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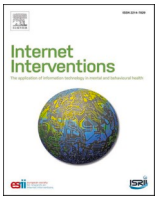

Perceptions of client stories in internet-delivered cognitive behaviour therapy: A mixed-methods evaluation

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ABSTRACT

Internet-delivered Cognitive-Behavioural Therapy (ICBT) aims to support people with mental health concerns using online treatment materials. Client stories (either real or a composite based on many clients) are often used in ICBT to facilitate learning. However, these stories remain understudied in terms of how they are perceived by clients, as well as their relationship to ICBT engagement, satisfaction, and outcomes. Among a sample of 324 clients enrolled in transdiagnostic ICBT targeting symptoms of depression and anxiety, we examined client perceptions of stories through mixed-method qualitative (open-ended) and quantitative (closed-ended) data collection. Specifically, 234 (72.22 %) clients responded to questions about stories at 4 weeks and 221 (68.21 %) responded to questions at 8 weeks. Most clients who responded to questions endorsed reviewing at least some stories (79.06 % at 4 weeks, 71.95 % at 8 weeks). Moreover, they rated stories positively in terms of being relatable, making clients feel less alone, increasing knowledge, providing ideas for how to use skills, and motivating clients to use skills. These perceptions of stories remained stable over the course of treatment. Stories were perceived more positively among those with lower symptom severity at 8 weeks as well as those who were more satisfied with ICBT at 8 weeks. Story perceptions at 4 weeks were predictive of decreased post-treatment anxiety symptom severity but not depression while controlling for baseline scores, age, and education. 26.49 % of clients at 4 weeks who reviewed stories and 33.33 % at 8 weeks provided suggestions about how to improve stories. In a qualitative analysis, we found 5 categories of suggestions including increasing the variety of issues and relatability of stories, ensuring the stories are realistic, refining the formatting, and making the stories shorter. Overall, this study provides insights into how client stories could be improved to play a more significant role in future ICBT programs.

1. Introduction

While Internet-delivered Cognitive-Behavioural Therapy (ICBT) is now well established as a valuable approach for improving client access to effective mental health care (e.g., Andersson et al., 2019; Carlbring et al., 2018; Etzelmueller et al., 2020; Karyotaki et al., 2021; Romijn et al., 2019; Simon et al., 2019), questions remain about what represents the optimal way to deliver ICBT. At its core, ICBT involves the delivery of cognitive behavioural treatment principles and skills via online lessons. The nature of these lessons varies widely across descriptions of programs in terms of length of treatment (e.g. Andersson et al., 2019; Carlbring et al., 2018; Etzelmueller et al., 2020; Karyotaki et al., 2021; Romijn et al., 2019), as well as whether treatment involves additional resources (e.g., Hadjistavropoulos et al., 2020). Moreover, ICBT programs also differ in terms of whether they are self-directed or therapist-assisted (Andersson et al., 2019). Client stories, also known as narratives or personas can be an important component of ICBT programs but to date have not been systematically investigated. Client stories have the potential to enhance treatment engagement and outcomes through the use of real stories from other clients or based on a synthesis of client

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experiences and reflections (Drewniak et al., 2020; Shaffer and Zikmund-Fisher, 2013).

The Shaffer and Zikmund-Fisher Model (2013) is a means of conceptualizing the function and structure of stories as a therapeutic tool used in online healthcare settings and predicts that carefully formulated stories enhance client outcomes. In this model, stories are broadly centred around five purposes including (i) communicating information to clients, both in terms of basic knowledge as well as experiences of living with a psychological and or medical condition; (ii) boosting engagement, leading to a greater depth of processing as well as more time spent with the material; (iii) modeling desired behaviour (in the case of ICBT, includes demonstrating how clients use cognitive behavioural skills in the context of their everyday life); (iv) persuading clients to employ new behavioural targets in a non-confrontational manner; and (v) providing comfort to clients (Shaffer and Zikmund-Fisher, 2013). Client stories have several common themes and can demonstrate how skills and principles can be applied in different contexts without directly challenging a client to do so themselves, thus reducing defensive postures that can impede adoption of skills. These include (i) outcome stories, which pertain to the outcome of a client's decision to engage in treatment; (ii) experience stories, which relate to the client's experience living with a condition, including thoughts, feelings, behaviours, and physiological experience; (iii) process stories, which includes the client's decision-making process throughout treatment, such as the search and discovery of information, as well as their appraisal of decisions made in treatment (e.g., in ICBT includes decisions about using skills in their everyday life); (iv) application stories, which includes how a client applies new skills to their life in the context of everyday life (Shaffer and Zikmund-Fisher, 2013). While there have been numerous studies of ICBT featuring client stories, there is yet to be a study systematically exploring perceptions and correlates of stories within ICBT. Previous studies on the use of stories have relied on open-ended feedback about ICBT overall, or on stories specifically (Xiang et al., 2021; Hadjistavropoulos et al., 2018; Beahm et al., 2021), but have been limited in terms of examining correlates of story perceptions.

