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Working Alliance for Clients with Social Anxiety Disorder: Relationship with Session Helpfulness and Within-Session Habituation

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Abstract

It has been suggested that a strong working alliance encourages clients to take risks during therapy (Raue, Castonguay, & Goldfried, 1993). This encouragement may be important for clients who fear negative evaluations as they engage in risk-taking elements of therapy. This study examined the relationship between working alliance, session helpfulness, and measures of emotional processing in 18 clients undergoing cognitive behavior therapy (CBT) for social anxiety disorder. Results indicate a positive correlation between client-rated, but not observer-rated, working alliance and session helpfulness. Moderate levels of working alliance were associated with higher initial anxiety and deeper within-session habituation. Overall, a strong alliance was associated with clients engaging with the session and finding the session helpful. Implications for the use of CBT for social anxiety are discussed.

Keywords: cognitive behavior therapy, exposure, emotional processing

Certain common factors of treatment are often seen as essential components of the therapeutic process in psychotherapy (Wampold, 2001). One of these common elements is the relationship between the client and the therapist, which has been termed the "working alliance" (Bordin, 1979). The working alliance is the development of a therapeutic bond and an agreement between client and therapist on tasks and goals. A strong working alliance has been associated with positive treatment outcome (Horvath & Greenberg, 1986; Luborsky, McLellan, Woody, O'Brien, & Auerbach, 1985) regardless of type or length of therapy (Horvath & Symonds, 1991; Martin, Garske, & Davis, 2000). While the relationship between the client and the therapist is viewed to be therapeutic in itself in some psychotherapies, the alliance in other therapies such as cognitive behavior therapy (CBT) is now thought to allow clients to accept and follow treatment faithfully (Horvath & Symonds, 1991) or effectively to use appropriate interventions or to engage in therapy (Horvath & Marx, 1990; Mallinckrodt, 1993). In this view, a strong and stable alliance is necessary, but not necessarily sufficient, for successful treatment.

One factor that may be important for the development of the working alliance is whether a client has difficulty forming interpersonal relationships. Moras and Strupp (1982) reported that individuals with adequate interpersonal relationships were likely to form positive therapeutic alliances with their dynamically or experientially oriented therapists. Additionally, Kokotovic and Tracey (1990) found that in a college counseling center it was more difficult for therapists to engage clients in a working alliance when they viewed the clients as having poor social relationships. The development of a strong working alliance might become especially important for individuals with interpersonal relationship difficulties, such as those clients with social anxiety disorder. For example, the anxiety in social and performance situations that characterizes social anxiety disorder (DSM-IV-TR; American Psychiatric Association, 2000) may include the therapy setting itself; therefore, it may be important for clients to form strong working alliances with their therapists in order to actively engage in the therapeutic process.

Only 2 studies have examined working alliance for social anxiety disorder. In the first, working alliance for clients in group CBT increased linearly over the course of therapy (Woody & Adessky, 2002). However, in this study, alliance was not significantly related to outcome. The second study involving clients undergoing individual CBT found that a strong working alliance measured after the final session was related to lower posttreatment symptom severity after controlling for pre-treatment severity (VanDyke, 2002). Working alliance earlier in treatment was not related to clinical outcome, suggesting that the alliance may be secondary to treatment gains. However, given the history of the importance of the working alliance for psychotherapy, it may be that a strong alliance is necessary but not sufficient for treatment improvement. A deeper understanding of the relationships between the alliance and specific elements of treatment may elucidate some of the complexities in the working alliance literature.

CBT is efficacious in reducing the symptoms of social anxiety disorder (Gould, Buckminster, Pollack, Otto, & Yap, 1997). However, approximately 25% of individuals with social anxiety do not improve with CBT (Heimberg & Becker, 2002). A better understanding of the working alliance may help to understand why these individuals are not improving. One of the key elements of CBT for social anxiety disorder is in-session exposures. In fact, exposure without cognitive interventions is an effective treatment for social anxiety disorder (Gould et al., 1997). Since, exposure-based treatment works successively, with each exposure session building on the previous one (Heimberg, 2002a), it is important for the first exposure session to be successful. Here, success is defined as the client experiencing sufficient anxiety to perceive the situation as challenging while being able to successfully cope without escape, thus allowing the anxiety to decrease during the situation. A strong working alliance might aid the client in engaging in the exposure, especially the first one in treatment, in which clients are asked to "perform" in a role-play situation for the first time. In the first exposure the client not only faces a feared situation, but may also be unsure of the unfamiliar procedures. The client may need to trust their therapist that facing the feared situation will be therapeutic before he or she is willing to engage in the exposure.

