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The relative importance of relational and scientific characteristics of psychotherapy: Perceptions of community members vs. therapists

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ABSTRACT

Although client preferences are an integral component of evidence-based practice in psychology (American Psychological Association, 2006), relatively little research has examined what potential mental health consumers value in the psychotherapy they may receive. The present study was conducted to examine community members' preferences for the scientific and relational aspects of psychotherapy for different types of presenting problems, and how accurately therapists perceive these preferences. Community members ($n = 200$) were surveyed about the importance of scientific (e.g., demonstrated efficacy in clinical trials) and relational (e.g., therapist empathy) characteristics of psychotherapy both for anxiety disorders (e.g., obsessive–compulsive disorder) and disorder-nonspecific issues (e.g., relationship difficulties). Therapists ($n = 199$) completed the same survey and responded how they expected the average mental health consumer would. Results showed that although community members valued relational characteristics significantly more than scientific characteristics, the gap between these two was large for disorder-nonspecific issues ($d = 1.24$) but small for anxiety disorders ($d = .27$). Community members rated scientific credibility as important across problem types. Therapists significantly underestimated the importance of scientific characteristics to community members, particularly in the treatment of disorder-nonspecific issues ($d = .74$). Therapists who valued research less in their own practice were more likely to underestimate the importance of scientific credibility to community members. The implications of the present findings for understanding the nature of client preferences in evidence-based psychological practice are discussed.

1. Introduction

The American Psychological Association (APA 2006) has defined evidence-based practice in psychology (EBPP) as "the integration of the best available research with clinical expertise in the context of client characteristics, culture, and preferences" (p. 273). Among the components of EBPP, client preferences are an essential guide to treatment decisions and may directly influence treatment outcomes. To illustrate, meta-analytic reviews have found that clients who receive their preferred treatment are more willing to participate, less likely to drop out, and experience greater improvement (King et al., 2005; Swift & Callahan, 2009; Swift, Callahan, Ivanovic, & Kominiak, 2013). Unfortunately, less research has been conducted on client preferences than other aspects of EBPP, and little is known about what potential mental health consumers value with regard to their experience in psychotherapy.

One aspect of client preferences that has received recent attention in the literature concerns the relative importance of relational (e.g., strong therapeutic alliance) and scientific (e.g., treatment efficacy) characteristics of psychotherapy. An initial investigation by Swift and Callahan (2010) assessed how much empirical support treatment-seeking clients would be willing to "give up" in exchange for stronger relational qualities of psychotherapy. Results showed that clients were willing to forego a considerable amount of empirical support to ensure the presence of relational characteristics. A later study by Swan and Heesacker (2013) conceptually replicated these findings among non-treatment-seeking community members surveyed about their preferences for relationship-oriented vs. science-based psychotherapy. Participants rated their preference for psychotherapy

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involving "a space to freely talk about and work through your problems with a therapist you can trust" and psychotherapy that "works just like taking medicine" in which the therapist can "choose the correct therapy to fix your particular problem" (p. 872). The authors interpreted the finding that participants preferred their depiction of relationship-oriented psychotherapy to science-based psychotherapy as "evidence of a pronounced preference for therapy guided by common factors" (p. 869). Taken together, these studies would seem to indicate that potential clients value the relational aspects of psychotherapy far more than its scientific credibility. If this is the case, the provision of empirically supported psychological treatments for specific problems may appear inconsistent with EBPP because science-based psychotherapy is not particularly valued by mental health consumers.

Both of these aforementioned studies (Swan & Heesacker, 2013; Swift & Callahan, 2010) are subject to methodological limitations that constrain the interpretability and clinical relevance of their findings. First, preferences were assessed without regard to the type of problem for which psychotherapy was sought, and it is possible that the perceived importance of scientific credibility of psychotherapy varies as a function of one's presenting problem. For example, empirical support may be more important when considering psychotherapy for an anxiety disorder associated with clinically significant distress and impairment than for a less specific and severe issue (e.g., desire for personal growth). Second, both Swan and Heesacker (2013) and Swift and Callahan (2010) pitted the scientific and relational characteristics of psychotherapy against each other as if these treatment qualities are mutually exclusive. This methodological choice is akin to asking participants how much teeth cleanliness they would be willing to sacrifice in order to ensure their dental hygienist is warm and empathic. The observation of a preference for warm and empathic dental hygienists would not necessarily imply that teeth cleanliness is not valued by dental clients, or that dental hygienists should de-emphasize teeth cleaning during office visits. The perception that science-based psychotherapy entails sacrificing relational qualities is reflected in common therapist concerns that use of science-based approaches will diminish the strength of the therapeutic alliance (Addis, Wade, & Hatgis, 1999) and other effective relational components in psychotherapy (Lilienfeld, Ritschel, Lynn, Cautin, & Latzman, 2013). In reality, science-based psychotherapy does not preclude strong therapeutic relationships. On the contrary, previous work suggests that therapeutic alliance is significantly associated with treatment effectiveness for science-based psychotherapy (Arnow et al., 2013) and may be more appropriately viewed as a consequence rather than an antecedent of therapeutic benefit (Webb et al., 2011). Accordingly, clients should not be forced to choose between psychotherapies that are adequate in only one of these two domains.

