HOW DO TREATMENT COMPLETERS FARE VERSUS DROPOUTS?: A FOLLOW-UP STUDY

A Dissertation

Presented to

The Faculty of the Department

of Psychology

University of Houston

In Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Philosophy

By

Suzanne C. Klenck

August 2012

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ABSTRACT

Premature termination from psychotherapy has been reported as the most pressing health care delivery problem of community mental health outpatient clinics since the 1970's (Albers & Scrivner, 1977). Historically, dropout has been viewed as a negative outcome for all involved, and the research has concentrated on determining what client factor(s) may influence premature termination. However, a study conducted in part by this author (see Krishnamurthy et al., unpublished manuscript) provided preliminary evidence that clients prematurely terminated from treatment after an initial lessening of their symptoms. These preliminary findings oppose the previously held idea that premature termination is predominantly due to a lack of perceived improvement or some dissatisfaction in the therapy process. The current study attempted further exploration of those that prematurely dropped out of treatment to show whether they maintained their gains as compared to those that completed the prescribed treatment protocol. Although underpowered, it was found that individuals who drop out of treatment, contrary to Eysenck's (1952) theory, are not all treatment failures. In the present study, it was found that similar to completers, those who dropped out of treatment comprised groups that both did (44%) and did not (34%) obtain high rates of improvement. In fact, the subset of dropouts who achieved the stringent criteria of clinically significant change (CSC) in eight or fewer sessions made as much gain as those who completed the study. These individuals were also found to maintain these gains over time, equal to those who received the full dose of treatment. The approach of managed healthcare regarding psychological services, where there are often strict preset limits for the number and cost of services that are covered (DeLeon, Vandenbos, & Bulatao, 1991), may need to be better informed and become more flexible following this model of change. A one-

size-fits-all approach to length of treatment may not be appropriate, as some individuals “get it” faster than others do.

TABLE OF CONTENTS

LIST OF TABLES

How Do Treatment Completers Fare Versus Dropouts?: A Follow-Up Study

High rates of treatment refusal have strong and far-reaching effects, and are presumed to be detrimental to the participants, their families, society, and the economy. Allegedly, large amounts of financial, including clinical, institutional, and personal, costs result when participants do not complete prescribed treatment regimens. This notion has left researchers and practitioners with the continued dilemma of client attrition and little valid research to draw from in order to predict who may be at risk for discontinuing treatment before having incorporated enduring positive changes. However, a study conducted in part by this author (see Krishnamurthy et al., unpublished manuscript) provided preliminary evidence that clients prematurely terminated from treatment after an initial lessening of their symptoms. This new theory opposes the previously held idea that premature termination is predominantly due to a lack of perceived improvement or some dissatisfaction in the therapy process. This study attempted further exploration of those that prematurely dropped out of treatment to show whether they maintained their gains as compared to those that completed the prescribed treatment protocol.

The problem of dropout

Premature termination from psychotherapy has been reported as the most pressing health care delivery problem of community mental health outpatient clinics since the 1970's (Albers & Scrivner, 1977). Kessler et al. (2005) estimates that anxiety disorders are the most prevalent mental disorder found in the general population, with a lifetime prevalence rate of 28.8%; constituting a large proportion of individuals in treatment. For those that provide services for and study these disorders, a major barrier in treatment outcome studies has been the high rates of participants that enter treatment for dysfunctional thoughts and behaviors

only to drop out of treatment prematurely. Having the ability to determine the reasons for treatment dropout and the impact this has on client outcome is crucial to target healthcare policies to maximize completion and improve treatment effectiveness.

Statistics from U.S. community mental health centers indicate that between 30% and 60% of psychotherapy outpatients terminate prematurely (National Institute of Mental Health [NIMH], 1981). Baekeland and Lundwall (1975), after comprehensively reviewing 362 research articles involving medicine and mental health treatment, found that 20% to 57% of participants did not return following their first visit for general psychiatric attention and 31% to 56% attended four or fewer sessions. Public psychotherapy clinic reports indicate that attrition rates often exceed 50% (Garfield, 1986; Pekarik, 1985). A review by Phillips (1985) reported the modal number of therapy sessions was one, the median was three to five sessions, and the mean was five to eight sessions. In a meta-analysis including 125 treatment studies, Wierzbicki and Pekarik (1993) reported an average psychotherapy dropout rate of 47%. Garfield (1994) concluded, after selectively reviewing 86 articles on dropout, that 23% to 49% of cases failed to attend one therapy session following intake and that two-thirds of cases terminated before completing ten sessions. These points are particularly important when considering manualized treatments that follow a protocol where active treatment components are revealed in each session. Missing a quarter or more of the treatment regime could potentially be equivalent to never having received treatment or could possibly be more detrimental than never having received treatment.

Historically, dropout has been viewed as a negative outcome for all involved, and the research has concentrated on determining what client factor(s) may influence premature termination. In Eysenck's landmark article in 1952, he asserted that all dropouts should be

classified as treatment failures. Bergin and Lambert (1978) reviewed the same articles Eysenck examined and found improvement rates increased from 44% to 62% when dropouts were excluded from outcome analyses. Discontinuing services early on has been described to have even led to a worsening in some mental health disorders such as substance dependence (Goldstein et al., 2002) and generalized anxiety disorder (Rubio & Lopez-Ibor, 2006), when thoughts and feelings of failure become reinforced when attempts at recovery are thwarted. Although earlier studies shed considerable light on the problems, most often, the studies targeted fixed client and clinical variables and did not study dynamic variables such as anxiety levels or the rates of improvement. Unfortunately, little is known about the course of outcome of those who dropout.

More recent studies have found that premature termination may not always be a negative indicator (Pekarik, 1992). In fact, Krishnamurthy et al. (unpublished manuscript), found that those who improved rapidly were most likely to discontinue treatment. It appears that in some cases, early and rapid improvement may lead to the participant concluding that treatment is no longer needed. Rapid improvement could be viewed as a positive response to therapy; however, more consideration should be made as to whether or not these gains will be maintained over time. Even though some participants showed rapid improvement, the recurrence rates of mental health difficulties may be higher over time because participants did not receive the full benefits of the specific treatment protocol.

Research performed several decades ago by Kogan (1957a, 1957b, 1957c) aimed to further investigate dropouts by interviewing patients that prematurely discontinued treatment through the Division of Family Services of the New York Community Service Society. Of the 30% of cases that experienced an unplanned termination, where they failed to keep

subsequent scheduled appointments, Kogan was able to speak directly with 80% of the cases between three and twelve months after the cases were closed. Follow-up interviews revealed that circumstances in the individuals' lives had interfered with treatment continuance, but that improvements in the problem situations more accurately accounted for the unplanned terminations. Two-thirds of all clients reported that they felt as though they had been helped, leaving no difference between the proportions of those that stated they were helped among the planned and unplanned terminations. Furthermore, therapists' ratings at the time of termination were compared to those cases that were labeled as planned and unplanned terminations. The research found that therapists characterized clients with unplanned terminations as treatment resistant or stated that the clients lacked interest. Therapists reported that there were more planned than unplanned terminations. These findings reveal the therapists' perception of clients with premature termination may be unduly more negative than is evidenced.

One of the many contributors of dropout may lie in the nature of the treatment itself. The characteristic behavioral problem, which in turn reinforces the anxiety, of anxiety disorders is avoidance. Yet the most efficacious treatment for anxiety is having the individual confront the precipitant of the anxiety (Barlow, 2002). This treatment component may be aversive enough for the participant to prompt treatment refusal (Buckner et al., 2006). On the other hand, attendance to treatment is associated with better post-treatment outcome, thus attendance to a greater number of sessions would seem to lead to greater symptom reduction (Buckner et al., 2006). It appears that though there is a plethora of research supporting the notion that planned short-term therapies are equally effective as time-unlimited psychotherapy, regardless of diagnosis (Barkham, 1989; Brockman, Poynton, Ryle,

& Watson, 1987; Blowers, Cobb, Mathews, 1987; Gelso & Johnson, 1983; Kiesler, 1982; Koss & Butcher, 1986; Miller & Hester, 1986; Piper, Debbane, Bienvenu, & Garant, 1984; Riessman, Rabkin, & Struening, 1977; Strupp, 1980), it still may be necessary to complete a prescribed regimen for true change to take place and endure.

Implications for managed care, health care providers, and those seeking services

In today's environment of managed care, where strict limits are often placed on the number of therapy sessions being covered by insurance companies, it is important that sound empirical research help to guide policy makers' decisions regarding the parameters set forth. Therefore, it is crucial to answer the question of how much psychotherapy is needed to bring about adequate change and alleviate the participant's distress into the foreseeable future. To this end, important questions arise as to how change is defined and how it is to be measured. Unfortunately, the research to date does not adequately address these questions, yet these questions are important ones to be answered in order to maximize benefits and minimize costs for both the provider and recipient. DeLeon, Vandenbos, and Bulatao (1991) have identified several issues in the area of managed healthcare regarding mental health that are of major concern, including: the fact that strict and unrealistic limits are applied to the numbers and/or costs of services that are covered, the quality or appropriateness of the services offered may be inadequate, insufficient information is provided to the individual about the kinds of services that are available, many services are limited by physicians who act as gatekeepers to specialty mental health services, and much of the review process conducted by the managed care organization may be performed by unlicensed and untrained employees who have little knowledge regarding mental health care.

Two areas of research that have been developed in the area of treatment outcome studies that have furthered these efforts and aided researchers, practitioners, and managed care organizations are dose-response studies (Howard, Kopta, Krause, & Orlinsky, 1986) and clinical significance methodology (Jacobson, Follette, & Revenstork, 1984). Each of these areas are further explored later in this study. Additionally, Herron et al. (1994) suggests that there are three basic categories of mental health care: basic, intermediate, and extended care; with each holding different values or meanings for the patient, depending on the degree of improvement desired. These varying degrees or intensities of treatment have the potential for each individual, when provided with adequate information regarding services and discussed with their mental health professional, to help the individual obtain the most suitable treatment approach based upon their needs and resources.

What constitutes significant clinical change?

Jacobson, Follette, and Revenstorf (1984), in their landmark article, and with later improvements by Jacobson and Truax (1991), made specific recommendations for determining the meaningfulness of observed differences in psychotherapy research, or what constitutes significant clinical change. The standardized definition that they used to describe clinically significant change (CSC) is when an individual's score on a measure of dysfunction is reliably different from their score at the beginning of treatment and is no longer in the range of dysfunction on that measure. This definition has been validated by a number of other researchers as a new standard for measuring improvement in controlled clinical trials, including Piper et al. (1990) and Wollersheim and Wilson (1991).

Similarly, Jacobson and Truax (1991) proposed that two explicit criteria be met in order to qualify change made in therapy as significantly meaningful. The first of these

criteria specifies that the individual must reach a designated crossover point that distinguishes healthy versus unhealthy populations. The second criteria states that the observed change also must meet statistical significance to a degree that it is considered reliable; meaning that the statistical change is greater than the error that is normally associated with the particular measure being used. Following these guidelines, it is possible to reach statistical significance without reaching clinical significance, but not vice versa. However, many have argued that these guidelines are too stringent for naturalistic settings (Newnham & Page, 2007; Howard et al., 1986; Anderson & Lambert, 2001; Lambert, Hansen, & Finch, 2001), and would occur even less frequently, if improvement must be to a degree that clients are functioning within the 'normal' range. Jacobson et al. (1988) reported a meager 27% CS improvement with cognitive behavioral therapy when treating agoraphobic clients and Wollersheim and Wilson (1991) reported 38% CSC after 11 sessions of cognitive behavioral therapy with depressed clients.

Dose response and how much therapy is enough

The dose-response method of determining how many sessions an individual in treatment needs to complete in order to reach an adequate level of improvement first became of interest in biological science and is widely used in medical research to develop new drugs. Howard et al. (1986) helped to pave the way for its use in psychotherapy research. Researchers in psychotherapy have been examining the dose-response intently for the past few decades. In this context, dose is defined as one session of therapy and response as a change toward improvement and away from dysfunctional thoughts, feelings, and behaviors, as measured by change on outcome measures.

Insurance companies are eager to find quick recovery models and are willing to cover only the minimal number of visits to a mental health professional. Yet, there are some studies that report more sessions are associated with greater improvement (Orlinsky, Grawe, & Parks, 1994). Specifically, Orlinsky et al. (1994) found that of the 156 studies published from 1950 to 1992, 100 reported a positive correlation between the number of therapy sessions and level of improvement. Prior to this, Howard et al. (1986) found among 114 estimates of the relationship between amounts of treatment and outcome, 100 supported a positive relationship. However, in these studies, there was no homogeneity of the type of treatment, level of improvement, definition of improvement, or disorder provided by these summarizations and may be the reason why these results are contrary to earlier reports of the relative effectiveness of short-term therapies. Additionally, in order to make any valid statement regarding this dose-response relationship, there must be a standard definition of improvement or meaningful change, as previously outlined by Jacobson and colleagues (1984, 1991) and stated above.