Although the exact mechanism underlying exposure is unclear, one prominent theory of the primary mechanism is emotional processing (Foa & Kozak, 1986; 1991). According to this model, emotional processing occurs when the fear structure is activated and incompatible information is processed and incorporated into the existing fear network, thus reducing the fear. This fear reduction, or habituation, needs to occur within a session and also across sessions and should follow an initial activation of the individual's fear network. For the client to activate the fear structure, he or she needs to engage in the feared situation. However, the client may need to have formed a strong working alliance with the therapist before he or she is willing or able to become involved in the feared situation. Likewise, the client needs to experience a decline in his or her anxiety across the exposure. Exposures often involve an interaction between the client and the therapist. If the client has formed a strong working alliance with his or her therapist, then he or she may be less likely to perceive the exposure as threatening. Having a positive interaction during the exposure may provide the incompatible information to facilitate the reduction in fear. Social anxiety may impede the development of this relationship and thus interfere with the within-session habituation at a key moment in treatment, namely the first in-session exposure.

This preliminary study examined the relationship between working alliance and the within-session habituation component of emotional processing during the first in-session exposure during CBT for social anxiety disorder. In this study, we chose to examine only the first exposure session because it is the first time in therapy that the client is directly confronting his or her fears. Therefore, the alliance may be especially important and somewhat different in this session compared with other sessions. In addition, the clients' and therapists' perception of whether this key session was helpful can be used as a subjective measure of the success of the session, regardless of overall working alliance. Perceived helpfulness of the session has been associated with outcome (Addis & Jacobson, 1996) and symptom change (Friedberg, Viglione, Stinson, Beal, Fidaleo, & Celeste, 1999) in CBT. It was hypothesized that clients would experience higher initial anxiety, larger decreases in anxiety, and greater perceived helpfulness in sessions during which a strong and stable working alliance between clients and their therapists occurred.

Method

Participants

Participants were 18 adult clients (44% women) with a mean age of 38.78 years (SD = 7.64) seeking treatment for social anxiety disorder.¹ Of the 18 participants, 13 had completed

college, 10 were married, and all participants were European-American. Clients were selected for this study if they had completed the measures of interest for this study and if there was a videotape of their first exposure session. Many (12) of the participants were part of a wait-list controlled outcome trial of individual CBT for social anxiety disorder that was conducted at an outpatient clinic (Heimberg, 2002b). Four of these participants waited 16 weeks before receiving treatment. The remaining 6 clients were treated under the same conditions as those in the treatment study. One individual, not included in this study, dropped out of treatment before his first exposure session.

After an initial telephone screening, all potential clients were administered the Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV; Brown, DiNardo, & Barlow, 1994). The ADIS-IV includes a Clinician Severity Rating (CSR) based on the extent that the anxiety interferes with daily functioning. A client was included if their primary ADIS-IV diagnosis was social anxiety disorder, with a CSR of at least 4 on a 0–8 scale. Overall, there were 8 individuals who had a clinically significant comorbid diagnosis (3 generalized anxiety disorder, 2 dysthymia, 2 substance abuse, and 1 schizophrenia). In this study, but not the larger outcome trial, individuals with substance abuse and schizophrenia were retained since their means on the measures of interest in this study were similar to other participants. Participants were excluded from this study and the larger treatment study if they required immediate attention (i.e., they were at immediate harm to themselves or someone else or they were actively psychotic) or if they were currently receiving therapy from an additional mental health provider.

