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Predictors of treatment satisfaction among older adults with anxiety in a primary care psychology program

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Abstract

Increasing numbers of patients are treated in integrated primary care mental health programs. The current study examined predictors of satisfaction with treatment in patients from a randomized clinical trial of late-life generalized anxiety disorder (GAD) in primary care. Higher treatment satisfaction was associated with receiving CBT rather than enhanced usual care. Treatment credibility, treatment expectancies, social support, and improvements in depression and anxiety symptoms predicted higher treatment satisfaction in the total sample. In the CBT group, only credibility and adherence with treatment predicted satisfaction. This suggests that older patients receiving CBT who believe more strongly in the treatment rationale and follow the therapist's recommendations more closely are likely to report satisfaction at the end of treatment. In addition, this study found that adherence mediated the relationship between treatment credibility and treatment satisfaction. In other words, patients' perceptions that the treatment made sense for them led to greater treatment adherence which then increased their satisfaction with treatment.

Keywords

Primary Care; Psychotherapy; Generalized Anxiety Disorder; Older Adults; Treatment Satisfaction; Adherence; Expectancies; Social Support

Spurred by several influential healthcare policy statements recommending integrated primary care mental health programs (IOM, 2006; WHO, 2008), increasing numbers of patients are being treated in these settings. Although there are many models for integrated programs, they generally involve primary care providers and behavioral health specialists working collaboratively to manage mental health conditions. Research suggests that these programs improve anxiety, depression (Roy-Byrne et al., 2005; Roy-Byrne et al., 2010; Rollman et al., 2009), treatment attendance, and patient satisfaction (Roy-Byrne et al., 2005;

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Katon et al., 1995). Such programs also improve generalized anxiety in older adults (Stanley et al., 2003; Stanley et al., 2009) and depression in older adults (Unutzer et al., 2002). Older adults in particular are likely to be more satisfied with integrated mental health services rather than referrals to specialty mental health services (Chen et al., 2006), potentially due to the stigma of receiving care in specialty mental health services (Corrigan, 2004) and older adults' greater burden of chronic illness (Druss & von Esenwein, 2006). Although research suggests that these programs improve patient satisfaction, less research examines the variables that predict patient satisfaction in such programs.

Patient satisfaction with treatment is an important component of program evaluation. Although satisfaction with psychotherapy is not always highly correlated with outcome (Ankuta & Abeles, 1993; Lambert, Salzer, & Bickman, 1998), it may be important because satisfied patients may be more likely to return for future treatment, increasing rates of engagement in therapy (Sun, Adams, Orav, Rucker, Brennan, & Burstin, 2000). Additionally, satisfied patients may be more likely to recommend treatment to others (Lee, 2005) and to speak highly of their experiences, potentially improving the public's perceptions of the helpfulness of therapy and reducing the stigma of seeking psychological help. In medical care, patient satisfaction is considered an important outcome in itself (Cleary & McNeil, 1988) and the Joint Commission and the National Committee for Quality Assurance both assess patient satisfaction a marker of quality care (TJC; 2010; NCQA, 2011).

Theories of patient satisfaction emphasize the roles of improvement in functioning and treatment expectations. Two different types of expectancies exist: outcome expectancies, or positive expectations for the helpfulness of treatment, and treatment expectations, or the degree to which the care meets patients' expectations about what care will be like (reviewed in Constantino, Glass, Arnkoff, Ametrano, & Smith, 2011). Some theories state that satisfaction is determined by the degree to which patients hold positive expectations for the helpfulness of treatment (Linder-Pelz, 1982; Ware, Snyder, Wright, and Davies, 1983) whereas others emphasize the degree to which the care meets patients' expectations about care (Fitzpatrick, 1984; Linder-Pelz, 1982; Ware et al., 1983; Williams, 1994). Another hypothesized predictor of satisfaction is quality of care and clinical improvement from care (Fitzpatrick, 1984; Linder-Pelz, 1982; Ware et al., 1983). Finally, theories emphasize the importance of patients feeling their emotional needs have been met by interactions with providers (Fitzpatrick, 1984).