The effectiveness of short termed cognitive-behavioral therapy has been demonstrated in the treatment of a number of disorders, including addiction (Baker, Boggs, & Lewin, 2001; Breslin et al., 2002), panic disorder with agoraphobia (Kadera, Lambert, & Andrews, 1996; Chambless, Foa, Groves & Goldstein, 1982; Marks et al., 1993; Nadiga, Hensley, & Uhlenhuth, 2003), panic disorder without agoraphobia (Beck, Sokol Clark, Berchick, & Wright, 1992; Crask, Maidenberg, & Bystritsky, 1995; Klosko, Barlow, Tassinari, & Cerny, 1990), generalized anxiety disorder (Beck & Emery, 1985), social phobia (Heimberg, Dodge, Hope, Kennedy, & Zollo, 1990; Kadera, Lambert, & Andrews, 1996; Butler et al., 1984; Feske & Chambless, 1995), and in primary care settings (Mynors-

Wallis et al., 1997). Manual based brief interventions have been successful in subsyndromal anxious and depressive participants as well more severely disordered participants (Barkham et al. 1999; Beck et al. 1961); however, this evidence seems to have not yet convinced the many therapists, who may cling to a generic belief that "more therapy is better."

With research and clinical practice pointing us in both directions of more and less therapy as being ideal, researchers have attempted to quantify how many therapy sessions are actually needed before a person has improved "enough". Attending additional sessions after significant change is made could be viewed as wasteful or unproductive use of time and resources, where too few would be ineffective and may warrant future treatment to successfully treat the problem. Howard, Kopta, Krause, and Orlinsky (1986) combined data collected from 15 different samples, most of which had a diagnosis of depression or anxiety. Most of the therapy given was either psychodynamic or interpersonal with no pharmacotherapy or behavioral treatment administered. The study revealed that 10-18% of clients improved from simply initiating therapy, 48-58% improved by 8 sessions, 75% by 26 sessions, and 85% by 52 sessions. In another study performed by Kopta et al. (1994), outpatients required a year of psychotherapy to achieve a 75% chance of remission from symptomatology. Hansen and Lambert (2003) used survival analysis to determine the dose-response among 4,761 clients and found that 50% of the sample recovered between sessions 15 and 19 when applying the clinical significance methodology. Anderson and Lambert (2001) combined their own data with that of Kadera, Lambert, and Andrews (1996) to find that 50% of clients required 13 sessions of therapy before reaching clinically significant improvement. They also found that participants with greater distress required eight more sessions than those with lesser distress to reach a 50% clinically significant improvement.

Lambert, Hansen, and Finch's (2001) findings revealed an even longer response time of 21 sessions of therapy, classified as mainly eclectic but primarily cognitive behavioral, in order for 50% of patients to obtain CS improvement; after which, 75% of clients were predicted to improve after 40 sessions. Most of the previous research suggests that 50% of clients achieve a CSC after 13 to 21 sessions.

Additionally, there have been a number of studies that have used the dose-response methodology to determine the number of sessions required to reach a 50% patient improvement rate and are summarized below. Howard et al. (1986) determined that 8 sessions were needed to reach these criteria, using pre-post comparisons. Kopta et al. (1994) was more expansive in their study and found that five sessions were needed to alleviate acute symptoms, 14 sessions were required for chronic or persistent symptomatology, and 104 sessions were needed when addressing characterological problems. Eight sessions were determined sufficient by Barkham et al. (1996), but 16 sessions were needed to approach 40% improvement rates for interpersonal problems. Kadera, Lambert, and Andrews' (1996) study determined that 16 sessions were needed using pre-post comparisons. Survival analysis was used by Anderson and Lambert (2001) to determine that 13 sessions were needed to reach the 50% cut off, and Hansen and Lambert (2003), also using survival analyses, found that 18 sessions were needed for the same rate of improvement. These studies used CSC as the standard of measure for improvement, but not all used clinical significance methods for determining these changes. A variety of treatment orientations were also used across these studies as well as diagnoses studied. However, despite these differences, it appears that on average; approximately 12 sessions are typically needed in

order to reach a 50% improvement rate for most problems commonly sought out for alleviation through psychotherapy.

As with most findings in clinical research on participants in therapy, there are often confounding factors and various known and unknown processes working that effect the recovery phase. Despite the fact that some clinicians believe that more treatment leads to greater improvement, much of the research reveals a curvilinear response rate, or when effect is measured against dose, a positive correlation is observed, followed by a downward curve (Howard et al., 1986). It appears that participants may improve more in the beginning, as an immediate result of therapy, followed by a decreased rate of improvement as time goes on. Much of the research supports the fact that the largest percentages of improvement occur in the earlier sessions of treatment, regardless of the length of treatment (Howard et al., 1986; Herron et al., 1994). Tang and DeRubeis (1999) found that some clients improved greatly from a single session of cognitive behavioral therapy for depression. They attributed the rapid and sustained improvement to deeply imbedded cognitive changes that occurred when schemas are changed. Howard et al. (1986) found that depressive clients improved more rapidly earlier in treatment than anxious clients. They also found that the dose-effect was much longer still in clients with borderline or psychotic type diagnoses. Others found evidence for acute distress being faster to respond in treatment than those with chronic distress symptoms, and that those with characterological symptoms take even more time to show improvement (Kopta et al., 1994). Clients experiencing interpersonal problems also have a longer response time, as this could also be seen as characterological in nature or as the source of the problem. Other studies have found that submissive behaviors are faster to change than hostile behaviors (Horowitz, Rosenberg, & Bartholomew, 1993). Beretta et al.

(2005) found that early responders showed less interpersonal problems, lower average controlling characteristics, and more mature defense functioning, which can also be correlated with various diagnoses. Due to the moderating effects of these client characteristics and responses to treatment, it would appear that a more individualistic model of change could better explain who would respond the best and how many sessions on average it would take for CSC to occur. Past research on dropout has most often focused on fixed client and clinical variables, without lending thought to dynamic variables such as anxiety levels or the rate of improvement and little was known about the course of outcome of those who dropped out (Eysenck, 1952; Bergin & Lambert, 1978; Goldstein et al., 2002; Rubio & Lopez-Ibor, 2006). Sullivan (1954) outlined four stages of treatment but applied a more general theory that stated each stage occurred at various rates for different individuals, depending on their unique circumstances.

Failure Zone

An interesting study performed by Cartwright (1955) determined that there was a "failure zone" that occurred along a continuum of treatment length, while also studying the effects of specific client variables that led to success in treatment. His study included 78 clients in a counseling center who were rated for "success" by their respective therapists. Success ratings were made by therapists based upon 10 nine-point rating scales, where low success clients received a mean score rating of 1-6 and high success client received a mean score rating of 7-9 for improvement from pre to post treatment. After plotting mean success scores to the mean number of sessions attended, he discovered two different types of therapeutic processes that occurred: short term (1-12 sessions), which consisted of treatment for "situational" issues, and long term (13-77 sessions), which was characterized as

personality issues. His interpretation of the findings was that there was a failure zone that occurred at the beginning of long term therapy due to "drastic behavioral manifestation of resistance" (p. 363), which he estimated to occur between the 17th and 18th sessions. Taylor (1956) found similar results, albeit in a psychoanalytically oriented clinic.

While Cartwright's model did not reveal a failure zone for the shorter length treatments in his study, it could be likely that a failure zone would occur for individuals that terminate treatment prematurely, and without CSC, due to their resistance to confront their anxiety in modern CBT approaches to treatment. However, other studies (e.g., Johnson, 1965; Weitz et al., 1975; Strassberg et al., 1977) found varying estimates of when the failure zones existed. For example, Johnson (1965) estimated the failure zone to occur between sessions five and eight in a subsample between treatments for "emotional" problems (versus "vocational" problems) at a university counseling center. Weitz et al. (1975) found a failure zone between sessions 6 and 10 for individuals seeking treatment for a wide range of problems at a university counseling center. Strassberg et al. (1977) found a failure zone between 11 and 20 sessions at a similar setting and found a strong association between the length of treatment and improvement scores, with improvement scores decreasing after session 20. Despite these findings, Strassberg et al. (1977) argues against the existence of a failure zone due to the range in estimated time frames, various problems being addressed in treatment, and the modalities of treatment being used across studies and failure zone existence appears to have lost appeal in current clinical research.

Phase Model

In lieu of the over-simplified failure zone explanation to treatment success and failure, a sequential multileveled phase model of psychotherapy outcome approach (e.g.,

Howard, Lueger, Mailing, & Martinovich, 1993) to treatment success has received more attention in recent years. There have been a number of theories that have proposed various stages in which change occurs throughout the course of treatment, including Rogers (1958) who was the first to develop stage sequencing. Whitehorn (1959) proposed a simplistic stage model with three modes that included: "expect well, feel well, and work well." Cashdan (1973) posited that there were five stages that required sequential progression through discrete treatment stages based upon transtheoretical principles. Sullivan (1954) outlined four stages of treatment that included formal initiation, reconnaissance, detailed inquiry, and termination. This theory was more general and stated that each of these stages occurred at various rates for different individuals, depending on their unique circumstances. Jung followed that therapy occurred in stages that included confession, elucidation, education, and "analysis proper", stating that these sometimes overlapped one another (Lambert, 1983). Additionally, a two-staged model of change was proposed by Uhlenhuth and Duncan (1968), where the first phase yielded a significant decrease in symptoms that occurred basically through nonspecific treatment effects or from a "sense of hope" gained by the initial movements to incur change. The second phase referred to a more deliberate or steady decrease in symptomatology that was viewed as the specific result of treatment.

Howard et al. (1993) proposed that interacting characteristics of each individual's particular problems change at varying times over the course of treatment. The phase model of outcome posits three stages that are mastered sequentially and state that different interventions will be appropriate at different times or phases of treatment and that certain tasks must be accomplished before moving on to the next. Their proposed three stages include: remoralization, where improvement in the individuals' subjective well-being occurs

quickly; remediation, where the focus is on resolving the problem by use of specific skills; and last, rehabilitation, where enduring change(s) typically occur. More specifically, the first stage, remoralization, involves the activation of a sense of hope that sometimes occurs after an appointment is made for treatment and sets the stage for the following components of treatment. For others, the remoralization phase may help the individuals to reactivate their own coping skills and may not require additional treatment. For those that continue treatment and go on to the next phase, they may feel as though they are more able to continue to address the issue that brought them into treatment. The second stage, remediation, is where teaching, demonstrating, and practicing specific new techniques (e.g. cognitive restructuring skills, interpersonal skills, desensitization, etc.) are used to help combat maladaptive cognitions and behaviors. The final stage, rehabilitation, is where individuals incorporate the new techniques into their daily living and learn a new "mode of functioning." Termination typically occurs in this phase, but treatment may last longer for individuals who may have a more difficult time making the enduring changes or who are combating chronic or longstanding behaviors and ways of thinking.

The data for Howard et al.'s (1993) proposed phase model of change supported their hypotheses. They also argue that this model may be key for managed healthcare because the different phases represent the various stages of change in psychotherapy and can help distinguish generally how much time would be needed for alleviation of symptoms versus longer term rehabilitation. This model also has interesting implications for the current study in that it could potentially help explain why some individuals may drop out of treatment early on (alleviation of symptoms that occur in the remoralization phase) versus those in the middle of treatment (remediation phase) or those that complete the treatment protocol (the

rehabilitation phase). If an individual terminates treatment during the remoralization phase because they initially feel better, a reasonable conclusion could be made that the individual had not yet learned new techniques with which to approach their problems differently. As with the remediation phase, perhaps the individual had not reasonably gained enough experience with the new technique to be able to incorporate enduring change in the future, was not able to maintain the change months later after they had terminated treatment, or was not confident enough in their new abilities to maintain them over time through new stressors.

Recovery rates and follow-up studies across the anxiety disorders

Community studies have found that recovery rates range from 12% to 25% for anxiety disorders (Angst & Vollrath, 1991). Some studies have also shown that patients continue to improve or maintain treatment gains over a time period of several years after the completion of treatment (e.g., Clark, et al., 1994; Craske, Brown, & Barlow, 1991; Heimberg, Salzman, Holt & Blendell, 1993; Scholing Emmelkamp, 1996a, 1996b). This suggests that some patients continue to develop mastery over their anxiety after intensive treatment is completed without the explicit use of a maintenance program. A study conducted by Hunt and Andrews (1998) found that completers who still had high levels of anxiety at the end of treatment also continued to improve over a two year follow-up. The following sections provide a follow up history for the specific anxiety disorders based upon empirical evidence in order to establish a typical course after treatment ends.

