The Impact of Hope in Mediating Psychotherapy Expectations and Outcomes: A Study of Brazilian Clients

Nicki L. Aubuchon-Endsley, Jennifer L. Callahan, David A. González, Camilo J. Ruggero, & Charles I. Abramson

Abstract:

Client treatment expectations and hope are robustly associated with treatment outcome. Despite this, no known studies have examined client hope as a mediator to the relationship between expectancies and psychotherapy session outcomes. In addition, recent literature also supports cross-cultural differences in relations between treatment expectancies and outcomes. This article presents a cross-sectional study with a sample of Brazilian psychotherapy clients collected via referral sampling, in which existing clients referred potential participants. Participants were asked about their symptomatology and expectations of psychotherapy. The current study found that, within this Brazilian sample, trait hope partially mediated relations between expectancies and treatment session outcomes. Further studies are needed to investigate these effects and session outcomes in a culturally competent manner.

Key Words: Psychotherapy, expectancies, hope, session outcomes, Brazil, cross-cultural

---

Psychotherapy Expectancies

Client psychotherapy expectancies have been categorized into role, process, control, and outcome/effectiveness expectations (Cyr, Bouchard, & Lecomte, 1990; Delsignore & Schnyder, 2007; Dew & Bickman, 2005). A seminal review article (Kirsch, 1997) defines role expectancies as the clients' expectations of their own behavior as well as the behavior of their therapists during treatment. Four components of client expectancies of their providers' roles have been supported in the research literature, including "nurturant" (guidance and support from provider), "critical" (constructive feedback), "model" (providing instruction so that clients can help themselves), and "cooperative" (equality of client and provider) expectations (Bleyen, Vertommen, Vander Steene, & van Audenhove, 2001). Early theoretical work in this area resulted in construction of

the Psychotherapy Expectancies Inventory-Revised (PEI-R), which has been used with good sensitivity and specificity in predicting treatment outcomes, including attrition, length of treatment, development of therapeutic alliance, and symptom reduction (Ackerman & Hilsenroth, 2003; Aubuchon-Endsley & Callahan, 2009; Constantino, Ametrano, & Greenberg, 2012).

In contrast, outcome expectancies have been described as prognostic expectancies, which may include expectations of improvement in presenting symptoms, acquiring of particular skills or competencies following treatment, or other benefits of treatment derived from the institution and/or provider (Kirsch, 1997). Additionally, process expectancies are related to the client's beliefs about therapeutic session content and general subjective experience of therapy (Constantino, Ametrano, & Greenberg, 2012). The Milwaukee Psychotherapy Expectations Questionnaire (MPEQ) was created to capture these additional expectancies pertaining to process and outcome, while also assessing clients' role expectations (Norberg, Wetterneck, Sass, & Kanter, 2011). Similar to the PEI-R, the MPEQ has been used to demonstrate significant relations between clients' expectancies and therapy attendance, treatment length, well-being, and symptomatic distress.

Despite the developing literature on the influence of client expectations on psychotherapy treatment outcomes, several notable gaps remain. Specifically, the vast majority of studies examine samples of predominantly European American clients, utilize end of therapy outcomes while failing to consider session outcomes during a course of treatment, and have not adequately investigated potential mediators to relations between expectancies and outcomes (Bhugra, 2006). The need to include international samples is supported by recent findings that psychotherapy process and outcomes may differ by culture, and may yield differential effects on treatment outcomes (Bhugra, 2006). In the most recent empirical study informing this issue, associations among treatment expectancies and end of treatment outcomes were explored in a sample of Osage Nation Native American clients (Aubuchon-Endsley et al., 2014). Results revealed that greater pre-treatment expectations of receiving advice and approval in therapy led to poorer treatment outcomes in Osage Nation clients. In contrast, lower scores on pre-treatment expectations of receiving advice and approval led to diminished treatment outcomes among Caucasian clients (the opposite of Osage Nation clients) seen in the same clinic and within the same socioeconomic status. This study, like many others, did not consider therapeutic change associated with sessions during treatment, or examine potential mediators between early expectancies and end of treatment outcomes. Consideration of ongoing session outcomes, rather than end of treatment outcomes, could provide a more nuanced understanding of the link between expectancies and outcomes. Furthermore, examination of important mediators of this link may inform intervention selection for efficacious practice.

Client Hope

A compelling potential mediator is client hope. Client hope has been defined extensively by Snyder and colleagues (2002), and is thought to reflect "a goal-directed thinking process in which people believe that they can produce the routes to desired goals (pathways thought), along with motivations to use those routes (agency thought)" (Snyder et al., 1996, p. 289). Hope theory has informed specific therapy modalities to utilize this non-specific factor in order to enhance treatment outcomes (Cheavens, Feldman, Gum, Michael, & Snyder, 2006; Michael, Taylor, & Cheavens, 2000). Similar to psychotherapy expectancies, client hope regarding treatment has been found to be associated with greater well-being, coping, emotional regulation and functioning, and fewer psychopathological symptoms at the beginning and later phases of psychotherapy (Irving et al., 2004).