Diagnostic interviews were conducted by trained ADIS-IV interviews. Training consisted of watching 3 interviews conducted by an experienced interviewer, then matching an experienced interviewer on at least 4 out of 5 interviews. All interviews were conducted by advanced graduate students or doctoral level psychologists. In no case did it become apparent during treatment that a diagnosis other than social anxiety disorder would have been appropriate for the primary diagnosis.

Treatment

The CBT for social anxiety disorder used was based on a client workbook (Hope, Heimberg, Juster, & Turk, 2000) adapted from the procedures of Heimberg's Cognitive Behavioral Group Therapy (CBGT; Heimberg, 1991; Heimberg & Becker, 2002). CBGT, which combines psycho-education, cognitive restructuring, and in session and in vivo exposures, has been shown to be more efficacious than a waiting-list control (Hope, Heimberg, & Bruch, 1995) and a credible attention control (Heimberg et al., 1990) and equally as effective as the monoamine oxidase inhibitor (MAOI) phenelzine (Heimberg et al., 1998). Although a treatment outcome review of the study from which these data are drawn is beyond the scope of this paper, preliminary evidence suggests that clients who underwent individual CBT showed more improvement than clients in the waitlist control condition (Effect Size (*ES*) = 1.35–1.83; Heimberg, 2002b). This is larger than the typical effect size for CBGT (*ES* = 0.84–1.13). The clients in this study improved significantly from pretreatment (CSR = 6.00; BFNE = 51.60) to posttreatment (CSR = 3.64; BFNE = 37.27) on the CSR (*F*(1, 13) = 20.55, p = 0.001, d = 1.21) and BFNE (*F*(1, 14) = 26.64, p < 0.001, d = 1.33).²

The data for this study were collected during the first exposure session when the client transitions from psycho-education and training in cognitive restructuring to the exposure section of the treatment at about session 7. The content of the exposure varied across clients based on their individual presenting fears. The first exposure is typically a situation that the client rated as moderately difficult and often involved a casual conversation or telling an anecdote. The exposures were designed to last 5–10 minutes. The protocol required that the therapist be the only role player for the first exposure.

Therapists in this study were a licensed clinical psychologist or 1 of 9 advanced graduate students supervised by a licensed clinical psychologist. No therapist saw more than 3 clients. All sessions were videotaped. Tapes from each phase of treatment were reliably assessed for adherence to the treatment protocol by 2 independent raters who coded a random sample of 20 sessions (interrater reliability $r_i = 0.78$ with intra-class correlation).³ Ratings were made using a therapist fidelity measure designed for the larger study (Hope, 2001) for 39 specific elements of the treatment protocol such as: "Therapist initiates an appropriately difficult in-session exposure and does not allow avoidance or escape, including: working out the details of the exposure, setting an achievable behavioral goal, and obtaining SUDS ratings at 1–2 minute intervals." A rating of 4 (reasonably effective) or 5 (extremely effective) is considered within protocol. The mean overall rating for the 155 rated items was 4.47 (*SD* = 0.69), indicating good adherence.

Measures

Symptom measures

All participants completed the Brief Fear of Negative Evaluation Scale (BFNE; Leary, 1983) and the Beck Depression Inventory – second edition (BDI-II; Beck, Steer, & Brown, 1996) before the start of treatment. These are common measures used to assess the core constructs of social anxiety and depression, respectively.

Working alliance measure

The total score from a shortened 12-item version of the Working Alliance Inventory (WAI), which has been shown to have comparable psychometric properties to the original 36-item version (Tracey & Kokotovic, 1989), was used in this study. The original WAI was developed specifically to address Bordin's concept of the working alliance (Horvath & Greenberg, 1986). Ratings are made on a 7-point Likert scale (1 = "never" and 7 = "always"). In a validation study of the WAI, Horvath and Greenberg (1989) demonstrated that the WAI has adequate reliability and validity.

In this study, the WAI was completed by both clients and by independent raters. Tichenor and Hill (1989) adapted the WAI to be used by independent raters (WAI-O) by altering the pronouns used in the original WAI. They showed strong correlations between other observer measures of working alliance and the WAI-O. The WAI-O demonstrated strong internal consistency and high inter-rater reliability. Two graduate students completed the WAI-O based on videotapes of each participant's first exposure session (1 rater was the first author; the other was blind to the study hypotheses). To calculate inter-rater

reliability, ratings were completed separately by both raters on 11 sessions. Intraclass correlations³ between the 2 raters based on these separate ratings was $r_i = 0.78$ for the total WAI-O.

