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8 Making and Keeping the Connection: Improving Consumer Attitudes and Engagement in E-Mental Health Interventions

Abstract: E-mental health services are internet-based treatment options for mental illness. Potential benefits of e-mental health interventions include increased cost effectiveness, enhanced dissemination of evidence based treatments, and decreased burden on existing healthcare systems (Griffiths, Farrer, & Christensen, 2007). E-mental health services may also overcome various barriers to care such as stigma, accessibility, and socioeconomic status. Despite these benefits, consumer uptake and engagement in e-mental health services remains less than optimal. Available research indicates that consumer attitudes toward e-mental health services are problematic (Klein & Cook, 2010) but may be improved by the provision of information about the services (Casey, Joy & Clough, 2013). Research also suggests that the medium by which this information is delivered may have a significant influence on the efficacy of such interventions (Casey et al., 2013). Similarly, client engagement in e-mental health services is less than optimal, with a weighted average of 31% of clients prematurely ceasing involvement in psychological interventions delivered via the internet (Melville, Casey & Kavanagh, 2010). The current chapter will provide a review and discussion of consumer attitudes toward e-mental health services, as well as the efficacy and use of strategies to improve attitudes and enhance engagement. Recommendations for future research and clinical practice are also provided.

E-mental health refers to mental health interventions which are delivered via the internet and encompasses a broad range of service types, including those with and without human interaction (Klein & Cook, 2010; Griffiths, Farrer, & Christensen, 2007). Potential benefits of e-mental health interventions include increased cost effectiveness, enhanced dissemination of evidence based treatments, and decreased burden on existing healthcare systems (Barak, Hen, Boniel-Nissim, & Shapira, 2008)). Within the broad category of e-mental health, there are several types of treatment available.

Information websites provide content regarding diagnosis, symptoms, causes, and treatments for mental health problems (Barak, Klein, & Proudfoot, 2009). These websites are predominantly text based, although interactive elements and multimedia are often included (Barak et al., 2009). For example, Griffiths and colleagues (Griffiths, Christensen, Jorm, Evans & Groves, 2004) developed an information website on depression (*BluePages*) and found that participants

accessing this site reduced their level of personal stigma experienced in regard to depression.

Interventions can also be delivered through internet programs without therapist assistance. Internet programs without therapist assistance are usually presented in a range of self-guided modules, and usually based upon a particular psychological approach (Rickwood, 2010). For example, Casey and colleagues developed an Internet-based treatment program for pathological gambling (Casey, Oei & Raylu, 2010). Known as *Improving the Odds*, this program provided a fully automated version of Internet-based Cognitive Behaviour Therapy (I-CBT) for pathological gambling which was delivered in six modules. When compared to both active treatment and waitlist control conditions, I-CBT was associated with stronger reductions in gambling related behaviour and achieved similar effect sizes to those observed in therapist-administered face to face treatment of pathological gambling.

Another form of e-mental health service is internet programs with therapist assistance, which provide structured psychological programs with the support of a health professional. This support can take many forms, including reminders and personalised feedback (Barak et al., 2009). For example, Berger, Hohl, and Caspar (2009) reported that combining I-CBT with therapist contact via email resulted in significant reductions in social anxiety, which was maintained six months after the intervention. Online counselling is also an effective treatment option, as King et al. (2009) demonstrated in their examination of online counselling to treat substance abuse.. Participants in this study were outpatients at an addiction treatment centre (N = 37) who were randomly assigned to receive counselling via internet video conferencing, or face-to-face sessions. After the six-week intervention, there were no significant differences between the groups in terms of program adherence or drug use.

In summary, e-mental health services appear to be a promising medium to administer treatment. In an extensive meta-analysis, Barak, et al., (2008) analysed 92 studies utilising e-mental health interventions. Overall, e-mental health services were found to effectively reduce symptoms across a range of conditions, with an effect size of 0.53. Notably, in the 14 studies directly comparing e-mental services with face-to-face treatments, there were no significant differences in treatment efficacy. Despite this evidence that e-mental health services can be effective, there has been relatively little examination of how well consumers engage with these services (Hordern, Georgiou, Whetton, & Progmet, 2011). Client engagement forms part of the broader concept of adherence to the therapeutic process (Clough & Casey, 2011). Two key issues in client engagement associated with e-mental health services are the rates of uptake (i.e., clients entering the service) and dropout (i.e., people ceasing the service).