Hope as Mediator of Expectancies-Outcome Link

The terms "hope" and "expectations" are often used interchangeably within the treatment outcome literature and are not always well defined. Although Lambert (2004) has conceptualized expectancies as including hope, Dew and Bickman (2005) made distinctions between the two constructs. In particular, they noted that (1) hope can only exist when there are concurrent positive expectations of treatment, (2) negative expectations may exist in the absence of hope, and (3) a client may hope for positive treatment outcomes, but not expect them to occur (Dew & Bickman, 2005). In this conceptualization, there is interdependency between the two constructs, but they remain distinguishable. Subsequent research supported this conceptualization and found significant, though incomplete, associations between expectancies and hope. For example, Swift, Whipple, & Sandberg (2012) reported correlations between outcome expectancies and state hope between .35-.59.

There appear to be robust associations of both treatment expectancies and client hope with end of treatment outcomes (Ackerman & Hilsenroth, 2003; Aubuchon-Endsley & Callahan, 2009; Cheavens, Feldman, Gum, Michael, & Snyder, 2006; Constantino, Ametrano, & Greenberg, 2012; Irving et al., 2004; Michael, Taylor, & Cheavens, 2000; Norberg, Wetterneck, Sass, & Kanter, 2011) as well as recent evidence of the interrelatedness between hope and treatment expectancies (Swift et al., 2012). While there remains ambiguity regarding the unique contributions of each construct to client outcomes, there may be an indirect effect of expectancies on outcomes mediated by other client or therapist factors (Joyce, Ogrodniczuk, Piper, & Mccallum, 2003), which may include client hopefulness.

Importance to Integrative Psychotherapy

Empirically elucidating the connection among hope, expectancies, and client outcomes is of critical importance to a common factors route to integrative psychotherapy. As described by Norcross and Goldfried (2005), there are four main routes established for attaining psychotherapy integration: *assimilative integration*, whereby the therapist is grounded in a primary orientation but assimilates elements of other theoretical orientations in a deliberate manner, *theoretical integration* whereby multiple therapies are combined and synthesized, *technical eclecticism* whereby interventions that have been found to work for others are selected and drawn from a range of theoretical orientations, as well as a *common factors* approach. The *common factors* approach focuses on variables that are common to many different therapies and associated with treatment effectiveness (Miller, Duncan, & Hubble, 2005; Wampold, 2001). Both hope and expectancies may be conceptualized as common factors.

For example, in a formative meta-analysis, Howard, Lueger, Maling, and Martinovich (1993) studied the process of effective treatment, irrespective of orientation or intervention and found that clients' progress through three sequential phases. These phases include remoralization (inculcation of hope), remediation (reduction in symptom distress), and rehabilitation (sustained improvements in functioning). Importantly, they noted that treatment effectiveness was associated with moving through these phases sequentially with instillation of hope providing the grounding for positive treatment outcomes. In more recent years, the phase model has held up well to replications (Callahan, Swift, & Hynan, 2006). The extant literature also points to expectancies as being an important common factor. Lambert (2004) summarized this body of literature and concluded that client expectancies account for a robust 15% of treatment outcomes. Unfortunately, a more recent review (Constantino, Ametrano, & Greenberg, 2012) reported that expectancies remain one of the most understudied of the common factors.

Thus, this study tested the hypothesis that client hope mediates relations between pre-treatment psychotherapy expectancies and ongoing session outcomes, specifically within a Brazilian sample. The goals of the study include examination of role, outcome, and process treatment expectancies. This included exploration of within-session outcomes such as subjective well-being, symptom severity, and interpersonal distress. As well, client hope was examined as a mediator between treatment expectancies and within-session outcomes.

If client hope was found to be a significant mediator of relations between treatment expectancies and within-session outcomes, this would support the assessment of important common factors to treatment outcome, namely client expectancies and hope. Additionally, to the degree that hope mediates relations between client expectancies and treatment outcome, it should be assessed regularly and findings should be integrated into psychotherapy to inform clinical

decision-making. For example, clinical decisions such as whether to focus on techniques to bolster hope, or focus on interventions consistent with other diverse theoretical orientations/approaches, could potentially influence treatment outcome. Assessment of hope via therapist inquiry, particularly as it relates to a long-term absence of satisfaction of relational needs, has been noted by Integrative Psychotherapy authors (Erskine & Trautmann, 1996). They suggest interventions that include engaging the client in the expression of hope, in order to assist with processing of past instances of hopefulness and validation of personal experience, which is one of the eight principal relational needs delineated in Integrative Psychotherapy theory (Erskine & Trautmann, 1996). Thus, hope has been shown to be an important aspect of co-created, relationally based psychotherapy and working within an integrative, relationship-based model, assessment and interventions targeting clients' hope become important elements in shaping positive treatment outcomes.

Method

Procedures

Data were obtained directly from Brazilian researchers who previously gathered information consistent with institutional procedures and in compliance with ethical standards. The collected data had not been previously analyzed and consisted of participants who were currently engaged in psychotherapy within any of the surrounding community clinics. Cross-sectional data were collected at a single time point via participant questionnaires, given by the researchers, regarding current expectations and symptomatology.

Participants

Beginning with students attending a Brazilian university, participants were recruited by referral sampling from existing participants. Participation did not require student status however; students were only the starting point for recruitment. Participants (n = 112) consisted of 68 women (60.7%) and 43 (38.4%) men, who were primarily not married or partnered (83%). The age of participants ranged from 17 to 51 years, with a mean age of 23 years (SD = 6.05). Unfortunately, no information regarding psychotherapy orientation was available from treating clinicians.

