The Efficacy of Cognitive–Behavioral Therapy and the Problem of Drop-Out

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Treatment drop-out is a common problem in the everyday practice of psychotherapy. In the cognitive–behavioral psychology literature, there are scant data on drop-out from therapy and the data available vary widely according to the definition of drop-out and the intensity of treatment. This study presents results obtained in the Behavioural Therapy Unit of the University of Barcelona. Of the 203 patients seen in the unit, 89 (43.8%) dropped out, mostly in the early stages of the intervention. The most common reasons for this were low motivation and/or dissatisfaction with the treatment or the therapist (46.7%), external difficulties (40%), and patients’ feeling of improvement (13.3%). Patients who dropped out differed from those who continued; they more often presented affective or eating disorders or problems with impulse control. The observed drop-out rate is in line with figures reported for psychotherapy in general and by those studies which have considered cognitive–behavioral therapy in particular. © 2007 Wiley Periodicals, Inc. J Clin Psychol 63: 585–592, 2007.

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Introduction

Treatment drop-out is a common problem in the everyday practice of psychotherapy. In a meta-analysis of 125 studies, Wierzbicki and Pekarik (1993) found that 48% of patients stopped therapy prematurely, regardless of whether the criterion was therapist judgment or the number of sessions attended; however, the percentage fell to 35.9% when the criterion was failure to attend a scheduled session. More recent studies conducted in mental health centers in various countries show drop-out rates of between 24% and 66%, although they commonly oscillate between 35% and 55% (Barkham et al., 2006; Berghofer, Schmidl, Rudas, Steiner, & Schmitz, 2002; Castañeda & Mira, 1998; Derisley &
Reynolds, 2000; Fernández, Autonell, Haro, & Carmona, 2004; Moré, Huidobro, Rodríguez, & Holgado, 2002; Percudani, Belloni, Contini, & Barbui, 2002; Souto & Crosland, 2005).

The differences in drop-out rates may be due to variations in the treatment setting (e.g., mental health centers vs. hospitals), the patient populations studied, the treatments offered, and the definition of drop-out used (failure to attend a scheduled session and not returning subsequently; terminating treatment before the therapist considers this to be appropriate; stopping treatment without this being mutually agreed with the therapist). Indeed, there is still no consensus as to what constitutes drop-out and, as illustrated by the findings of Hatchett and Park (2003) and Wierzbicki and Pekarik (1993), the use of widely different definitions affects the results obtained.

In the cognitive–behavioral psychology literature, little attention has been paid to the issue of drop-out in clinical practice. In four studies (García-Vera, personal communication, September 20, 2005; Gavino & Godoy, 1993; Persons, Burns, & Perloff, 1988; Trepka, 1986) conducted with 525, 52, 70, and 88 patients, respectively, the drop-out rates were 41%, 34.6%, 50%, and 39.8%. The definitions of drop-out used varied widely: interrupting treatment prior to achieving the proposed therapeutic objectives, terminating therapy against the therapist’s advice or without the termination being discussed with the therapist, and not attending a scheduled appointment and not requesting a new one despite having been sent a reminder letter.

In contrast to the above, in two studies carried out in Australia (Davis, Hooke, & Page 2006; Issakidis & Andrews, 2004) and one in Germany (Lincoln et al., 2005), with 946, 731, and 287 patients, respectively, only 12.3%, 10.3%, and 6.3% of patients dropped out, which in this case meant beginning an intensive treatment program (30–80 hours over a period of 1–3 weeks), but failing to complete it. Finally, the study by Westbrook and Kirk (2005) reported a drop-out rate of only 22.5% among 1,646 patients offered cognitive–behavioral therapy as part of the National Health Service in the United Kingdom; drop-out was defined as stopping treatment without this having been agreed previously with the therapist.

Thus, there is a limited amount of data on patients who drop out of cognitive–behavioral treatment in routine clinical practice, and the figures available vary widely according to the definition of drop-out used and the intensity of treatment offered. Furthermore, there are no data regarding aspects such as the reasons why patients drop out of cognitive–behavioral treatment. Given the above, the present study sought to provide further information about a number of key aspects of this issue: percentage of drop-outs, the point at which they occur, reasons given by patients for stopping treatment, and differences between patients who drop out and those who complete treatment.