Generalized Anxiety Disorder. Generalized anxiety disorder (GAD) is viewed as a chronic condition that inflicts great distress and it is characterized by frequent and exaggerated worry, tension, avoidance, and loss of confidence. GAD is estimated to have a lifetime prevalence rate of 5.7% in the general population (Kessler et al., 2005). Patients that

received CBT for GAD were found to have maintained treatment gains at a 12-month follow-up and roughly 58% were evaluated to be at high end state functioning (Borkovec & Costello, 1993). Butler and colleagues (1991) found that 32% of patients receiving CBT for GAD improved significantly by the end of treatment as measured by the Hamilton Anxiety Scale, Beck Anxiety Inventory, and Leeds Anxiety Scale. This rate increased to 42% six months later and to 58% eleven to twenty-four months after treatment completion; however, the authors reported that 11% of this population had received extensive additional treatment during the same time frame. Many other studies have similarly demonstrated the effectiveness of CBT for the treatment of GAD and improvements are frequently maintained for up to two years post-treatment, despite the long-term course of most GAD sufferers (Barlow et al., 1984; Blowers, Cobb, & Mathews, 1987; Borkovec & Mathews, 1988; Borkovec et al., 1987; Butler, Cullington, Hibbert, Klimes, & Gelder, 1987; Butler, Fennell, Robson, & Gelder, 1991).

Panic Disorder without Agoraphobia. Panic disorder (PD) is characterized by its core fear of somatic sensations which typically initiates the anxiety and leads to escalation of panic symptoms. The lifetime prevalence rate for panic disorder with or without agoraphobic avoidance is estimated to be 4.7% (Kessler et al., 2005). Rates of improvement following brief cognitive behavioral therapy for panic disorder (PD) have been found to be high, with 75% of clients no longer meeting criteria after completion (American Psychiatric Association, 1998). In a review of the literature, Nadiga and colleagues (2003) examined the long term effectiveness of CBT in PD. Their review revealed that CBT has long lasting effects, defined as six months after the acute treatment phase. In another treatment study, evaluating the long term effects of treatment for panic found an average effect size of 1.69 at

15-month follow-up (Clark et al., 1994). Craske et al. (1991) found an average effect size of 2.1 in an exposure and cognitive therapy condition and 1.1 in an exposure, cognitive therapy, and relaxation condition. Craske and colleagues (1991) reported a high maintenance of treatment gains following short term CBT where 80% of patients remained panic-free at one and two year follow-ups.

Panic Disorder with Agoraphobia. In a cognitive-behavioral treatment program for agoraphobia, the average effect size was found to be 2.12 when followed up twelve months after treatment ended (Andrews & Moran, 1988). In another treatment program involving 104 patients with agoraphobia, 78% reported that they remained symptom free at a 5-year follow-up (Fiegenbaum, 1988). However, it was noted that this sample received several days of intensive exposure treatment, where in some cases the treatment involved plane rides or overnight trips on trains, and was more extensive than many treatment programs offer due to time and cost restraints.

Social Phobia. Social phobia is characterized by the core fear of negative evaluation by others, and negatively biased thoughts and avoidance patterns that prevent opportunities to disconfirm these fears. Lifetime prevalence rates for social phobia are estimated to be 12.1% in the general population (Kessler et al., 2005). In a long term outcome study by Heimberg and colleagues (1993), findings revealed maintenance of gains when followed up five years after treatment completion. Scholing and Emmelkamp (1996a, 1996b) reported treatment gains were maintained eighteen months post-treatment for social phobia.

Obsessive Compulsive Disorder. Obsessive compulsive disorder (OCD) is defined by persistent fears (e.g., contamination, harming others) that are linked to repetitive attempts to manage or control these fears (e.g., repetitive washing, checking). OCD has been reported to

have a lifetime prevalence rate of 1.6% in the general population (Kessler et al., 2005). Pinard (2006) reported that OCD patients are very difficult to treat, with drop-out rates often occurring in the 25-30% range, and non-responders being even more prevalent. Despite this report, Wetzel and colleagues (1999) reported significant improvement among 68% of patients after 1-year follow-up for OCD patients with effect sizes greater than 1.0. Franklin (2002) reported that at 6-month follow-up after CBT, most maintained their gains and were equal to post-treatment symptoms after completion of a 12 week program. Rufer and colleagues (2005) reported, despite a small sample size (n = 30), that 41% improvement was maintained at follow-up seven years later when treating inpatients with severe OCD with CBT; however, 29 of these patients received additional treatment following the initial treatment period.

Post-Traumatic Stress Disorder. Post-traumatic stress disorder (PTSD) is characterized by the imaginal re-living of a traumatic event, or avoidance of associations to the traumatic event. A heightened startle response and hypervigilance are other common symptoms of those suffering from PTSD. The lifetime prevalence rate of PTSD among the general population is estimated to be 6.8% (Kessler et al., 2005). Bryant, Moulds, and Nixon (2003) reported positive results at a four-year follow-up from CBT for acute stress in civilian trauma survivors, where only 8% of those previously assessed met criteria for PTSD at the second time-point. Resnick and colleagues (2002) found that cognitive-processing therapy (CPT), which is composed of cognitive therapy and exposure and analogous to CBT, was efficacious for the treatment of PTSD and treatment gains were maintained 3 and 9 months follow-up (Resnick, Nishith, Weaver, Astin, & Feuer, 2002). In another study by Echeburúa and colleagues (1996), they found that treatment involving cognitive restructuring for PTSD

was efficacious post-treatment and was maintained at 12-month follow-up (Echeburúa, de Corral, Sarasua, & Zubizarreta, 1996).

The current study

In addition to the more straightforward questions of how much treatment is enough to impart change, and how much change is considered clinically significant, lay a host of other confounding factors. Some research suggests that the key predictor of change is pretreatment severity, which, in turn, is related to the diagnosis of the client (Howard et al., 1986). Severely disordered participants have a greater distance to cover to approach recovery; hence, they are often left with significant impairment at the end of most short-term cognitive behavioral treatment programs. As Howard and colleague's (1986) findings suggest, the rate of improvement begins to diminish over time, meaning that an individual does not continue to improve at the same rate and can provide diminishing returns with time. This theory finds more support in that an early response to treatment appears to be the most effective and is reflective of more powerful gains made in treatment (Fennell & Teasdale, 1987). This curvilinear dose effect could also be explained by some characteristic or cluster of characteristics of the clients' (Kopta et al., 1994; Lutz et al., 2001). Various dose-effect patterns have been found with different diagnoses, specifically, depressed patients have been found to respond at a more rapid pace than anxious participants (Howard et al., 1986). As with drug studies, early response can mean a premature change in symptomatology due to client characteristics rather than drug effects. This is linked to poorer long-term outcomes, particularly relapse during follow-up (Lutz et al., 2002). Furthermore, most research studies have not assessed the outcome of clients that discontinued the treatment regime so no real conclusions came be drawn from these subgroups.

This study aimed to test the hypothesis that participants in our sample who have an early and clinically significant response to treatment and then drop out maintained their gains at a 6+ month follow-up. This hypothesis was based upon the belief that a subset of participants that discontinued treatment comprehended and incorporated the changes to their cognitions and behaviors as presented in treatment more quickly than their cohorts and experience significant treatment gains earlier on in the group setting. These participants were hypothesized to then have discontinued because they perceived that they would not benefit from further treatment. These conclusions were drawn from a previous preliminary study by Krishnamurthy et al. (unpublished manuscript) where participants were found to discontinue treatment after experiencing marked improvement. It was further posited that while some participants may have experienced CSC and dropped out of treatment, others did not experience CSC but dropped out of treatment for unrelated reasons (e.g., felt as though treatment was not working, required too much effort, encountered child care issues, or had other time constraints).

Participants who terminated after obtaining significant improvement early on in symptoms may have decided that their improvement was sufficient. However, it is unclear whether more could have been accomplished or if their initial improvement could be maintained over time. It may be possible that the participants that discontinued after rapid gains may have not fully developed the skills needed to continue on their own or did not receive everything they could have from the treatment, resulting in poorer long-term outcomes.

Method

Participants and Procedures

Participants in this study were compiled of approximately 147 participants that contacted the University of Houston's Anxiety Disorder Clinic for treatment of an anxiety disorder (refer to the Group Anxiety Treatment study by Peter J. Norton, Ph.D., CPHS Application No.05227 and Anxiety Disorder Clinic study, CPHS Application No. 06009) and subsequently prematurely dropped out of treatment (n = 62) and compared to participants that completed the treatment protocol (n = 85). The participants involved in the treatment study came from the general population from the greater Houston area. A primary diagnosis of an anxiety disorder, determined by qualified graduate students using the Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV; Brown, Di Nardo, & Barlow, 1994), was required for admittance into treatment. Participants with a primary anxiety disorder were enrolled in a 12-week program for group cognitive behavioral therapy (CBT). Groups were typically capped at 6 to 8 members. Enrollment in the treatment groups was closed, in that new participants were not added to an existing group after services were initiated. Twelve sessions are a common standard for most cognitive-behavioral treatments for anxiety disorders, as it tends to show a good cost (time, effort, etc.) to benefit (anxiety reduction) ratio (Otto, Pollack, & Maki, 2000). The 12-week treatment was highly structured and follows a standardized set of therapeutic procedures (Norton & Hope, 2005).

Immediately prior to each session, the participants were asked to complete the STAI-S in order to track their anxiety levels from session to session. At the end of the 12-week period, those that completed the treatment protocol completed a series of post-treatment measures as well as at 6 and 12 month follow-ups. In most cases, the assessment measures were identical to those completed at pre-treatment.

For those participants that prematurely dropped out, roughly the same series of questionnaires were collected for this study and compared to treatment completers. A consent form for participation, letter of instruction, pre-termination questionnaire, and symptom measurement questionnaires were mailed to participants that did not complete the treatment protocol. Upon completion and return of the information, participants received a $15 gift card to Target for their cooperation and time.

In the event that participants did not return the completed questionnaire packet within three weeks, a phone call was made in order to follow-up with the individual to request their participation and to answer any potential questions they had regarding the study (see attached telephone script).

Measures

Anxiety Disorder Interview Schedule for DSM-IV (ADIS-IV; Brown, Di Nardo, & Barlow, 1994). The ADIS is a semi-structured diagnostic interview designed to assess the presence, nature, and severity of clinically elevated anxiety, mood, and somatoform disorders, as well as previous mental health history. The interview also contains a brief screen for psychotic symptoms, and alcohol or substance abuse. With the exception of Axis II disorders, the ADIS-IV uses the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV; 1994) multiaxial system as a diagnostic measurement and reporting tool. A recent large scale analysis of the ADIS-IV found strong support for the reliability of diagnoses using the ADIS-IV (Brown, Di Nardo, Lehman, & Campbell, 2001; Brown et al., 1994).

State-Trait Anxiety Inventory-State Form (STAI-S; Speilberger et al., 1993). The STAI-S is a psychometrically sound index of current anxiety levels. The STAI-S is a 20-

item measure commonly utilized in treatment research as the primary outcome measure, with higher STAI-S scores indicating greater levels of anxiety. Participants rated their current anxiety state from one (not at all) to four (very much so). The use of the STAI-S as a standardized instrument to measure mental well-being was administered to help examine movement in regard to mental health goals and improvement over the course of treatment.

Anxiety Disorder Diagnostic Questionnaire (ADDQ: Norton & Robinson, 2010). The ADDQ was developed as a screening tool for the presence of clinical fear and anxiety, non-specific to a particular anxiety disorder. Specifically, it was developed to measure two different aspects of anxiety: fearfulness and apprehension/worry, but also asks for ratings of severity, interference, and distress of the fear and anxiety over the past month, on a Likert scale of zero (none) to eight (severe). Initial results provide good support of the psychometric characteristics of the ADDQ in measuring the presence of the general construct of anxiety (Norton & Robinson, 2010).

Beck Depression Inventory (BDI-II; Beck, Steer, & Brown, 1996). The BDI-II is a 21-question multiple-choice self-report inventory, one of the most widely used instruments for measuring the severity of depression. The measure assesses the existence and severity of symptoms of depression as listed in the DSM-IV. Each answer is rated on a scale value of 0 to 3, with higher total scores indicating more severe depressive symptoms.

Panic Disorder Severity Scale (PDSS; Shear et al., 1997). The PDSS was developed to provide a measurement of the overall severity of panic disorder, as defined in the DSM-IV. The PDSS consists of seven items, each rated on a 5-point Likert scale to assess panic frequency, distress during panic, panic-focused anticipatory anxiety, phobic avoidance of situations, phobic avoidance of physical sensations, impairment in work functioning, and

impairment in social functioning. The self-report version used in the present study, the PDSS-SR (Houck et al., 2002), has shown comparable reliability, validity, and clinical sensitivity as the original clinician-rated PDSS.

