Available online at www.sciencedirect.com
SCIENCE DIRECT
Comprehensive Psychiatry 47 (2006) 241–245
Comprehensive PSYCHIATRY
www.elsevier.com/locate/comppsych

Effect of referral source on outcome with cognitive-behavior therapy self-help

David Mataix-Cols*, Rachel Cameron, Lina Gega, Mark Kenwright, Isaac M. Marks

Department of Psychological Medicine, Imperial College London, W6 8RP London, UK
Department of Psychological Medicine, King's College London, Institute of Psychiatry, SE5 8AF London, UK
Department of Psychology, King's College London, Institute of Psychiatry, SE5 8AF London, UK

Abstract

Little is known about how psychiatric patients' source of referral relates to treatment outcome. This study examines the effect of referral source on clinical outcome with computer-aided cognitive-behavior therapy (CCBT) for anxiety and depressive disorders. Three hundred fifty-five referrals to a clinic that offered CCBT with brief backup from a clinician were classified into general practitioner (GP) referrals (34%), mental health (MH) professional referrals (42%), and self-referrals (SR, 24%), and compared on sociodemographic and clinical features and treatment outcome. At intake, referrals from all 3 sources had similar sociodemographic features and problem duration, but GP referrals had less comorbidity, whereas MH professional referrals were being treated for their problem more often and were less motivated to change than were SR. Among treatment completers, SRs had the least and MH professional referrals had the most impaired work/social adjustment. Each referral group improved on generic and syndrome-specific measures; however, GP referrals improved the most and MH professional referrals the least. The 3 groups received similar therapist support and were equally satisfied after treatment. We conclude that GP referrals had the best outcome with CCBT for anxiety/depressive disorders. Referral source can be important in psychotherapy research because it may affect the type of patient seen and may predict treatment outcome.

1. Introduction

In the UK and many other countries, referral to mental health (MH) services is most often done by general practitioners (GPs) who act as "gatekeepers," followed by MH professionals and self-referrals (SR) [1,2]. In a UK survey, however, up to 70% of people with a neurotic disorder had not consulted their GP for their problem [3]. Lack of such consultation related especially to having more severe symptoms and disability, being male, having no physical illness, being older, having no partner, being South Asian, and working full time. Furthermore, less than 30% of people who consulted a GP were being treated for their problem, and this treatment was often not very appropriate [4]. Such findings challenge health service planners.

Few studies report whether the source of referral of people with a neurotic disorder relates to their demographic and clinical features and outcome with treatment. In one study, people with anxiety disorders improved less with treatment including cognitive-behavior therapy (CBT) if the referral was from a psychiatrist rather than from a GP [5]. The present study reports relevant data from a clinic that offered computer-aided CBT (CCBT) self-help for anxiety/depression with brief backup from a clinician [6]. It received referrals from GPs, MH professionals, and SR. We tested whether the source of referral was related to pretreatment variables, motivation to do CCBT, and outcome and satisfaction with CCBT.

2. Methods

2.1. The clinic and sources of referral

The clinic offered west London residents who had anxiety/depressive disorders free screening and CCBT self-help if they were suitable at screening. Patients were deemed

* Corresponding author. King's College London, Institute of Psychiatry, PO Box 69, SE5 8AF London, UK. Tel.: +44 20 7848 0543; fax: +44 20 7848 0379.
E-mail address: d.mataix@iop.kcl.ac.uk (D. Mataix-Cols).

0010-440X/$ – see front matter © 2006 Elsevier Inc. All rights reserved.
doi:10.1016/j.comppsych.2005.11.007

unsuitable if they had no anxiety/depression, had psychosis, had substance abuse, had a severe personality disorder, had a serious medical condition, had suicide risk, had poor motivation for self-help, or if they preferred face-to-face therapy [6]. If CCBT users encountered difficulties, they could seek brief support from a therapist.

All the clinic's referrals were SR in a broad sense because they had to initiate referral by sending in a completed Screening Questionnaire (SQ) [7]. The SQ could be obtained from health care professionals and their clinics and from advertisements. Most of the referrals had been encouraged by a GP or an MH professional to get an SQ, complete it, and then send it to the clinic.

