



Applying technology to the treatment of cannabis use disorder: Comparing telephone versus Internet delivery using data from two completed trials

Sally E. Rooke, B.A. (Hons), Ph.D. ^{*}, Peter J. Gates, B.Sc., Psych, Adv. Dip. Psych, Ph.D.,
Melissa M. Norberg, B.A., M.S., Ph.D., M.A.P.S., Jan Copeland, B.Sc.(Hons), Ph.D., M.A.P.S.

National Cannabis Prevention and Information Centre, University of New South Wales, PO Box 684, Randwick NSW, 2031, Australia

ARTICLE INFO

Article history:

Received 28 March 2013

Received in revised form 30 July 2013

Accepted 1 August 2013

Keywords:

Cannabis
Addiction
E-health
Telehealth
Technology-based treatments

ABSTRACT

Technology-based interventions such as those delivered by telephone or online may assist in removing significant barriers to treatment seeking for cannabis use disorder. Little research, however, has addressed differing technology-based treatments regarding their comparative effectiveness, and how user profiles may affect compliance and treatment satisfaction. This study addressed this issue by examining these factors in online ($N = 225$) versus telephone ($N = 160$) delivered interventions for cannabis use, using data obtained from two previously published randomized controlled trials conducted by the current authors. Several differences emerged including stronger treatment effects (medium to large effect sizes in the telephone study versus small effect sizes in the Web study) and lower dropout in the telephone intervention (38% vs. 46%). Additionally, around half of the telephone study participants sought concurrent treatment, compared with 2% of participants in the Web study. Demographics and predictors of treatment engagement, retention and satisfaction also varied between the studies. Findings indicate that both telephone and Web-based treatments can be effective in assisting cannabis users to quit or reduce their use; however, participant characteristics may have important implications for treatment preference and outcome, with those who elect telephone-based treatment experiencing stronger outcomes. Thus, participant preference may shape study populations, adherence, and outcome.

© 2013 Elsevier Inc. All rights reserved.

1. Introduction

Cannabis is the most commonly used illicit drug in the developed world – 1.9 million Australians, for example, reported using cannabis in 2010 (Australian Institute of Health and Welfare, 2011). Although once believed to be a relatively harmless substance, it is now known that approximately one out of 10 of those who ever use cannabis meet DSM-IV criteria for cannabis dependence at some point in time (Degenhardt, Hall, & Lynskey, 2001). Further, heavy cannabis use is associated with poorer mental and physical health, lower educational achievement, and impaired cognitive functioning (Fischer, Jefferies, Hall, Room, Goldner, & Rehm, 2011). Despite this, only one in three cannabis-dependent individuals report receiving cannabis use treatment in Australia (Teeson, Hall, Lynskey, & Degenhardt, 2000), and the US (Stinson, Ruan, Pickering, & Grant, 2006). This rate is lower than that of treatment uptake by cocaine and heroin users (Kessler et al., 2001).

There are many barriers that hinder cannabis treatment seeking, including: 1) poor recognition that cannabis use may be problematic or require treatment; 2) the feeling that accessing treatment will invoke stigma; and 3) problems with accessing treatment due to location or wait lists (Ellingstad, Sobell, Sobell, Eickleberry, & Golden,

2006; Gates, Copeland, Swift, & Martin, 2012; Mariani et al., 2011; Strike, Urbanoski, & Rush, 2003; Vendetti, McRee, Miller, Christiansen, Herrell, & The Marijuana Treatment Project Research Group, 2002). Interventions that employ technologies rather than requiring face-to-face interactions offer a promising solution to overcoming these barriers. These treatments can relieve the unmet demand for alcohol and other drug clinicians, and are advantageous in terms of cost and convenience, having the ability to be disseminated to most locations at low cost. Stigmatization concerns are reduced because the treatment can be delivered without face-to-face contact, and in many cases, anonymously.

Two prominent yet considerably different forms of technology-applied interventions are those delivered over the telephone and those delivered via the Internet. Given the considerable need to increase treatment uptake among cannabis users, along with their being very few previous computer and telephone-delivered interventions for cannabis (Budney et al., 2011; Fernandes et al., 2010; Lee, Neighbors, Kilmer, & Larimer, 2010; Tossmann, Jonas, Tensil, Lang, & Struber, 2011), we developed both telephone and Web-based interventions addressing cannabis use disorder. The treatments were largely based on a face-to-face brief treatment previously found to be effective for problematic cannabis use (Copeland, Swift, Roffman, & Stephens, 2001). This face-to-face treatment was informed by the principles of cognitive behavioural therapy (CBT)

^{*} Corresponding author. Tel.: +61 2 9385 0450; fax: +61 2 6773 0201.
E-mail address: s.rooke@unsw.edu.au (S.E. Rooke).

and motivational enhancement therapy (MET), and was specifically based on previous cognitive-behavioral interventions with known efficacy in managing substance use (Goldstein, Niarura, Follick, & Abrams, 1989; Marlatt & Gordon, 1985).