8.1 Uptake of E-mental Health Services

A number of studies indicate that uptake rates of e-mental health services can be relatively low. In one study, participants were recruited to a guided online CBT program for depression from 11 participating general practitioners, who first identified eligible patients from his or her personal files, then sent out the study information packs (Woodford, Farrand, Bessant, & Williams, 2011). Only seven participants were recruited over eight months from 1,606 study packages sent out. In another study on the evaluation of the effectiveness of an online treatment program for depression, out of 12,051 study packages sent out to eligible depressed and non-depressed individuals only 255 people were recruited (Clarke et al., 2005). However, there are a number of limitations in the studies finding low-uptake of computer and online treatment programs for mental health conditions. A number of studies in this area have neglected to publish their recruitment methods and treatment uptake rates as well as there being insufficient trials conducted in routine settings (Bennett & Glasgow, 2009). Reported studies vary considerably on recruitment methods: participants are either self-selected, or specifically selected by health-care practitioners, and it is possible that the reluctance to take up treatment could be related to reluctance to be involved in a clinical trial and not the medium of treatment itself (Kaltenthaler et al., 2008). Despite these limitations, there is a growing consensus that participation in online treatment program is less than optimal.

8.2 Consumer Satisfaction with E-mental Health Services

Paradoxically, e-mental health services are well accepted by consumers who have actually participated in e-mental health treatments. Research has shown high satisfaction rates amongst users who have completed, or are participating in, an online treatment program. Titov and colleagues investigated therapist assisted internet-based treatment for depression (Titov, Andrews, Johnston, Schwencke, & Choi, 2009). Treatment involved an eight to ten week program consisting of online lessons, homework, an online discussion forum, and email communication with a therapist. Immediately following the completion of treatment, the participants completed measures which assessed their opinions about the face-to-face and e-mental health treatment options. These measures included rating e-mental health treatment on several dimensions. In terms of preference and efficacy, no significant differences were found between endorsements for e-mental health and face-to-face services. Immediately after participation, the treatment was rated as logical (9/10) and effective (8/10), and participants reported that they would be confident recommending the treatment to others (9/10). At six months follow up, there was no change in the rating of treatment efficacy, and only slight reductions in ratings of logic (8/10) and confidence in recommending the treatment (8/10). In a study that directly

compared behavioural treatment delivered via an internet-based program with therapist assistance to or face-to-face therapy Kiropoulos and colleagues reported that after 12 weeks of treatment for panic disorder, both treatment conditions were rated as equally satisfying and credible at the conclusion of treatment and achieved significant improvements in panic frequency, depression, and stress (Kiropoulos et al., 2008). Although the face-to-face group reported more enjoyment during therapist interactions, there was no significant difference in the degree of therapeutic alliance achieved.

8.3 Attitudes to E-mental Health Services

Attitudes of potential consumers of e-mental health services generally remain problematic. A consistent finding across the literature is that face-to-face services are preferred in comparison to e-mental health services. Tsan & Day (2007) analysed attitudes towards counselling delivered via face-to-face treatment, online instant messaging, internet microphone, email or internet video conferencing in a sample of college students ($N = 176$). Eighty-seven per cent of the sample reported a preference for face-to-face treatment. Similarly, Horgan and Sweeney (2010) reported that in a sample of university students aged between 18 and 24 years ($N = 922$), e-mental health services were the preferred treatment format for only 20.6 per cent of the sample. Opinions and experiences with e-mental health services have also been assessed by Neal, Campbell, Williams, Liu, & Nussbaumer (2011) who conducted an online study of Canadians aged between 18 and 25 years of age ($N = 1308$). In this study, participants were asked about their opinions and experience in regards to online-mental health treatment. Sixty-eight per cent of the sample indicated that they would not consider contacting a psychologist online, and only 17 per cent reported that they would use a self-directed online program if they needed help.