Failure to consider the methodological limitations of existing research on preferences in psychotherapy (Swan & Heesacker, 2013; Swift & Callahan, 2010) may reinforce therapist-level barriers to dissemination of science-based psychotherapy (Lilienfeld et al., 2013). For example, therapists who adopt Swan and Heesacker (2013) contention that clients prefer providers who "accentuate the nonspecific aspects of therapy" (p. 877) may conclude that science-based psychotherapies are inconsistent with EBPP by virtue of their incompatibility with client preferences. Further, therapists who believe that clients unconditionally prefer relational aspects of psychotherapy over its scientific credibility regardless of the presenting problem may eschew psychological treatments that have demonstrated specific efficacy (above and beyond relationship-oriented psychotherapies) in the treatment of certain mental disorders. For example, therapists may forego use of exposure-based therapies for anxiety disorders (Abramowitz, Deacon, & Whiteside, 2011), thereby limiting client access to these underutilized but effective approaches (Gunter & Whittal, 2010; Shafran et al., 2009).

Accordingly, it is important to assess the accuracy of therapist *perceptions* of client preferences in psychotherapy. Many therapists favor their own clinical judgment over scientific evidence (Lilienfeld et al., 2013) and may conceivably rely on their judgment to surmise client preferences. Therapists who place less importance on the scientific credibility of psychotherapy, in keeping with previous research on client preferences (Swan & Heesacker, 2013; Swift & Callahan, 2010), may assume mental health consumers share their perspective. Thus, in addition to psychotherapy preferences among community members, it is important to assess therapist perceptions of these preferences.

The present study examined community members' valuation of scientific credibility and relational aspects of psychotherapy in a manner that improves upon the methodological limitations of previous research. First, preferences for the scientific and relational characteristics of psychotherapy were assessed independently, such that more of one did not have to come at the expense of less of the other. Second, these preferences were assessed both in the context of disorder-nonspecific concerns (desiring personal growth, adjusting to the end of a relationship) and specific anxiety disorders (obsessive–compulsive disorder [OCD], panic disorder). Anxiety disorders were selected for comparison with disorder-nonspecific concerns because there is arguably stronger evidence for the specific efficacy of empirically supported psychological treatments for anxiety disorders than for any other type of psychological problem (Westen, Novotny, & Thompson-Brenner, 2004). Third, this study directly compared community members' preferences for the scientific and relational characteristics of psychotherapy with therapists' perceptions of these preferences.

The following hypotheses were tested: (a) community members would value the relational aspects of psychotherapy more than its scientific credibility when considered independently of problem type, (b) community members' valuation of scientific aspects of psychotherapy would interact with problem type, such that scientific credibility would be more important for anxiety disorders than for disorder-nonspecific problems, (c) therapists would not underestimate the importance of relational characteristics of psychotherapy to community members across problem types, (d) therapists would underestimate the extent to which community members value the scientific aspects of psychotherapy across problem types, and (e) therapists who value research evidence less in their clinical practice would be more likely to underestimate community members' values for the scientific aspects of psychotherapy.

2. Method

2.1. Participants and procedure

A total of 399 participants completed the present study, including 200 community members (M age = 33.6 years [SD = 11.7], 63.5% female, 83.5% Caucasian) and 199 practicing therapists (M age = 48.6 years [SD = 12.4], 62.3% female, 87.4% Caucasian). Participants in the community sample were recruited via Amazon's Mechanical Turk, (MTurk, http://www.mturk.com), an online labor market where "workers" (i.e., respondents) complete tasks for small monetary compensation. Compared to convenience samples of university students, MTurk users offer researchers better sampling diversity, better representation of the U.S. population, and at least equivalent reliability and validity (Buhrmester, Kwang, & Gosling, 2011; Paolacci, Chandler, & Ipeirotis, 2010). Consistent with Swan and Heesacker (2013),