Method

Participants

The initial sample comprised 233 adult patients who requested an appointment at the Behavioural Therapy Unit (UTC) of the University of Barcelona between October 1998 and December 2004, and whose case file was closed prior to December 31, 2004. The UTC is a fee-paying service that offers treatment to staff and students of the university, as well as to members of the general public.

Measures

A wide variety of standardized questionnaires was used according to the disorder in question. These included the Social Phobia and Anxiety Inventory (Turner, Beidel, Dancu,
& Stanley, 1989) and the Beck Depression Inventory (Beck, Rush, Shaw, & Emery, 1979). As regards the reasons for dropping out of treatment, these were identified by means of specific questions asked by the therapist, and through information offered spontaneously by patients to the center’s secretary.

Drop-outs were considered as those cases stopping treatment prior to completing 14 sessions, except in the event that an agreement had been reached between therapist and patient prior to this point as a result of an appreciable improvement in the latter. This was operationalized in the form of a statistically reliable improvement in the patient—according to the Reliable Change Index of Jacobson and Truax (1991)—on at least one of the standardized questionnaires used; those patients for whom existing standardized questionnaires were considered inappropriate were asked to respond to individualized questionnaires and had to show a reduction of at least 33% in their pretreatment score. The number of 14 sessions was chosen based on research into the dose-response relationship, that is, between the number of sessions attended and the percentage of patients who improve significantly, beyond what would be expected by chance or due to measurement error. The most recent study on the dose-response effect in psychotherapy was conducted by Lambert, Hansen, and Finch (2001); this study also was methodologically more robust and included a larger number of patients than previous research. By means of a survival analysis with a sample of 6,072 American patients, these authors estimated that 14 sessions were required to achieve a significant improvement in 75% of patients. With regard to the second part of our definition, this was based on the fact that drop-out should not be defined solely in terms of failure to attend a minimum number of sessions as some patients improve significantly in fewer sessions.

Treatment

The treatments offered were modeled on empirically supported cognitive–behavioral intervention protocols for the various disorders (Bados, García-Grau, & Fusté, 2002; Chambless & Ollendick, 2001), although in each case the necessary adaptations were made according to the functional analysis of the presented problem. Patients were seen by therapists in their second year of training, under the supervision of expert clinical psychologists (including the first and third authors of this article). The sessions generally lasted for one hour and took place weekly. The mean number of sessions was 16.3 (SD = 15.5, Mdn = 13); of these, a mean number of 2.7 sessions (SD = 1.1) were dedicated to assessment. Treatment was offered on an individual basis.

Results

Characteristics of Participants

Of the 233 initial patients, 16 failed to attend the first session and 14 were referred on at the outset due to their problem not being among those dealt with at the center (e.g., drug dependency). Of the 203 patients remaining: (a) 3 patients (1.5%) were referred to another center specialized in treating another disorder that appeared during treatment, (b) 8 patients (3.9%) interrupted treatment at the therapist’s request due to lack of therapeutic compliance, (c) 89 patients (43.8%) dropped out of treatment (19.2% during the assessment stage and 24.6% during treatment), and (d) 103 patients (50.7%) completed treatment.

The mean age of the 203 patients was 31.2 years (SD = 9.9), and 72.4% were women. Of the total, 53.2% were single; 39.4% were married or cohabiting; and 7.4% were separated, divorced, or widowed. With regard to employment, 47.8% worked fulltime, 15.7%
part-time, 32.5% were unemployed, and 4% were on sick leave or in receipt of a pension. Psychotropic medication was being taken by 36.3%. Over half the patients (59.1%) came from outside the University of Barcelona.