Attitudes regarding the helpfulness of mental health services have also been examined by Leach and colleagues in a study that assessed the perceived helpfulness of treatments delivered via a website, book or health educator (Leach, Christensen, Griffiths, Jorm, & Mackinnon, 2007). Although over half of the sample ($N = 3998$) stated that a website would be useful, it was rated as the least helpful treatment option. In a study of university students ($N = 330$) in the United Kingdom, participants were provided with a description of a traumatic event, resulting post traumatic stress disorder symptoms, and 14 potential treatment options (Tarrier, Liversidge, & Gregg, 2006). Participants rated the treatments on several dimensions, and ranked them according to their suitability for treating post traumatic stress disorder. Information was also gathered about prior knowledge of the services, and whether the prior knowledge was positive or negative. Notably, only 8.2 per cent of the sample were familiar with computer-based therapy, and 6.6 per cent with e-therapy. These findings contrasted with knowledge of face-to-face treatments such as cognitive therapy (43.5

per cent), group therapy (63.8 per cent), and family therapy (47 per cent). Additionally, the e-mental health services were amongst the least endorsed treatments, ranking 12th and 13th out of the 14 services. Carper, McHugh and Barlow (2011) gave information about various forms of computer based psychological treatment (e.g., email-based psychotherapy) to patients seeking treatment for an anxiety or a related disorder. These patients were asked to rank the various forms of computer based psychological treatment and to answer a questionnaire about their perceptions of computerized therapy. Overall, the patients' perceptions of computer based psychological therapy were found to be neutral to slightly negative and they reported low intentions of utilising computer based psychological therapy in the future. Analysis of individual items revealed that participants did, however, report that computer-based treatment had advantages such as reduced cost, being easier to access, and flexibility in meeting individual needs. This finding is similar to other studies in which participants reported perceiving advantages to internet-based treatment but expressed an overall preference for face-to-face treatment (Mohr et al., 2010).

One explanation for the lack of interest in internet-based treatment is the general lack of information that potential consumers may have about this treatment modality. There is certainly evidence that knowledge about treatment is associated with treatment preferences. For instance, primary care patients (N = 1187) with depressive symptoms responded to a telephone survey regarding their preferences for treatment and their knowledge about treatment (Dwight-Johnson, Sherbourne, Liao & Wells, 2000). The survey revealed that patients with greater knowledge about antidepressant medication were more likely than those without knowledge to desire active treatment for depression (medication, individual counselling or group counselling). Counselling was the most preferred treatment among participants who reported preferring active treatment over no treatment. Patients reporting a preference for counselling also reported having a greater knowledge about counselling than patients who did not prefer counselling.

The provision of information regarding treatment outcomes has also been shown to have a positive impact on hopefulness about treatment outcomes and psychotherapy treatment uptake rates (Woodhead, Ivan & Emery, 2012). In this study, participants (N = 50) aged over 60 years with depressive symptoms, who were recommended to receive psychotherapy were also given information about the outcomes achieved by older adults in psychotherapy, (i.e., 80% remained depression free 3 years after psychotherapy). Participants then rated how important they perceived the information to be and were given the opportunity to receive psychotherapy. Weak, but significant, positive correlations were found between participants who elected to initiate treatment and the participants' ratings of how important they perceived the information to be (Spearman's $r = 0.30$, $p = 0.04$). That is, participants who elected to initiate treatment reported that they perceived the information regarding treatment outcomes to be important.

Unfortunately, potential consumers of e-mental health services appear to have relatively little information about these services. Carper et al. (2011) found that the observability of computer based psychological treatment was rated as very low, with potential consumers reporting that they did not often see treatment being used in this format and were unfamiliar with it. This finding may indicate that there is a need to better understand an internet-based treatment in order to feel confident accessing treatment in this modality. Thus, it is possible that the provision of more detailed information may enhance the likelihood of engaging in internet-based treatment.

