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Content of client emails in internet-delivered cognitive behaviour therapy: A comparison between two trials and relationship to client outcome

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ABSTRACT

Many Internet-delivered cognitive behavioural therapy (ICBT) programs include email communication between clients and therapists as a part of treatment; yet relatively little is known about the nature and impact of this communication. Previous research conducted by Svartvatten et al. (2015) has identified 10 themes in written correspondence by clients accessing ICBT for depression. The current study examined: (1) if previously identified themes in client emails would be present in a shorter ICBT program for depression and anxiety; and (2) whether themes in emails similarly correlated with symptom improvement, lesson completion, and perceptions of working alliance. Using 80 randomly selected clients from a published ICBT trial (ISRCTN42729166; Hadjistavropoulos et al., 2016), client emails (average 5.69 per client) were examined for the presence of the themes reported by Svartvatten et al. (2015) and correlated with symptom improvement, lesson completion, perceptions of working alliance. Although most themes developed by Svartvatten et al. (2015) were identified in client emails, the frequency of themes differed between studies. Most notably, emails in the current study were more often coded as involving *alliance bolstering* (~39% vs. 22% of statements) and *identification of patterns and problem behaviours* (~25% vs. 6% of statements). Greater frequency of *tries alternative behaviour* and *identifies patterns and problem behaviours* were correlated with a greater number of lessons completed. In terms of symptom change, greater frequency of *maladaptive repetitive thinking* and *problems with treatment content* in the emails were correlated with smaller improvements in anxiety, whereas *observes positive consequences* was correlated with larger improvements in anxiety. Similarly, greater frequency of *maladaptive repetitive thinking* was correlated with smaller improvements in depression. Regarding perceptions of working alliance, more frequent statements of *observes positive consequences* was correlated with higher alliance. The research provides clinicians and researchers with an improved understanding of the comparability and meaning of client communication in different ICBT programs. Experimental research is needed to better understand the role of client communication in ICBT.

1. Introduction

Anxiety and depressive disorders are common mental health concerns, with lifetime prevalence estimates of 16% and 12%, respectively (Kessler et al., 2009). These conditions are associated with personal suffering and poor quality of life (Baxter et al., 2014). The serious nature of anxiety and depression underscores the importance of efficacious treatment options. Cognitive behavioural therapy (CBT) is an effective form of treating anxiety (Hofmann and Smits, 2008) and depression (Cuijpers et al., 2013) and involves assisting individuals in modifying maladaptive thinking and behaviours. Despite the existence of effective treatment options, such as CBT, a notable treatment gap is reported (McHugh and Barlow, 2010). Numerous factors contribute to the under-treatment of mental health concerns, including low perceived need for treatment, a desire to manage problems independently, limited finances, time constraints, transportation or mobility challenges, poor access to providers, and concerns about privacy and stigma (Andrade et al., 2014).

Advancements in modern technology have allowed for new approaches to make treatment more accessible. Internet-delivered cognitive behavioural therapy (ICBT) is based on the principles of CBT, and involves providing clients with structured psychoeducational and therapeutic materials in an online format (Andersson and Titov, 2014). ICBT programs may either be therapist-guided or self-guided in nature

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(Andersson et al., 2013). Therapist-guided ICBT programs typically involve clients accessing online therapeutic materials as well as weekly email or telephone exchanges between clients and therapists (Andersson et al., 2013). Conversely, self-guided ICBT involves clients working through online materials during the active treatment period without the assistance of a therapist (Andersson et al., 2013). While some research suggests that both forms of ICBT can be effective when using well-designed interventions combined with monitoring of client outcomes (e.g., Titov et al., 2015a), in general, more favourable effect sizes have been reported for therapist-guided ICBT relative to self-guided ICBT (Baumeister et al., 2014).

Despite an increasing number of studies on therapist-assisted ICBT, our understanding of client communication remains quite unclear, with limited research directed toward this aspect of ICBT. Ascertaining a better understanding of client communication has several potential benefits. First, it assists with improved understanding of a treatment method that is still quite novel and not widely available. Second, examination of client communication could lead to earlier recognition of clients who are at risk of not benefitting or failing to engage in ICBT (Hadjistavropoulos, Nugent, et al., 2016). Third, it may inform clinicians as to what aspects of communication are helpful versus unhelpful and, thus, serve as a guide for future therapists in their written communication with clients.

Of note, understanding client communication in ICBT complements a broader literature that has investigated the impact of expressive emotional writing on individuals' wellbeing. Past research, for instance, has shown that writing about one's thoughts and feelings results in small but significant improvements in wellbeing and reduced levels of depression, anger, and anxiety (Frattaroli, 2006; Pennebaker, 1993). In this literature, writing is often analyzed using linguistic inquiry word count (Pennebaker, 1993), a method designed to analyze language use and categorize written text into categories. To date, the majority of research on client communication in ICBT has been in line with the expressive writing research and examined the use and impact of specific word use in client communication during ICBT. Findings have highlighted that client correspondence is an important element of treatment and is related to client outcome (Dirkse et al., 2015; Van der Zanden et al., 2014). As an example, Dirkse et al. (2015) identified that negative emotion, anxiety, causation, and insight words declined in client emails with therapists during ICBT for generalized anxiety, whereas the use of past tense words increased. Further, Dirkse et al. (2015) found that a decline in negative emotion words (e.g., annoyed, bitter) over treatment strongly correlated with symptom improvement.