Social Phobia Diagnostic Questionnaire (SPDQ; Newman et al., 2003). The SPDQ is a 25-item self-report measure designed to diagnose social phobia based on the DSM-IV. The questionnaire detects the presence or absence of social fears (7 items) by indication of a yes or no answer, as well as the levels of fear and avoidance (18 items) by using a 5-point Likert scale. The SPDQ has shown very good specificity and sensitivity in diagnosing social anxiety disorder, and psychometric evaluations have shown the SPDQ to have acceptable reliability and validity (Newman et al., 2003).

Yale-Brown Obsessive Compulsive Scale (Y-BOCS; Goodman et al., 1989a, 1989b). The Y-BOCS is a 10-item measure of OCD based on a 5-point Likert scale and has become the most widely used rating scale for OCD. The Y-BOCS provides five rating dimensions for obsessions and compulsions: time spent or occupied; interference with functioning or relationships; degree of distress; resistance; and control or success in resistance. Psychometric estimates of the Y-BOCS suggest excellent reliability and validity in both clinician-rated (Goodman et al., 1989a, 1989b) and self-report formats (Steketee et al., 1996). A self-report version of the Y-BOCS was used for this study.

Generalized Anxiety Disorder Questionnaire (GADQ-IV: Newman, Zuellig, & Kachin, 2002). The GADQ-IV is a 9-item scale screener for generalized anxiety disorder based on the DSM-IV criteria. Dichotomous items assess the presence, frequency, and controllability of excessive worry, 9-point scales assess the interference and distress caused by worry and its symptoms, and two items provide counts of the number of endorsed worry

themes and physical symptoms. The GADQ-IV has demonstrated good psychometric characteristics and has shown good sensitivity and specificity in distinguishing participants with generalized anxiety disorder from those with other anxiety diagnoses (Newman et al., 2002).

Post-Traumatic Stress Disorder Symptom Scale, Self-Report version (PSS-SR: Foa, Riggs, Dancu, & Rothbaum, 1993). The PSS-SR is a 17-item measure that rates symptom frequency over the preceding two weeks and is reported on a four-point Likert scale, from 0 (not at all) to 3 (almost always). The measure consists of three subscales that group symptoms into re-experiencing, avoidance, and arousal clusters. The PSS-SR has been found to be a psychometrically sound measure of PTSD symptom severity and diagnostic status (Foa, Riggs, Dancu, & Rothbaum, 1993).

Treatment Discontinuation Questionnaire. This questionnaire, created by the investigator, is a 10-item self-report measure to help determine the clients' perceived reason for not completing the prescribed treatment protocol. This information will provide much needed information regarding the reasons that they specifically determined for non-completion, whether they believe they benefitted enough, did not think the treatment was helping, or if other non-treatment related reasons lead to non-compliance. Additionally, items query for information regarding the quality of the services they received, whether they received the type of treatment they had wanted, and are asked to indicate from a list of reasons why they discontinued treatment. Clients are asked to indicate their responses from a list of options for most questions, except for the last question, where they are provided with space to list any other comments that may be pertinent to their treatment discontinuation that was not previously covered in the questionnaire.

Dropout. A dropout variable was calculated based upon each participant's course of treatment and classified as either yes or no. The following guidelines were followed to determine which participants prematurely terminated treatment: a) If the participant attended a majority (at least 8 of the 12 sessions or two-thirds rule) of sessions but failed to attend sessions 11 and/or 12, and then the participant was characterized as a completer. b) If the participant attended a majority of sessions but failed to attend the last four consecutive sessions, the participant was characterized as a dropout. c) If the participant attended a majority of the sessions, but failed to complete the last three sessions, the therapist determined whether the participant was a dropout based upon contact made with the participant after each no-show or cancellation. If the participant stated that they did not intend to return to treatment, or indicated that they did not benefit, or had benefited enough, the participant was characterized as a dropout.

Preliminary Analyses

Data screening

First, the data were screened for missing data points and unequal sample sizes. Normality of variables was assessed through graphical and statistical methods and the data would have been transformed to improve normality had it been deemed necessary. Next, the data was evaluated for univariate and multivariate within-cell outliers. Then assumptions for homoscedasticity, linearity, multicollinearity, and singularity were inspected.

The standardized definition of what is meant by CSC, as formulated by Jacobson and colleagues (Jacobson, Follette, & Revenstorf, 1984; Jacobson & Truax, 1991) where clinical significance is evaluated on a participant-by-participant basis, was used. The criteria were as follows: 1) an individual's score on a measure of dysfunction is reliably different; using the

reliable change index, from their score at the beginning of treatment, and 2) is no longer in the range of dysfunction on that measure.

Primary Analyses

Participants who prematurely dropped out of treatment were examined to determine if there, in fact, were two categories: those who dropped out and 1) experienced CSC, and 2) those who did not. Where two distinct groups of dropouts were found to exist, the CSC subset was compared to the treatment completers. If two distinct categories of dropouts did not exist, then dropouts as a whole were compared to those that completed treatment. An ANOVA was used to determine if the two distinct groups continued to be significantly different at follow-up on the following outcome measures: ADDQ, BDI-II, PDSS, SPDQ, Y-BOCS, GADQ-IV, and the PSS-SR. The independent variables were CSC and no CSC, while the dependent variables were the outcome scores at follow-up.

Next, the second hypothesis, that participants who terminate treatment prematurely with CSC will carry the same gains at follow-up as those that completed treatment, was tested using one-way ANOVAs across the measures of change. The independent variables included treatment completers and dropouts, as dichotomous groups. The dependent variables included outcomes on the following seven measures: ADDQ, BDI-II, PDSS, SPDQ, Y-BOCS, GADQ-IV, and the PSS-SR, at pre-treatment and last point of contact for follow-up. Each of the seven measures was examined by univariate analyses to determine if there were specific areas of greater improvement or worsening of symptoms over time.

Finally, exploratory analyses were conducted on the qualitative data gathered from those who prematurely dropped out as to their specified reasons for termination from the survey data collection. Each self-reported reason for premature termination was explored

and possible conclusions were drawn from this information to assist in the determination of specified reasons for dropout and whether these reasons are indicative of a particular outcome.

Results

The sample population was comprised of 147 participants: 46% male and 52% female (2% were missing information regarding gender). Fifty-seven percent were racially characterized as Caucasian, 21% as Hispanic, 10% as African American, 6% as Asian American, and 6% identified as other or mixed. Most of the participants were single (50%), worked full-time (44%), did not have children (61%), and had some undergraduate education (31%). Client's ages ranged from 16 to 71, with mean, median and modal ages of 33, 31, and 25 respectively. The severities of the clients' diagnoses were rated by the original assessors from 4 (moderately ill or definitely disturbing/disabling) to 8 (very severe or very severely disturbing/disabling) with the median and mode both equaling 6. Of the 147 clients included in the study, 85 (58%) completed the treatment protocol, while 62 (42%) dropped out prematurely. Tables 1 and 2 display descriptive statistics for the remaining client variables used in this study. All variables were screened for missing data, outliers, and normal distributions. Mahalanobis distances were used to identify potential multivariate outliers, however, none were found. The distribution and frequency charts of the variables were analyzed for normality and all were found to have relatively normal distributions.

Primary Analyses

Evidence was found in support of the first hypothesis, that two different groups of dropouts existed, those who obtained CSC and those who did not. Jacobson and Truax's (1991) stringent criterion for determining CSC was followed. The first of these two steps

was to compute the Reliable Change Index (RCI), which is defined as: $RCI = \frac{X_{post-} X_{pre}}{S_{diff}}$. Reliable change, considered not to be the result of measurement error, is considered to have taken place when the RCI is greater than 1.96. Thirty-two participants (52%) who dropped out of treatment were found to have met these criteria, while 16 (26%) did not. Fourteen (23%) dropouts did not have one or more STAI-S scores and were therefore not included in the analyses. The second step was to determine if each participant had obtained some degree of meaningful or noticeable change, defined by having statistically no longer scoring in the dysfunctional range on the measure of functioning. Twenty-seven participants (44%), independent from the first step, who dropped out were found to have met these criteria, while 21 (34%) did not. After both of these steps were completed, the sample was found to have two groups: 1) those who obtained CSC (specifically RCI>1.96) and were no longer within the dysfunctional range on the STAI-S (35.46 out of a possible 80, n = 27); and 2) those who did not meet both of these requirements (n = 21). A significant effect was found for first STAI-S [CSC (M = 44.49, SD = 11.55), no CSC (M = 53.14, SD = 9.03), (F (1, 46) = 7.98, p < .01)] and last STAI-S on CSC (F (1, 46) = 69.29, p = .00)], and supported the first hypothesis that some treatment discontinuers did so after considerable improvement (M = 34.55, SD = 7.67), while others did not (M = 54.29, SD = 8.73). These two groups (dropouts who did (n = 17, M = 35.35, SD = 9.01) and did not (n = 16, M = 36.38, SD = 7.85) achieve CSC) were not found to differ on pre-treatment ADDQ scores (F (1, 31) = .12, p = .73), suggesting they had similar severity scores prior to treatment. However, first session STAI scores did show differences, with those achieving CSC reporting lower state anxiety (n = 27, M = 44.49, SD = 11.55) than did those who discontinued without CSC (n = 21, M = 53.14, SD = 9.03), (F (1, 46) = 7.98, p < .01).

The second hypothesis was then investigated to determine if those who obtained CSC and dropped out prematurely were able to maintain their gains over time as compared to those individuals who completed the treatment protocol across all measures of anxiety at the last point of contact. Unfortunately, the sample sizes for the follow up census was extremely low for both dropouts (n = 4) and completers (n = 6), making any conclusion tentative. No differences were found among individuals who dropped and those who did or did not complete the questionnaires on either the first [completed data, (n = 13, M = 49.08, SD = 12.20), did not complete data, (n = 48, M = 48.12, SD = 11.43), (F (1, 59) = .07, p = .79)] or last STAI-S scores [completed data, (n = 11, M = 43.00, SD = 15.14); did not complete data, (n = 37, M = 43.24, SD = 12.20), (F (1, 46) = .003, p = .96)], indicating that those that completed the questionnaires were not more or less symptomatic than those that chose not to complete the questionnaires. These findings were consistent both when they began treatment and when they dropped out. Individuals who chose whether or not to participate were also inspected for any other possible similarities or differences; however, there were no significant findings when the following factors were considered: age (F (1, 60) = .10, p = .76), race (F (1, 60) = .36, p = .55), sex (F (1, 59) = .20, p = .65), highest level of education (F (1, 57) = .79, p = .38), axis 1 diagnosis (F (1, 57) = 1.42, p = .24), axis 1 diagnosis severity (F (1, 56) = .35, p = .56), axis 1 comorbid diagnosis (F (1, 30) = 2.09, p = .16), and axis 1 comorbid diagnosis severity (F (1, 30) = .01, p = .93).

Nonetheless, with the little data that was available, no significant differences were found among these two groups across all seven measures of anxiety, including the: ADDQ (F (1, 8) = .01, p = .91) for completers at follow-up (n = 6, M = 17.67, SD = 10.78) and dropouts with CSC at follow-up (n = 4, M = 16.75, SD = 14.59); BDI-II (F (1, 8) = .04, p =

.85) for completers at follow-up (*n = 6, M* = 5.5, *SD* = 4.68) and dropouts with CSC at follow-up (*n = 4, M* = 6.25, *SD* = 7.41); PDSS (*F* (1, 8) = .20, *p* = .66) for completers at follow-up (*n = 6, M* = 3.17, *SD* = 2.71) and dropouts with CSC at follow-up (*n = 4, M* = 4.50, *SD* = 6.61); SPDQ (*F* (1, 5) = .42, *p* = .55), for completers at follow-up (*n* = 5, *M* = 8.10, *SD* = 7.61) and dropouts with CSC at follow-up (*n = 2, M* = 4.38, *SD* = 1.94); Y-BOCS (*F* (1, 8) = .20, *p* = .67), for completers at follow-up (*n* = 6, *M* = 8.17, *SD* = 7.52) and dropouts with CSC at follow-up (*n* = 4, *M* = 6.25, *SD* = 4.99); GADQ-IV (*F* (1, 8) = .24, *p* = .64), for completers at follow-up (*n* = 6, *M* = 10.00, *SD* = 7.95) and dropouts with CSC at follow-up (*n* = 4, *M* = 12.75, *SD* = 9.81); and the PSS-SR (*F* (1, 8) = .81, *p* = .40) for completers at follow-up (*n* = *M* = 4.33, *SD* = 6.74) and dropouts with CSC at follow-up (*n = 4, M* = 9.00, *SD* = 9.83); at the last point of contact. Additionally, those who dropped out and achieved CSC (*n* = 4, *M* = 32.50, *SD* = 9.95*)* did not differ from those that completed the treatment (*n* = 6, *M* = 35.28, *SD* = 7.62*)* on the last STAI-S data gathered (*F* (1, 8) = .25, *p* = .63). Pre-treatment ADDQ (*F* (1, 6) = 3.60, *p* = .11) and first STAI-S scores [(dropouts, *n* = 4, *M* = 49.50, *SD* = 19.07*;* completers, *n* = 6, *M* = 40.85, *SD* = 11.55), (*F* (1, 8) = .82, *p* = .39)] on the two groups (those who dropped out with CSC and completers) were also compared and no significant differences were found there either, suggesting that these two groups did not differ on their level of severity when entering treatment. Surprisingly, individuals who did and did not experience CSC did not report differing reasons for discontinuing, with both groups reporting that external factors influenced them to discontinue.