The possibility that additional information regarding internet-based treatment may increase utilisation of this treatment medium is supported by an Australian online survey (Klein and Cook, 2010). Participants ($N = 218$) were asked whether they would prefer to use face-to-face treatment or internet-based treatment if they were experiencing a mental health problem. In line with previous research, the majority of participants (77.1%) reported a preference for face-to-face treatment. However, only 9.6% of participants reported that they would not use e-mental health services. So, while the majority of participants indicated a preference for face-to-face treatment, only a small number of participants indicated that they would not use internet-based treatment. In attempting to clarify this finding, the researchers examined the concerns raised by participants in regard to internet-based health services. Fifty-four percent of participants indicated a need to know more about internet-based health services, suggesting a lack of information about these type of services may underlie the reluctance to access treatment offered through this medium.

8.4 Providing Information to Improve Attitudes

Despite a lack of awareness about e-mental health services, research indicates that individuals are receptive to gaining more information about these treatment options. Furthermore, there is preliminary evidence that knowledge and familiarity may enhance attitudes towards services. A number of studies have investigated the impact of providing information to improve attitudes towards mental health services, although most of this has been conducted with regard to services provided face to face. The American Psychological Association conducted a national media campaign to increase usage of psychological services (Farberman, 1997). This campaign provided consumers with information about psychological services and their potential benefits. It resulted in a marked increase in enquiries from states in which the campaign had been implemented. Esters, Cooker, and Ittenbach (1988) delivered a school based intervention to adolescents between 13 and 17 years of age ($N = 40$). The treatment group in this study viewed a video presentation about mental illness, local help sources, and the qualifications of mental health professionals. The control group attended their normal classes, and did not watch the video presentation. In comparison to the control group, participants in the intervention group reported a

significant increase in mental health knowledge as well as significantly attitudes towards help seeking. These findings were maintained at a 12 week follow up, and indicate that education can influence attitudes about mental illness.

Sharp, Hargrove, Johnson, & Deal (2006) examined the impact of an informational intervention upon the help seeking attitudes of American university students ($N = 123$). All participants watched a 40 minute lecture and slide show presentation. In the intervention group, the topics addressed in the presentation were psychological disorders, the therapeutic process, and the role of mental health professionals. Participants in the control group watched a presentation on astronomy. Participants were also provided with the contact details of their local mental health services. Attitudes towards help seeking and opinions about mental illness were significantly more improved for participants in the intervention group and were maintained at four weeks following the study. Sawamura, Ito, Koyama, Tajima and Higuchi (2010) provided 122 psychiatric clinic outpatients who met criteria for a depressive disorder with either treatment as usual or treatment with the provision of an additional educational leaflet. The educational leaflet included information about depressive disorders, available treatments, and strategies for coping with stress. Participants were asked to indicate their attitudes and beliefs about depression and antidepressants at their first and third visit. Participants who received the educational leaflet demonstrated significantly improved attitudes and beliefs about depression and antidepressant treatment at their third visit, whereas the attitudes and beliefs of participants who did not receive the leaflet did not change.

Nicholas, Oliver, Lee, and O'Brien (2004) examined the impact of informational intervention about e-mental health services in secondary schools with participants aged 13 to 18 years ($N = 243$). The topic of the intervention was 'Reach Out', an e-mental health service for young people in Australia. Interactive presentations were used to promote Reach Out as a place where young people could seek help for a variety of personal problems. Following the presentation, 70% of participants reported that the intervention had taught them where they could seek help if they were experiencing difficulties and 45% of participants visited the Reach Out website following the presentation. Notably, six months after the presentation, 63 per cent of participants reported that they would use the Reach Out website in the future if they needed help. Although the interpretation of these findings is constrained by the absence of a control group, this study suggests that information may enhance help seeking intentions and awareness of e-mental health services.

An important issue to consider is the type of information that may improve the attitudes of potential utilisers of these treatments (Sawamura et al, 2010). Young (2005) asked clients ($N = 48$) taking part in an online treatment program for internet addiction about their decision to access online counselling. Of these clients 71% reported that the convenience and flexibility offered by online treatment was an important factor and 52% reported that understanding the credentials of the counsellor was also an important factor. Bradley (2010) explored what features of an internet-based self-

help program for psychological distress would encourage adolescents to seek help. Adolescents reported an online treatment program that was credible, offered privacy, convenience, and accessibility was the most appealing.

