniques in the person’s daily life. Chapters were 5–10 pages in length and were written at an 8th grade reading level. Approximately 1–2 weeks after receiving the workbook chapter, the participant received a telephone therapy session. During these sessions, the content of the chapter was reviewed and the participant was encouraged to ask questions. The therapist then reviewed the homework exercises, discussed any problems the participant had with the homework, and discussed ways to apply the exercise in the participant's daily life. If the participant understood the chapter and successfully applied the techniques according to the clinician's judgment, the next chapter was mailed. However, participants could spend an additional session on any chapters with which they had difficulty. After completing the workbook, all participants received 4 additional booster sessions to reinforce use of the anxiety management techniques. Booster sessions were provided 2, 4, 8, and 12 weeks after completing the treatment. Therapy was administered by one doctoral level psychology student and one master’s level social worker. The therapists were trained by a clinical psychologist (G.A.B.). After completing didactic sessions and role plays, the therapists were supervised on 2 nonstudy cases before treating study participants.

Information-only comparison—Participants randomized to information-only were provided with written information on anxiety disorders from the NIMH (Facts about Anxiety Disorders) and a list of referral options. They were given the option of having a letter sent to their primary care physician notifying the physician of their diagnosis and participation in this study.

Measures

Co-primary outcomes—The Penn State Worry Questionnaire (PSWQ; 12) is a 16-item measure of the frequency and intensity of worry. Participants rated each item on a 5-point scale and responses were summed, with higher scores indicating greater worry. The PSWQ has demonstrated reliability and validity in older adults with GAD (8, 13). The internal consistency of the PSWQ in the current study was 0.75.

The State-Trait Anxiety Inventory-Trait subscale (STAI-T; 14) is a 20-item self-report measure of anxiety symptoms. Participants rated each item on a 4-point scale and responses were summed. The STAI-T has demonstrated convergent validity and good to excellent internal validity in samples of older adults; however, it fails to demonstrate divergent validity with measures of depression (15–16). The STAI-T was chosen as a co-primary outcome because it is one of the few validated measures of anxiety that does not include physiological symptoms. The internal consistency of the STAI-T in the current study was 0.51.

Secondary outcomes—The Anxiety Sensitivity Index (ASI; 17) is a 16-item measure of fear of anxiety-related symptoms that is frequently used as an outcome measure in studies of Panic Disorder. Participants rated each item on a 5-point Likert scale and responses were summed. The ASI has been validated in an older adult sample (18). The internal consistency of the ASI in the current study was 0.89.

The Beck Depression Inventory (BDI; 19) is a 21-item measure of depressive symptoms. Responses were summed and higher scores indicate greater depressive symptoms. The BDI has good psychometric properties in samples of both younger and older adults with GAD (20–21). The internal consistency of the BDI in this study was 0.81.

The Hamilton Anxiety Rating Scale (HAMA; 22) is a 14-item interviewer-rated measure of anxiety symptoms. The Structured Interview Guide for the Hamilton Anxiety Rating Scale was used in order to increase reliability (23). It has been validated in samples of older adults with GAD and demonstrates good inter-rater reliability (rs = .81–.85; 6, 16, 24). Twenty-five percent of audiotapes were randomly selected for review by a second rater and inter-rater reliability was .86. Assessors administering the HAM-A were blind to treatment condition.

The Insomnia Severity Index (ISI; 25) is a 7-item self-report measure of type and severity of insomnia symptoms. Responses are summed, with higher scores indicating greater sleep impairment. The internal consistency of the ISI in the current study was .86.

The SF-36 (26) is a self-report measure of quality of life consisting of 36 items that assess physical functioning, role limitations due to physical health problems, bodily pain, general health, vitality, social functioning, role limitations due to emotional problems, and emotional well-being. Two summary scales representing mental health and physical health components are created. The SF-36 has demonstrated reliability and validity in older adult samples (27).

Process variables—These variables were assessed only in the CBT-T condition upon completion of the treatment.

The Client Satisfaction Questionnaire (CSQ; 28) is an 8-item questionnaire that assesses patient satisfaction with treatment. Responses are summed, with higher scores indicating greater satisfaction. The CSQ has adequate reliability when used with older adults (29). The CSQ was administered after the final session and had an internal consistency of 0.94.