community participants recruited from MTurk were deemed "potential clients" for purposes of this study. This methodological choice is further justified based on previous research showing comparable psychological treatment preferences between clinical and non-clinical samples (McHugh, Whitton, Peckham, Welge, & Otto, 2013; Zoellner, Feeny, Cochran, & Pruitt, 2003), and arguments that treatment preferences from the general public are less subject to biases than those of clinical respondents (Gold, Siegel, Russell, & Weinstein, 1996; Hadorn, 1991). In the present study, community participants were required to reside in the U.S. and received $.50 upon completion of the survey. Recruitment of the community sample via MTurk took place over the course of a week. Therapists were not compensated for their participation.

In an attempt to obtain a nationally representative sample of psychotherapy providers from varying backgrounds, participating therapists were recruited from the following online directories: Academy of Cognitive Therapy, American Association of Pastoral Counselors, Anxiety Disorders Association of America, Association of Behavioral and Cognitive Therapies, Association for Comprehensive Energy Psychology, Counselor Education and Supervision NETwork, EMDR International Association, Family and Marriage Counseling Directory, and American Psychological Association Divisions 53 (Society of Child and Adolescent Psychology) and 54 (Society of Pediatric Psychology). Email invitations were sent to each of the above directories with a link to the survey webpage, and a follow-up email invitation was sent to each directory two weeks after the initial invitation. Given the indeterminate number of therapists who received invitations to participate in this study, it was not possible to calculate a precise response rate. Most therapists reported that their highest degree obtained was a Ph.D. (57.3%), Master's (24.1%), or PsyD (7.0%). The majority of therapists (59.8%) reported working in a private practice setting. Membership in various mental health professions was as follows: clinical psychology (54.3%), pastoral counseling (13.1%), counseling (13.1%), counseling psychology (10.1%), social work (8.5%), other (8.5%), marriage and family therapy (6.0%), school psychology (1.0%), and psychiatry (.5%); participants could select multiple professions. This study was approved by the University of Wyoming Institutional Review Board.

2.2. Measures

The Treatment Preferences Questionnaire (TPQ) was a 16-item measure constructed for the present study to assess the importance of scientific and relational characteristics of psychotherapy in the context of different presenting problems. The TPQ presents four vignettes in randomized order in which respondents are asked to imagine seeking help from a mental health professional. Two vignettes describe disorder-nonspecific problems; the "Personal Growth" vignette describes the reader as being dissatisfied with some aspects of life and seeking to better understand oneself and experience personal growth, and the "Relationship End" vignette describes the reader as having difficulty adjusting to the end of a long-term romantic relationship and wishing to process thoughts and feelings about the situation. These problems were not described as distressing or impairing, and together they denote issues that are neither associated with a specific mental disorder diagnosis or with clinically significant severity. Two additional vignettes describe specific anxiety disorders. The "OCD" vignette describes the reader as having obsessions about being contaminated by germs and developing a serious illness as well as avoidance and hand washing compulsions, and the "Panic Disorder" vignette describes the reader as experiencing frequent unexpected panic attacks accompanied by agoraphobic avoidance and the fear of losing control and dying from a heart attack. Both anxiety disorders were described as "highly distressing and interfering with your social relationships and ability to function at work."

For each vignette, participants were asked to imagine themselves seeking help for the problem and to rate the importance of four characteristics of psychotherapy on a scale ranging from 0 (*not at all important*) to 100 (*extremely important*). Two items, derived from previous work by Swift and Callahan (2010), assess the importance of relational aspects: (a) "you and the therapist have a good, positive working relationship," (b) "the therapist is warm, empathic, and accepting." Two additional items assess the importance of scientific credibility: (a) "the treatment is based on a scientifically-supported rationale for why it helps the problem you are experiencing," (b) "the treatment has been scientifically tested in clinical trials and shown to be effective for the problem you are experiencing." The TPQ takes approximately 10 min to complete. The community sample completed the TPQ as described above. Participants in the therapist sample were instructed to answer each item according to how they believed the average individual seeking mental health treatment would respond. Thus, it was possible to directly compare therapist *perceptions* of potential clients' preferences with the *actual* preferences of potential clients. A copy of the TPQ can be obtained from the corresponding author.

Lastly, we provided therapists with the APA's (2006) definition of EBPP: the integration of the (a) best available research with (b) clinical expertise in the context of (c) client characteristics, culture, and preferences. Therapists rated the importance of each of these three EBPP components on a scale ranging from 0 (*not at all important*) to 100 (*extremely important*) in informing their clinical practice.