Measures

Data were gathered via paper questionnaires, which were presented in Portuguese. All measures were first translated and back-translated by a team of bilingual (English/Portuguese) Brazilian colleagues in the field of psychology with prior experience translating measures for research purposes. In addition to providing brief demographic information, participants completed the following measures.

Psychotherapy Expectancy Inventory-Revised (PEI-R).

The PEI-R is a 24-item self-report inventory of client's role expectancies of the therapist (Berzins, Herron, & Seidman, 1971; Bleyen, Vertommen, Vander Steene, & van Audenhove, 2001). This includes approval seeking, advice seeking, audience seeking (i.e., genuine listening), and relationship seeking scales. An example of an approval seeking item is, "How strongly do you expect your therapist to be gentle in phrasing his/her opinions about an important topic?" An example of an advice seeking item is, "How strongly do you expect to get definite advice from your therapist?" An example of an audience seeking item is, "How strongly do you expect to 'carry the ball' conversationally?" An example of a relationship seeking item is, "How strongly do you expect to be comfortable in expressing your feelings toward the therapist?" Respondents rate items using a Likert scale from 1 (*not at all*) to 7 (*very strongly*). Higher scores correspond to greater client expectations of the therapist. The PEI-R has high internal consistency (reported alpha coefficients of .75 - .87 and falling from.74 - .85 in the current sample) and 1-week test–retest reliability (*r*s = .54 - .68) across its scales (Berzins, Herron, & Seidman, 1971). The PEI-R also has good internal construct validity, supported by exploratory and confirmatory factor analyses (Bleyen, Vertommen, Vander Steene, & van Audenhove, 2001), in addition to concurrent validity with other measures of expectancies (Aubuchon-Endsley & Callahan, 2014).

Milwaukee Psychotherapy Expectations Questionnaire (MPEQ)

The MPEQ is a 28-item self-report measure of several forms of treatment expectancies, including role, outcome, and process expectancies (Norberg, Wetterneck, Sass, & Kanter, 2011). A recent validation of the instrument, including exploratory and confirmatory factor analyses, supported the measure's five-factor structure which includes expectations of therapeutic activities, self in therapy, improvement after therapy, therapist/alliance, and personal improvement (Aubuchon-Endsley & Callahan, 2014). An example of a therapeutic activities item is, "I will be taught new skills in therapy." An example of a self in therapy item is "I will be able to express my true thoughts and feelings." An example of an improvement after therapy item is, "At the end of the therapy period, how much improvement in your problem(s) do you think will occur?" An example of a therapist/alliance item is "My therapist will be interested in what I have to say." An example of a personal improvement item is, "After therapy, I will have the strength needed to avoid feelings of distress in the future." Items 1 – 24 are rated using a Likert scale from 0 (*not at all*) to 10 (*very much so*), whereas items 25 – 27 are rated from 0% to 100% (scored as 0 - 10) corresponding to the frequency of expectations and item 28 is scored using a Likert rating scale ranging from 0 (*I expect to feel worse*) to 10 (*I expect to feel completely better*). Higher scores correspond to greater client expectations on each respective factor. The MPEQ has good internal consistency (reported α

coefficients = .81 - .95; obtained α coefficients = .85 - .93) and 2-week test–retest reliability (*r*s = .73 - .85; Aubuchon-Endsley & Callahan, 2014). The MPEQ has also demonstrated good divergent validity with measures of self-efficacy, hope, subjective well-being, and symptom severity and good convergent validity with other measures of role expectancies (Aubuchon-Endsley & Callahan, 2014).

State and Trait Hope Scales

The State and Trait Hope Scales (SHS and THS, respectively; Snyder et al., 1991) were created to measure one's current and dispositional hope. For each scale, participants were asked to rate three agency and three pathways items on a Likert scale ranging from 0 (*strongly disagree*) to 8 (*strongly agree*). The SHS has a stable two-factor structure with agency factor loadings ranging from .83 - .89 and pathways factor loadings ranging from .69 - .88 (Snyder et al., 1996). The SHS also has high internal consistency with reported α coefficients ranging from .82 - .95 and an observed α coefficient in the current study of .86. Similarly, the SHS evidences adequate to good convergent (*r*s = .78) and concurrent validity (*r*s = .49) with other hope measures as well as discriminant validity after partialling out variance from another dispositional hope measure (Feldman & Snyder, 2000; Snyder et al., 1996). The THS also has a stable two-factor (agency and pathway) structure and high internal consistency with reported α coefficients ranging from .74 - .84 and an observed α coefficient in the current study of .78). The THS has a 3-week test-retest reliability of r = .85 and adequate to good convergent validity with other hope measures (*r*s = .50 - .75). The THS also has adequate to good discriminant validity with measures of self-esteem, hopelessness, expectancies for success, problem-solving, and symptom severity (Carifio & Rhodes, 2002; Tong, Fredrickson, Weining, & Zi Xing, 2010).

Subjective Well-being (SWB)

The SWB measure is a four-item client report questionnaire which was expanded from two items used in Howard and colleagues' (1986) phase model study (Callahan, Swift, & Hynan, 2006). Items address subjective distress, energy level, emotional functioning, and level of satisfaction with life on a five-point scale. The SWB has adequate internal consistency (reported α = .71; observed α = .73), 1-week test-retest reliability (r = .63), and convergent validity with other measures of well-being (r = .79; Callahan et al., 2006). This instrument has been found to perform well in clinical research applications (Swift, Callahan, Heath, Herbert, & Levine, 2010).