The Working Alliance Inventory Short Form (WAI-S; 30) assesses the working alliance between the therapist and the patient from the therapist's and the patient's perspectives. Patients and therapists rate 12 items on a 7-point scale. Responses are summed, with higher scores indicating a greater working alliance. The WAI-S has demonstrated high correlations with the full WAI (31), and comparable internal consistency and predictive validity (32). The internal consistency for the WAI-S Patient and WAI-S Therapist versions in this study were 0.84 and 0.85, respectively.

Therapists rated participants' adherence to the program on a 5-point scale ranging from "*not adherent at all*" (defined as never prepared for sessions, did not read the workbook, did not complete homework assignments) to "*extremely adherent*" (defined as always prepared for sessions, read the workbook, completed homework assignments). Therapists also rated participants' investment in treatment on a 5-point scale from "*not very invested*" to "*extremely invested*." These ratings were made independent of any knowledge of outcomes.

Procedures

This study was conducted in compliance with the Wake Forest University School of Medicine Institutional Review Board and informed consent was obtained from all participants by a trained research assistant. Assessments were conducted at baseline, post-intervention, and 6 months after completing the intervention by interviewers who were blinded to condition. With the exception of the HAM-A, all outcome measures were assessed by mail at all 3 time points. The HAM-A was administered either in person or by telephone at the baseline assessment, and then by telephone for the post-intervention and 6 month follow-up assessments. After completion of the SCID and baseline assessment, eligible participants were randomized to either CBT-T or to the information-only comparison condition. Because the time to complete the CBT-T intervention could vary, each participant randomized to CBT-T was paired with a participant randomized to information-only and their post-treatment assessments occurred at the same time. Participants received $25 for completing each assessment.

Data Analyses

The pre-specified co-primary outcomes were the PSWQ and the STAI-T. The pre-specified follow-up time point of primary interest was the immediate post-intervention measurement. A sequentially rejective test procedure (33) based on the Bonferroni correction was used to control the overall Type I error at 0.05 for these two significance tests of the intervention effect on PSWQ and STAI-T at the post-intervention measurement. This procedure orders the two p-values and compares the largest p-value to 0.05. If that p-value is less than 0.05, then both tests are declared statistically significant. If the largest p-value is not less than 0.05, then the smaller p-value is compared to 0.025, as would be done with the traditional Bonferroni procedure.

All analyses of intervention differences were performed using an approach consistent with the intent-to-treat (ITT) philosophy (34). Specifically, a likelihood-based, mixed-effects analysis of covariance approach was used to estimate intervention differences for the outcomes measured repeatedly at post-intervention and 6 month follow-up. These models contained a covariate for the baseline value of the outcome of interest, an intervention effect, and a time by intervention interaction. Inclusion of the time by intervention interaction term was necessary to permit estimates of the intervention effect specific to each follow-up. The test of the interaction is a test that the intervention effect is the same at both follow-up time points. Tests of intervention hypotheses at each time point were carried out using contrasts. Effect sizes were calculated by dividing the difference in post-intervention least-squares means at each follow-up by the estimated standard deviation for that follow-up time point. Secondary outcome measures were also analyzed using repeated measures ANCOVAs. Because we considered tests of these secondary outcomes to be hypothesis generating, all tests of secondary outcomes were carried out at the 0.05 level.

Results

Baseline Comparisons

Differences between participants in the CBT-T and information-only conditions on baseline demographic and clinical characteristics were examined (Table 1). The only significant difference between the 2 groups at baseline was on education [$t(57) = -2.20$, $p = .03$)], with participants in the CBT-T condition reporting more education than participants in the information-only condition. There were no other differences in demographic or clinical characteristics. All analyses described below were rerun controlling for education and the significance of the results were unchanged.

Attrition

The attrition rate from randomization to the post intervention assessment was 8.3% (4 from CBT-T, 1 from information-only). An additional 5 people dropped out between the post-intervention assessment and the 6 month follow up assessment (2 from CBT-T, 3 from information-only).

Treatment Outcomes

Least square means and standard errors for all outcome measures by condition and time, as well as the results of the ANCOVAs are presented in Table 2.