Although theories of patient satisfaction do not propose an association between patients' adherence with treatment and satisfaction, there are several reasons to believe it exists: 1) patients who adhere more closely to treatment may obtain more benefit from treatment and therefore be more satisfied, 2) patients who adhere more closely to treatment may experience cognitive dissonance (Festinger & Carlsmith, 1959) if they expended a great deal of effort on adhering to a treatment that they were not satisfied with, motivating them to reappraise their satisfaction level, or 3) early satisfaction with treatment may lead to continued "buy-in" and greater adherence later in treatment.

Consistent with theories of treatment satisfaction, positive treatment expectancies predict greater satisfaction with treatment among students attending therapy at a university counseling center (Greenfield, 1983), patients in a short-term psychiatric inpatient unit (Hansson & Berglund, 1987) and youth receiving therapy in a community based outpatient clinic (Garland, Haine, & Lewczyk Boxmeyer, 2007). Symptom improvement sometimes predicts treatment satisfaction (Deane, 1993; Hasler, Moergeli, Bachmann, Lambrev, Buddeberg, & Schnyder, 2004; Propst, Paris, & Rosberger, 1994), with associated correlations ranging from $r = .35$ (Attkisson, & Zwick, 1982) to $r = .53$ (Calsyn, Morse,

Klinkenberg, Yonker, & Trusty, 2002), although other research suggests no relationship between symptom improvement and satisfaction (e.g., Lambert, et al., 1998). Finally, although little research examined the effect of adherence on satisfaction in psychotherapy, some studies found that adherence predicts treatment satisfaction for substance abusing patients (Dearing, Barrick, Dermen, & Walitzer, 2005; Hawkins, Baer, & Kivlahan, 2008). Additionally, adherence to psychiatric medication regimens is associated with greater treatment satisfaction (e.g., Katon et al., 1996). Overall, the literature on predictors of satisfaction with mental health treatment suggests that expectancies, symptom improvement, and adherence may predict satisfaction.

Research on predictors of satisfaction with mental health treatment has focused primarily on younger adults in traditional mental health settings. However, the variables that predict satisfaction may be different in older adults and in integrated primary care programs. For example, older adults are less likely to perceive the need for mental health services (Karlin, Duffy, & Gleaves, 2008) and may be less psychologically minded (e.g., Burgmer & Heuft, 2004), indicating that the role of expectancies may be different. Although older adults report high levels of satisfaction with mental health treatment (Lippens & Mackenzie, 2011), not all psychosocial treatments have as large an effect for older adults (e.g., Wolitzky-Taylor, Castriotta, Lenze, Stanley, & Craske, 2010), so the role of clinical improvement may differ. Previous research on the predictors of satisfaction with psychiatric services in this age group has indicated that, consistent with findings in younger adults, treatment attendance and clinical improvement are important (Chen et al., 2006). Another study examined predictors of satisfaction with overall mental health services including services received from psychiatrists, family doctors, social workers, and psychologists. This study found that social support was associated with greater treatment satisfaction whereas demographic variables, chronic health conditions, and initial psychological distress were not (Lippens & Mackenzie, 2011). Finally, personality characteristics such as agreeableness and neuroticism have been found to predict older adults' satisfaction with psychotherapy (Green, Hadjistavropoulos, & Sharpe, 2008). Overall, more research is needed on the predictors of older adults' satisfaction with primary care mental health programs.

The current study examined the predictors of satisfaction with cognitive-behavioral treatment in patients from a randomized clinical trial of late-life generalized anxiety disorder (GAD) in primary care (Author, 2009). We examined patients receiving CBT with GAD because it is the most common anxiety disorder in elderly individuals presenting to primary care, with prevalence rates ranging from 1 to 7.3%, and CBT is a well established as a treatment for late-life anxiety (Wolitzky-Taylor et al., 2010).

We predicted that, consistent with theories of patient satisfaction (e.g., Linder-Pelz, 1982; Ware et al., 1983; Williams, 1994) symptom improvement, positive treatment outcome expectancies, treatment credibility, and adherence to treatment would predict treatment satisfaction. Although theories of treatment satisfaction do not address the role of social support in predicting treatment satisfaction, a previous study with older adults did find an effect (Lippens & Mackenzie, 2011) and we believe that poorer social support may indicate difficulty with interpersonal relationships that may interfere with developing a satisfying therapeutic relationship and benefitting from treatment. Therefore, we also predicted that social support would be positively associated with satisfaction. Finally, we hypothesized that positive treatment credibility for CBT may lead to greater adherence to treatment which may in turn lead to greater satisfaction.