1.1. Telephone intervention

The telephone intervention (Cannabis Assistance Help Line, CAHL) (Gates, Norberg, Copeland, & Digiusto, 2012) consisted of four, approximately 60-minute counselling sessions, conducted 1 week apart, delivered by specially trained telephone counsellors. The first two sessions of the intervention were based on MET to enhance and solidify readiness to change. Between these two sessions, participants were encouraged to begin scheduling a reduction in cannabis use by one-third per week (a cold turkey approach was allowed but not advised). The second two sessions shifted focus to CBT techniques, providing participants with a behavioural skill set to help promote and cope with cannabis reductions, and avoid relapse. Sessions were flexible and focused on enhancing motivation where appropriate. In addition, participants were instructed to complete self-help exercises outlined in a quitting cannabis workbook between sessions. Participants randomly assigned to the control condition in this study were placed on a waitlist.

1.2. Web intervention

The Web intervention, *Reduce Your Use*, contained six core modules: feedback and building motivation, managing smoking urges and withdrawal, changing your thinking, coping strategies and skill enhancement, activities and interpersonal skills, and relapse prevention and lifestyle changes (Rooke, Copeland, Norberg, Hine, & McCambridge, 2013). Modules were undertaken sequentially at intervals chosen by the participant. Feedback on the participant's progress was available throughout the sequence via graphing of cannabis use through the program and detailed feedback on changes in use and related factors such as attitude toward cannabis, goal setting, and weekly expenditure on cannabis. The Website also featured a personalized folder for the participant, blogs from former cannabis users, quick assist links, and weekly automatically generated encouragement emails. Individuals using the Website had the option of reading its text or watching a video of an actor speaking the text. Participants randomly assigned to the control condition in this study received Web-based factsheets on cannabis as a placebo, and were given access to the intervention at the end of the study.

1.3. Distinguishing features of the interventions and implications

While the telephone and Web-based interventions had the similarities of being largely based on the same treatment manual and utilizing technology in order to overcome several of the barriers to treatment seeking associated with face-to-face therapy, the interventions clearly differed in a number of ways that may have important implications for treatment uptake, acceptability, and outcome. The purpose of this study was to explore, via secondary analyses, variations in these two previously evaluated treatment programs (Gates, Norberg et al., 2012; Rooke et al., 2013), including comparing the characteristics of the treatments and individuals who elected to use each treatment; comparing treatment outcomes; examining and comparing predictors of treatment engagement and satisfaction among study participants in each treatment; and making recommendations relating to the suitability of the treatments for different individuals and possible means of improving the treatments to build retention and satisfaction. The rationale behind selecting these two studies for comparison was that they were likely to be most similar in content given that they were based on the same treatment manual, thus enabling us to identify treatment

delivery mode as the major difference between the two studies. As this study was exploratory, we did not include specific hypotheses.

2. Methods

This study compared the results of two previously published randomized controlled trials (Gates, Norberg et al., 2012; Rooke et al., 2013), while also employing secondary analyses on the two datasets individually and combined.

2.1. Participants

The telephone trial included 160 participants and, the Web, 230 participants. Both studies relied primarily on Google advertising to recruit their participants. Other recruitment methods used in both studies included poster advertising, and advertising through clinicians and conferences. The major difference in advertising techniques was that the recruitment into the telephone study occurred via advertising the cannabis helpline, whereas recruitment for the Web study occurred directly through the study advertisements. Participants in the telephone study were recruited between August 2009 and June 2011, while participants in the Web study were recruited between April 2010 and May 2011. A consort diagram for both studies is presented in Fig. 1.

2.2. Measures

Measures that were used in the telephone study, the Web study, or both studies, and were employed in the current research, are described below.

2.2.1. Cannabis use

Past month cannabis use frequency and quantity levels were established in both studies using a timeline followback (TLFB) procedure (Sobell & Sobell, 1992). As well as the extensively validated frequency measure, quantity estimates from the TFLB have been found to be reliable (Norberg, Mackenzie, & Copeland, 2012). Although the TFLB is a somewhat complex measure, previous research supports the validity of its use over the Internet (Pederson, Grow, Duncan, Neighbors, & Larimer, 2012).

2.2.2. Cannabis use dependence

Severity of cannabis dependence was measured using the Severity of Dependence Scale (SDS) (Gossop, Griffiths, Powis, & Strang, 1992) in both the telephone and the Web studies.

2.2.3. Cannabis use problems/abuse

The telephone study assessed cannabis-related problems using the Cannabis Problems Questionnaire (CPQ) (Copeland, Gilmour, Gates, & Swift, 2005), while the Web study examined the number of cannabis abuse symptoms using the GAIN-I (Dennis, White, Titus, & Unsicker, 2006).

2.2.4. Cannabis use motives

Cannabis use motives in both studies were established using the Marijuana Motives Measure (MMM; Simons, Correia, Carey, & Borsari, 1998).

2.2.5. Age of initiation/years since first use

Participants in both studies indicated the age at which they initiated cannabis use. Years since first use was also calculated using this indicator along the participant's current age.

2.2.6. Concurrent treatment seeking

In both studies, participants were asked at follow-up whether they had sought any concurrent professional treatment since commencing their participation in the research.

Download English Version:

<https://daneshyari.com/en/article/329766>

Download Persian Version:

<https://daneshyari.com/article/329766>

[Daneshyari.com](https://daneshyari.com)