3. Results

3.1. Baseline equivalence of groups

The community and therapist samples did not differ with respect to sex, $\chi^2(1, n = 399) = .06$, $p = .81$, or ethnicity, $\chi^2(1, n = 399) = .23$, $p = .78$. Community participants were significantly younger than therapists (M difference = 15.1 years, $p < .001$). Age was subsequently entered as a covariate in all subsequent between-group comparisons.

3.2. Creation of relational and scientific value scores

For each of the four vignettes, strong positive correlations were observed between the two items assessing relational characteristics (rs range from .52 to .71, all ps < .001) and scientific characteristics (rs range from .78 to .90, all ps < .001). In contrast, correlations between relational and scientific items were weak (rs range from .05 to .34). Principal components analyses with oblique (Oblimin) rotations were conducted separately for each vignette. Each analysis indicated a clear two-factor solution that accounted for a large majority of the item variance (range = 82.9%–88.2%). In each analysis, the two scientific value items loaded onto factor one and the two relational value items loaded onto factor two. Each item evidenced a very strong loading on its primary factor (range = .87 to .97) and a very small loading on its secondary factor (range = −.07 to .09). The pattern of correlational and factor analytic findings described above was highly similar across the therapist and community samples. Thus, for ease of presentation, responses to the two relational value items were averaged for each vignette to form a relational value (RV) score, and responses to the two scientific value items were averaged for each vignette to form a scientific value (SV) score.

3.3. Descriptive statistics for relational and scientific psychotherapy preferences

Table 1 presents descriptive statistics for relational value (RV) and scientific value (SV) scores for each vignette in the community and therapist samples. Average RV and SV scores were greater than 50 for each vignette, indicating that participants rated the relational aspects and scientific credibility of psychotherapy as at least moderately important across problem types. Within each sample, RV and SV scores were highly comparable for the two disorder-nonspecific vignettes (Personal Growth and Relationship End). Further, there were similarly equivalent responses to the two anxiety disorder vignettes (OCD and Panic Disorder). Hence, participants in each sample appeared to view the two vignettes within each problem type as essentially equivalent.

To determine the suitability of aggregating RV and SV scores for the two vignettes within each problem type, we conducted a series of eight bivariate correlations, four within each sample. Within the therapist sample, there were strong positive correlations between RV scores for the Personal Growth and Relationship End vignettes ($r = .85$, $p < .001$) as well as the OCD and Panic Disorder vignettes ($r = .78$, $p < .001$). There were also strong correlations in the therapist group between SV scores for the Personal Growth and Relationship End vignettes ($r = .76$, $p < .001$) and the OCD and Panic Disorder vignettes ($r = .65$, $p < .001$). A very similar pattern of correlations between RV and SV scores within each problem type emerged among the community sample (rs range from .67 to .74, all ps < .001). Thus, for concise presentation, we elected to average RV and SV scores across problem types. This created RV and SV scores for the disorder-nonspecific vignette pair and for the anxiety disorder vignette pair (see Table 1). These scores were used in subsequent analyses to test the study hypotheses.

3.4. Relational and scientific psychotherapy preferences among community members

To examine community members' preferences for the scientific and relational characteristics of psychotherapy, a 2 × 2 repeated measures factorial analysis of variance (ANOVA) was conducted. This analysis included a two-level effect of problem type (disorder-nonspecific issues vs. anxiety disorders) and a two-level effect of value type (RV vs. SV). Results showed a significant main effect of problem type, $F(1, 199) = 116.11$, $p < .001$, $\eta_p^2 = .37$, such that the combination of RV and SV scores were significantly higher for the anxiety disorder vignettes. There was also a significant main effect of value type, $F(1, 199) = 164.99$, $p < .001$, $\eta_p{}^2 = .45$, indicating significantly higher RV scores across problem type. Finally, a significant interaction emerged between problem type and value type, $F(1, 199) = 120.82$, $p < .001$, $\eta_p{}^2 = .38$. Follow-up simple effects analyses revealed that for disorder-nonspecific concerns, RV scores were significantly greater than SV scores, $t(199) = 13.51$, $p < .001$, a difference that yielded a large effect ($d = 1.24$). Although RV scores were also significantly greater than SV scores for anxiety disorders, ($t[199] = 3.53$, $p = .001$), this difference was smaller ($d = .27$) and denotes only a 4.4-point difference on a 0–100 scale. These findings support our hypothesis that community members would place greater value on the relational aspects of psychotherapy than its scientific credibility when considered independently of problem type. However, this effect appears to be largely context dependent. As predicted, community members placed considerably greater importance on scientific credibility when considering psychotherapy for anxiety disorders as opposed to disorder-nonspecific issues.

