Internet and psychological treatment. How well can they be combined?

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Abstract

As evidenced by several trials, cognitive behavior therapy (CBT) is a highly effective treatment for many conditions including panic disorder with or without agoraphobia. However, therapists are short in supply, and patients with conditions like agoraphobia may not seek therapy due to fear of leaving their homes or traveling certain distances. A major challenge therefore is to increase the accessibility and affordability of empirically supported psychological treatments. The results of randomized controlled trials testing Internet delivered self-help programs generally provide evidence to support the continued use and development for a range of conditions. However, there are special treatment aspects that need to be taken into consideration such as internet access and the idiosyncrasies provided in traditional face to face therapies.

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1. Introduction

A modern alternative to printed self-help manuals is computers (Andersson & Carlbring, 2003; King & Moreggi, 1998; Smith & Senior, 2001). Computerized
programs have been used for a number of years for assessment, diagnosis, and education (Newman, Consoli, & Taylor, 1997), but most controversial has been their use for psychological treatment (Proudfoot et al., 2003). Until recently, computer mediated therapies have been offered without any patient-therapist interaction (Marks, Shaw, & Parkin, 1998). However, there now seems to have been a shift toward using the World Wide Web (WWW; Zuckerman, 2003) to inexpensively administer self-help treatment instructions, in combination with some sort of text-based human interaction (e.g., e-mail). However, there does not yet seem to be any golden standard for the delivery of these novel minimal therapist contact therapies (Ragusea & VandeCreek, 2003). The aim of this brief paper is to review the recent development of Internet-based psychological treatment, with an emphasis on cognitive-behavioral applications.

2. Brief review of Internet-based treatments

Internet-based psychological interventions, recently referred to as “Interapy” (Lange et al., 2000; Lange et al., 2003; Lange, van de Ven, & Schrieken, 2003; Lange, van de Ven, Schrieken, & Emmelkamp, 2001), can be divided into four categories: (1) self-administered therapy or pure self-help; (2) predominately self-help (i.e. therapist assesses and provides initial rationale, and teaches how to use the self-help tool); (3) minimal contact therapy (i.e. active involvement of a therapist, though to a lesser degree than traditional therapy); (4) predominantly therapist administered therapy (i.e. regular contact with therapist for a number of sessions, but in conjunction with self-help material (Scogin, 2003)). Most of the randomized controlled trails on Internet-based treatment have been done on minimal contact therapy. Although an early review of articles indexed in Medline up until 2001 concluded that the methodological quality of many Internet-based studies was poor (Bessell et al., 2002), and that there was almost a complete lack of evidence of any effects this may have on health outcomes, there are a number of more recent studies indexed in PsycINFO and Medline. Hence, a more recent review by Ritterband and co-workers was more positive (Ritterband et al. 2003; Ritterband, Gonder-Frederick, et al. 2003) but yet another review by Nguyen, Carrieri-Kohlman, Rankin, Slaughter, and Stulbarg (2004) concerns were again raised regarding the future use of the Internet. Generally, these reviewers have considered the scientific evidence to be weak at best or even absent.