Discussion

This study found dropout rates similar to those reported in the literature (National Institute of Mental Health, 1981; Baekeland & Lundwall, 1975; Garfield, 1986; Pekarik, 1985; Phillips, 1985; Wierzbicki & Pekarik, 1993; Garfield, 1994). From this study, while underpowered, it was concluded that individuals who drop out of treatment, contrary to Eysenck's (1952) theory, are not all treatment failures. Similar to completers, those who dropped out of treatment in this study comprised groups that both did (44%) and did not (34%) obtain high rates of improvement. In fact, the subset of dropouts who achieved the stringent criteria of CSC in eight or fewer sessions made as much gain as those who completed the study. This number of sessions are similar to Howard, Kopta, Krause, and Orlinsky's (1986) findings where 48-58% improved by 8 sessions of psychotherapy for depression or anxiety. The individuals in the current study were also found to maintain these gains over time, equal to those who received the full dose of treatment. This could potentially have widespread implications for how clinicians, researchers, and healthcare policies approach treatment length, particularly for manualized and group treatments. The approach of managed healthcare regarding psychological services, where there are often strict preset limits for the number and cost of services that are covered (DeLeon, Vandenbos, & Bulatao, 1991), may need to be better informed and become more flexible following this model of change. A one-size-fits-all approach to length of treatment may not be appropriate, as some individuals "get it" faster than others do.

These findings lend further support to Howard et al.'s (1993) three-phase model of outcome, which includes remoralization, remediation, and rehabilitation. It can logically be concluded that those who dropped out and maintained their gains had most likely entered the remediation phase, where they had begun to resolve their problems with the use of specific

skills (e.g., cognitive restructuring, exposure, and habituation). Then, perhaps fairly soon after they dropped out of treatment, they were able to transition to the rehabilitation phase on their own, where enduring change takes place and where they incorporate the new techniques into their daily living. The dose-response method (Howard et al., 1986) of determining how many sessions an individual needs to complete in order to reach an adequate level of improvement is one that appears to be individually driven. This can vary based upon the type of problem being treated and can be further complicated by the existence of other comorbid disorders. Short term therapies are increasingly being shown to be efficacious in a number of disorders (Barkham, 1989), yet certain client characteristics will inherently dictate longer treatment to initiate change (e.g., axis II characteristics) (Kopta et al., 1994). Early responders have been found to have less interpersonal problems (Beretta et al., 2005) versus characteristics of axis II disorders, which again suggest an individual model of change is more appropriate. Cartwright (1955) also reported that situational issues required 1-12 sessions, while much longer was needed for characterological issues. As Herron et al. (1994) suggests, treatment could perhaps be separated into three basic categories of mental healthcare (basic, intermediate, and extended care), with each holding different values or meanings for the patient, depending on the diagnosis(es) and complicating factors being treatment. Better still, the issue of number of sessions needed may be best addressed ongoing as a part of the treatment process and be driven by improvement in the individual's symptoms.

In the current study, it was found that those who dropped out and completed the questionnaires did not differ from completers on pre-treatment scores on measure of anxiety symptoms, as measured on both the ADDQ and STAI. This lends evidence that these two

groups did not differ on severity levels at treatment onset, and thus was less likely to be a major factor in their decision to drop out since they did not appear to require greater improvement to alleviate their symptoms. In addition, the dropouts who did and did not experience CSC were not found to differ on pre-treatment scores of anxiety disorder severity (ADDQ), although they did report greater state anxiety during the first session. While there are mixed findings of anxiety levels at pre-treatment between these two groups (dropouts who did and did not experience CSC), the higher STAI-S score could potentially be due to the use of this measure as the defining criteria for CSC.

Upon examination of the components of treatment that were most helpful among those who dropped out and completed the questionnaires, the two most endorsed components were cognitive restructuring in session and having a supportive therapist (see table 3). Of the components that were least helpful in treatment, the two most endorsed items were the workbook and exposure in session, followed by homework exposure and homework cognitive restructuring. Interestingly, these reasons are all behavioral components that require action on the part of the client in treatment, which is contrary to the behavior of what the typical anxious people will do on their own. Avoidance is a hallmark behavior of individuals with an anxiety disorder, which reinforces their fear and the treatment (exposure) is characteristically perceived as being aversive (Buckner et al., 2006). Workbook readings and individualized exposures are activities that are assigned to group members to work on between sessions, so it is not too surprising that those who dropped out endorsed them as being least useful. The most commonly endorsed reason reported, but not found to be statistically significant for drop out was that the time was not convenient or that individuals could not fit sessions into their schedules. This indicates that the main reason for

discontinuation was due more to external factors and not related to the treatment itself. However, another limitation to be considered could be that those that responded to the questionnaire tended to be more positive or did not feel comfortable providing information that was negatively attributable to the treatment. The results of the current study are similar to those found by Kogan (1957) where follow-up interviews with those who dropped out prematurely revealed that circumstances in their lives had interfered with the treatment, but that improvement in their problems more accurately accounted for them dropping out. Their improvement rates were also found to be comparable to those who had planned terminations, highlighting the fact that therapists' perception of clients with premature termination may be more negative than those who complete treatment.

A limitation to consider in this study is that the sample of dropouts that responded to the questionnaire could be fundamentally different from those who did not. However, the data suggests that this is not the case. Severity levels were examined at the beginning and the end of their treatment and no differences were found among those who did and did not return the questionnaire. Also, no differences were found when looking at diagnoses and demographic variables. This provides stronger evidence that the information gathered is not skewed due to differences in their disorder, intensity, or personal characteristics that may make them more or less likely to complete the questionnaires, however underpowered. Future similar studies are needed to more conclusively remark on the trajectories of those who drop out prematurely, after making significant improvement, as compared to those who completed the treatment. The findings in this study are tentative due to the small sample sizes and possible biases from the samples received. It is difficult to conclude whether the participants who provided follow-up data are inherently different, or more engaged, than

those who did not provide follow up information. This applies not only to the dropout sample, but also to the sample of completers that turned in follow up data.

This study aimed to find reasons and differences in results in those who prematurely discontinued from treatment. Perhaps future studies examining dropout could better obtain information from those who prematurely discontinue by contacting them closer to the time of discontinuation, in an effort to get this much-needed information and better ensure its accuracy. Those who responded may have had difficulty remembering or providing negative feedback about the treatment or therapists. When obtaining this information, a telephone call may provide the best means of providing the information, as individuals may be more willing to discuss their situation verbally with someone in lieu of filling out and returning a form (similar to Kogan's study (1957)). This would also provide the opportunity for some rapport building in order to obtain the information.

These findings do point to conclusions that individuals drop out of treatment for myriad reasons. Perhaps most importantly, this study provides more evidence that not all dropouts are treatment failures (Krishnamurthy et al., unpublished manuscript; Pekarik, 1992; Kogan, 1957). In fact, some individuals are able to show significant improvement. They also appear to maintain these gains just as well as those that completed the full treatment protocol. It may be that once faulty cognitions have been altered and/or individuals feel understood by their therapist(s), they feel they have improved to a degree that is satisfactory and with time constraints and various other external factors pulling for their time, they conclude they have improved "enough." The change in cognitions find support in the literature with Tang and DeRubeis' (1999) study that found some clients improved greatly from a single session of cognitive behavioral therapy. They attributed the

rapid and sustained improvement to deeply imbedded cognitive changes that occurred when schemas are changed. It appears that individuals improve at varying rates, and once a CSC is obtained, further treatment may not be necessary. Further, as Kogan (1957) astutely points out, as researchers and clinicians, we should be cognizant of our own countertransference and frustration with individuals who prematurely terminate, as some have proven to be treatment successes. Efforts should also be made to continue to follow up with these individuals, just as completers, in order to shed more light on these issues and perhaps to help make better decisions regarding treatment length on an individual basis.

The study of premature termination of treatment has been researched for decades and is confounded with conflicting findings. Additionally, little attention is given to dynamic variables during the treatment process. One of the major barriers to this research is gathering data from this population, as they are difficult to reach and have been labeled as noncompliant. Findings dictate that this is a very important area that is in great need of further exploration by researchers despite the extra time and effort needed, as well as the frustration that may be experienced by the researcher. More information regarding why they dropped out of treatment and what benefits they believe they have gained would better inform researchers and practitioners as to how and when that individual could be approached differently. Perhaps clinicians could include, as part of the ongoing dialogue with the client, how they are doing. Then more attention could be made towards those who have improved to determine what they feel their course should be, which would provide better data regarding the perception that they are treatment failures or if they have reached recovery and feel they did not need to continue in treatment. This timely information, which could be monitored on a session-by-session basis, could also inform the clinician to provide the client

information regarding relapse and what steps to take in the event they find themselves slipping in the future. Additionally, improved data gathering techniques should continue to be employed and allowed to evolve over time. Best practices should be shared in an attempt to better inform researchers on how to get the most out of their efforts and hard lessons learned. This is the only way that we can ensure that continued light will be shed on this mysterious group with the goal of improving services to all individuals.

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Table 1. Demographics for Completers and Dropouts.

		Completers (n = 85)	% of Total (N = 147)	Dropouts (n = 62)	% of Total (N = 147)
Gender	Male	43	29.9%	25	17.4%
	Female	40	27.8	36	25.0
Race	Caucasian	47	32.0	36	24.5
	Hispanic	21	14.3	10	6.8
	African-American	6	4.1	9	6.1
	Asian-American	3	2.0	6	4.1
	Other or mixed	8	5.4	1	0.7
Age	16 – 24 years	15	10.0	19	12.8
	25 – 34 years	37	25.1	23	15.7
	35-44 years	22	15.0	11	7.6
	45-54 years	8	5.5	6	4.2
	55-64 years	2	1.4	3	2.1
	65 years and up	1	0.7	0	0
Education	Did not complete HS	5	3.8	3	2.3
	HS	6	4.5	5	3.8
	Some college	20	15.2	26	19.7
	Bachelor or equivalent	26	19.7	15	11.4
	Graduate School	16	12.1	10	7.6
Marital	Married	30	20.7	15	10.3
	Single	40	27.6	33	22.8
	Divorced	7	4.8	7	4.8
	Other	5	3.5	7	4.8
Work	Unemployed	10	7.4	11	8.1
	Part-time	2	1.5	3	2.2
	Full-time	36	26.5	29	21.3
	Student	20	14.7	18	13.2
	Other	6	4.4	1	0.7
Children	Yes	27	19.9	18	13.3
	No	48	35.6	42	31.1
Diagnosis	Social Phobia	40	28.2	30	21.1
	GAD	13	9.2	10	7
	Panic Disorder	21	14.8	13	9.1
	Other	9	6.3	8	5.6
Severity	4	11	7.9	8	5.7
	5	24	17.1	10	7.1
	6	31	22.1	26	18.6
	7	13	9.3	14	10.0
	8	3	2.1	0	.0

Table 2. Demographics for Dropouts Who Did and Did Not Complete Follow-up Data.

		Did not complete follow-up data (*n* = 48)	**% of Total (*n* = 62)**	**Did complete follow-up data (*n* = 14)**	**% of Total (*n* = 62)**
Gender	Male	20	32.8%	5	8.2%
	Female	27	44.3	9	14.8
Race	Caucasian	27	43.57	9	14.5
	Hispanic	8	12.9	2	3.2
	African-American	7	11.3	2	3.2
	Asian-American	5	8.1	1	1.6
	Other or mixed	1	1.6	0	.0
Age	16 – 24 years	15	24.1	4	6.4
	25 – 34 years	17	27.3	6	9.6
	35-44 years	9	14.4	2	3.2
	45-54 years	6	9.6	0	.0
	55-64 years	1	1.6	2	3.2
	65 years and up	0	.0	0	.0
Education	Did not complete HS	2	3.4	1	1.7
	HS	5	8.5	0	.0
	Some college	21	35.6	5	8.5
	Bachelor or equivalent	10	16.9	5	8.5
	Graduate School	7	11.9	3	5.1
Marital	Married	10	16.1	5	8.1
	Single	26	41.9	7	11.3
	Divorced	7	11.3	0	.0
	Other	5	8.1	2	3.2
Work	Unemployed	9	14.5	2	3.2
	Part-time	2	3.2	1	1.6
	Full-time	22	35.5	7	11.3
	Student	14	22.6	4	6.5
	Other	1	1.6	0	.0
Children	Yes	13	21.6	5	8.3
	No	34	56.7	8	13.3
Diagnosis	Social Phobia	23	39.0	7	11.9
	GAD	8	13.6	2	3.4
	Panic Disorder	12	20.4	1	1.7
	Other	4	6.8	2	3.4
Severity	4	7	12.1	1	1.7
	5	7	12.1	3	5.2
	6	20	34.5	6	10.3
	7	13	22.4	1	1.7
	8	0	.0	0	.0

Table 3. One-Way ANOVA Results for Completers and Dropouts with CSC.