3.5. Scientific psychotherapy preferences: effects of group and problem type

To examine differences in SV scores by group and problem type, a 2 × 2 mixed factorial analysis of covariance (ANCOVA) was conducted with age entered as a covariate. This analysis included a two-level, between-subjects effect of group (therapist vs. community group) and a two-level, within-subjects effect of problem type (disorder-nonspecific issues vs. anxiety disorders). Results showed a significant main effect of group, $F(1, 396) = 20.52$, $p < .001$, $\eta_p^2 = .05$, indicating higher SV scores in the community group than the therapist group. A significant main effect for problem type was also obtained, $F(1, 396) = 88.87$, $p < .001$, $\eta_p{}^2 = .18$, such that SV scores were higher for anxiety disorders than disorder-nonspecific issues. Finally, the interaction between group and problem type was significant, $F(1, 396) = 35.29$, $p < .001$, $\eta_p^2 = .08$. Follow-up simple effects analyses revealed that for the disorder-nonspecific vignette pair, SV scores were significantly higher in the community group than the therapist group, $t(397) = 7.37$, $p < .001$, $d = .74$. A significant but smaller difference was also observed for the anxiety disorder vignette pair, $t(397) = 3.50$, $p = .001$, $d = .35$. Thus, as hypothesized, therapists underestimated the importance community members place on the scientific credibility of psychotherapy, but this underestimation was more pronounced in the context of psychotherapy for disorder-nonspecific problems than for anxiety disorders.

3.6. Relational psychotherapy preferences: effects of group and problem type

To examine differences in RV scores by group and problem type, a 2 × 2 mixed factorial analysis of covariance (ANCOVA) was conducted with age entered as a covariate. This analysis included a two-level, between-subjects effect of group (therapist vs. community group) and a two-level, within-subjects effect of problem type (disorder-nonspecific issues vs. anxiety disorders). Consistent with prediction, the main effect of group on RV scores was not significant, $F(1, 396) = .05$, $p = .83$, $\eta_p^2 < .001$. Also, there was not a significant main effect for problem type, $F(1, 396) = 2.35$, $p = .13$,

Table 1
Descriptive statistics for scientific and relational value scales by vignette type and participant group.

Vignette type	Community sample ($n = 200$)		Therapist sample ($n = 199$)	
	Scientific value scale *M* (*SD*)	Relational value scale *M* (*SD*)	Scientific value scale *M* (*SD*)	Relational value scale *M* (*SD*)
Personal growth	70.5 (21.4)	88.1 (12.2)	52.4 (23.2)	90.6 (13.0)
Relationship end	64.7 (23.7)	89.8 (12.6)	52.0 (21.9)	90.5 (12.5)
Disorder-nonspecific average	67.6 (20.6)	88.9 (11.4)	52.2 (21.2)	90.5 (12.3)
OCD	83.4 (17.1)	88.0 (14.4)	79.5 (19.5)	84.3 (16.4)
Panic disorder	85.1 (17.7)	89.3 (13.8)	77.0 (20.2)	85.6 (17.0)
Anxiety disorder average	84.2 (15.9)	88.6 (13.1)	78.3 (18.0)	85.0 (15.8)

Note. OCD = obsessive–compulsive disorder. Disorder-nonspecific average = mean of personal growth and relationship end scores. Anxiety disorder average = mean of panic disorder and obsessive–compulsive disorder scores.

$\eta_p^2 = .01$. However, a significant interaction emerged between group and problem type, $F(1, 396) = 22.03$, $p < .001$, $\eta_p^2 = .05$. Follow-up simple effects analyses revealed a non-significant difference between groups on RV scores for the disorder-nonspecific vignette pair, $t(397) = 1.35$, $p = .18$, $d = .14$. Although the community group scored significantly higher than the therapist group on the RV scale for the anxiety disorder vignette pair, $t(397) = 2.47$, $p = .02$, this difference was relatively small ($d = .24$). These findings partially support our hypothesis that therapists would not underestimate the importance of relational aspects of psychotherapy to community members.