Outcome Questionnaire-Abbreviated (OQ-Abbreviated)

The Outcome Questionnaire-45.2 (OQ-45.2; Lambert et al., 1996) is a self-report measure that consists of 45 items inquiring about the client's feelings and functioning in the preceding week with responses provided on a scale ranging from *never* to *almost always*. Back translation of the full OQ-45.2 indicated that

some items might be problematic from the standpoint of construct invariance. Thus, for this study an abbreviated version of the measure was developed. The OQ-Abbreviated consists of 13 OQ-45.2 items that raised no concerns during the translation process. Factor analysis of the OQ-Abbreviated identified two factors: the first factor is thought to reflect symptom severity (items 9, 10, 23, 28, 33, 36, 40, and 42 of the original measure), while the second factor is conceptualized as indicative of interpersonal distress (items 19, 30, 37, 39, and 43 of the original measure). The internal consistency (α = .72) was found to be acceptable in the current sample.

Results

Descriptive statistics for the measures used are reported in Table 1 and zero-order Pearson correlations among measures are reported in Table 2.

Table 1
Descriptive statistics for the study measures (n = 112)

	Mean (*SD*)	α
MPEQ Total	197.29(50.93)	.86
MPEQ Therapeutic Activities	63.63 (16.66)	.91
MPEQ Self in Therapy	52.42 (14.89)	.92
MPEQ Improvement After Therapy	24.57 (7.11)	.85
MPEQ Therapist/Alliance	27.56 (9.54)	.91
MPEQ Personal Improvement	29.10 (9.36)	.93
PEI-R Total	107.05(23.55)	.90
PEI-R Approval Seeking	26.38 (7.42)	.74
PEI-R Advice Seeking	28.21 (7.86)	.84
PEI-R Audience Seeking	23.79 (7.16)	.76
PEI-R Relationship Seeking	28.67 (7.89)	.85
Trait Hope Total	25.55 (3.42)	.77
State Hope Total	36.68 (7.91)	.86
OQ-Abbreviated Total	19.49 (6.43)	.72
SWB Total	13.77 (2.75)	.73

Note. MPEQ = Milwaukee Psychotherapy Expectations Questionnaire; PEI-R = Psychotherapy Expectancy Inventory-Revised; OQ-Abbreviated = Outcome Questionnaire-Abbreviated; SWB = Subjective Well-being. Kolmogorov-Smirnov (K-S) tests of normality were non-significant for each measure.

Table 2
Zero-order correlations among study measures (n = 112)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. MPEQ Total														
2. MPEQ Therapeutic Activities	**.89***													
3. MPEQ Self in Therapy	**.90***	**.70***												
4. MPEQ Improvement After Therapy	**.87***	**.69***	**.80***											
5. MPEQ Therapist/Alliance	**.83***	**.63***	**.69***	**.68***										
6. MPEQ Personal Improvement	**.92***	**.78***	**.79***	**.77***	**.76***									
7. PEI-R Total	**.71***	**.58***	**.69***	**.59***	**.62***	**.62***								
8. PEI-R Approval Seeking	**.63***	**.58***	**.56***	**.52***	**.50***	**.60***	**.80***							
9. PEI-R Advice Seeking	**.62***	**.59***	**.55***	**.46***	**.52***	**.58***	**.78***	**.61***						
10. PEI-R Audience Seeking	**.38***	**.25**	**.38***	**.34***	**.42***	**.34***	**.76***	**.47***	**.42***					
11. PEI-R Relationship Seeking	**.54***	**.37***	**.63***	**.49***	**.47***	**.43***	**.74***	**.40***	**.37***	**.50***				
12. Trait Hope Total	**.33***	**.25**	**.36***	**.24**	**.36***	**.22**	**.36***	**.27**	**.24**	**.32***	**.27**			
13. State Hope Total	**.35***	**.28**	**.35***	**.23**	**.36***	**.32**	**.33***	**.35***	**.19**	**.26**	**.22**	**.65***		
14. OQ-Abbreviated Total	**-.19**	-.08	**-.28**	-.19	-.18	-.14	**-.22**	-.15	-.12	**-.22**	**-20**	**-.39***	**-.40***	
15. SWB Total	**.27**	.14	**.32**	**.29**	**.24**	**.23**	**.24**	**.24**	.10	**.26**	.14	**.44***	**.54***	**-.61***

Notes. All correlations in bold were significant at $p \leq .05$. Those with * were significant at Bonferroni corrected critical value of $p \leq .001$. MPEQ = Milwaukee Psychotherapy Expectations Questionnaire; PEI-R = Psychotherapy Expectations Inventory-Revised; OQ-Abbreviated = Outcome Questionnaire-Abbreviated; SWB = Subjective Well-being.