The main diagnoses, in accordance with the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV; American Psychiatric Association, 1994) criteria, were anxiety disorders (54.3%), affective disorders (14.9%), other conditions that may be a focus of clinical attention (12.2%), eating disorders (8%), adaptive disorders (2.7%), impulse control disorders (2.7%), somatoform disorders (2.7%), personality disorders (1.6%), sexual dysfunction (0.5%), and nicotine dependence (0.5%). These diagnoses were made by clinical psychologists by means of the usual clinical interview. The mean duration of disorder among patients was 7.6 years ($SD = 6.9$) and 137 (72.9%) had received previous treatment for their problems.

### Reasons for Dropping Out

Of the 89 patients who dropped out of treatment the majority (28.1%) did so after the first session; 51.7% had dropped out by the fifth session. Table 1 shows the percentage of patients who dropped out in each session. It should also be noted that 43.8% of those who dropped out did so during the assessment stage.

Sixty (67.4%) of the 89 patients provided reasons for dropping out. The main reasons were grouped into three categories in line with previous studies (Castañeda & Mira, 1998; Pekarik, 1992). Of the total, 46.7% dropped out due to low motivation and/or dissatisfaction with the treatment or the therapist, 40% because of external difficulties (transport problems, moving house, timetables, illness, new responsibilities, etc.), and 13.3% because they believed they had improved.

Patients who dropped out did not differ from those who completed treatment in terms of age, sex, marital status, employment status, relationship to the University of Barcelona, duration of their disorder, use of psychotropic medication, number of previous attempts to resolve their problems, having received previous treatment or not, or the type of treatment received. In contrast, and as Table 2 shows, patients who dropped out were more likely to present diagnoses other than anxiety disorders or other conditions that may be a focus of clinical attention, $\chi^2(4, N = 177) = 11.67, p < .020$. Similarly, and as would be expected, patients who dropped out attended fewer sessions ($z$ of the Mann-Whitney $U = -10.922, p < .001$).

### Discussion

Of the 203 patients attending the UTC, 89 (43.8%) dropped out of treatment. Although, among other factors, the different definitions of drop-out make it difficult, if not impossible,
to compare studies, the rate observed here is similar to the 48% reported in the meta-
alysis of Wierzbicki and Pekarik (1993) and within the range of 35 to 55% found in the
more recent studies cited in the Introduction. With respect to the cognitive–behavioral
approach a drop-out rate of 43.8% is also within the range of 35 to 50% reported by
several authors (García-Vera, personal communication, September 20, 2005; Gavino &
Godoy, 1993; Persons et al., 1988; Trepka, 1986), although other studies found much
lower rates (6–22.5%: Hooke & Page, 2006; Issakidis & Andrews, 2004; Lincoln et al.,
2005; Westbrook & Kirk, 2005). However, the latter percentages may not be representa-
tive of what occurs in everyday clinical practice, for the following reasons.

First, in two of these studies (Issakidis & Andrews, 2004; Lincoln et al., 2005)
ceasing to attend during the assessment stage was not considered as drop-out, and it is
likely, given the definition of drop-out, that the same problem would arise in the other
two studies. If in the first two studies drop-out includes those patients who stopped prior
to the treatment stage, the drop-out rates rise from 10.3% and 6.3% to 22.9% and 30.6%,
respectively. Second, Hooke & Page (2006), Issakidis & Andrews (2004), and Lincoln
et al. (2005) all used intensive treatment programs applied over a period of 1–3 weeks.
Thus, it may be that those patients who are most likely to drop out have less probability
of being referred to these centers and of making a commitment to the intensive treatment.
In addition, it could be that it is easier to continue with an intensive treatment program
over a short period than it is to attend 16 to 20 weekly sessions. Finally, in the study by
Westbrook and Kirk (2005) the definition of drop-out in terms of stopping treatment
without this having been previously agreed with the therapist may have underestimated
the drop-out rate; indeed, it is possible that a therapist might agree to terminate treatment
because a patient reports external obstacles to continuing or indicates dissatisfaction with
the type of treatment.