Measure	F-Statistic	Completers at follow-up	Dropouts with CSC at follow-up
ADDQ	F (1, 8) = .01, p = .91	n = 6, M = 17.67, SD = 10.78	n = 4, M = 16.75, SD = 14.59
BDI-II	F (1, 8) = .04, p = .85	n = 6, M = 5.5, SD = 4.68	n = 4, M = 6.25, SD = 7.41
PDSS	F (1, 8) = .20, p = .66	n = 6, M = 3.17, SD = 2.71	n = 4, M = 4.50, SD = 6.61
SPDQ	F (1, 5) = .42, p = .55	n = 5, M = 8.10, SD = 7.61	n = 2, M = 4.38, SD = 1.94
Y-BOCS	F (1, 8) = .20, p = .67	n = 6, M = 8.17, SD = 7.52	n = 4, M = 6.25, SD = 4.99
GADQ	F (1, 8) = .24, p = .64	n = 6, M = 10.00, SD = 7.95	n = 4, M = 12.75, SD = 9.81
PSS-SR	F (1, 8) = .81, p = .40	n = 6, M = 4.33, SD = 6.74	n = 4, M = 9.00, SD = 9.83

Table 4. Participants' Reasons Provided for Dropping Out of Treatment Prematurely.

	Dropouts with CSC	**% of total (n = 14)**	**Dropouts without CSC**	**% of total (n = 14)**	**Missing STAI**	**% of total (n = 14)**
Location not convenient	0	0.00%	0	0.00%	0	0.00%
Time not convenient/could not fit into my schedule	1	7.14%	1	7.14%	2	14.29%
Cost of therapy was an issue/too expensive	0	0.00%	0	0.00%	0	0.00%
Felt as though no longer needed treatment	0	0.00%	0	0.00%	1	7.14%
Felt as though this particular treatment was not of help to me/not what I wanted	1	7.14%	0	0.00%	0	0.00%
Felt it was not helping/I was not improving as rapidly as desired	0	0.00%	0	0.00%	0	0.00%
Did not feel therapist was best suited for me	0	0.00%	0	0.00%	0	0.00%
Did not like group format/did not like group members	1	7.14%	1	7.14%	0	0.00%
Other reason not listed or multiple responses	2	14.29%	4	28.57%	0	0.00%
Totals	**5**	**35.71%**	**6**	**42.86%**	**3**	**21.43%**

Attachment 1. Letter of Instruction

UNIVERSITY *of* HOUSTON

ANXIETY DISORDER CLINIC

Date

Mr. or Ms.
111 Street
City, TX

Dear Mr. or Ms. Xxx:

Within the recent past, you contacted the Psychological Research and Services Center at the University of Houston for treatment through the Anxiety Disorder Clinic. We hope that your experience with our clinic was a positive one, but if not, we would like to know that too. At this time, I am conducting further research that will help me complete the requirements for my Doctorate Degree, as well as provide much needed research regarding treatment outcome in individuals that did not complete the full treatment protocol.

As such, you will find a few documents enclosed. The first of which includes a consent form to participate in this study. Next are nine questionnaires that will provide us with valuable information to complete this study. These questionnaires are brief and should require a maximum of 30-40 minutes to complete in their entirety.

The information that you provide will be kept strictly confidential, will not be communicated to anyone that provided services to you, nor will your name or identity be identified in any subsequent research. As a small token of my appreciation for your participation, **upon receipt of the fully-completed consent form and nine questionnaires, the Anxiety Disorder Clinic will, in turn provide you with a $15 gift certificate to Target**. We have also included a self-addressed and postage paid envelope for your convenience.

If you have any questions regarding this matter, please feel free to contact me at 713-743-8600. Thank you in advance for your contribution.

Sincerely,

Suzanne Klenck, M.A.
Graduate Student and Principal Investigator

Peter J. Norton, Ph.D.
Assistant Professor of Psychology
Director, Anxiety Disorder Clinic

Attachment 2. Consent Form. UNIVERSITY OF HOUSTON
CONSENT TO PARTICIPATE IN RESEARCH

PROJECT TITLE: **STUDENT DISSERTATION, TREATMENT COMPLETERS VERSUS DROPOUTS: A FOLLOW-UP STUDY.** You are being invited to participate in a research study conducted by Suzanne C. Klenck, M.A. and Dr. Peter J. Norton from the Department of Psychology at the University of Houston.

NON-PARTICIPATION STATEMENT. Your participation is voluntary and you may refuse to participate or withdraw at any time without penalty. You may also refuse to answer any question. If you do not wish to participate in the research, simply do not complete the enclosed questionnaires.

PURPOSE OF THE STUDY. The purpose of this form is to inform you that the Psychology Research
and Services Center at the University of Houston exists to fulfill two purposes:
1. Provision of clinical services.
2. Training of students in the assessment and treatment of mental health problems.
The Anxiety Disorder Clinic within the Psychology Research and Services Center has one additional purpose—Research on the nature of anxiety, how treatments for anxiety work, and how effectively treatments of anxiety work.
By consenting to participate in this study, you will provide much sought after and needed information regarding how those that prematurely discontinue treatment fare at follow-up versus those that completed the full treatment protocol at the Anxiety Disorder Clinic.
If you do not wish to participate in the research, please feel free to disregard this information.
If you are interested in continued treatment, please contact our clinic for further information.

PROCEDURES. The information for this study will be drawn from self-report questionnaires mailed to your home. A postage paid self-addressed envelope is provided for prompt return of the completed questionnaires. The information being gathered will only occur at one time point, meaning you will not again be asked to complete these measures. The questionnaires will be returned to: Psychology Research and Services Center, Attention: Suzanne Klenck, M.A./Dr. Peter Norton, 126 Heyne Building, Houston, TX 77204. There are no charges associated with your participation.

CONFIDENTIALITY. All information gathered and used in the research will be kept strictly confidential within the legal limits of confidentiality. Your research file will contain information about you such as your name, phone number, and information about treatment. The Research File will contain your research questionnaire and assessment information. It will be kept separately in a locking cabinet in locked research office. Only PRSC staff has any access to your original Clinic File, and only Anxiety Disorder Clinic research staff will have access to your research file. All information is kept in locked cabinets in the PRSC and will be destroyed after seven years as required by legal and ethical guidelines. This research may be published in scientific journals in a manner that will present only summary results of our findings—no individuals will be identified.
Every effort will be made to maintain the confidentiality of your participation in this project. Every client's name will be paired with a code number. This code number will appear on all written materials. The list pairing the subject's name to the assigned code number will be kept separate from all research materials and will be available only to the researchers. Confidentiality will be maintained within legal limits. The only legal ways that confidentiality can be broken are:
 Child Abuse: If we have cause to believe that a child has been, or may be, abused, neglected, or sexually abused, we must make a report of such within 48 hours to the Texas Department of

Protective and Regulatory Services, the Texas Youth Commission, or to any local or state law enforcement agency.
 Adult and Domestic Abuse: If we have cause to believe that an elderly or disabled person is in a state
of abuse, neglect, or exploitation, we must immediately report such to the Department of Protective and Regulatory Services.
 Health Oversight: If a complaint is filed against the PRSC, a therapist, or supervisor, with the State Board of Examiners of Psychologists, they have the authority to subpoena confidential mental health information relevant to that complaint.
 Judicial or Administrative Proceedings: If you are involved in a court proceeding and a request is made for information about your diagnosis and treatment and the records thereof, such information is privileged under state law, and the PRSC will not release information, without written authorization from you or your personal or legally appointed representative, or a court order. The privilege does not apply where the evaluation is court ordered. You will be informed in advance if this is the case.
 Serious Threat to Health or Safety: If we determine that there is a probability of imminent physical injury by you to yourself or others, or there is a probability of immediate mental or emotional injury to you, we may disclose relevant confidential mental health information to medical or law enforcement personnel.
 Worker's Compensation: If you file a worker's compensation claim, we may disclose records relating to your diagnosis and treatment to your employer's insurance carrier.
These limits of confidentiality apply to any psychological treatment or other therapy, not just this research. If you have any questions or concerns about confidentiality or the legal limits of confidentiality, do not sign this document until you have had a chance to discuss your questions with the investigator, Suzanne Klenck, M.A., or the supervisor of this project, Dr. Peter Norton.

RISKS/DISCOMFORTS. As with any psychological assessment or when completing questionnaires regarding psychological status, you may experience some anxiety or other emotional distress. This distress or anxiety should not differ from what you normally experience in your daily life. You may withdraw from or stop any procedure at any time. If you do experience distress, we recommend discussing it with the investigator, Suzanne Klenck.
Examples of sensitive topics that will be questioned include:
• I am afraid that other people will not approve of me
• I felt I wasn't worth much as a person
• I wash my hands more often and longer than necessary
• Uncertainty makes life unbearable
• I have had thoughts of harming myself or committing suicide
• I know I should not worry about things, but I just cannot help it

BENEFITS. ***Upon completion of the questionnaires in their entirety, you will be compensated with a $15 gift card to Target for your participation in this research***. An additional benefit from participating in this study is the knowledge that you are adding to our understanding of the treatment of anxiety and depression, which may help someone else in the future.

ALTERNATIVES. Participation in this project is voluntary and the only alternative to this project is non-participation. If you do not wish to participate in the research, please disregard the enclosed information.

FINANCIAL CONSIDERATION. There are no associated fees or charges for your participation in this study.

PUBLICATION STATEMENT. The results of this study may be published in professional and/or scientific journals. It may also be used for educational purposes or for professional presentations. However, no individual subjects will be identified.

CIRCUMSTANCES FOR DISMISSAL FROM PROJECT. Your participation in this project may be stopped by Suzanne Klenck if:
1. One quarter or more of the information enclosed for collection is not completed;
2. Your responses appear random or as if sincere consideration to accurate information was not provided (e.g. you answer in a consistent pattern – you answer "1" to all questions).

SUBJECT RIGHTS:

1. I understand that informed consent is required of all persons participating in this project.
2. All procedures have been explained to me and all my questions have been answered to my satisfaction.
3. Any risks and/or discomforts have been explained to me.
4. Any benefits have been explained to me.
5. I understand that, if I have any questions, I may contact Suzanne Klenck, M.A. at 713-743-8600.
6. I have been told that I may refuse to participate or to stop my participation in this project at any time before or during the project. I may also refuse to answer any question.
7. ANY QUESTIONS REGARDING MY RIGHTS AS A RESEARCH SUBJECT MAY BE ADDRESSED TO THE UNIVERSITY OF HOUSTON COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (713-743-9204). ALL RESEARCH PROJECTS THAT ARE CARRIED OUT BY INVESTIGATORS AT THE UNIVERSITY OF HOUSTON ARE GOVERNED BY REQUIREMENTS OF THE UNIVERSITY AND THE FEDERAL GOVERNMENT.
8. All information that is obtained in connection with this project and that can be identified with me will remain confidential as far as possible within legal limits. Information gained from this study that can be identified with me may be released to no one other than the principal investigators. The results may be published in scientific journals, professional publications, or educational presentations without identifying me by name.

I HAVE READ (OR HAVE HAD READ TO ME) THE CONTENTS OF THIS CONSENT FORM AND HAVE BEEN ENCOURAGED TO ASK QUESTIONS. I HAVE RECEIVED ANSWERS TO MY QUESTIONS. I GIVE MY CONSENT TO PARTICIPATE IN THIS STUDY. I HAVE RECEIVED (OR WILL RECEIVE) A COPY OF THIS FORM FOR MY RECORDS AND FUTURE REFERENCE.

Study Subject (print name): _____

Signature of Study Subject:_____

Date: _____

I HAVE READ THIS FORM TO THE SUBJECT AND/OR THE SUBJECT HAS READ THIS FORM. AN EXPLANATION OF THE RESEARCH WAS GIVEN AND QUESTIONS FROM THE SUBJECT WERE SOLICITED AND ANSWERED TO THE SUBJECT'S SATISFACTION. IN MY JUDGMENT, THE SUBJECT HAS DEMONSTRATED COMPREHENSION OF THE INFORMATION.

Principal Investigator (print name and title): _____

PAGE 1 OF 1, Subject's Initials_____

Attachment 3. Treatment Discontinuation Questionnaire.