We defined *SRs* more narrowly as people who sent the clinic an SQ without having been encouraged to do so by a health care professional. They learned about the clinic from notices in the yellow pages, local newspapers, patient organizations, National Health Service (NHS) Direct, or posters in GP surgeries or community MH centers. *General practitioner referrals* were defined as those who came because the GP encouraged them to attend the clinic and gave them an SQ to start the process, and *MH professional referrals* were defined as those who were advised to contact the clinic and were given an SQ by psychiatrists, psychiatric nurses, or community MH teams, or were already on a waiting list for CBT. It is not known how many people were advised by a GP or an MH professional to contact the clinic but did not do so.

2.2. The sample

Referrals had chronic moderately severe neurotic disorders (*International Statistical Classification of Diseases, 10th Revision* [*ICD-10*]) such as depression, generalized anxiety disorder (GAD), mixed anxiety and depression, reaction to stress/adjustment, phobias, panic disorder, and obsessive-compulsive disorder (OCD) (details in Reference [6]). Of the 355 who sent an SQ to the clinic, by the definitions mentioned, 84 (24%) were self-referred, 122 (34%) GP referred, and 149 (42%) MH professional referred (57, psychiatrists; 9, MH nurses; 41, community MH teams; 42, CBT waiting lists).

All patients participated voluntarily after written informed consent was obtained and the local ethics committee approved the study.

2.3. Measures

Outcome was self-rated at pretreatment and posttreatment unless otherwise stated. Lower scores denoted more normality/improvement.

Generic measures for all referrals: 1-item depression scale [8] (at pretreatment only), Work and Social Adjustment Scale (WSAS) [9,10], motivation to do self-help at pretreatment, and satisfaction at posttreatment (both detailed in the "Results" section).

Syndrome-specific measures: For depression and mixed anxiety/depression, Beck Depression Inventory [11] and Hamilton Depression Scale [12]; for GAD, Beck Anxiety Inventory [13]; for phobia/panic, Fear Questionnaire (FQ) [14]; for OCD, Yale-Brown Obsessive-Compulsive Scale [15].

2.4. Data analyses

Univariate analyses of variance and χ^2 tests were used to compare SRs, GP referrals, and MH professional referrals on each available pretreatment variable. Outcome was examined with mixed-model multivariate analyses of variance (MANOVAs) with source of referral as the between-groups factor and pretreatment to posttreatment as the within-subjects factor, followed by least significant difference (LSD) post hoc tests. The P value was set at .05 and all tests were 2-tailed.

3. Results

3.1. Pretreatment features

3.1.1. Sociodemographic

There were no statistically significant differences between the groups on any sociodemographic variable (all $P > .05$). The 3 sources-of-referral groups overall had similar sex (54% female), age (mean = 38 years, SD = 13), socioeconomic status (4% high professional, 28% middle professional, 19% low professional, 12% manual worker, 35% unemployed or student, and 2% unknown), and problem duration (mean = 8.4 years, SD = 9.9).

3.1.2. Number of ICD-10 diagnoses

At the screening interview, the total number of *ICD-10* diagnoses differed significantly among GP referrals (mean = 1.4, SD = 0.7), SR (mean = 1.7, SD = 0.8), and MH professional referrals (mean = 1.6, SD = 0.8) ($F_{2,263} = 3.8$, $P = .02$). On post hoc LSD tests, GP referrals had fewer *ICD-10* diagnoses, that is, less comorbidity, than SR or MH professional referrals (both $P < .03$).

3.1.3. Current and past help for main problem

Of the 139 referrals who gave this information, more than twice MH professional referrals (n = 42, 66%) were currently seeing an MH professional (psychiatrist, psychologist, nurse therapist, counselor, or psychotherapist) for their problem than were GP referrals (n = 12, 27%) or SR (n = 8, 27%) ($\chi^2_2 = 21.2$, $P < .001$). More MH professional referrals were on psychotropic medication than were pooled GP referrals and SR (70% vs 57%; $\chi^2_1 = 4.7$, $P = .03$). In contrast, in all 3 referral groups, a similar vast majority (94%-98%) noted past help for their problems and a similar small minority (14%-24%) noted past CBT.

3.1.4. Symptom severity

In patients who gave pretreatment measures, the 3 referral groups were similarly severe and disabled, except for the patients with phobia. Among the 44 patients with phobia, the phobias were the least severe in GP referrals: vs SR on FQ