Dissemination trial of computer-based psychological treatment in a
drug and alcohol clinical service: Predictors of technology integration

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This thesis is submitted to the
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Declaration

1. The thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to the final version of my thesis being made available worldwide when deposited in the University Digital Repository, subject to the provision of the Copyright Act 1968.

2. The work in this thesis was carried out under the supervision of Dr Frances Kay-Lambkin, Research Fellow, National Drug and Alcohol Research Centre, University of New South Wales; Professor Jenny Bowman within the School of Psychology, The University of Newcastle; and, Mr Steven Childs, Clinical Director, Central Coast Drug and Alcohol Clinical Services.

3. The conduct of this research was approved by the University of Newcastle Human Research Ethics Committee (H-2008-0271), the North Sydney Central Coast Human Research Ethics Committee (08/HARBR/78/79), and the Macquarie University Ethics Review Committee (Human Research, 0806-125M(R)).

Signed: ……………………………………… Date: …20/05/2013……
Acknowledgements

Dedicated to the memory of my mum - Denise Simpson. It was her unwavering belief in me that got me through undergraduate studies. It was that same support, encouragement and sometimes harassment to get things done that I sorely missed over the last couple of years. I miss her immensely and hope she is proud of me.

Before I get into the pleasantries I must make a disclosure - my doctorate, culminating in this paper, has run overtime. But if given the time again I’m not sure I would approach things differently. Postgraduate studies ran second to most other stuff happening in my world. Family, work, having fun and procrastination took precedence. And haven’t I had some great moments while simultaneously juggling the demands of night classes, placements and research. Getting married, renovating houses (N=2) and an interstate move to Geelong, Victoria, in mid-2012 are just some of the highlights. Without question, top of the list was the birth of Willoby in January 2010 and Arlo in March 2013. I now have the privilege of supporting both boys to develop into intelligent, thoughtful and cheeky men. However, I can’t take all the credit. Much of that has to go to my wife, Melanie. Mel - thank you for your patience. It’s time to get this thesis monkey off my back. In saying that, I submit this paper with pride and a genuine sense of achievement.

I would like to sincerely thank my supervisors Frances Kay-Lambkin, Jenny Bowman and Steven Childs for their guidance. To Dr FKL - nothing I could write here would adequately describe your enormous intellectual horsepower, generosity and downright awesomeness. A Nobel Prize along with an illustrious posting somewhere in the academic stratosphere awaits.

Many thanks also to my collaborating student researchers. I also extend my deepest thanks to the clinicians and clients from the Central Coast Drug and Alcohol Clinical Service who generously shared their time, expertise and willingness to try something new.
Abstract

Scope

Controlled efficacy trials have established that the SHADE (Self-Help for Alcohol/other drug use and DEpression) computer-based psychological treatment (CBPT) package produces equivalent, and on some measures superior, benefits to face-to-face treatment for co-existing depression, alcohol and/or cannabis use. As a treatment medium, CBPT offers great potential to improve mental health outcomes and reduce many barriers people face to accessing evidence-based treatment. The potential benefits of CBPT for the broader healthcare system are equally significant. To date, the effectiveness of SHADE remains unknown. Researchers are also yet to establish how and to what extent clinicians might employ CBPT in their clinical practice. This particular study formed part of a larger real-world dissemination trial testing the effectiveness of the SHADE CBPT package, from both a clinician and client perspective, within a publically funded drug and alcohol clinical service.

Purpose

The purpose of this study was to: (1) elicit clinician attitudes and concerns about adopting new treatment innovations into their clinical practice, and the SHADE CBPT package in particular; (2) complete a naturalistic field study of SHADE use within a real-world clinical setting – by observing if, when and how clinicians working in a drug and alcohol clinical service might utilise SHADE in practice; (3) test the effectiveness of SHADE exposure on mental health and alcohol/other drug (AOD) use outcomes, along with self-reported willingness of clients to use CBPT in their treatment; and (4) examine the association between two clinician factors, namely openness to innovation and computer anxiety, and adoption of the SHADE package.
Methodology

The study employed a mixed methods design. Thirteen clinicians working within a publically funded drug and alcohol clinical service on the Central Coast of New South Wales, Australia, were recruited. First, clinicians participated in a semi-structured focus group to reveal obstacles to dissemination and implementation of CBPT into a clinical setting. At baseline, clinicians were also assessed for their computer anxiety (a proxy measure of computer comfort) and openness to innovation. Clinicians were then supplied with the tools needed to use the SHADE CBPT package. Clinicians referred clients to the study (N=77), with consenting clients completing a baseline and 15-week follow-up clinical assessment with an independent research assistant, comprising a range of mental health and AOD measures. Over the course of the study, clinicians submitted session checklists detailing information about session content, including the context and extent to which SHADE was used for each client (N=304 checklists submitted for 35 individual clients).

Results

Thematic analysis identified four major themes relating to clinician attitudes and concerns about adopting the SHADE CBPT package into their clinical practice. ‘Technology’ describes concerns and logistical challenges surrounding the use of multimedia technology; ‘Effectiveness and compatibility’ describes the extent to which new treatments adhere to minimum practice standards while simultaneously aligning with a clinicians preferred theoretical orientation and clinical style; ‘Clinical judgement’ revealed a range of clinical considerations surrounding the use CBPT in clinical practice; and ‘Potential’ describes the perceived opportunity presented by the SHADE package and its likely application within a publically funded drug and alcohol clinical service.
Detailed descriptive statistics showed that clinicians employed the SHADE program in a variety of different ways. When SHADE modules were used, it was generally introduced in the early phase of treatment, on average around session 4 (M=3.77, SD=5.26, Range 1-36). However, only 12 of the 35 clients whose session checklists were available were exposed to the SHADE modules. This is despite 28 of these clients indicating they would be willing to use SHADE if offered to them. Repeated measures ANOVA explored changes in key client outcome variables between baseline and follow-up; and exposure to the SHADE modules during treatment sessions (yes/no). Over the study period, clients reported significant reductions in alcohol and cannabis use, however this was not moderated by exposure to SHADE. Clients also reported a significant reduction in depression, anxiety and stress between baseline and follow-up, but not according to SHADE exposure. Contrary to the hypotheses, no significant predictor relationship was detected between clinician openness to innovation or computer comfort and their propensity to adopt CBPT.

Conclusion

This original study offers preliminary findings of factors that promote and impede clinician adoption of CBPT into their clinical repertoire. Clinicians were open to innovation, not anxious about using computers or technology, yet still chose to utilise the SHADE CBPT package with a small proportion of their clients only. Clinicians in this study tended to use SHADE with one client in their caseload only. Treatment seekers are generally open to receiving CBPT, especially younger people. More research is needed to confirm SHADE’s effectiveness for treating co-existing depression and AOD use problems under real-world conditions. The study offers insight into strategies for successful dissemination and implementation of CBPT into clinical service provision.
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