A Medline and PsychINFO search of the literature (including unpublished studies known to the authors) reveal an emerging data base, which will soon be ready for a meta-analysis. This search reveals that programs have been used successfully in the treatment of psychiatric conditions such as panic disorder (Carlbring, Ekselius, & Andersson, 2003; Carlbring et al. 2004; Carlbring, Nilsson-Ihrfelt et al. 2004; Carlbring, Westling, Ljungstrand, Ekselius, & Andersson, 2001; Klein & Richards, 2000; Richards & Alvarenga, 2002), agoraphobia (Alcaniz et al., 2003), posttraumatic stress symptoms (Lange et al., 2000; Lange, van de Ven, et al., 2001; Lange et al., 2003; Lange, van de Ven, et al., 2003), depression (Andersson et al. 2004; Andersson, Carlbring, Kaldo, & Strömd, 2004; Christensen, Griffiths, & Jorm, 2004; Clarke et al.,...
Interventions have also targeted other topics such as public speaking fear (Botella et al., 2000), restructuring on the irrational career beliefs of adolescent girls (Kovalski & Horan, 1999), reducing risk factors for eating disorders (Winzelberg et al., 2000; Zabinski et al., 2001), weight loss (Tate, Jackvony, & Wing, 2003; Tate, Wing, & Winett, 2001), obesity (Harvey-Borio et al., 2002), jet-lag symptoms (Lieberman, 2003), and stress (Zetterqvist, Maanmies, Strom, & Andersson, 2003). Other applications in the field of health psychology have targeted headache (Andersson, Lundstrom, & Strom, 2003; Devineni & Blanchard, 2004; Strom, Pettersson, & Andersson, 2000), insomnia (Strom, Pettersson, & Andersson, 2004), distress associated with tinnitus (Andersson & Kaldo, 2004; Andersson, Stromgren, Strom, & Lyttkens, 2002; Kaldo, Larsen, & Andersson, submitted), breast cancer (Lieberman et al., 2003; Winzelberg et al., 2003), chronic pain (Buhrman, Faltenhag, Strom, & Andersson, 2004; Lorig et al., 2002), encopresis in children (Ritterband et al., 2003b), and smoking (Brandon, Collins, Juliano, & Lazev, 2000; Jerome, Fiero, & Behar, 2000). More or less, these programs have relied on cognitive behavioral methods, although there are exceptions of less technique focused applications (e.g., Houston, Cooper, & Ford, 2002). Overall, these studies suggest that the Internet is more than promising as a medium for the dissemination of psychological treatment methods, and in particular cognitive behavioural methods. The findings also represent a challenge for psychotherapy researchers who consistently argue for the role of non-specific ‘common factors’ related to the psychotherapeutic relation (Lambert, 2004), which is necessarily are less present in Internet based treatment although it might not be absent (e.g., clients can develop a close relation to a therapist via e-mail correspondence). Still, we are aware of only two direct comparisons between Internet and face-to-face delivered interventions (e.g., Carlbring et al. 2004; Carlbring, Nilsson-Ihrfelt et al. 2004; Kaldo et al., unpublished data).

3. Advantages and caveats

Generally, according to Wright and Wright (1997), computer-assisted therapy has been well accepted by patients. In fact, patients are more likely to disclose suicide plans to a computer than to a human being (Proudfoot et al., 2003). According to Zabinski, Celio, Wilfley, and Taylor (2003), on-line interventions also offer practical advantages. Time constraints are removed and communication can be done asynchronously. Winzelberg (1997) found that participants in an electronic support group for eating disorders posted more than half of the messages between 18.00 and 07.00 h, times when traditional therapy is unavailable. Furthermore, treatment compliance can be easily and accurately monitored through computerized tracking devices, the use of aliases can reduce social barriers to self-disclosure, and finally, computerized interventions can be disseminated easily in a cost-efficient manner.

Despite promising findings and the advantages discussed, the drawbacks of the Internet must also be acknowledged. One obvious problem is computer ownership and Internet access, which, though rapidly expanding, is still not available to
everyone (Robinson, Flowers, Alperson, & Norris, 1999). According to a report by Official Statistics of Sweden (SCB; Statistics Sweden, 2002) slightly <70% of the Swedish population aged 16–64 used the Internet. People aged 16–19 used the Internet most frequently (90%). Generally, the older the person the less likely he/she is to use the Internet. Most of the users spend 1–5 h a week, only 21% of the women and 33% of the men use the Internet more than 6 h a week (Statistics Sweden, 2004). Furthermore, the technology is imperfect. Differences in computer software can interfere with communication and determined hackers may be able to infiltrate even secure servers. A good way to counter these potential problems is using SSL-certificates, encrypted storage in databases, anonymous log-in names, automatic timed log-off and not caching the web content on the local computer (Nosek, Banaji, & Greenwald, 2002).

Another obvious potential problem is the lack of visual cues and facial expressions that can aid in understanding words and phrases in face-to-face contact (Bloom, 1998; Childress, 2001; Childress & Asamen, 1998; Mallen, Day, & Green, 2003). However, it has been suggested that it is possible to overcome this limitation by adding in parenthetical remarks (i.e. “smilies” or “emotional bracketing”) to express implied undertones that would have been more easily understood in person (Zabinski et al., 2003). The therapist can also actively check in with participants with follow-up questions to comments that may cause concern.