3.7. Therapists characteristics as predictors of therapist underestimation of community members' scientific psychotherapy preferences

To examine potential contributing factors to therapist underestimation of community members' preferences for scientific credibility in psychotherapy, we calculated a score to represent the extent of therapist underestimation by subtracting therapists' SV scores from the community group mean SV score. These difference scores were calculated in the same manner for disorder-nonspecific issues and anxiety disorders. Higher scores denote greater underestimation of community member preferences for scientific credibility in psychotherapy. Next, we conducted a hierarchical regression to examine the contribution of therapists' relative valuation of the three EBPP components to underestimation of community member preferences for scientific credibility of psychotherapy for anxiety disorders. In the first block, the following demographic characteristics were simultaneously entered: age, sex (1 = men, 2 = women), and highest degree obtained (1 = doctoral, 2 = masters/bachelors).[1] In the second block, therapist ratings of the importance of each of the three EBPP components were entered. In this manner, it was possible to test the hypothesis that therapists' own values for the importance of research in clinical practice would predict perceptions of potential client values for the scientific credibility of psychotherapy. Results of this analysis are presented in Table 2.

Therapists' demographic characteristics were entered in the first block and explained a significant portion of variance in underestimation of community member preferences for scientific credibility in psychotherapy for anxiety disorders, $F(3, 195) = 6.67$, $p < .001$, $R^2 = .09$. In this block, both older age and female sex were unique predictors of greater underestimation of community members' preferences for scientifically informed psychotherapy. The addition of variables assessing therapists' valuation of each of the three components of EBPP in the second block accounted for a significant portion of incremental variance, $F(3, 192) = 15.08$, $p < .001$, $R^2_\Delta = .18$. As hypothesized, therapists' greater valuation of research evidence for psychotherapy emerged as a significant, unique predictor of less underestimation of community member preferences for scientific credibility in psychotherapy for anxiety disorders, $\beta = -.31$, $t(198) = -4.28$, $p < .001$. Additionally, therapist beliefs about the importance of client characteristics, culture, and preferences informing psychotherapy significantly predicted less underestimation of community member preferences for scientific credibility in psychotherapy, $\beta = -.17$, $t(198) = -2.10$, $p = .04$. The final regression model accounted for 26.6% of the total variance in scores denoting therapist underestimation of community member preferences for scientific credibility in psychotherapy for anxiety disorders.

We conducted a second hierarchical regression utilizing an identical approach to predict therapist underestimation of community member preferences for scientific credibility in psychotherapy for disorder-nonspecific issues. Therapist demographics in the first block did not explain a significant portion of variance, $F(3, 195) = .43$, $p = .73$. However, the entry of therapists' relative valuation of each of the three EBPP components in the second block explained significant variance, $F(3, 192) = 4.032.27$, $p = .01$, $R^2_\Delta = .07$. The only significant, unique predictor of underestimation of community member preferences for scientific credibility in psychotherapy for disorder-nonspecific issues was therapist beliefs about the importance of research evidence in psychotherapy, $\beta = -.20$, $t(198) = -2.46$, $p = .02$ (see Table 2). The final regression model accounted for 6.5% of the total variance in scores denoting therapist underestimation of community member preferences for scientific credibility in psychotherapy for disorder-nonspecific issues. As hypothesized, therapists who valued research evidence less in their own clinical practice significantly underestimated potential clients' preferences for the scientific credibility of psychotherapy across problem types.

4. Discussion

Although client preferences are an integral component of evidence-based practice in psychology (APA, 2006) and directly influence treatment outcomes (Swift et al., 2013), little is understood about what clients value in psychological treatment. In particular, few studies have examined the importance potential mental health consumers place upon relational and scientific qualities of psychotherapy, and no previous studies have assessed how accurately therapists are able to gauge these preferences. Two investigations have ostensibly demonstrated that individuals have a "pronounced preference" for relational aspects of psychotherapy over scientific credibility (Swan & Heesacker, 2013; Swift & Callahan, 2010). However, we contend that potential consumer preferences are most effectively assessed in the context of different psychological problems, and without being pitted against each other, such that people are not asked to sacrifice the scientific credibility of psychotherapy for relational factors, or vice-versa. Thus, the present study examined the importance of both relational and scientific qualities of psychological treatment among community members in the context of different problem types. Additionally, this study was the first of which we are aware to assess therapists' perceptions of how important scientific and relational qualities of psychological treatment are to potential clients.