Session helpfulness measure

After each session, all clients and therapists completed the Helpfulness Scale (Elliott, 1985), which is a 1-item rating of session helpfulness on a 9-point Likert scale (1 = "extremely hindering" to 9 = "extremely helpful"). Elliott (1986) reported a predictive validity of 0.60 for helpfulness ratings and session outcome. Client ratings on the Helpfulness Scale have been shown to be related to positive client reactions (Hill, Helms, Spiegel, & Tichenor, 1988).

Measures of emotional processing

According to Foa and Kozak (1986), one way to assess emotional processing is to obtain client reports of fear throughout an exposure session. In this study, clients reported ratings of subjective units of distress (SUDS; Wolpe & Lazarus, 1967) during the first exposure. The SUDS ratings range from 0 indicating "no anxiety, calm, relaxed" to 100 indicating "very severe anxiety, the worst ever encountered" (Hope et al., 2000). The protocol includes practice making these ratings and setting individualized anchor points. Two variables were derived for the present study. "Highest SUDS" was the greatest SUDS number during the first exposure. The "SUDS change" was the difference between the highest and the lowest SUDS number given during the first exposure. According to the treatment protocol, the therapist should request a SUDS rating approximately every minute. However, because therapists also serve as role-players in the first exposure, there was some variability as to when SUDS were taken. Each client provided a minimum of 3 SUDS ratings. Ratings immediately before and at the end of exposure are always taken and represent the first and last assessment point.

Procedure

All participants provided informed consent that their data could be used for research purposes. Participants received Hope et al.'s (2000) individual treatment for social anxiety disorder. According to the protocol, the first exposure typically occurs around the seventh session. During the first exposure, clients provided their SUDS ratings approximately every minute. Immediately, after the first exposure session both the clients and their therapists completed the Helpfulness Scale and the clients completed the WAI. To reassure clients that their therapists would not see their ratings, clients and therapists placed their ratings in a locked box, from which they were later retrieved by a research assistant. Independent raters completed the observer version of the Working Alliance Inventory (WAI-O) based on videotapes of the client's first exposure session.

Results

Preliminary analyses

Table 1 provides means, standard deviations, and correlations between measures of psychopathology and outcome and WAI, helpfulness ratings, and SUDS ratings. Overall, WAI scores averaged 5.89 (SD = 1.11; range 1–7) per item for clients and 5.35 (SD = 0.93; range 3–7) for observers, indicating strong relationships between clients and therapists. These mean ratings are similar to the means from the first session found in the study of CBGT for social anxiety disorder (M = 5.84; Woody & Adessky, 2002). The client-rated WAI was significantly correlated with the observer-rated WAI, r(16) = 0.49, p = 0.04.

Table 1. Means, standard deviations, and correlations between working alliance, helpfulness, and emotional processing and measures of psychopathology and outcome

	-				
		CSR	BFNE	BDI-II	Change in CSR
	M (SD)	5.94 (0.80)	51.44 (8.54)	19.67 (10.73)	2.36 (1.94)
Client WAI	70.69 (9.19)	0.08	0.14	-0.38	0.14
Observer WAI	64.17 (7.77)	0.34	0.46*	-0.01	0.57*
Client Helpfulness	7.78 (0.88)	-0.02	0.38	-0.20	-0.18
Therapist Helpfulness	7.11 (0.90)	0.33	0.08	-0.01	-0.27
Highest SUDS	61.00 (18.78)	0.32	0.32	0.48*	0.04
SUDS Change	26.83 (13.67)	0.06	0.01	0.11	20.29

CSR = Clinician Severity Rating; BFNE = Brief Fear of Negative Evaluations scale; BDI-II = Beck Depression Inventory – II; Change in CSR represents the difference between pre- and post-treatment CSRs, with higher numbers indicating more improvement; WAI = Working Alliance Inventory; SUDS = Subject Units of Discomfort. * p < 0.05

Results indicate that both clients and therapists found the first exposure session helpful. These helpfulness ratings are consistent with the mean client (M = 7.58, SD = 1.19) and therapist (M = 6.85, SD = 1.16) ratings across all therapy sessions. Client's ratings of session helpfulness were significantly correlated with therapist's ratings of session helpfulness, r(16) = 0.55, p = 0.02.