Providing information about issues of privacy and confidentiality may be particularly important to users of e-mental health services. A survey of internet users ($N = 7014$) in America compared the internet usage patterns of participants who reported experiencing a stigmatised illness, such as depression, to those who reported other health related conditions, such as back pain (Berger, Wagner & Baker, 2005). The survey revealed that participants who reported a stigmatised illness were significantly more likely to access the internet for health information and to communicate with clinicians on the internet about their condition than participants who did not report having a stigmatised illness

Providing information about the efficacy of treatment programs may also be important, although again much of this evidence comes from research into improving attitudes toward face to face psychological interventions. Interviews with employees of a manufacturing plant ($N = 984$) revealed that the likelihood of accessing an employee assistance program providing psychological treatment for drinking problems was directly increased by their belief in the efficacy of the program (Delaney, Grube & Ames, 1998). Ahmed & Westra (2009) provided participants demonstrating a high fear of negative evaluation with a rationale about CBT for the treatment of social anxiety. Participants' expectancies for improvements in their anxiety and their perceived helpfulness of exposure to information about treatment efficacy were measured before and after being exposed to the information. Participants' perceptions of the helpfulness of treatment and their expectations for anxiety change significantly improved following the presentation of a rationale for therapy. Mitchell and Gordon (2007) found that a sample of university students rated a computerised CBT treatment for depression as less credible, unlikely to help improve depression, and also reported that they were unlikely to use it. However, after their participants were exposed to a sample demonstration of the treatment, increases were found in credibility, expectation for improvement, and perceived likelihood of using the treatment in the future.

It is evident that an association exists between treatment preferences and consumers knowledge or understanding of available treatments. Therefore, providing information regarding the outcomes and process of e-mental health services may increase their perceived likelihood of uptake. Casey, Joy & Clough (2013) directly tested this possibility in a randomised control study by investigating the relationship between knowledge of e-mental health services and attitudes toward e-mental health services. The attitudes examined were the perceived helpfulness of e-mental health services and the likelihood of using the services. Participants ($N = 217$) were randomly assigned to one of three conditions: provision of e-mental health information by means of film; provision of e-mental health information by text; or provision of no e-mental health information. Main effects were found for type of e-mental health

service and for both perceived helpfulness and likelihood of future use. Participants perceived online programs without therapist assistance as being significantly less helpful, and reported reduced likelihood of engaging these programs when compared to other e-mental health services. There was also a main effect for type of information intervention, in that the text group reported higher likelihood of e-mental health use in the future, whereas there were no effects for the film group. Results indicated that participants perceive important differences between types of e-mental health services, and that a brief text intervention can improve attitudes toward these services.

Finally, provision of information may also be important for clinicians, with research suggesting that particularly in rural areas health professionals play an important role in the referral of clients to treatment pathways (Griffiths & Christensen, 2007). However, research suggests that professional opinions of e-mental health programs remain largely unfavourable (Tarrier et al., 2006), although more research is needed in this area.

8.5 Adherence and Dropout from E-mental Health services

Researchers vary considerably in their use of the terms to describe clients ceasing treatment. “Premature termination”, “attrition” and “dropout” are used interchangeably in the literature to indicate clients who terminate before the completion of treatment. High attrition rates are common for e-mental health services and are thought to be due to the low intensity and unstructured nature of many online treatment programs (Bennett & Glasgow, 2009). However, attrition rates are found to be similar to traditional face-to-face therapy when online treatment programs are combined with therapist support (Kaltenthaler et al, 2008; Melville, Casey, & Kavanagh, 2010; Proudfoot, 2004). In a comprehensive review of the literature (1990 to 2009) on the extent of dropout from internet-based treatment programs for psychological disorders, a weighted mean of 31% was found for dropout rates (Melville et al., 2010). Within e-mental health, client engagement includes not only initial uptake of services but also participation in therapeutic modules and activities (i.e., adherence), and completion of a therapeutic program. Research investigating strategies to minimize client dropout in e-mental health services is currently limited, as is research investigating ways of enhancing client adherence to these programs.