Method

Participants

Participants were drawn from a randomized clinical trial of 134 older adults with GAD (Author, 2009). Patients received either CBT or enhanced usual care (EUC), in which patients received brief biweekly telephone calls to provide support and ensure safety. This trial found that CBT compared with EUC significantly improved worry severity and depression symptoms for older adults, and that treatment satisfaction was higher in patients receiving CBT than EUC.

All patients met criteria for GAD as assessed by a Structured Clinical Interview for the DSM-IV, Axis I Disorders, Research Version (SCID-I; First, Spitzer, Miriam, & Williams, 1997), and interrater reliability was adequate (for example, $\kappa = .64$ for GAD, $.71$ for depression, $.81$ for social phobia). Patients with Mini-Mental State Examination scores less than 24, indicating cognitive difficulties, were excluded, as were patients with active substance abuse, psychosis, or bipolar disorder. Included patients were primarily Caucasian (73%) and female (81%). They ranged in age from 60 to 88, with a mean age of 67.3 (SD = 5.9). The majority (79%) had at least one coexisting disorder, primarily Major Depressive Disorder (44.8%) or another anxiety disorder (40.3%). Patients randomized to CBT had lower worry severity ($p < .02$; see Author et al., 2009). The current study included only patients who were still participating in the trial at three months and completed the Client Satisfaction Questionnaire; therefore, we examined data from 60 patients in the CBT condition and 43 patients in the EUC condition, for a total of 103 patients.

Intervention

As described in Author et al. (2009), therapists were 3 master's level therapists with at least 2 years of CBT experience, 1 predoctoral intern with more than 3 years' experience in CBT for anxiety, and 1 post bachelor's level therapist with 5 years' experience in CBT for late-life anxiety. Patients were referred by their primary care physician and received co-located mental health treatment, meaning that patients received therapy in the same suite of offices as they received physical health care. The CBT intervention consisted of 10 individual sessions over 12 weeks and included education and awareness, relaxation training, cognitive therapy, exposure, problem-solving skills training, and behavioral sleep management (Author, 2004). Brief telephone booster sessions were offered at 4, 7, 10, and 13 months. Patients completed a mean of 7.7 (SD = 1.3) sessions.

The EUC condition consisted of brief (approximately 15 minutes) biweekly telephone calls for 3 months to provide support and ensure safety. Therapists reminded patients to call project staff if symptoms worsened and suggested contacting their primary care provider for medical problems.

Measures

The Client Satisfaction Questionnaire (CSQ; Larsen, Attkinson, Hargreaves, & Nguyen, 1979) is an 8-item assessment of client/patient satisfaction with a specific treatment. Each item is measured on a 4-point likert scale. The CSQ has good internal consistency reliability ($\alpha = .87$ in the current sample), and validity (Larsen et al., 1979). The CSQ is reliable in older adults with GAD (Akkerman, et al., 2001). Patients rated their satisfaction with the care provided by study staff (e.g., CBT, EUC check-in calls) rather than care provided by their physician.

The Expectancy Rating Scale (ERS) is a 4-item questionnaire composed of items taken from Borkovec and Nau's (1972) outcome expectancies questionnaire. All items are rated on a

10-point Likert scale, except the question “how much improvement do you expect to result from treatment?” which is rated on a 0% to 100% scale. Three items are summed to create a Credibility subscale, measuring the degree to which the patient believes in the rationale of treatment, and 1 item composes the Expectancy subscale, measuring the degree to which the patient expects to improve from the treatment. The original questionnaire has high internal consistency (.89 for the Credibility subscale in the current sample), test-retest reliability, and validity (Devilly & Borkovec, 2000). This questionnaire has been used extensively with older adults (e.g., Wetherell et al., 2005).