The WAI scores, helpfulness ratings and SUDS measures were compared with 3 measures of pre-treatment psychopathology and change in the Clinician's Severity Ratings (CSR) from pre- to post-treatment. Outcome measured by the change in CSR was significantly correlated with observer-rated, r(12) = 0.57, p = 0.03, but not client-rated WAI scores r(12) = 0.14, p = 0.62. The BDI-II was positively correlated with the highest SUDS rating, r(16) = 0.48, p = 0.04, indicating that individuals with higher depression scores also tended to have higher peak SUDS ratings. The BFNE was positively correlated with observer-rated WAI, r(16) = 0.46, p = 0.05, indicating that observers rated the working alliance higher for clients with higher self-reports of fear of negative evaluations. No other correlations reached significance. The effect of BDI-II and BFNE on the remaining analyses will be examined.

Relationships between WAI scores and helpfulness ratings

The correlations between WAI scales and helpfulness ratings are shown in Table 2. In partial support of the research hypothesis, ratings of the working alliance by clients, but not observers, were correlated with ratings of session helpfulness. Higher client and therapist ratings of session helpfulness were associated with higher client-rated WAI scores. Partial correlations between the WAI scales and the helpfulness ratings that controlled for pretreatment BFNE, BDI-II, or CSR scores showed similar patterns to the bivariate correlations.

Table 2. Correlations of WAI scores and session helpfulness								
			Controlling for BFNE					
	Client WAI	Observer WAI	Client WAI	Observer WAI				
Client Helpfulness	0.69***	0.26	0.70**	0.11				
Therapist Helpfulness	0.47*	0.20	0.46	0.18				

n = 15 for correlations involving BFNE due to missing data. WAI = Working Alliance Inventory; BFNE = Brief Fear of Negative Evaluations scale. The same pattern is present when controlling for depression or initial severity scores.

* p < 0.05, ** p < 0.01, ***p < 0.001

Relationships between WAI scores and elements of emotional processing

The relationship between WAI scores and elements of emotional processing was examined twice: once as a linear relationship and once as a quadratic or reverse-U shaped relationship. These are 2 orthogonal analyses. While it was thought that higher WAI scores would be associated with higher SUDS scores and a larger amount of change in SUDS scores, these variables did not show significant linear correlations (see Table 3). However, there was a significant quadratic relationship between the WAI scores and the SUDS ratings, indicating that moderate amounts of observer-rated WAI were associated with the highest SUDS and the largest change in SUDS. There were no significant correlations between the client-rated WAI scores and the SUDS measures. Partial correlations between WAI scores and SUDS measures that controlled for pre-treatment BFNE, BDI-II, or CSR scores showed similar patterns to the bivariate correlations.

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	WAI Scores as Linear Terms		WAI Scores as Quadratic Terms					
	Client	Observer	Client	Observer				
Highest SUDS	-0.16	0.23	0.10	-0.52*				
SUDS Change	-0.16	0.14	-0.14	-0.59**				

Table 3. Correlations of WAI scores as linear and as quadratic terms and highest SUDS and SUDS change

WAI = Working Alliance Inventory; SUDS = Subjective Units of Discomfort. The pattern is the same when controlling for Beck Depression Inventory (BDI), Brief Fear of Negative Evaluations scale (BFNE), or Clinician Severity Rating (CSR).

* p < 0.05, ** p < 0.01

Discussion

This study sought to examine the working alliance between clients and their therapists during CBT for social anxiety disorder. Specifically, this study examined the relationship between working alliance and ratings of session helpfulness and elements of emotional processing during the first exposure session as clients transition to the behavioral component of treatment. Due to the small sample size and the preliminary nature of this study, all conclusions should be interpreted with caution.