Co-primary outcomes—Upon completion of the intervention, participants who received CBT-T had significantly greater improvements in PSWQ and STAI-T scores than participants in the information-only condition. Mean change in PSWQ and STAI scores was 8.3 points (S.E. = 1.57) and 2.2 points (S.E. = 0.94), respectively, among participants in the CBT-T condition. Scores on the PSWQ declined 3.4 points (S.E. = 1.52) but increased 1.2 points (S.E. = 0.91) on the STAI-T among participants in the information-only condition. Significant group differences in PSWQ scores were maintained at the 6 month follow-up. Mean change in PSWQ scores was 10.9 points (S.E. = 1.70) among participants in CBT-T, and 4.2 points (S.E. = 1.67) in the information-only condition. Differences between the conditions on STAI-T scores were no longer significant at the 6 month follow up. There was no differential effect of the intervention on outcomes by diagnostic group (GAD vs. PD and comorbid GAD and PD).

Secondary outcomes—Results indicate significant improvements on the ASI, HAM-A, and ISI for participants in the CBT-T group upon completion of the intervention. Changes on the BDI and SF-36 were not significantly different between the groups. Group differences in outcomes observed immediately post-treatment on the ASI, HAM-A, and ISI were not maintained by the 6 month follow-up. There was a significant condition by time interaction on the ISI, indicating that the improvement in sleep exhibited by the CBT-T group at post-intervention was not maintained over the 6 month follow-up period. However, participants who received CBT-T demonstrated significant improvements on the Mental Health Component of the SF-36 at the follow-up assessment.

Diagnosis—There were no differences between CBT-T and information only groups in the percent of participants who met criteria for GAD (97% CBT-T, 87% information only, $p = 0.35$ Fisher's Exact Test) or PD (43% CBT-T, 50% information only, $p = 0.80$ Fisher's Exact Test) at baseline or post-treatment (GAD: 50% CBT-T, 73% information only, $p = 0.15$ Fisher's Exact Test; PD: 25% CBT-T, 35% information only, $p = 0.46$ Fisher's Exact Test).

Use of other services—At baseline and follow-up, there were no differences in the percent of participants that reported taking psychotropic medications (Baseline: 47% CBT-T, 60% information only, p = 0.44 Fisher's Exact Test; Follow-up: 54% CBT-T, 46% information only, p = 0.78 Fisher's Exact Test). At baseline, no participants reported seeing a therapist; whereas, at follow-up one information only participant had a single visit with a therapist.

Adherence and Satisfaction

Therapists rated participant adherence (M = 3.7, SD = 1.5) and investment (M = 3.7, SD = 1.5) to be good. There were no significant differences in rates of completion of the assessments between the conditions at the post-intervention [χ^2 (1) = 0.39, p > .05] or follow-up [χ^2 (1) = 0.77, p > .05] assessments. Furthermore, participant satisfaction with treatment (M = 27.4, SD = 4.7) and therapeutic alliance (WAI-Client M = 70.8, SD =11.9; WAI-Therapist M = 67.7, SD = 17.6) were also high.

Discussion

This is the first study of telephone-delivered CBT for late-life anxiety disorders. The results indicate that participants who received CBT experienced a greater improvement in self-report and clinician-rated worry and anxiety symptoms than participants who received information-only. Furthermore, these participants also demonstrated greater reductions in anxiety sensitivity and insomnia. Thus, CBT delivered by telephone shows promise for treating symptoms of both GAD and Panic Disorder among older adults.

Follow-up data, collected 6 months after completing the treatment, indicate maintenance of improvement in worry symptoms. Although the reductions in anxiety sensitivity and insomnia were no longer significantly different between the 2 conditions, differential improvements in mental health quality of life emerged, favoring the CBT-T condition. We speculate that this may be due to the maintenance of improvement in worry, but this finding needs to be replicated in future studies before firm conclusions can be drawn. This may also suggest that a longer intervention or more intense follow-up may be needed.

We found moderate to large (.61–.85) effect sizes for post-treatment data, and large effect sizes for 6 month follow-up data (.80–.99). This compares favorably with the findings of a face-to-face CBT intervention for late-life GAD (13); our effect size for the PSWQ was smaller but our effect size for the HAM-A was much larger. Similarly, our effect sizes were also comparable with the mean between group effect size of .71 reported by Borkovec and Ruscio (5) in a meta-analysis of CBT for GAD in adults. Thus, the CBT-T intervention appears to be strong enough to produce changes in symptoms that are comparable to face-to-face studies of CBT for anxiety.

Older adults appear to find telephone-delivered psychotherapy to be a suitable option. Drop out rates were lower than studies of psychotherapy for late-life anxiety (8, 35). Similarly, participant satisfaction with the intervention is comparable to the level of satisfaction reported by older adults in a study of face-to-face CBT for late-life GAD (13). Furthermore, both participants and therapists reported high degrees of working alliance, indicating that a strong therapeutic relationship was established. Anecdotally, some participants reported that they were impressed with the level of detail with which the therapists could remember their particular sessions. It should be noted, however, that participants who did not like the lack of face-to-face contact may have refused to participate in the study.