UNIVERSITY *of* HOUSTON

ANXIETY DISORDER CLINIC

We are interested in your honest opinions, whether they are positive or negative. Please answer all of the questions. We also welcome your comments and suggestions. We really appreciate your help and hope that it will enable us to make treatment more successful.

1. How would you rate the quality of the service you have received?

_____	_____	_____	_____
Excellent	Good	Fair	Poor

2. Did you get or were you offered the kind of service that you wanted?

_____	_____	_____	_____
No, definitely	No, not really	Yes, generally	Yes, definitely

3. To what extent did you feel our program could have met your needs?

_____	_____	_____	_____
Almost all of my needs were met	Most of my needs were met	Only a few of my needs were met	None of my needs were met

4. If a friend were in need of similar help, would you recommend our program to him or her?

_____	_____	_____	_____
No, definitely not	No, I do not think so	Yes, I think so	Yes, definitely

5. If you were to seek help again, would you come back to our program?

_____	_____	_____	_____
No, definitely not	No, I do not think so	Yes, I think so	Yes, definitely

6. How long had you been thinking about seeking treatment for the current problem before you contacted our clinic?

_____	_____	_____	_____
One week or less	Approximately 1 month	More than 2 months	More than 6 months

7. Have you sought further treatment since receiving treatment at the Anxiety Disorder Clinic?
   Yes____ No____

8. If you answered yes to number 7, which best describes the treatment you received (check all that apply).

_____	_____	_____
Psychiatric Medication	Individual Psychotherapy	Group Psychotherapy

9. What is the main reason you chose not to continue services at our center? (Please **check all that apply <u>and</u> circle the main reason** for discontinuation of treatment.)

_____Location not convenient
_____Time not convenient/could not fit into my schedule
_____Cost of therapy was an issue/too expensive
_____Felt as though no longer needed treatment
_____Felt as though this particular treatment was not of help to me/not what I wanted
_____Felt it was not helping/I was not improving as rapidly as desired
_____Did not feel therapist was best suited for me
_____Did not like group format/did not like group members
_____Other reason not listed_____(please elaborate)

(It is important that you make sure to specify above **all that apply *and* to circle the primary reason** for discontinuing treatment.)

10. Please list any other comments or reasons in the space provided below, that may not have been covered, that capture problems or reasons that contributed to treatment discontinuation.

_____

_____

_____

_____

_____

Thank you again for your honest responses.

Attachment 4. Questionnaire Packet (containing the eight questionnaires).

Anxiety Disorder Diagnostic Questionnaire

An **Anxiety Disorder** is a condition in which a person feels extreme ***fear*** when faced with certain objects, situations, feelings, or thoughts, and/or extreme ***anxiety/worry*** about possible encounters with those objects (e.g., heights, crowds), situations (e.g., public speaking) , bodily sensations (e.g., racing heart, nausea), thoughts (e.g., recurring bothersome thoughts), or memories (e.g., recurring unexpected memories of past events).

Both the ***fear*** and the ***anxiety/worry*** often lead to various physical symptoms and urges to prevent or escape from the objects, situations, bodily sensations, thoughts, or memories. The amount of ***fear*** and ***anxiety/worry*** is usually much more than other people seem to experience in the same situation.

Please describe the main objects, situations, bodily sensations, thoughts, or memories that provoke your **fear** or **anxiety/worry**:

_____

1. Over the past month, have you experienced intense and frequent **fear** when you are faced with the object, situation, bodily sensation, thought, or memory listed above? Yes___ No___

1a. Is this **fear** more than what others seem to feel in the same situation? Yes___ No___

1b. How intense is the **fear** you *typically* feel when faced with the objects, situations, thoughts, memories, or sensations?

None Mild Moderate Severe Very Severe

0----------1----------2----------3----------4----------5----------6----------7----------8

What do you typically do when you are faced with the objects, situations, thoughts, memories, or sensations listed above?_____

2. Over the past month, have you experienced **anxiety/worry** when thinking about possible meetings with the object, situation, bodily sensation, thought, or memory listed above?

Yes___ No___

2a. Is this **anxiety/worry** more than what others seem to feel in the same situation? Yes___No___

2b. How intense is the **anxiety/worry** you *typically* feel when thinking about possibly meeting the objects, situations, thoughts, memories, or sensations?

None Mild Moderate Severe Very Severe

0----------1----------2----------3----------4----------5----------6----------7----------8

What do you typically do when thinking about possible meeting with the objects, situations, thoughts, memories, or sensations listed above?_____

3. During the past month, have you been bothered by any of the following symptoms when experiencing **fear** and/or **anxiety/worry**? Place a check mark next to each symptom you *frequently* have experienced in the past month?

___ racing/pounding heart ___ irritability ___ sweaty/clammy ___ stomach problems or nausea

___ shortness of breath ___ sleep problems ___ hot flashes/chills____ restlessness/feeling on edge

__ trembling/shaking ___ muscle tension ___ numbness/tingling___ dizziness/lightheadedness

__ fatigue ___ choking sensations ___ chest tightness ___concentration difficulties

_____

4a. Over the past month, how much has your **fear** and **anxiety/worry** interfered with your life, work, social activities, family, etc.?

None Mild Moderate Severe Very Severe

0----------1----------2----------3----------4----------5----------6----------7----------8

4b. Over the past month, how distressed have you been about your fear and anxiety/worry?

None Mild Moderate Severe Very Severe

0----------1----------2----------3----------4----------5----------6----------7----------8

STAI

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then click in the appropriate circle to the right of the statement to indicate how you feel *right* now, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.	Not at all	Somewhat	Moderately so	Very much so
1. I feel calm	1	2	3	4
2. I feel secure	1	2	3	4
3. I am tense	1	2	3	4
4. I feel strained	1	2	3	4
5. I feel at ease	1	2	3	4
6. I feel upset	1	2	3	4
7. I am presently worrying over possible misfortunes	1	2	3	4
8. I feel satisfied	1	2	3	4
9. I feel frightened	1	2	3	4
10. I feel comfortable	1	2	3	4
11. I feel self-confident	1	2	3	4
12. I feel nervous	1	2	3	4
13. I am jittery	1	2	3	4
14. I feel indecisive	1	2	3	4
15. I am relaxed	1	2	3	4
16. I feel content	1	2	3	4
17. I am worried	1	2	3	4
18. I feel confused	1	2	3	4
19. I feel steady	1	2	3	4
20. I feel pleasant	1	2	3	4

BDI-II

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today**. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1 **Sadness**	0	I do not feel sad.
	1	I feel sad much of the time.
	2	I am sad all the time.
	3	I am so sad or unhappy that I can't stand it.
2 **Pessimism**	0	I am not discouraged about my future.
	1	I feel more discouraged about my future than I used to be.
	2	I do not expect things to work out for me.
	3	I feel my future is hopeless and will only get worse.
3 **Past Failure**	0	I do not feel like a failure.
	1	I have failed more than I should have.
	2	As I look back, I see a lot of failures.
	3	I feel I am a total failure as a person.
4 **Loss of Pleasure**	0	I get as much pleasure as I ever did from the things I enjoy.
	1	I don't enjoy things as much as I used to.
	2	I get very little pleasure from the things I used to enjoy.
	3	I can't get any pleasure from the things I used to enjoy.
5 **Guilty Feelings**	0	I don't feel particularly guilty.
	1	I feel guilty over many things I have done or should have done.
	2	I feel quite guilty most of the time.
	3	I feel guilty all of the time.
6 **Punishment Feelings**	0	I don't feel I am being punished.
	1	I feel I may be punished.
	2	I expect to be punished.
	3	I feel I am being punished.
7 **Self-Dislike**	0	I feel the same about myself as ever.
	1	I have lost confidence in myself.
	2	I am disappointed in myself.
	3	I dislike myself.
8 **Self-Criticalness**	0	I don't criticize or blame myself more than usual.
	1	I am more critical of myself than I used to be.
	2	I criticize myself for all of my faults.
	3	I blame myself for everything bad that happens.
9 **Suicidal Thoughts or Wishes**	0	I don't have any thoughts of killing myself.
	1	I have thoughts of killing myself, but I would not carry them out.
	2	I would like to kill myself.
	3	I would kill myself if I had the chance.
10 **Crying**	0	I don't cry anymore than I used to.
	1	I cry more than I used to.
	2	I cry over every little thing.
	3	I feel like crying, but I can't.
11 **Agitation**	0	I am no more restless or wound up than usual.
	1	I feel more restless or wound up than usual.
	2	I am so restless or agitated that it's hard to stay still.
	3	I am so restless or agitated that I have to keep moving or doing something.

12 **Loss of Interest**	0	I have not lost interest in other people or activities.	
	1	I am less interested in other people or things than before.	
	2	I have lost most of my interest in other people or things.	
	3	It's hard to get interested in anything.	
13 **Indecisiveness**	0	I make decisions about as well as ever.	
	1	I find it more difficult to make decisions than usual.	
	2	I have much greater difficulty in making decisions than I used to.	
	3	I have trouble making any decisions.	
14 **Worthlessness**	0	I do not feel I am worthless.	
	1	I don't consider myself as worthwhile and useful as I used to.	
	2	I feel more worthless as compared to other people.	
	3	I feel utterly worthless.	
15 **Loss of Energy**	0	I have as much energy as ever.	
	1	I have less energy than I used to have.	
	2	I don't have enough energy to do very much.	
	3	I don't have enough energy to do anything.	
16 **Changes in Sleeping Pattern**	0	I have not experienced any change in my sleeping pattern.	
	1a	I sleep somewhat more than usual.	1b I sleep somewhat less than usual.
	2a	I sleep a lot more than usual.	2b I sleep a lot less than usual.
	3a	I sleep most of the day.	3b I wake up 1-2 hours early and can't get back to sleep.
17 **Irritability**	0	I am no more irritable than usual.	
	1	I am more irritable than usual.	
	2	I am much more irritable than usual.	
	3	I am irritable all the time.	
18 **Changes in Appetite**	0	I have not experienced any change in my appetite.	
	1a	My appetite is somewhat less than usual.	1b My appetite is somewhat greater than usual.
	2a	My appetite is much less than before.	2b My appetite is much greater than usual.
	3a	I have no appetite at all.	3b I crave food all the time.
19 **Concentration Difficulty**	0	I can concentrate as well as ever.	
	1	I can't concentrate as well as ever.	
	2	It's hard to keep my mind on anything for very long.	
	3	I find I can't concentrate on anything.	
20 **Tiredness or Fatigue**	0	I am no more tired or fatigued than usual.	
	1	I get more tired or fatigued more easily than usual.	
	2	I am too tired or fatigued to do a lot of the things I used to do.	
	3	I am too tired or fatigued to do most of the things I used to do.	
21 **Loss of Interest in Sex**	0	I have not noticed any recent change in my interest in sex.	
	1	I am less interested in sex than I used to be.	
	2	I am much less interested in sex now.	
	3	I have lost interest in sex completely.	

Panic Disorder Severity Scale

A **Panic Attack** is a feeling of fear or apprehension that begins suddenly and builds rapidly in intensity, usually reaching a peak in less than 10 minutes. This feeling is associated with uncomfortable physical sensations like racing or pounding heart, shortness of breath, choking, dizziness, sweating, and trembling. Often there are distressing, catastrophic thoughts such as fear or losing control, having a heart attack, or dying.

1. **Frequency of panic attacks** – Over the past month, how frequently did you experience panic attacks?

0 – None
1 – Mild (panic-like sensations or limited symptom attacks or less than on full panic attack a week)
2 – Moderate (one or more full panic attacks a week).
3 – Severe (daily attacks reported or several a week).
4 – Extreme (attacks occur more than once a day).

2. **Distress during panic attacks** – Over the past month, when you had panic attacks, how much distress did they cause you?

0 – None
1 – Mild, infrequent and not too intense
2 – Moderate, regular and intense, but still manageable
3 – Severe, very frequent and very intense
4 – Extreme distress with all attacks

3. **Anticipatory anxiety** – Over the past month, how much did you worry, feel fearful or apprehensive about when your next panic attack would occur or about what panic attacks might mean about your physical or mental health?

0 – None
1 – Mild, occasional worry about when next panic will occur
2 – Moderate, frequent worry about next attack
3 – Severe, preoccupied with very disturbing worry about next attack
4 – Extreme, near constant and disabling worry

4. **Panic-related phobic-avoidance of particular situations** – Over the past month, were there places you felt afraid, or that you avoided, because you thought if you had a panic attack it would be difficult to get help or easily leave?

0 – None
1 – Definite fear or discomfort and desire to avoid at least one situation. Will confront or endure situation under most circumstances.
2 – Definite fear or discomfort and desire to avoid up to three situations. Will regularly avoid at least one of these situations.
3 – Definite fear or discomfort and desire to avoid more than three situations. Will regularly avoid two or more situations but may confront if accompanied by a trusted companion.
4 – Definite fear and avoidance of several situations. There are definite and major modifications in lifestyle because of avoidance.