8.6 Adherence

Client adherence during a psychological program is an important predictor of treatment outcome. This relationship is particularly true when considering self help or unguided programs (Rapee, Abbott, Baillie, & Gaston, 2007). Nordgreen and colleagues (2012) examined patient adherence in guided and unguided e-mental health treatment for

social phobia. Results indicated greater adherence for guided compared to unguided treatment. For the unguided self-help group, higher participant ratings of treatment credibility were associated with greater treatment adherence. This effect was not found for the guided group, suggesting that client perceptions of treatment credibility may be of particular importance for programs with reduced or no therapist contact.

The efficacy of internet delivered therapy with therapist telephone support was examined by Carlbring et al (2007). Participants in the treatment group were found to have high adherence to the social anxiety program, with 93% of participants completing all modules of the program. However, as the study did not contain a comparison treatment group, a direct comparison of the unique contribution of the telephone support was not possible. Although patient adherence was found to be significantly greater (93% vs. 62%) when compared to participants from a previous study (Andersson et al., 2006) that completed the same e-therapy program without telephone support. These results indicate that client engagement during e-mental health programs may be increased by the addition of minimal therapist support and contact during the program.

8.7 Dropout

Although Melville et al (2010) failed to find consistent associations between the various client, contextual, and treatment related variables among participants who dropped out of e-mental health programs, there is some evidence that dropout may be lower among those clients with more favourable treatment expectations and perceptions of credibility prior to treatment commencing (Cavanagh et al., 2009). This finding further supports the importance of interventions providing information not only to increase uptake but also to potentially reduce dropout once clients have started programs. Similarly, minimal therapist contact either by phone or email may be an important strategy for increasing client adherence to treatment modules, and promoting greater program completion (Andersson et al., 2006; Carlbring et al., 2007). Such therapist contact might also be beneficial for the recovery of participants who dropout of treatment prematurely.

Alternatively, it may be worth considering how this form of contact can be built into e-mental health services. Melville, Casey, and Kavanagh (in preparation) randomised those participants who dropped out of an online treatment program for pathological gambling to receive either an automated treatment recovery intervention or no intervention. Those in the treatment recovery group were automatically emailed following dropout from the program, with the email inviting them to a return to treatment intervention. The return to treatment intervention was an online program, which explored participant reasons for discontinuing treatment, and provided problem solving and motivational strategies for continuing treatment. At the end of the return to treatment intervention, participants were then asked if they would like

to resume their work in the original e-therapy program. Participants in the control condition also received an email upon dropout from the e-therapy program. This email acknowledged their withdrawal from the program and offered participants the option to return to treatment, but did not offer the recovery intervention. Results indicated significant support for this approach to reducing dropout, with 32% of those participants in the treatment recovery condition returning to treatment compared to 9% in the control condition. Interventions such as this, which require minimal or no therapist input, could substantially improve client engagement and reduce dropout in e-mental health programs.

8.8 Summary

The effectiveness of e-mental health therapies is dependent on client engagement with these services. These engagement behaviours can include initial uptake of services, engagement with activities and modules, and completion of programs. A range of efficacious e-mental health programs now exist, however ongoing difficulties with client engagement in these services remain. Recent research suggests that uptake of services can be improved through educational interventions, which may be important for both health professionals and consumers.

These educational interventions may also be beneficial in improving client perceptions of credibility and effectiveness of e-mental health interventions, particularly for those programs with minimal or no therapist contact. Improving client attitudes and understanding of e-mental health programs has been found to have beneficial effects for engagement with therapeutic content, as well as reducing dropout. Client engagement with e-mental health programs would also likely improve with the integration of dropout recovery programs, such as those used by Melville et al. (in preparation).

Despite the ongoing difficulties with client engagement currently observed in e-mental health programs, the difficulties reported are similar to those observed in face-to-face treatment programs. Ongoing difficulties exist in traditional therapy modalities with regards to help seeking behaviours and uptake of services, engagement during therapy and homework adherence, as well as the completion of treatment programs. A considerable amount of research has been conducted in these areas with various therapeutic strategies (e.g., motivational, session contracting, dropout recovery) found to enhance client engagement in these areas. As of yet, research in the use of these engagement interventions is limited with regards to e-mental health interventions. Future research should explore the integration of these strategies with the aim of increasing client engagement and thereby the effectiveness of e-mental health programs.

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