In comparing the reasons for dropping out with other studies (Castañeda & Mira,
1998; Moré et al., 2002; Pekarik, 1983, 1992), the percentage of patients reporting low
motivation and/or dissatisfaction with the treatment or therapist was higher in the present
study (47% vs. 26%, 33%, 35%, and 40%, respectively), and the percentage reporting
external difficulties also was slightly higher (40% vs. 16%, 31%, 35% and 35%). In
contrast, the percentage who attributed drop-out to having improved was considerably

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Table 2

| Differences Between Patients Who Dropped Out of Treatment and Those Who Completed It |
|---------------------------------|-----------------|-----------------|
|                                 | Drop-outs        | Completers      |
|                                 | n  | %    | n  | %    |
| Diagnosis                       |    |      |    |      |
| Anxiety disorder                | 32 | 43.2 | 64 | 62.1 |
| Mood disorder                   | 14 | 18.9 | 10 | 9.7  |
| Eating disorder                 | 10 | 13.5 | 5  | 4.9  |
| Other axis I diagnoses          | 11 | 14.9 | 9  | 8.7  |
| Other conditions that may be a focus of clinical attention | 7  | 9.5  | 15 | 14.6 |
| No. of sessions**               | 89 | 5.10 (3.89) | 103 | 25.70 (16.00) |

*p < .020. **p < .001.
lower (13% vs. 30%, 37%, 39%, and 44%). One factor which may, in part, explain these differences is that the UTC therapists were less experienced.

Among those UTC patients who dropped out, 28% did so after the first session and 52% prior to the fifth. This finding, that the majority of drop-outs occur during the initial stages of treatment, is consistent with that reported by other studies (Fernández et al., 2004; Pang, Lum, Ungvari, Wong, & Leung, 1996; Souto & Crosland, 2005; Trepka, 1986) and suggests that the patients do not find the kind of help they are seeking or do not feel that a good therapeutic relationship has been established.

Regarding the variables that distinguished patients who dropped out of treatment from those who completed it, the former were more likely to present with affective or eating disorders or problems with impulse control. Although it is plausible that people with these disorders are more difficult for trainee therapists to treat and maintain in therapy than are people with anxiety disorders, the predictive value of the diagnostic variable has not proved consistent in research on either cognitive–behavioral therapy (Davis et al., 2006; Issakidis & Andrews, 2004) or psychotherapy in general (Reis & Brown, 1999). Unfortunately, the case notes did not include other variables that may have been more important in terms of predicting drop-out, for example, the quality of the therapeutic relationship or the motivation and expectations of the patient with respect to treatment (Pekarik, 1993; Reis & Brown, 1999; Wierzbicki & Pekarik, 1993).

The present results underline the importance of drop-out from cognitive–behavioral therapy. Even when taking into account that some patients who drop out improve (Pekarik, 1983, 1992; Persons et al, 1988), the problem of drop-out has a considerable impact on the interpretation of treatment efficacy. In line with various reviews, let us suppose that 70% of patients with anxiety or affective disorders improve upon completion of a cognitive–behavioral treatment (Bados, García-Grau, & Fusté, 2003; Eddy, Dutra, Bradley, & Westen, 2004; Fisher & Durham, 1999; Gortner, Gollan, Dobson, & Jacobson, 1998; Westen & Morrison, 2001; Westen, Novotny, & Thompson-Brenner, 2004). This percentage is reduced considerably if the number of drop-outs is also taken into account. Suppose that 40% of patients drop out in everyday clinical practice, and let us also suppose—optimistically—that all those who claim to have done so as a result of improvement (35% of the 40%; that is 14% overall) have actually improved. Under these conditions the percentage of improved patients among the total sample is equivalent to this 14% plus another 42% (the 70% who have improved among the 60% who completed treatment); thus, the actual figure is 56%, rather less promising than the initial rate of 70%.

In sum, although the cognitive–behavioral approach offers effective treatments for a range of disorders (Bados, García-Grau, & Fusté, 2002; Chambless & Ollendick, 2001; Nathan & Gorman, 2002) this efficacy is less than it seems when drop-out rates are taken into account. Furthermore, drop-out seems to be more common in everyday clinical practice than in controlled research trials.

References