Community members placed significantly greater importance on the relational aspects of psychotherapy than its scientific credibility for both disorder-nonspecific issues and anxiety disorders. This finding is consistent with previous research demonstrating the high regard that prospective clients have for relational aspects of psychotherapy (Swan & Heesacker, 2013; Swift & Callahan, 2010). However, as hypothesized, the relative importance of relational and scientific characteristics of psychotherapy varied considerably according to the type of problem for which treatment was considered. Whereas community members valued relational qualities over scientific credibility to a large extent for less severe disorder-nonspecific issues ($d = 1.24$), this difference was small for anxiety disorders associated with clinically significant distress and impairment ($d = .27$). Thus, the relative value community members placed on the relational and scientific characteristics of psychotherapy was context-dependent. In considering psychotherapy for

[1] Therapist highest degree obtained was chosen as a demographic predictor variable over type of practice setting or membership in various mental health professions because, for these latter two variables, participants could endorse multiple options for each (e.g., professional membership in both counseling psychology and marriage and family therapy).

Table 2
Therapist characteristics as predictors of therapist underestimation of community members' preferences for the scientific aspects of psychotherapy.

Measure	ΔR^2	*B*	SE *B*	β	*t*	*p*
Predicting underestimation of community members' scientific preferences for anxiety disorders psychotherapy						
Step 1: Demographics	.09**					
Age		.27	.11	.19	.87	.01
Sex		−5.63	2.73	−.16	−2.06	.04
Highest degree obtained		−3.80	2.61	−.10	−1.46	.15
Step 2: Importance of EBPP components	.18**					
Best research evidence		−1.26	.29	−.31	−4.28	<.001
Clinical expertise		−.30	.38	−.06	−.79	.43
Client characteristics		−.59	.28	−.17	−2.11	.04
Predicting underestimation of community members' scientific preferences for disorder-nonspecific psychotherapy						
Step 1: Demographics	.01					
Age		.02	.13	.01	.15	.89
Sex		−3.32	3.35	−.08	−.99	.32
Highest degree obtained		.38	3.20	.01	.12	.91
Step 2: Importance of EBPP components	.06*					
Best research evidence		−.96	.39	−.20	−2.46	.02
Clinical expertise		−.30	.50	−.05	−.60	.55
Client characteristics		−.22	.37	−.05	−.58	.56

Note. *$p < .01$, **$p < .001$. Categorical variables: sex (1 = male, 2 = female), highest degree obtained (1 = doctoral, 2 = masters/bachelors).

personal growth or dealing with a relationship break-up, potential clients may view a good working relationship with an empathic therapist as the principal source of therapeutic benefit. However, community members rated the scientific characteristics of psychotherapy as important ($M = 67.6$ on a 0–100 scale) for disorder-nonspecific issues, suggesting that a scientifically credible theory and demonstrated efficacy are important to potential clients regardless of their presenting problem. In considering psychotherapy for more specific and severe problems (e.g., OCD, panic disorder), both relational qualities and scientific credibility appear to be of central importance. Overall, our findings suggest that community members highly value both the relational and scientific aspects of psychotherapy regardless of problem type, and that the relative importance of these characteristics varies as a function of the specificity and severity of the presenting problem.

As expected, therapists were generally accurate in their estimation of the high importance potential clients placed on the relational aspects of psychotherapy. However, also consistent with our hypothesis, therapists underestimated the extent to which community members valued the scientific characteristics of psychotherapy. This underestimation was most pronounced in the context of disorder-nonspecific issues ($d = .74$), where community members rated the scientific credibility of psychotherapy approximately 15 points higher than therapists estimated. Regression analyses revealed that therapists who valued research-informed psychotherapy less in their own clinical practice were more likely to underestimate the importance of scientific credibility to community members. This finding highlights a potentially novel manifestation of therapist biases against science-based psychotherapy, of which there are many (Lilienfeld et al., 2013): therapists who believe research evidence is less important to clinical practice appear to assume potential clients share this belief. The present findings indicate that this belief is generally erroneous, particularly in the context of psychotherapy for disorder-nonspecific issues where potential clients value scientific credibility substantially more than the average therapist realizes. Regression analyses also yielded the unexpected finding that therapists who more highly valued client characteristics, culture, and preferences were less likely to underestimate potential client preferences for scientific credibility in the context of anxiety treatment. It is possible that this association is attributable to experience working with anxious clients, such that more experienced therapists may have learned that individuals seeking anxiety treatment highly value the scientific credibility of their psychotherapy. Our results suggest that therapists, particularly those who de-emphasize the scientific aspects of psychotherapy in their own practice, should carefully assess client preferences at the outset of therapy. Although clients are likely to prize a strong working relationship with an empathic therapist for psychotherapy in general, they are also likely to value the importance of scientific credibility to a degree greater than therapists may expect — particularly when seeking help for less severe, disorder-nonspecific issues like a desire for personal growth.