As noted in the introduction, it was hypothesized that the effect of client expectancies on session outcomes would be mediated by client hopefulness. Mediation models were tested using the product of coefficients approach outlined by MacKinnon and Fairchild (2009). This technique is more sensitive than traditional causal steps approaches (Baron & Kenny, 1986) and allows for the calculation of confidence intervals around the mediated effect (Tofighi & MacKinnon, 2011). A product of coefficients was calculated by estimating a regression coefficient between the predictor and mediator (*a* path), estimating a regression coefficient between the mediator and outcome variable controlling for the predictor variable (*b* path), and multiplying the two. If the subsequent confidence interval did not include 0, then a statistically significant mediation effect was said to exist. Furthermore, if the relation between the predictor and outcome variable controlling for the predictor (*c′* path) was still significant, partial mediation was deemed present. There is no standard measure of effect size for the mediation effect that statisticians agree upon. Nevertheless, the zero-order correlation for the *a* path and the partial correlation for the *b* path has been suggested for this purpose and were therefore used in the current study (MacKinnon, Fairchild, & Fritz, 2007).

Mediation was found to be present in all models, which are summarized in Table 3.

Table 3
Product of coefficients and partial correlations for mediated effects

	ab	σ	CI	Partial *r* for *b*	Partial *r* for *c'*
Trait Hope Total					
MPEQ Total → OQ 13	-.01	.01	[-.03, -.01]	-.35	**-.19**†
MPEQ Activities → OQ 13	-.04	.02	[-.08, -.01]	-.38	.02
MPEQ Self → OQ 13	-.05	.02	[-.09, -.01]	-.32	-.17†
MPEQ Improve After → OQ 13	-.08	.04	[-.16, -.02]	-.36	-.10
MPEQ Therapist → OQ 13	-.08	.03	[-.15, -.03]	-.35	-.05
MPEQ Improve Personal → OQ 13	-.05	.03	[-.11, -.004]	-.37	-.06
MPEQ Total → SWB	.01	.002	[.002, .01]	.38	.15†
MPEQ Activities → SWB	.02	.01	[.01, .03]	.42	.02
MPEQ Self → SWB	.02	.01	[.01, .04]	.37	**.20**†
MPEQ Improve After → SWB	.04	.02	[.01, .07]	.39	**.21**†
MPEQ Therapist → SWB	.04	.01	[.01, .07]	.38	.13†
MPEQ Improve Personal → SWB	.02	.01	[.002, .05]	.40	.15†
PEI-R Total → OQ 13	-.03	.01	[-.06, -.01]	-.34	-.09†
PEI-R Approval → OQ 13	-.09	.04	[-.17, -.02]	-.36	-.04
PEI-R Advice → OQ 13	-.07	.04	[-.15, -.02]	-.37	-.03
PEI-R Audience → OQ 13	-.10	.04	[-.19, -.03]	-.34	-.11†
PEI-R Relationship → OQ 13	-.08	.04	[-.16, -.02]	-.35	-.10†
PEI-R Total → SWB	.012	.01	[.01, .03]	.38	.10†
PEI-R Approval → SWB	.04	.02	[.01, .07]	.39	.16†
PEI-R Advice→ SWB	.04	.02	[.01, .07]	.42	-.01
PEI-R Audience → SWB	.05	.02	[.02, .09]	.38	.14†
PEI-R Relationship → SWB	.04	.02	[.01, .08]	.42	.01

Note. MPEQ = Milwaukee Psychotherapy Expectations Questionnaire; PEI-R = Psychotherapy Expectancy Inventory-Revised; OQ 13 = Outcome Questionnaire-Abbreviated; SWB = Subjective Well-being.

Bolded values in Table 3 have a $p < .05$. †= zero-order *r, p* < .05. *ab* = product of regression coefficient (a) between expectancies and mediator (hope), and regression coefficient (b) between mediator and outcome (distress/well-being), controlling for expectancies. σ = *SD* of *ab*. CI = 95% confidence interval. c' = relation between expectancies and outcome, controlling for mediator. The partial r for b is used as a measure of effect size, while the partial r for c is used as a criterion for evaluating the statistical significance of mediation utilizing the product of coefficients approach.

With two exceptions, effects were in the anticipated direction. In particular, for the

majority of models, elevated client hope accounted for relations between greater treatment expectations and (1) more subjective well-being, (2) reduced symptom severity, and (3) less interpersonal distress. For the two models in which the direction of effects deviated from hypotheses (i.e., MPEQ Activities → OQ 13 and PEI-R Advice→ SWB), the sign of the *ab* path was opposite the *c'* path, suggesting that there is an unidentified direct effect.

To allow for comparisons among the literature, a traditional causal steps approach (i.e., comparing *c* zero-order to *c'* partial correlation) to mediation was also used. All mediation models were still significant; the relation between predictor and outcome changed from statistically significant to non-significant when controlling for the mediator. The size of all mediated effects was medium. Data were further analyzed to explore which specific types of expectancies were mediated by client hope. Five different expectancies measured by the MPEQ were used as predictors, including: (1) expectations of therapeutic activities, (2) self in therapy, (3) improvement after therapy, (4) therapist/alliance, and (5) personal improvement. Moreover, four types of role expectancies measured by the PEI-R were used, including: (1) approval seeking, (2) advice seeking, (3) audience seeking, and (4) relationship seeking. As a more stable construct, only the trait related hope scale (i.e., THS) was used as a mediator to contain the number of analyses and reduce family-wise error.

Utilizing the product of coefficients approach with measures' total scores, relations between the PEI-R and MPEQ and SWB and OQ-13 were partially mediated by trait hope, though relations between the MPEQ and the OQ-13 remained significant after controlling for hope. Analyses by scale also suggested that trait hope mediated (medium effect sizes) relations between the MPEQ and SWB (expectancies of therapist and personal improvement) and OQ-13 (expectancies of self) with scales initially significantly related to respective outcomes. The same was true of the PEI-R and SWB (approval and audience seeking expectancies) and OQ-13 (audience and relationship seeking expectancies).