The Adherence with Treatment Scale (AWTS; adapted from DiMatteo et al., 1993) is a 5-item self-report measure of the patient’s adherence with treatment. The AWTS was adapted from the Medical Outcomes Study (DiMatteo et al., 1993) where it was used to examine adherence to physician treatment of physical conditions. We modified the scale to refer to the patient’s therapist rather than their medical doctor. The AWTS has acceptable internal consistency reliability ($\alpha = .82$ in the current sample) and validity (DiMatteo et al., 1993). The AWTS was only administered to patients in the CBT group.

The Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988) is a 12-item measure of perceived social support, in which agreement with each item is rated on a 7-point Likert scale. Subscales include support from family, friends, and a significant other. It has good internal consistency reliability ($\alpha = .95$ in the current sample), test-retest reliability, and validity in adults and adolescents (Zimet, Powell, Farley, Werkman, & Berkoff, 1990) and older adults (Stanley, Beck, & Zebb, 1998). The current study used only the total support score.

Treatment outcome measures—The Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990) is a measure of worry and generalized anxiety. Patients rated each item on a 5-point likert scale ranging from *not at all typical of me* to *very typical of me*. The PSWQ has high internal consistency ($\alpha = .85$ in the current sample), test-retest reliability ($r = .92$), and strong convergent validity with diagnoses of generalized anxiety disorder and other measures of worry and anxiety (Meyer et al., 1990). The PSWQ has been used successfully as an outcome measure in geriatric anxiety treatment research (Stanley, et al., 2009; Wetherell, Gatz, & Craske, 2003).

The Beck Depression Inventory-II (Beck, Steer, & Brown, 1996) is a 21-item inventory of depression symptoms that requires participants to select one of four statements that best describes their mood state over the last two weeks. The BDI-II has good internal consistency ($\alpha = .85$ in the current sample) and is widely used in research and clinical settings (e.g., Dozois, Dobson, & Ahnberg, 1998; Whisman, Perez, & Ramel, 2000). The BDI-II has been used with older adults with anxiety (Wetherell, et al., 2009; Segal, Coolidge, Cahill, & O’Riley, 2008)

Procedure

At baseline, patients completed the PSWQ, BDI, and MSPSS. They were then randomized to CBT or usual care. At the end of the first treatment session, patients in the CBT condition completed the ERS. After 3 months, patients completed the PSWQ, and BDI again as well as the CSQ and the AWTS. Patients completed the CSQ again at the 6-month follow-up. Patients in the EUC group completed the same assessments minus the AWTS.

Data analysis

Treatment satisfaction, treatment credibility, and social support were skewed and were normalized with transformations. We examined Pearson or point-biserial correlations of

each variable with treatment satisfaction (Table 1). Next, we conducted a multiple regression model to examine unique predictors of patient satisfaction with treatment at three months. Finally, we used bootstrapping to test the proposed mediational model. Bootstrapping (Bollen & Stine, 1990) is a non-parametric statistical test of mediation that is ideal for small sample sizes. The bootstrapping method repetitively samples from the available data to construct the sampling distribution and provide an unbiased confidence interval for the mediated effect. Accordingly, we used Preacher and Hayes's (2008) SPSS macros for conducting this analysis. Mediation is significant if the 95% bias corrected confidence intervals for the indirect effect do not include 0 (Preacher & Hayes, 2008). In this analysis, adherence was entered as the mediator variable, expectancies as the independent variable, and satisfaction as the dependent variable. We examined whether this mediational model held for predicting satisfaction at 3 months post-treatment and, in a separate analysis, 6-months post-treatment.

Results

Treatment satisfaction with CBT was high (see Table 1; $M = 28.7$, $SD = 3.2$, on a scale ranging from 8 to 32) and significantly higher than in the EUC condition ($M = 23.0$, $SD = 3.0$; $p < .001$), as reported in Author et al. (2009). Across both treatment conditions, treatment satisfaction correlated significantly and positively with treatment credibility, positive expectancies for treatment, social support, and change in PSWQ and BDI scores (Table 1). Additionally, in the CBT condition, patient adherence with treatment was associated with satisfaction (Table 1). Treatment satisfaction was not associated with gender, age, race, ethnicity, education level, therapist, or baseline severity of depression, anxiety, or worry (all $p > .05$).