The presentation of information through telephone sessions and supplemented with a workbook allowed for both visual and auditory processing of information. By presenting the

didactic information in written format prior to the telephone sessions, participants were able to read the material multiple times and make note of questions. This may be particularly relevant for older adults with GAD, as they experience poorer short-term memory than nonanxious older adults (36). Anecdotal comments indicated that some participants did reread materials and referred back to chapters over the course of the intervention.

There are a number of limitations of this study. The sample size was relatively small, with a total of 60 participants randomized to 2 conditions. The participants were <70 years old on average, which may not be representative of most homebound older adults. There was a lack of homogeneity of the sample in terms of diagnosis. Although this reduces the disorder specific conclusions that can be made, this heterogeneity in diagnosis increases the generalizability of findings, particularly to nonacademic settings. Conversely, the sample was homogenous in terms of demographic characteristics, with most of the sample consisting of well-educated white women. Regarding the design of the study, CBT-T was compared with an information-only condition rather than a structurally equivalent comparison group with similar levels of treatment credibility and outcome expectations (37). Thus we are unable to conclude that the changes in outcomes were a result of the specific cognitive-behavioral skills rather than the effects of attention. A third limitation of the study was the poor internal consistency of the STAI-T, which was chosen a priori as an outcome measure. Other limitations include a lack of assessment of treatment fidelity and reliability of diagnoses. Further, the 8th grade reading level may limit accessibility to people with very limited education. Finally, the fact that telephone psychotherapy is not reimbursable under Medicare regulations at this time may weaken the current public health significance of this study; however, studies such as this one that demonstrate the effectiveness of alternative modes of delivery may at some point lead to changes in reimbursement policies.

CBT-T may be useful in a stepped care approach to late-life anxiety, particularly if its cost-effectiveness is established. A recent study found that a stepped-care approach to the prevention of late-life anxiety and depressive disorders, which included CBT delivered by bibliotherapy in conjunction with 2–3 nurse visits or telephone calls, was successful in reducing the 12-month incidence of anxiety and depressive disorders by 50% among older adults with subthreshold symptoms (38). Participants in the current study had more severe symptoms, as they met diagnostic criteria for anxiety disorders. However, participants did evidence significant reductions in anxiety and related symptoms, and lasting reductions in worry. Many older adults prefer psychotherapy to pharmacotherapy (39). Results suggest that this may be a viable option for anxious older adults who are unable to attend regular face-to-face therapy sessions. The mixed long-term findings suggest that more follow-up sessions may need to be integrated into telephone treatment in order to provide the same kind of lasting results that face-to-face treatment provides.

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Table 1

Baseline sociodemographic and clinical characteristics by intervention status

	CBT-T (n = 30)	Information-only (n = 30)	p
Age in years, Mean (SD)	68.8 (7.3)	69.5 (6.9)	.72
Education in years, Mean (SD)	14.4 (1.6)	13.2 (1.6)	.03
Gender-% Women	83.3%	83.3%	1.0
Race/ethnicity			.10
% Non-Hispanic white	76.7%	70 .0%	
% African American	16.7%	13.3%	
% Native American	0%	16.7%	
% Hispanic	3.3%	0.0%	
Marital status			.47
% Divorced	17.2%	10.3%	
% Never married	0.0%	3.4%	
% Married	44.8%	58.6%	
% Widowed	37.9%	27.6%	
Mini Mental State Exam, Mean (SD)	29.1 (1.2)	28.6 (1.6)	.17
% with comorbid psychiatric diagnosis	83.3%	76.7%	.35
Major Depressive Disorder	46.7%	46.7%	
Specific Phobia	36.7%	23.3%	
Social phobia	26.7%	20.0%	
OCD	3.3%	13.3%	
PTSD	6.7%	10.0%	
% taking ≥ 1 psychotropic medication	46.7%	60.0%	.44
Anxiety Sensitivity Index	29.1 (14.0)	31.2 (11.4)	.53
Beck Anxiety Inventory	18.9 (11.6)	22.1 (12.0)	.31
Beck Depression Inventory	16.9 (8.2)	17.9 (7.7)	.64
Hamilton Anxiety Rating Scale	20.4 (5.5)	19.9 (7.8)	.79
Insomnia Severity Index	16.3 (5.5)	14.1 (5.8)	.15
Penn State Worry Questionnaire	43.7 (8.4)	44.5 (9.1)	.74
SF-36 Mental Health Component	33.8 (13.2)	34.2 (11.9)	.92
SF-36 Physical Health Component	44.8 (12.2)	39.1 (12.6)	.09
State Trait Anxiety Inventory-Trait	44.9 (6.4)	44.0 (5.4)	.57