The present findings, although preliminary, have several important practical applications. First, given that therapists may be prone to underestimating the importance clients place on the scientific credibility of the psychotherapy, therapists should directly discuss clients' psychotherapy preferences at the outset of treatment. This discussion could conceivably take place in the larger context of establishing informed consent in which the therapist educates the client about the scientific basis of the particular treatment options available. In this manner, clients would be adequately equipped with information about the relative efficacy of different treatment options prior to asserting their therapy preferences. Additionally, individuals who conduct clinical training in various settings may wish to disseminate the current findings to trainee therapists, who might otherwise conclude that scientifically-supported treatments are incompatible with EBPP by virtue of clients strongly preferring relationally-oriented psychotherapy (Swan & Heesacker, 2013; Swift & Callahan, 2010). Training may instead encourage the consideration of important contextual factors that influence client preferences, such as the severity of the problem for which help is being sought. Further, as an extension to our suggestions for training, future experimental research may examine the effects of clinical training emphasizing sensitivity toward client preferences for relational *and* scientific qualities of psychotherapy. Finally, researchers who compare the relative effectiveness of various psychological treatments should consider assessing the relationship between client preferences and treatment outcome. Whereas previous work has shown that clients who receive a particular treatment they prefer at the outset of a clinical trial experience greater therapeutic benefit (Swift et al., 2013), future research may assess clients' self-reported preferences for various relational and scientific aspects of psychotherapy at post-treatment as correlates of outcome.

Strengths of the present study include a large and diverse

sample of practicing therapists as well as a large sample of community members that is likely more representative of the population of potential mental health consumers than traditional convenience samples of undergraduate students. In addition, the present study utilized a methodology that allowed for comparisons between community members' preferences in psychotherapy and therapists' perceptions of what potential clients value. Lastly, this study compared community members' psychotherapy-related preferences for both disorder-nonspecific mental health issues as well as anxiety disorders, which to our knowledge has not been examined in previous studies.

This study also has several limitations. First, although we were unable to calculate a precise response rate, it is likely that most therapists contacted to participate in this study declined. As a result, the extent to which our findings are representative of the views of therapists in general is unclear. Second, although we considered our community participants as potential mental health consumers following Swan and Heesacker (2013), they were not treatment-seeking clients recruited in a clinical context. Accordingly, the extent to which findings from our community sample generalize to actual mental health consumers is unknown. Third, because we did not assess treatment history, we were unable to measure the extent to which psychotherapy value ratings were hypothetical vs. derived from direct experience. Fourth, because we did not assess whether participants actually experienced the problems described in the vignettes, we were unable to examine the extent to which the findings varied as a function of personal experience with anxiety disorders and/or disorder-nonspecific issues. Fifth, our anxiety disorder vignettes differed from the disorder-nonspecific vignettes in both the specificity and severity of the problem described, making it difficult to determine whether the differences observed by vignette type were a function of problem specificity or severity. However, diagnosable mental disorders are, by definition, typically associated with greater severity than non-diagnosable issues, and we designed our vignettes to reflect this distinction. Finally, our use of a brief, four-item measure of treatment-related preferences did not assess the full range of scientific and relational qualities that individuals value in psychotherapy. Future research should examine additional psychotherapy-related preferences among potential and actual clients, as well as predictors of such preferences, so that therapists may better understand what their clients seek from psychotherapy.

In conclusion, we echo the sentiments of Swan and Heesacker (2013) that client preferences for the relational and scientific aspects of psychotherapy are not mutually exclusive, and that clients hopefully do not have to choose between them. Strong relational and scientific qualities can comfortably co-exist in psychotherapy; indeed, potential clients believe they should, especially in the treatment of anxiety disorders. We believe this important message merits widespread adoption and dissemination among mental health professionals. Unfortunately, far less research has been conducted on client preferences relative to other aspects of EBPP. Future research should examine psychotherapy-related preferences in different samples (e.g., at-risk populations, treatment-seeking clients), in different clinical settings (e.g., community-based outpatient clinics, medical centers), and in the treatment of different presenting problems (e.g., addictions, psychotic disorders). Additional research is necessary to better understand what mental health consumers desire from the services they seek, and how client preferences should be integrated with research evidence and clinical expertise in accordance with practice recommendations (APA, 2006).

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