Originally the working alliance was a psychodynamic concept that was thought to be important in clinical outcomes. Interestingly, in this study, strong observer-rated, but not client-rated, working alliances were related to more improvement. However, previous research (i.e., Krupnick et al., 1994; Raue et al., 1993), as well as this current study, shows that the working alliance is strong in CBT. This study also demonstrated that clients with difficulty forming interpersonal relationships, specifically clients with social anxiety disorder, can and do form strong working alliances with their therapists. In addition, clients and their therapists perceived the first exposure session as being helpful.

It was believed that since clients with social anxiety disorder fear negative evaluation that it would be important for them to form a strong working alliance with their therapists to engage in therapy sessions and to perceive benefit from the sessions. In this study, clients' ratings of the working alliance were related to both client and therapist ratings of helpfulness. Therefore, clients who perceive a strong working alliance with their therapists rated the sessions as being helpful, which may indicate that clients have an overall positive view of treatment. However, this relationship was not present for observer ratings of the working alliance, which may indicate that clients and observers are rating different underlying phenomena. Also, the direction of causality is unknown. Alliance may predict helpfulness or a strong alliance may be a byproduct of session helpfulness.

It was hypothesized that in sessions where clients had a strong working alliance with their therapist, they would be more willing and able to engage in the exposure, thus we should see a larger initial SUDS level. Additionally, clients with a strong working alliance would be comfortable enough with their therapist to habituate to the situation, which would be indicated by a change in SUDS. Interestingly, it was not high, but moderate levels of observer-rated working alliance that occurred in sessions with the highest initial SUDS and the largest change in SUDS. It may be that clients with low levels of alliance are not comfortable enough in the therapeutic setting to immerse themselves fully in the exposure. On the other hand, when the alliance is strong, the exposure may not invoke the client's fears of negative evaluation when the therapist is the role player. Thus, these clients are not fully activating their fear structures. Clients with moderate levels of working alliance appear to experience the highest initial SUDS and the most SUDS change. These clients may trust their therapist enough to invest in the exposure, but their alliance with their therapist is not so strong as to prevent fears of negative evaluations during the exposure.⁴ However, it should be noted that given the design of this study it is not possible to determine whether alliance influences emotional processing or emotional processing influences alliance.

A potential limitation of this study is the possibility of an observer bias, since the observers watched the client's ratings of the exposure before making alliance ratings. To control for bias, one of the raters was blind to the hypothesis and inter-rater reliability was high. Results may also be affected by several measurement challenges. For example, the working alliance and helpfulness ratings are consistently rated highly, which could indicate a ceiling effect. Also, clients with social anxiety may respond in socially desirable ways; however, every effort was made to ensure clients that their therapist would not see the ratings. In the therapeutic context, therapists rely on self-report measures such as SUDS ratings to gauge the amount of within-session habituation. Future studies could use objective, physiological measures, such as heart rate or skin conductance monitors, to measure within-session habituation and its relationship with the working alliance. In this study, only one session was examined for each client. It is likely that the working alliance is a dynamic process that changes throughout the course of therapy and future research may benefit from examining the working alliance over time. In addition, the power of this study was limited because of the small sample size.

Conclusion

CBT is a complex process and we examined proximal relationships between working alliance, elements of emotional processing and perceived helpfulness at a key therapeutic point. Socially anxious individuals are able to establish strong working alliances, but alliances that are too strong may be counter-therapeutic for the first in-session exposure. It may be beneficial to consider the level of alliance before exposures are selected. If a weaker alliance has formed, work to improve the alliance before the first exposure may be helpful. Alternatively, if a strong alliance is established, the therapist may be able to increase the amount of emotional processing by selecting a more anxiety-provoking situation for the exposure. Previous studies examining the working alliance have looked for linear relationships, assuming that stronger alliances are better. This study highlights the importance of more detailed analyses of the therapeutic process.