According to Kraut et al. (1998), there is a potential risk for Internet use to decrease communication with family members and decrease the size of one’s social network and increase isolation. However, a 3-year follow-up of the same respondents found that negative effects dissipated (Kraut et al., 2002). In fact, the sample generally experienced positive effects of using the Internet on communication, social involvement, and well-being. However, consistent with a “rich get richer” model, using the Internet predicted better outcomes for extraverts and those with more social support but worse outcomes for introverts and those with less support.

Perhaps the most critical point is how psychological crises are to be identified and managed in Internet-delivered interventions. For example, when panic disorder is targeted, the need for a thorough assessment is particularly important because panic disorder itself is associated with an increased risk of suicide attempts (Weissman, Klerman, Markowitz, & Ouellette, 1989). When combined with significant depression as it often is (Gorman & Coplan, 1996), panic disorder is also associated with a substantially increased risk of suicide completions (Hirschfeld, 1996). Consequently, there is always the possibility of a psychological crisis occurring for people with panic disorder in psychotherapy. When therapy is conducted on a face-to-face basis, the therapist is usually on hand to assess and manage it, but because of their remoteness from the therapy center, this is usually not possible for participants who are enrolled in Internet-based programs. It is therefore also important to have details of each participant’s primary care physician in the event of a psychological emergency (e.g., threatened suicide). One way to counter this is to at an early stage exclude potential participants who are suffering from other psychiatric disorders needing immediate attention, who are significantly depressed, and/or who seem at risk of suicide. Earlier studies have used the (Montgomery Asberg Depression
Rating Scale (MADRS); Svanborg & Åsberg, 2001) for this purpose. Often using a cut-off score of 21 (i.e., Carlbring et al., 2001) or 30 (i.e., Andersson, Bergström, Holländare, Ekselius, & Carlbring, 2004) for exclusion. However, the patients’ status can change during the course of the treatment. It is important to monitor the participants, preferably on a weekly basis (e.g., using the Hospital Anxiety and Depression Scale (HADS); Zigmond & Snaith, 1983). If a weekly monitoring score reaches a cut-off (e.g., 15 or above on HADS) the therapist should get an automatic e-mail prompting him or her to call the participant and his/her primary care physician.

4. Conclusions

As Rosen (1987) pointed out, it is very important that professional standards, not commercial considerations, influence the development and use of self-help materials. If proper assessment is not done before commencing treatment, there is a significant risk that someone with for example panic disorder symptoms, but who actually has a physical disorder (e.g., hyperthyroidism), tries psychological self-help without any success. Other problems Rosen pointed out are the possible problems with a client misunderstanding or misapplying instructions or failing to comply with therapeutic regimens. In the more comprehensive treatment programs, compliance, understanding, and progress are monitored on a weekly basis (e.g., Andersson et al. 2004; Andersson, Carlbring et al. 2004; Carlbring et al. 2004; Carlbring, Nilsson-Ihrfelt et al. 2004). However, should treatment failure occur, there are still potential risks of negative self-attributions, and of reduced belief in today’s therapeutic techniques.

The present brief review was not a systematic review of the literature and not a meta-analysis which would be the next step now as the number of studies being conducted grows at a fast rate. We have not commented on other applications of the Internet in psychological research such as web-based experiments (Birnbaum, 2000), or studies on the psychometric properties of web-based questionnaires (Buchanan, 2003). Another issue concerns how well the Internet can be used for diagnostic purposes (e.g., Andersson et al. 2004; Andersson, Carlbring et al. 2004; Carlbring et al., 2002).

In conclusion, the Internet is being used as a source of mental health information as well as structured treatment programs for people with mental health concerns or problems as well as health problems in general and preventive interventions. Although promising as a form of intervention, there is a need for more research on the efficacy of Internet-based treatment for panic disorder and on comparisons with evidence-based face-to-face therapies.

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References