Discussion

Within this sample of Brazilian clients, the means and standard deviations for the study measures largely mirrored those found in previous samples (Aubuchon-Endsley & Callahan, 2014; Aubuchon-Endsley & Callahan, 2009; Bleyen et al., 2001; Callahan et al., 2006), suggesting ample variability in this study's constructs. One notable exception was the THS. In particular, the mean in our sample ($M = 25.55$) was much lower than the typical mean of 49 found in other samples (Snyder, 2002). However, none of the samples reported by Snyder (2002) were derived internationally. Therefore, study findings highlight the possibility that trait hope may be lower in populations of clients within developing countries. Despite this, hope still significantly mediated relations

between greater expectancies and positive session outcomes. One possible implication of this observation is that the threshold or level of hope needed to enhance treatment outcomes may be lower within such populations. As in previous samples, internal consistency was adequate for all measures used, which were also normally distributed without major outliers. This further supports the appropriateness of the use of these measures within Brazilian samples and suggests that follow-up studies within other international populations may also benefit from their utilization.

Similarly, as in prior studies, both expectancies measures (PEI-R and MPEQ) were significantly correlated. They were also found to be significantly associated with measures of both state and trait hope in this sample. Results further suggest that hope partially mediates relations between treatment expectancies and session outcomes. Although hopefulness partially accounts for relations between process, role, and outcome expectancies and subjective well-being, only process and role expectancies were mediated by hope in relation to symptom severity/client distress. This suggests that hopefulness does not explain relations between treatment outcome expectancies and symptom severity/client distress following psychotherapy sessions. This may be because outcome expectancies are more robustly associated with end of treatment outcomes rather than session outcomes. Future studies should measure and compare session and treatment outcomes in reference to expectancies and hope in order to evaluate this hypothesis. Additionally, two models (i.e., MPEQ Activities → OQ 13 and PEI-R Advice→ SWB) contained opposite signs for paths *ab* and *c'*, suggesting that there are additional mediators that should be considered for relations between expectancies and outcome. While previous studies have highlighted the mediational role of the therapeutic alliance (Joyce et al., 2003), additional client and therapist characteristics might also be important to consider in future research.

Overall, because hope partially mediates relations between expectancies and session outcomes, treatment providers may wish to evaluate both. If treatment expectancies are low, interventions to augment hope could be combined with expectancies interventions to foster positive session outcomes. Specifically, interventions and techniques which may promote hope may include a greater focus on the client's strengths and resiliency factors, as opposed to pathology/symptomatology, when explaining case conceptualization and treatment rationale (Cheavens et al., 2006). Additionally, setting reasonably attainable early goals for treatment may enhance clients' probability of reaching their goals, leading to positive affect and enhanced hope of accomplishing future treatment goals. Highlighting and monitoring clear, tangible pathways or plans for obtaining these goals may also be important to enhance client confidence in treatment. Moreover, identification of variables that increase motivation for treatment may also be beneficial. Additional expectancies interventions have been recently outlined by several authors (Constantino et al., 2012; DeFife & Hilsenroth, 2011; Swift et al., 2012). This may include the therapist modeling

positive expectations of treatment process and outcome, emphasizing treatment initiation as a positive first step toward therapeutic efficacy, establishing rapport and a collaborative treatment process early, working toward a mutual understanding and explanation of client concerns and treatment rationale, and normalizing client concerns with appropriate empathy and realistic expectations regarding treatment. Future studies should evaluate the efficacy of these combined treatment interventions with dismantling designs recommended to parse out the most efficacious elements.

Despite the promising implications for clinical practice and beneficial lines of future research, results should be interpreted within the context of existing study limitations. Specifically, the convenience, medium-sized sample had relatively homogeneous sociodemographic characteristics, which carries the potential of limiting external validity of current findings. However, when placed within the larger context of the developing expectancies literature, this study seems to lend strong support to the previously identified expectancies-outcomes association as also salient to international populations. Additional international studies are strongly encouraged to examine the generalizability of these findings. Further, the archival data did not contain information about how many sessions participants had completed thus far in their course of treatment. Despite this lack of information, a moderate mediation effect was still observed. However, had that data been available, a more nuanced picture might have emerged. In particular, the effect of expectancies on session outcomes might be dose-dependent. Future research examining the possibility of a dose-dependent expectancies effect is strongly encouraged.

In sum, the current study supports the use of the aforementioned measures to conduct important and much-needed investigation of psychotherapy process and outcomes in diverse populations. Although results suggest that expectations in Brazilian samples are similar to those found in other samples, there may be less client hopefulness in Brazilian samples. Nevertheless, hope still significantly explains associations between treatment expectations and outcomes. Therefore, treatment techniques that bolster hope should be considered within such populations when clients are experiencing low treatment expectations. Because these associations were found throughout treatment and not just at the end of psychotherapy, the assessment of expectations and application of hope interventions should be considered at any stage of treatment. Despite the fact that results support hope as a mediator between several forms of treatment expectancies and within-session outcomes, they also highlight the need for further research to examine why these models are not unanimously significant. Specifically, future research should focus on whether there are particular types of expectancies or treatment outcomes for which this mediation hypothesis does not hold true. Additionally, other salient potential mediators to relations between client treatment expectancies and within-session outcomes should be examined.