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Notes

- 1. Data were originally collected from a second site. However, due to differences in the recording mechanisms from the 2 sites, only data from 1 of the sites is presented here.
- 2. Three individuals dropped out of treatment. For this analysis, pre-treatment scores were used as post-treatment scores for those who dropped out.
- 3. The intra-class correlation (ICC) was a 2-way mixed model corresponding to Shrout and Fleiss's (1979) classification as ICC (3, k) = (BMS EMS)/BMS, where BMS = $k\sigma^{2}T + \sigma^{2}E$ and EMS = k/(k 1) $\sigma^{2}I + \sigma^{2}E$.

4. We thank an anonymous reviewer for pointing out that it is also possible that therapists chose "safer" exposures for clients with whom they have lower alliances.

References

- Addis, M. E., & Jacobson, N. S. (1996). Reasons for depression and the process and outcome of cognitive-behavioral psychotherapies. *Journal of Consulting & Clinical Psychology*, 64, 1417–1424.
- American Psychiatric Association (2000). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). Manual for the Beck Depression Inventory Second Edition. San Antonio, TX: The Psychological Corporation.
- Bordin, E. S. (1979). The generalizability of the psychoanalytic concept of the working alliance. *Psychotherapy: Theory, Research & Practice, 16, 252–260.*
- Brown, T. A., DiNardo, P. A., & Barlow, D. H. (1994). Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV). San Antonio, TX: The Psychological Corporation.
- Elliott, R. (1985). Helpful and nonhelpful events in brief counseling interviews: an empirical taxonomy. *Journal of Counseling Psychology*, 32, 307–322.
- Elliott, R. (1986). Interpersonal Process Recall (IPR) as a psychotherapy process research method. In L. S. Greenberg & M. W. Pinsof (Eds.), *The Psychotherapeutic Process: A Research Handbook* (pp. 503– 528). New York: Guilford Press.
- Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: exposure to corrective information. *Psychological Bulletin*, 99, 20–35.
- Foa, E. B., & Kozak, M. J. (1991). Emotional processing: theory, research, and clinical implications for anxiety disorders. In J. D. Safran & L. S. Greenberg (Eds.), *Emotion, Psychotherapy, and Change* (pp. 21–49). New York: Guilford Press.
- Friedberg, R. D., Viglione, D. J., Stinson, B. L., Beal, K. G., Fidaleo, R. A., & Celeste, B. (1999). Perceptions of treatment helpfulness and depressive symptomatology in psychiatric inpatients on a cognitive therapy unit. *Journal of Rational-Emotive & Cognitive Behavior Therapy*, 17, 33–50.
- Gould, R. A., Buckminster, S., Pollack, M. H., Otto, M. W., & Yap, L. (1997). Cognitive-behavioral and pharmacological treatment for social phobia: a meta-analysis. *Clinical Psychology: Science and Practice*, 4, 291–306.
- Heimberg, R. G. (1991). A Manual for Conducting Cognitive-Behavioral Group Therapy for Social Phobia (2nd ed.). Unpublished manuscript.
- Heimberg, R. G. (2002a). Cognitive-behavioral therapy for social anxiety disorder: current status and future directions. *Biological Psychiatry*, 51, 101–108.
- Heimberg, R. G. (2002b, November). *The understanding and treatment of social anxiety: What a long strange trip it's been (and will be)*. Reno, NV: Presidential address at the annual meeting of the Association for Advancement of Behavior Therapy.
- Heimberg, R. G., & Becker, R. E. (2002). Cognitive-Behavioral Group Treatment for Social Phobia: Basic Mechanisms and Clinical Applications. New York: Guilford Press.
- Heimberg, R. G., Dodge, C. S., Hope, D. A., Kennedy, C. R., Zollo, L. J., & Becker, R. E. (1990). Cognitive behavioral group treatment for social phobia: comparison with a credible placebo control. *Cognitive Therapy and Research*, 14, 1–23.