Note: The χ^2 test was used for gender (df = 1), race/ethnicity (df = 3), marital status (df = 3), comorbid psychiatric diagnosis (df = 1), and depression diagnosis (df = 1). A Fisher's exact test was used for psychotropic medication use (df = 1). T tests were used for all other variables (df =58).

Measure	Group	Baseline Mean (SD)[c]	Least Squares Follow-Up Means (model based SE/ N)		Post-Treatment Intervention Effects[a]			6-Month Follow-Up Intervention Effects			Condition X Time Effects[b]	
			Post-Intervention[c]	6-mo Follow-Up[c]	Effect Size[d]	F[e]	p	Effect Size[d]	F[e]	P	F[e]	p
Co-Primary Outcomes:												
Penn State Worry Questionnaire	CBT	44.1 (8.7)	35.8 (1.6/28)	33.2 (1.7/24)	0.61	5.02	0.03	0.80	8.03	0.007	0.68	0.42
	Info Only		40.7 (1.5/26)	39.9 (1.7/24)								
State Trait Anxiety Inventory	CBT	44.5 (5.9)	42.3 (0.9/28)	43.6 (0.9/24)	0.71	6.58	0.01	0.24	0.63	0.43	2.38	0.13
	Info Only		45.7 (0.9/26)	44.8 (1.0/24)								
Secondary Outcomes:												
Anxiety Sensitivity Index	CBT	30.2 (12.7)	16.7 (1.9/27)	19.2 (2.3/23)	0.85	9.31	0.004	0.35	1.49	0.23	1.97	0.17
	Info Only		24.8 (1.8/26)	23.1 (2.2/23)								
Beck Depression Inventory	CBT	17.4 (7.9)	11.4 (1.1/28)	10.7 (1.6/24)	0.48	3.01	0.89	0.30	1.36	0.25	<0.01	0.97
	Info Only		14.1 (1.1/26)	13.3 (1.6/24)								
Hamilton Anxiety Rating Scale	CBT	20.2 (6.7)	11.4 (1.2/29)	11.1 (1.5/23)	0.81	9.01	0.004	0.46	2.52	0.12	0.73	0.40
	Info Only		16.3 (1.1/26)	14.4 (1.5/23)								
Insomnia Severity Index	CBT	15.2 (5.7)	8.7 (1.1/28)	9.0 (1.1/24)	0.82	8.62	0.005	0.42	2.24	0.14	5.10	0.03
	Info Only		13.3 (1.1/26)	11.3 (1.1/24)								
SF-36 Mental Health Component	CBT	34.0 (12.4)	41.4 (2.7/25)	51.5 (3.0/23)	−0.36	1.56	0.22	−0.77	6.17	0.17	1.76	0.19
	Info Only		36.7 (2.6/25)	41.2 (2.9/23)								
SF-36 Physical Health Component	CBT	42.0 (12.6)	41.6 (1.6/25)	38.7 (2.0/23)	0.03	0.01	0.96	0.24	0.59	0.45	0.56	0.46
	Info Only		41.8 (1.5/25)	40.9 (1.9/23)								

[a] Pre-specified follow-up for tests of primary outcomes. Using a sequentially rejective Bonferroni test, we declare both primary outcomes significant at the 0.05 level.

[b] Tests of equality of intervention effects across 2 time points.

[c] Baseline mean represents the overall pre-randomization mean of both groups combined. This value is used to obtain the adjusted means at follow-up using the estimated coefficients from the mixed models analysis of covariance procedure that uses the baseline value as a covariate. Follow-up means are presented with SE/N in parentheses.

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[d] Effect size is calculated as the difference in adjusted follow-up means divided by the standard deviation at follow-up.

[e] All F-tests have 1,51 d.f. except for the Hamilton Anxiety Rating Scale, which has 1,52 d.f., and the SF-36 measures which have 1,48 d.f.