Authors:

Nicki Aubuchon-Endsley, Ph.D., is the Clinic Director and an Assistant Professor in the Department of Psychology at Idaho State University. She completed graduate school at Oklahoma State University, a pre-doctoral internship at the Durham, NC VAMC, and an NIH postdoctoral research fellowship at the Alpert Medical School of Brown University. She is a licensed Psychologist who currently has two lines of research examining (1) treatment efficacy and the development of clinical competencies within psychology training clinics and (2) biopsychosocial mechanisms underlying the influence of maternal perinatal health on offspring neurobehavioral and cardiometabolic outcomes.

Jennifer L. Callahan earned her Ph.D. in Clinical Psychology from the University of Wisconsin-Milwaukee, completed her internship and postdoctoral training at Yale University, and holds board certification in Clinical Psychology. She is currently Associate Professor and Director of Clinical Training for the Clinical Psychology program at the University of North Texas (Denton TX) where she directs the Evidence-based Training and Competencies Research Lab.
Address: Jennifer L. Callahan, Department of Psychology, University of North Texas, 1155 Union Circle #311280, Denton, TX 76203-5017, USA.
E-mail: Jennifer.Callahan@unt.edu.

David Andrés González is completing a postdoctoral fellowship in clinical neuropsychology at the South Texas Veterans Health Care System where he also completed his internship; he earned a Ph.D. in clinical psychology from the University of North Texas. In addition to clinical work with low-income and minority individuals, he maintains a line of research aimed at improving the assessment of emotion and cognition in individuals with neurologic and psychiatric disorders.

Camilo J. Ruggero is associate professor of psychology at the University of North Texas. He completed his Ph.D. at the University of Miami and his pre-doctoral internship and NIMH-sponsored F32 postdoctoral fellowship at the Alpert Medical School of Brown University. His research explores phenomenology and risk factors related to psychopathology in general and mood disorders in particular.

Charles I. Abramson earned his Ph.D. in Experimental Psychology from Boston University. He is currently Regents Professor of Psychology and Lawrence Boger Professor of International Studies at Oklahoma State University. His area of research is the comparative analysis of behavior where he is director of the Laboratory of Comparative Psychology and Behavioral Biology.

References

Ackerman, S. J., & Hilsenroth, M. J. (2003). A review of therapist characteristics and techniques positively impacting the therapeutic alliance. *Clinical Psychology Review*, *23*, 1-33. doi: 10.1016/S0272-7358(02)00146-0

Aubuchon-Endsley, N. L. & Callahan, J. L. (2009). The hour of departure: Predicting attrition in the training clinic from role expectancies. *Training and Education in Professional Psychology, 3,* 120-126. doi: 10.1037/a0014455

Aubuchon-Endsley, N. L., & Callahan, J. L. (2014). Exploring pretreatment expectancies in a campus mental health setting. *Journal of College Counseling, 17,* 64-79. doi: 10.1002/j.2161-1882.2014.00048.x

Aubuchon-Endsley, N., Callahan, J. L., & Scott, S. (2014). Role expectancies, race, and treatment outcome in rural mental health. *American Journal of Psychotherapy, 68,* 339-354.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182. doi: 10.1037/0022-3514.51.6.1173

Berzins, J. I., Herron, E., & Seidman, E. (1971). Patients' role behaviors as seen by therapists: A factor analytic study. *Psychotherapy: Theory, Research, and Practice, 8*, 127-130. doi: 10.1037/h00866638

Bleyen, K., Vertommen, H., Vander Steene, G., & van Audenhove, C. (2001). Psychometric properties of the Psychotherapy Expectancy Inventory - Revised (PEI-R). *Psychotherapy Research, 11*, 69-83. doi: 10.1080/713663853

Callahan, J. L., Swift, J. K., & Hynan, M. T. (2006). Test of the phase model of psychotherapy in a training clinic. *Psychological Services, 3*, 129-136. doi: 10.1037/1541-1559.3.2.129

Carifio, J., & Rhodes, L. (2002). Construct validities and the empirical relationships between optimism, hope, self-efficacy, and locus of control. *Work*, *19,* 125-136.

Cheavens, J. S., Feldman, D. B., Gum, A., Michael, S. T., & Snyder, C. R. (2006). Hope therapy in a community sample: A pilot investigation. *Social Indicators Research, 77,* 61-78. doi: 10.1007/s11205-005-5553-0

Constantino, M. J., Ametrano, R. M., & Greenberg, R. P. (2012). Clinician interventions and participant characteristics that foster adaptive patient expectations for psychotherapy and psychotherapeutic change. *Psychotherapy*, *49*, 557-569. doi: 10.1037/a0029440

Cyr, M., & Bouchard, M-A., & Lecomte, C. (1990). Self-consciousness and theoretical orientation as mediators of therapist expectancies in psychotherapy. *Counselling Psychology Quarterly, 3,* 125-132. doi: 10.1080/09515079008254241

DeFife, J. A., & Hilsenroth, M. J. (2011). Starting off on the right foot: Common factor elements in early psychotherapy process. *Journal of Psychotherapy Integration, 21,* 172-191. doi: 10.1037/a0023889

Delsignore, A., & Schnyder, U. (2007). Control expectancies as predictors of psychotherapy outcome: A systematic review. *British Journal of Clinical Psychology, 46*, 467-483. doi: 10.1348/014466507X226953

Dew, S. E., & Bickman, L. (2005). Client expectancies about therapy. *Mental Health Services Research, 7,* 21-33. doi: 10.1007/s11020-005-1963-5

Erskine, R. G., & Trautmann, R. L. (1996). Methods of an integrative psychotherapy. *Transactional Analysis Journal*, *26*(4), 316-328.