- Heimberg, R. G., Liebowitz, M. R., Hope, D. A., Schneier, F. R., Holt, C. S., Welkowitz, L. A., et al. (1998). Cognitive behavioral group therapy vs phenelzine therapy for social phobia: 12-week outcome. *Archives of General Psychiatry*, 55, 1133–1141.
- Hill, C. E., Helms, J. E., Spiegel, S. B., & Tichenor, V. (1988). Development of a system for categorizing client reactions to therapist interventions. *Journal of Counseling Psychology*, 35, 27–36.
- Hope, D. A. (2001). *Managing Social Anxiety Therapist Fidelity Measure*. Unpublished Manuscript, University of Nebraska–Lincoln.
- Hope, D. A., Heimberg, R. G., & Bruch, M. A. (1995). Dismantling cognitive-behavioral group therapy for social phobia. *Behaviour Research and Therapy*, 33, 637–650.
- Hope, D. A., Heimberg, R. G., Juster, H. R., & Turk, C. L. (2000). *Managing Social Anxiety: A Cognitive-Behavioral Therapy Approach. Client Workbook*. San Antonio, TX: The Psychological Corporation.
- Horvath, A. O., & Greenberg, L. S. (1986). The development of the working alliance inventory. In L. S. Greenberg & W. M. Pinsof (Eds.), *The Psychotherapeutic Process: A Research Handbook* (pp. 529–556). New York: Guilford Press.
- Horvath, A. O., & Greenberg, L. S. (1989). Development and validation of the working alliance inventory. *Journal of Counseling Psychology*, 36, 223–233.
- Horvath, A. O., & Marx, R. W. (1990). The development and decay of the working alliance during time-limited counseling. *Canadian Journal of Counseling*, 24, 240–259.
- Horvath, A. O., & Symonds, B. D. (1991). Relation between working alliance and outcome in psychotherapy: a meta-analysis. *Journal of Counseling Psychology*, 38, 139–149.
- Kokotovic, A. M., & Tracey, T. J. (1990). Working alliance in the early phase of counseling. Journal of Counseling Psychology, 37, 16–31.
- Krupnick, J. L., Elkin, I., Collins, J., Simmens, S., Sotsky, S. M., Pilkonis, P. A., et al. (1994). Therapeutic alliance and clinical outcome in the NIMH treatment of depression collaborative research program: preliminary findings. *Psychotherapy*, 31, 28–35.
- Leary, M. R. (1983). A brief version of the Fear of Negative Evaluation Scale. Personality and Social Psychology Bulletin, 9, 371–375.
- Luborsky, L., McLellan, A. T., Woody, G. E., O'Brien, C. P., & Auerbach, A. (1985). Therapist success and its determinants. Archives of General Psychiatry, 42, 602–611. Mallinckrodt, B. (1993). Session impact, working alliance, and treatment outcome in brief counseling. *Journal of Counseling Psychology*, 40, 25–32.
- Martin, D. J., Garske, J. P., & Davis, M. K. (2000). Relation of the therapeutic alliance with outcome and other variables: a meta-analytic review. *Journal of Consulting and Clinical Psychology*, 68, 438–450.
- Moras, K., & Strupp, H. H. (1982). Pretherapy interpersonal relations, patients' alliance, and outcome in brief therapy. Archives of General Psychiatry, 39, 405–409.
- Raue, P. J., Castonguay, L. G., & Goldfried, M. R. (1993). The working alliance: a comparison of two therapies. *Psychotherapy Research*, 3, 197–207.
- Shrout, P. E., & Fleiss, J. L. (1979). Intraclass correlations: uses in assessing rater reliability. *Psycholog*ical Bulletin, 86, 420–428.
- Tichenor, V., & Hill, C. E. (1989). A comparison of six measures of working alliance. *Psychotherapy*, 26, 195–199.
- Tracey, T. J., & Kokotovic, A. M. (1989). Factor structure of the Working Alliance Inventory. Psychological Assessment, 37, 369–375.
- VanDyke, M. M. (2002). Contribution of working alliance to manual-based treatment of social anxiety disorder. Doctoral dissertation, University of Nebraska, Lincoln.

- Wampold, B. E. (2001). *The Great Psychotherapy Debate: Models, Methods, and Findings*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Wolpe, J., & Lazarus, A. A. (1967). *Behavior Therapy Techniques: A Guide to the Treatment of Neuroses*. Oxford: Pergamon Press.
- Woody, S. R., & Adessky, R. S. (2002). Therapeutic alliance, group cohesion, and homework compliance during cognitive-behavioral group treatment of social phobia. *Behavior Therapy*, 33, 5–27.