Next, we conducted a regression using all of the variables that were significant in the correlational analyses as predictors. Because several of the predictors were correlated, entering all of the potential predictors in a regression may induce problematic multicollinearity. Therefore, we elected to exclude ERS Expectancy scores because of their overlap with the ERS Credibility scores ($r = .67$, Table 1), and to include only one measure of symptom severity and symptom change, the PSWQ. In this regression, only treatment condition ($\beta = .49$, $p < .001$), treatment credibility ($\beta = .33$, $p < .001$), and social support ($\beta = .19$, $p = .03$) uniquely predicted treatment satisfaction (see Table 2). Next, we examined the role of patients' adherence with treatment, which was only measured in the CBT group. In this subset of patients, only treatment credibility ($\beta = .39$, $p < .001$) and adherence with treatment ($\beta = .42$, $p = .001$) uniquely predicted treatment satisfaction.

Results based on 10,000 bias-corrected bootstrapped samples indicated that CBT patients' adherence with treatment mediated the relationship between treatment credibility and treatment satisfaction (95% CI [.25, 1.33]). Because zero is not in the 95% confidence interval, the indirect effect is significantly different from zero at $p < .05$ (two tailed). The residual direct effect indicated partial mediation ($p < .001$). We compared this to a mediational model in which adherence was proposed to mediate the relationship between treatment credibility and treatment outcome, specifically change in PSWQ score. This mediation model was nonsignificant (95% CI [-.245, .038]) indicating that although adherence and credibility both predicted outcome individually, adherence did not mediate the relationship between credibility and treatment outcome.

One criterion for establishing mediation is that it must be clearly established that the mediator occurred after the introduction of the independent variable and before the measurement of the dependent variable the temporal sequence of variables (Kraemer, Wilson, Fairburn, & Agras, 2002). Therefore, we also examined whether the mediation

model predicting satisfaction at 6-months post-treatment. This analysis again found that adherence with treatment mediated the relationship between treatment credibility and treatment satisfaction (95% CI [.02, .20]).

Discussion

Consistent with our hypotheses and previous research, satisfaction was associated with treatment credibility, treatment expectancies, social support, and improvements in depression and anxiety symptoms. However, only treatment condition, treatment credibility, and social support uniquely predicted treatment satisfaction in the entire sample whereas credibility and adherence uniquely predicted satisfaction within the CBT group. This suggests that older primary care patients who believe more strongly in the treatment rationale and follow the therapist's recommendations more closely are likely to report greater satisfaction at the end of treatment.

Consistent with a previous study of treatment satisfaction in older adults (Lippens & Mackenzie, 2011), baseline symptom severity did not predict treatment satisfaction. This indicates that both mildly and more severely distressed patients may be equally likely to be satisfied with treatment. Although some previous studies have found that decreases in symptoms predicted treatment satisfaction (e.g., Attkisson, & Zwick, 1982; Calsyn et al., 2002; Chen et al., 2006), others have not (Ankuta & Abeles, 1993; Lambert et al., 1998), and the current study suggested that the association between symptom improvement and treatment satisfaction disappears when controlling for other variables. As such, clinical improvement may be a less robust predictor compared to treatment credibility and adherence. Overall, this research suggests that the predictors of treatment satisfaction in older adults are similar to those found in younger adults (e.g., Garland et al., 2007; Hawkins et al., 2008).

In addition, this study found that adherence mediated the relationship between treatment credibility and treatment satisfaction immediately post-treatment and 3 and 6 months later. In other words, patients' perceptions that the treatment made sense for them led to greater treatment adherence which was associated with greater satisfaction with treatment. There are several possible reasons for the relationship between adherence and satisfaction. Although we have no data to address this, cognitive dissonance is a plausible explanation in that patients may be motivated to believe that a therapy was helpful if they expended a great deal of effort on complying with treatment recommendations. Another explanation may be that this relationship is driven by symptom improvement, in that patients who adhere more strongly to treatment experience greater reduction in symptoms, leading to greater satisfaction. However, the results of the current study found that symptom improvement was not uniquely associated with satisfaction, suggesting that increased satisfaction in highly adherent patients is not due to increased symptom improvement. In contrast to the above mediational model, adherence did not mediate the relationship between treatment credibility and decreases in anxiety symptoms. This suggests that, although satisfaction is associated with clinical improvement, adherence is not the mechanism through which that effect occurs. A final possible explanation is the relationship between adherence and satisfaction may be driven by patients' personality characteristics. For example, patients who are compliant and agreeable are likely to adhere to the therapist's recommendations and to endorse satisfaction with treatment in order to please the therapist (e.g., Green, Hadjistavropoulos, & Sharpe, 2008).