Feldman, D. B., & Snyder, C. R. (2000). The State Hope Scale. In: J. Maltby, C. A. Lewis, & A. Hill (Eds.) *A handbook of psychological tests.* Lampeter, Wales: Edwin Mellen Press (pp. 240-245).

Howard, K. I., Kopta, S. M., Krause, M. S., & Orlinsky, D. E. (1986). The dose-effect relationship in psychotherapy. *American Psychologist, 41*, 159-164. doi: 10.1037/0003-066X.41.2.159

Howard, K. I., Leuger, R. J., Maling, M. S., & Martinovich, Z. (1993). A phase model of psychotherapy outcome: Causal mediation of change. *Journal of Consulting and Clinical Psychology, 61,* 678-685. doi: 10.1037/0003-066X.51.10.1059

Irving, L. M., Snyder, C. R., Cheavens, J., Gravel, L., Hanke, J., Hilberg, P., & Nelson, N. (2004). The relationships between hope and outcomes at the pretreatment, beginning, and later phases of psychotherapy. *Journal of Psychotherapy Integration, 14,* 419-443. doi: 10.1037/1053-0479.14.4.419

Joyce, A. S., Ogrodniczuk, J. S., Piper, W. E., & McCallum, M. (2003). The alliance as mediator of expectancy effects in short-term individual therapy. *Journal of Consulting and Clinical Psychology, 71,* 672-679. doi: 10.1037/1089-2699.8.1.3

Kirsch, I. (1997). Response expectancy theory and application: A decennial review. *Applied and Preventive Psychology*, *6,* 69-79. doi: 10/1016/S0962-1849(05)80012-5

Lambert, M. J. (2004). *Bergin and Garfield's handbook of psychotherapy and behavior change* (5th ed.). New York: John Wiley & Sons, Inc.

Lambert, M. J., Hansen, N. B., Umpress, V., Lunnen, K., Okiishi, J., & Burlingame, G. M. (1996). *Administration and scoring manual for the OQ-45.2*. Stevenson, MD: American Professional Credentialing Services LLC.

MacKinnon, D. P. & Fairchild, A. J. (2009). Current directions in mediation analysis. *Current Directions in Psychological Science, 18*, 16-20. Doi: 10.1111/j.1467-8721.2009.01598.x

MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology, 58*, 593-614. doi: 10.1146/annurev.psych.58.110405.085542

Michael, S. T., Taylor, J. D., & Cheavens, J. (2000). *Handbook of hope: Theory, measures, and applications.* San Diego, CA US: Academic Press.

Miller, S. D., Duncan, B. L., & Hubble, M. A. (2005). Outcome-informed clinical work. In J. C. Norcross & M. R. Goldfried, (Eds.), *Handbook of Psychotherapy Integration* (2nd ed., pp. 84-102). New York: Oxford.

Norberg, M. M., Wetterneck, C. T., Sass, D. A., & Kanter, J. W. (2011). Development and psychometric evaluation of the Milwaukee

Psychotherapy Expectations Questionnaire. *Journal of Clinical Psychology, 67,* 574-590*.* doi: 10.1002/jclp.20781
Norcross, J. C. & Goldfried, M. R. (Eds.) (2005). *Handbook of Psychotherapy Integration* (2nd ed.). New York: Oxford.
Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry, 13*, 249-275*.* Article Stable URL: http://www.jstor.org/stable/1448867
Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T.,…Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*, 570-585*.* doi: 10.1037/0022-3514.60.4.570
Snyder, C. R., Sympson, S. C., Ybasco, F. C., Borders, T. F., Babyak, M. A. & Higgins, R. L. (1996). Development and validation of the State Hope Scale. *Journal of Personality and Social Psychology, 70,* 321-335*.* doi: 10.1037/0022-3514.70.2.321
Swift, J. K., Whipple, J. L., & Sandberg, P. (2012). A prediction of initial appointment attendance and initial outcome expectations. *Psychotherapy*, *49*, 549-556*.* doi: 10.1037/a0029441
Tofighi, D. & MacKinnon, D. P. (2011). RMediation: An R package for mediation analysis confidence intervals. *Behavior Research Methods, 43*, 692-700*.* doi: 10.3758/s13428-011-0076-x
Tong, E. W., Fredrickson, B. L., Weining, C., & Zi Xing, L. (2010). Re-examining hope: The roles of agency thinking and pathways thinking. *Cognition and Emotion*, *24*, 1207-1215*.* doi: 10.1080/02699930903138865
Vermeersch, D., Lambert, M., & Burlingame, G. (2000). Outcome questionnaire: Item sensitivity to change. *Journal of Personality Assessment*, *74*, 242-261*.* doi: 10.1207/S15327752JPA7402_6
Wampold, B. E. (2001). *The Great Psychotherapy Debate: Models, Methods, and Findings.* Mahwah, N.J.: Lawrence Erlbaum.

Date of publication: 22.12.2015