Taking a somewhat different approach, Svartvatten et al. (2015) employed a thematic content analysis of communication sent by 29 clients to one of eight therapists during a 12-week ICBT course for depression. In this approach, the focus was on themes rather than on specific words. The treatment provided in the study by Svartvatten et al. consisted of eight online modules that presented psychoeducation on, and strategies to, manage symptoms of depression. Treatment content primarily focused on behavioural activation, and was coupled with weekly homework assignments designed to facilitate learning. Additionally, participants answered questions associated with each module and therapists subsequently provided written correspondence to validate, normalize, and clarify participants' responses to these questions.

Using an inductive and deductive approach, Svartvatten et al. (2015) categorized all client emails and lesson responses into 10 themes in order of frequency: *alliance* (22.3%); *tries alternative behaviour* (20.5%); *chooses alternative behaviour* (11.4%); *avoidance of treatment* (8.2%); *observes positive consequences* (7.6%); *maladaptive repetitive thinking* (7.5%); *problems with techniques and administration* (7.2%); *identifies patterns and problem behaviours* (6.4%); *problems with treatment content* (5.2%); *and confrontational alliance rupture* (3.8%). A positive correlation was found between self-assessed changes in symptoms of depression and statements showing *observing positive consequences* (Spearman's $r = 0.49$, $p < .01$) and *alliance* (Spearman's $r = 0.42$, $p < .05$). Svartvatten et al. also reported several positive correlations between the number of lessons completed and client behaviours, with *observing positive consequences* (Spearman's $r = 0.91$ $p < .01$) and *trying alternative behaviours* (Spearman's $r = 0.90$, $p < .01$) emerging as the two strongest relationships The results provide clinicians with a greater understanding of client communication in ICBT and suggest that additional research is warranted on how client communication impacts ICBT and is used by therapists. Svartvatten et al. indicated that therapists could use statements about *alliance* and *observations about positive consequences* as textual indicators of client progress; however, it is important to note that the study conducted by Svartvatten et al. was limited in sample size ($n = 29$) and focused on depression. Thus, additional research is needed to consider whether these findings generalize with larger sample sizes, other clinical presentations (i.e., anxiety), and in different ICBT programs.

The goals of the current study were to extend past research and examine: (1) if themes identified by Svartvatten et al. (2015) would be identified in client emails during a shorter, 5-lesson transdiagnostic ICBT program for depression and anxiety; (2) if these themes would be similarly correlated with symptom improvement and lesson completion; and (3) if these themes would be correlated with self-reported ratings of therapeutic alliance. Understanding the generalizability of themes in written ICBT communication is important clinically, as it provides therapists with valuable information about what to expect when delivering ICBT and the extent to which therapists can expect client communication to be indicative of client outcomes.

2. Method

2.1. Clients

The current study made use of data from a previously conducted trial of transdiagnostic ICBT for symptoms of anxiety and depression (Hadjistavropoulos, Nugent, et al., 2016). Eligibility criteria for the original trial included: (1) age of 18 or older; (2) residents of Saskatchewan, Canada; (3) experiencing symptoms of anxiety and/or depression; (4) able and comfortable using computers and the internet; (5) willing to provide a physician as an emergency contact; (6) no recent or current problems with psychosis, bipolar disorder, severe alcohol or drug-related problems, or suicidal plan or intent; (7) not currently in regular face-to-face therapy; and (8) consent to participate. Additional information concerning client recruitment and screening can be found in Hadjistavropoulos, Nugent, et al. (2016). Clients completed questionnaires assessing symptoms of anxiety and depression at pre- and post-treatment. Of the 466 individuals who met inclusion criteria and completed the pre-treatment measures, 378 completed the post-treatment measures (81% completion rate). In order to fully examine communication over the course of ICBT, the sample for the current study was derived from the 378 treatment completers. A G*Power analysis (Faul et al., 2007) using a two-tailed correlation point biserial model revealed that a sample size of 80 participants (alpha level 0.05; power level 0.80) is suitable for detecting medium to large effects. Therefore, a random sample of 80 clients from 378 treatment completers was utilized for the current sample.

2.2. Treatment

Clients in the current study were offered the Wellbeing Course through the Online Therapy Unit located at the University of Regina in Saskatchewan, Canada. The Unit (www.onlinetherapyuser.ca) is government funded and offers ICBT to clients across Saskatchewan, Canada. In addition to providing a service, the Unit delivers education to students and community providers and conducts research designed to improve service delivery. The Unit licensed the Wellbeing Course from Macquarie University in Sydney Australia (see Titov et al., 2015a).