5. **Panic-related phobic avoidance of sensations** – Sometimes people experience physical sensations that may be reminiscent of panic and cause them to feel frightened or uncomfortable. Over the past month, did you avoid doing anything because you thought it might can this kind of uncomfortable physical sensations?

0 – None
1 – Definite discomfort with one or more physical sensations. Will endure sensations under most circumstances.
2 – Definite discomfort with and desire to avoid fully experiencing physical sensations. Has reduced certain activities to limit sensations.
3 – Definite discomfort with and desire to avoid experiencing one or more physical sensations. Consistently avoids at least one activity to prevent experiencing sensations.
4 – Definite discomfort with and desire to avoid experiencing one or more physical sensations. Consistently avoids more than one activity to prevent experiencing sensations.

6. **Impairment/interference in work functioning** –Over the past month, considering all the symptoms, panic attacks, anticipatory anxiety, and avoidance, how much did panic interfere with your ability to do your job, schoolwork, or responsibilities at home?

0 – None
1 – Mild, slight interference with occupational activities, but overall performance is not impaired
2 – Moderate, definite interference with occupational performance but still manageable.
3 – Severe, causes substantial impairment in occupational performance
4 – Extreme, incapacitating.

7. **Impairment/interference in social functioning** – Over the past month, considering all the symptoms, panic attacks, anticipatory anxiety, and avoidance, how much did panic interfere with your social life?

0 – None
1 – Mild, slight interference with social activities, but overall performance not impaired
2 – Moderate, definite interference with social performance but still manageable
3 – Severe, causes substantial impairment in social performance
4 – Extreme, incapacitating

SPDQ

1. In social situations where it is possible that you will be noticed or evaluated by other people, do you feel excessively nervous, fearful or uncomfortable? Yes___ No___

2. Do you tend to be overly worried that you may act in a way that might embarrass or humiliate yourself in front of other people, or that others may not think well of you? Yes___ No___

3. Do you try to avoid social situations? Yes___ No___

Below is a list of some situations that are fear provoking for some people. Rate the severity of your anxiety and avoidance on the following scales:

	0=No fear 1=Mild fear 2=Moderate fear 3=Severe fear 4=Very severe fear	0=Never avoid 1=Rarely avoid 2=Sometimes avoid 3=Often avoid 4=Always avoid
	(a) fear	(b) avoidance
4. Parties	0 1 2 3 4	0 1 2 3 4
5. Meetings	0 1 2 3 4	0 1 2 3 4
6. Becoming the focus of attention	0 1 2 3 4	0 1 2 3 4
7. Dating circumstances	0 1 2 3 4	0 1 2 3 4
8. Meeting people in authority	0 1 2 3 4	0 1 2 3 4
9. Speaking with people in authority	0 1 2 3 4	0 1 2 3 4
10. Saying 'no' to unreasonable requests	0 1 2 3 4	0 1 2 3 4
11. A first date	0 1 2 3 4	0 1 2 3 4
12. Asking others to do something differently	0 1 2 3 4	0 1 2 3 4
13. Being introduced	0 1 2 3 4	0 1 2 3 4
14. Initiating a conversation	0 1 2 3 4	0 1 2 3 4
15. Keeping a conversation going	0 1 2 3 4	0 1 2 3 4
16. Giving a speech	0 1 2 3 4	0 1 2 3 4
17. Others judging you	0 1 2 3 4	0 1 2 3 4
18. Being under observation by others	0 1 2 3 4	0 1 2 3 4
19. Being teased	0 1 2 3 4	0 1 2 3 4

20. Do you tend to experience fear each time you are in feared social situations? Yes___ No___

21. Does the fear come on as soon as you encounter feared social situations? Yes___ No___

22. Would you say that you social fear is excessive or unreasonable? Yes___ No___

23. Circle the degree to which your social fear interferes with your life, work, social activities, family, etc.?

0	1	2	3	4
No Interference	Mild	Moderate	Severe	Very Severe/Disabling

24. How distressing do you find social fear? (Circle one)

0	1	2	3	4
Not Distressing	Mild	Moderately	Severely	Very Severely

25. Has what you have been able to achieve in your job or in school been negatively effected by your social fear? Yes___ No___

Y-BOCS

Questions 1 to 5 are about your obsessive thoughts.

Obsessions are unwanted ideas, images or impulses that intrude on thinking against your wishes and efforts to resist them. They usually involve themes of harm, risk, and danger. Common obsessions are excessive fears of contamination; recurring doubts about danger; extreme concern with order, symmetry, or exactness; fear of losing important things. Please answer each question by writing the appropriate number in the box next to it.

1. TIME OCCUPIED BY OBSESSIVE THOUGHTS

Q. How much of your time is occupied by obsessive thoughts?

	0 = None 1 = Less than 1 hr/day or occasional occurrence 2 = 1 to 3 hrs/day or frequent 3 = Greater than 3 and up to 8 hrs/day or very frequent occurrence 4 = Greater than 8 hrs/day or nearly constant occurrence

2. INTERFERENCE DUE TO OBSESSIVE THOUGHTS

Q. How much do your obsessive thoughts interfere with your work, school, social, or other important role functioning? Is there anything that you don't do because of them?

	0 = None 1 = Slight interference with social or other activities, but overall performance not impaired 2 = Definite interference with social or occupational performance, but still manageable 3 = Causes substantial impairment in social or occupational performance 4 = Incapacitating

3. DISTRESS ASSOCIATED WITH OBSESSIVE THOUGHTS

Q. How much distress do your obsessive thoughts cause you?

	0 = None 1 = Not too disturbing 2 = Disturbing, but still manageable 3 = Very disturbing 4 = Near constant and disabling distress

4. RESISTANCE AGAINST OBSESSIONS

Q. How much of an effort do you make to resist the obsessive thoughts? How often do you try to disregard or turn your attention away from these thoughts as they enter your mind?

	0 = Try to resist all the time 1 = Try to resist most of the time 2 = Make some effort to resist 3 = Yield to all obsessions without attempting to control them, but with some reluctance 4 = Completely and willingly yield to all obsessions

5. DEGREE OF CONTROL OVER OBSESSIVE THOUGHTS

Q. How much control do you have over your obsessive thoughts? How successful are you in stopping or diverting your obsessive thinking? Can you dismiss them?

	0 = Complete control 1 = Usually able to stop or divert obsessions with some effort and concentration 2 = Sometimes able to stop or divert obsessions 3 = Rarely successful in stopping or dismissing obsessions, can only divert attention with difficulty 4 = Obsessions are completely involuntary, rarely able to even momentarily alter obsessive thinking

The next several questions are about your compulsive behaviors.

Compulsions are urges that people have to do something to lessen feelings of anxiety or other discomfort. Often they do repetitive, purposeful, intentional behaviors called rituals. The behavior itself may seem appropriate but it becomes a ritual when done to excess. Washing, checking, repeating, straightening, hoarding, and many other behaviors can be rituals. Some rituals are mental. For example, thinking or saying things over and over under your breath.

6. TIME SPENT PERFORMING COMPULSIVE BEHAVIORS

Q. How much time do you spend performing compulsive behaviors? How much longer than most people does it take to complete routine activities because of your rituals? How frequently do you do rituals?

	0 = None 1 = Less than 1 hr/day, or occasional performance of compulsive behaviors 2 = From 1 to 3 hrs/day, or frequent performance of compulsive behaviors 3 = More than 3 and up to 8 hrs/day, or very frequent performance of compulsive behaviors 4 = More than 8 hrs/day, or near constant performance of compulsive behaviors (too numerous to count)

7. INTERFERENCE DUE TO COMPULSIVE BEHAVIORS

Q. How much do your compulsive behaviors interfere with your work, school, social, or other important role functioning? Is there anything that you don't do because of the compulsions?

	0 = None 1 = Slight interference with social or other activities, but overall performance not impaired 2 = Definite interference with social or occupational performance, but still manageable 3 = Causes substantial impairment in social or occupational performance 4 = Incapacitating

8. DISTRESS ASSOCIATED WITH COMPULSIVE BEHAVIOR

Q. How would you feel if prevented from performing your compulsion(s)? How anxious would you become?

	0 = None 1 = Only slightly anxious if compulsions prevented 2 = Anxiety would mount but remain manageable if compulsions prevented 3 = Prominent and very disturbing increase in anxiety if compulsions interrupted 4 = Incapacitating anxiety from any intervention aimed at modifying activity

9. RESISTANCE AGAINST COMPULSIONS

Q. How much of an effort do you make to resist the compulsions?

	0 = Always try to resist 1 = Try to resist most of the time 2 = Make some effort to resist 3 = Yield to almost all compulsions without attempting to control them, but with some reluctance 4 = Completely and willingly yield to all compulsions

10. DEGREE OF CONTROL OVER COMPULSIVE BEHAVIOR

Q. How strong is the drive to perform the compulsive behavior? How much control do you have over the compulsions?

	0 = Complete control 1 = Pressure to perform the behavior but usually able to exercise voluntary control over it 2 = Strong pressure to perform behavior, can control it only with difficulty 3 = Very strong drive to perform behavior, must be carried to completion, can only delay with difficulty 4 = Drive to perform behavior experience as completely involuntary and overpowering, rarely able to even momentarily delay activity

GADQ-IV

1. Do you experience excessive worry? Yes____ No ____

2. Is your worry excessive in intensity, frequency, or amount of distress it causes?
   Yes____ No____

3. Do you find it difficult to control your worry (or stop worrying) once it starts?
   Yes____ No____

4. Do you worry excessively or uncontrollably about minor things such as being late for an appointment, minor repairs, homework, etc.? Yes____ No____

5. Please list the most frequent topics about which you worry excessively or uncontrollably:

   a. _____ d. _____

   b. _____ e. _____

   c. _____ f. _____

6. During the last six months, have you been bothered by excessive worries more days than not?
   Yes____ No____

7. During the past six months, have you often been bothered by any of the following symptoms? Place a check next to each symptom that you have had more days than not:

   ____ restlessness or feeling keyed up or on edge ____ irritability

   ____ difficulty falling/staying asleep or restlessness/ unsatisfying sleep ____ being easily fatigued

   ____ difficulty concentrating or mind going blank ____ muscle tension

8. How much do worry and physical symptoms interfere with your life, work, social activities, family, etc.? Circle one number:

0	1	2	3	4	5	6	7	8
None		Mild		Moderate		Severe		Very Severe

9. How much are you bothered by worry and physical symptoms (how much distress does it cause you)? Circle one number:

0	1	2	3	4	5	6	7	8
No Distress		Mild Distress		Moderate Distress		Severe Distress		Very Severe Distress

PSS-SR

Below is a list of questions about reactions that can occur after being traumatically injured. By "traumatic injury", we mean the actual injury itself and events associated with the injury (e.g., being in the hospital, painful procedures, etc.). Specify the relevant traumatic event here.

_____

Read each item and circle how frequently it was true for you DURING THE PAST MONTH. For the scales listed below:

Rarely = once per week or less, or only once in a while
Sometimes = 2-4 times per week, or about half the time
Almost always = 5 or more times per week, or quite often

1. In the past month, have you had upsetting thoughts that came into your head when you didn't want them to?

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

2. In the past month, have you been having bad dreams or nightmares about the injury?

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

3. In the past month, have you had the experience of reliving the injury, or feeling as if it were happening again?

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

4. In the past month, have you been very EMOTIONALLY upset when reminded of the injury? (Emotionally upset includes becoming very scared, angry, sad, etc.)

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

5. In the past month, have you been having PHYSICAL reactions when reminded of the injury? (i.e., breaking out in the sweat, increased heart rate, etc.)

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

6. In the past month, have you been trying to avoid thinking about the injury?

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

7. In the past month, have you been making efforts to avoid activities, situations, or places that remind you of the injury?

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

8. In the past month, are there any important parts of the injury that you still cannot remember, even though you were conscious at the time?

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

9. In the past month, have you found that you are not interested in things you used to enjoy doing?

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

10. In the past month, have you felt distant or cut off from others around you?

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

11. In the past month, have you felt emotionally numb (e.g., feeling sad but can't cry, unable to have feelings, no longer feel the same level of joy, etc.)?

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

12. In the past month, have you felt that any future plans or hopes have changed because of the injury? (e.g., you will have no career, marriage, children, etc.)

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

13. In the past month, have you been having problems falling or staying asleep?

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

14. In the past month, have you been more irritable or having outburst of anger?

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

15. In the past month, have you been having difficulty concentrating? (e.g., drift in and out of conversation, lose track of a story on TV, etc.)

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

16. In the past month, have you been overly alert? (i.e., always waiting for something bad to happen)

0	1	2	3
Not at all	Rarely	Sometimes	Almost always

17. In the past month, have you been jumpy or easily startled? (e.g., when you hear a loud noise or when someone walks up behind you)

0	1	2	3
Not at all	Rarely	Sometimes	Almost always