Overall, these results suggest that in order to obtain greater treatment satisfaction, primary care mental health providers may need to focus on establishing treatment credibility early in treatment and strongly encouraging adherence to treatment procedures. For example,

emphasizing therapist expertise and empirical support for the proposed treatment may improve credibility (Dryden & Sabelus, 2012).

Lessons Learned

Limitations of the current study include measuring patient-reported adherence. Future research should include objective or therapist-rated measures of patient adherence in order to more fully examine the role of adherence. Additionally, adherence was assessed at the end of treatment and therefore retrospective bias may have influenced patients' reports of their compliance with treatment. Future research should examine adherence throughout therapy. Another limitation is that the current results do not distinguish between the various potential reasons, such as personality style, for adherence's role in mediating treatment credibility and satisfaction; future research should examine these. Finally, these results may not generalize to patients with comorbid bipolar disorder, substance abuse, psychosis, or cognitive difficulties.

Conclusion

These results suggest that in order to maximize patient satisfaction with integrated treatments for primary care, programs should focus on improving treatment credibility by providing strong a rationale for the treatments provided and encouraging adherence throughout treatment.

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***Highlights**

- Older adults received CBT for GAD in primary care
- Expectancies and adherence predict treatment satisfaction
- Adherence mediated the relationship between expectancies and satisfaction

Figure 1. Adherence partially mediates the relationship between treatment credibility and satisfaction in CBT

Table 1
Means, standard deviations, internal consistencies, and Pearson and point-biserial correlations for study variables

	Mean (SD)	α	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. CSQ Satisfaction	26.3 (5.3)	.87	--										
2. ERS Credibility	20.4 (7.3)	.89	.52**	--									
3. ERS Expectancy	7.6 (1.9)	--	.38**	.67**	--								
4. MSPSS Social Support	5.3 (1.4)	.95	.26**	.22*	.31**	--							
5. AWTR Client Adherence ^I	3.9 (.6)	.82	.59**	.41**	.37**	.30**	--						
6. Treatment Condition (CBT = 1)	--	--	.50**	.30**	.25*	.02	--	--					
7. Therapist	--	--	.07	.06	-.04	.03	.16	-.04	--				
8. Baseline PSWQ	53.4 (10.4)	.85	.12	.01	.03	.01	-.05	-.13	.12	--			
9. Baseline BDI	16.5 (8.4)	.85	-.03	-.01	.00	-.22*	.02	.07	.09	.44**	--		
10. PSWQ Change	-5.8 (8.8)	--	.21*	.29**	.19	.05	.13	.24*	.02	.47**	.24*	--	
11. BDI Change	-5.3 (7.4)	--	.29**	.28**	.16	.06	.37**	.24*	.10	-.10	.51**	.50**	--

Note:

^I only measured in patients in the CBT condition;

* significant at $p < .05$;

** significant at $p < .01$. CSQ = Client Satisfaction Questionnaire; ERS = Expectancy Rating Scale; AWTR = Adherence with Treatment Scale; PSWQ = Penn State Worry Questionnaire; BDI = Beck Depression Inventory.

Table 2

Linear regression predicting client satisfaction with treatment

Predictor	Both treatment groups		CBT group only	
	β	p	β	p
Treatment Condition	.49	<.001	--	--
ERS Treatment Credibility	.33	<.001	.39	<.001
MSPSS Social Support	.19	.020	.12	.239
PSWQ change	.05	.543	.07	.611
AWTS Client Adherence ¹	--	--	.42	<.001
R ²		.42		.54

Note:

¹ only measured in CBT sample; bolded items are significant at $p < .05$; ERS = Expectancy Rating Scale; AWTR = Adherence with Treatment Scale; PSWQ = Penn State Worry Questionnaire