In several qualitative studies, clients have expressed concerns about not being able to relate to the people in stories used in ICBT (Xiang et al., 2021, Hadjistavropoulos et al., 2018; Beahm et al., 2021). In one of these studies, some clients reported finding stories boring or artificial representations of the experience of depression and anxiety (Hadjistavropoulos et al., 2018). Nevertheless other clients reported that stories represented a strength of the treatment program (Hadjistavropoulos et al., 2018). Similarly, in an exploratory qualitative analysis of client experiences in an ICBT program tailored to public safety personnel (PSP; Beahm et al., 2021), about one-third of clients who completed ICBT mentioned liking stories included in the program, yet most also identified the stories as needing improvement. Potential improvements included adding more examples that would assist PSP with the application of material to their circumstances (Beahm et al., 2021). In a follow-up study, over one-third of clients from the same program reported that stories were helpful, with a small number (about 10 %) reporting not liking or not resonating with the stories (Beahm et al., 2022). Some felt that the readability of written stories could be improved with font and colour changes or paired with audio and video narrations. Other clients felt the stories could be shorter or fewer, as they were sometimes taxing on the client's attention span. Some clients also had concerns that the stories were too generic and simplistic, which prevented a sense of realism. Given the findings, there have been several calls for additional research on stories including assessment of how stories relate to outcomes (Xiang et al., 2021; Beahm et al., 2021; Hadjistavropoulos et al., 2018). In general, while there is a consistent theme from some clients enrolled in ICBT that stories could be improved, there is no research that explores how perceptions of stories relate to client characteristics, engagement, overall treatment satisfaction, or outcomes.

1.1. Study objective

The current observational study had three aims: 1) to examine perceptions of stories and suggestions for improving stories at 4 and 8 weeks after enrolling in ICBT; 2) to explore whether overall perceptions of stories at 4 and 8 weeks were related to pre-treatment variables (e.g., client demographics, symptom severity, and type of therapist support clients select) and post-treatment variables (e.g., lesson completion, treatment satisfaction); and 3) to explore how perceptions of stories at week 4 relate to client outcomes of ICBT at 8 weeks, controlling for baseline variables. While the first two aims were exploratory, consistent with Shaffer and Zikmund-Fisher (2013), we hypothesized that positive perceptions of the stories would be related to treatment outcomes.

2. Methods

2.1. Design and ethics

This observational study was conducted within the Online Therapy Unit (OTU), which provides ICBT on a routine basis to Saskatchewan residents through government funding, while also conducting research to improve service delivery. The University of Regina Research Ethics Board approved the use of data (file #2019–197) and all clients provided informed consent.

2.2. Eligibility criteria

Clients who completed the online screening between June 15th and November 24th, 2022 were included in the current trial. Clients learned about ICBT through several channels, including community mental health clinics, healthcare practitioners, online advertising, posters, media and email announcements. Clients were eligible for ICBT if they were (i) 18 years of age or older, (ii) self-reporting symptoms of anxiety and/or depression, (iii) residing in the province of Saskatchewan for the duration of treatment, (iv) able to access the internet and had time to participate for the 8 week treatment period; and (v) willing to provide a medical contact in the event of emergency. In terms of exclusion criteria, clients were ineligible to participate if they were (i) at high risk of suicide, (ii) had a severe unmanaged psychiatric or cognitive condition, (iii) had severe alcohol or drug problems (i.e., scored $\geq$20 on the Alcohol Use Disorder Identification Test (Saunders et al., 1993) or $\geq$ 25 on the Drug Use Disorder Identification Test (Berman et al., 2003)), or (iv) visited the emergency room or were hospitalized for a mental health concern in the last year. In terms of suicide risk assessment, clients who endorsed that they would be better off dead of hurting themselves in some way, several or more days a week during the online screening, were administered the Suicide Behaviours Questionnaire-Revised (Osman et al., 2001) during a subsequent telephone screening. If the score was 8 or greater, clients were typically referred to face-to-face services although some exceptions were made based on the clinical telephone interview (e.g., score was elevated related to past but not current suicide risk).

2.3. Measures

2.3.1. Demographics

At the time of online screening, clients answered background questions pertaining to age, gender, ethnocultural background, education, and the urban vs. rural nature of their municipality of residence.

2.3.2. Primary outcome measures

Primary outcome measures used in this study are listed below.

2.3.3. Patient Health Questionnaire-9

The PHQ-9, administered at pre-treatment and 8 weeks after enrollment, measured symptoms of depression, and is structured as a 9-

item questionnaire rated on a 0 to 3 scale resulting in scores ranging from 0 to 27 (Kroenke et al., 2001). A score under 5 suggests minimal depression, while a score of 10 or higher signifies a probable diagnosis of major depressive disorder (Manea et al., 2012), although it should be noted that this cut-off may over-estimate cases of depression (Titov and Andersson, 2021). The PHQ-9 has good psychometric properties (Liu and Wang, 2015) and the Cronbach's Alpha in the current study ranged from 0.85 to 0.89.

2.3.4. Generalized Anxiety Disorder-7

The GAD-7, administered at pre-treatment and 8 weeks after enrollment, measured symptoms of anxiety using a 7-item questionnaire, rated 0 to 3, resulting in a score ranging from 0 to 21 (Spitzer et al., 2006). An overall score under 5 suggests minimal anxiety while a score of 10 of higher suggests a likely diagnosis of anxiety (Spitzer et al., 2006). The GAD-7 also has strong psychometric properties (Henderson et al., 2014), with the Cronbach's Alpha in the current study ranging from 0.87 to 0.91.

2.3.5. Story satisfaction questionnaire

The Story Satisfaction Questionnaire (SSQ), developed for this study, consisted of 8 questions, and gathered feedback on the client's perceptions of the stories at 4-weeks and at 8-weeks post-enrollment. The first question asked clients to rate the extent to which they read the stories (rated 1–5, where 1 indicates they did not read any of the stories while 5 indicates they read them all). Clients were then asked to rate the stories on five 5-point Likert scales (1 = strongly disagree, 5 = strongly agree), in terms of whether they were relatable, made them feel less alone, provided ideas to use skills, motivated them to use skills, and increased their knowledge. Clients were then asked to rate whether stories were worth their time ("yes" or "no") and to share suggestions for how stories could be improved (open-ended question; "Do you have any suggestions to help us improve the stories?"). A Principal Components Analysis of the SSQ was conducted at 4 and 8 weeks to determine whether the five SSQ ratings could be combined into a total SSQ score (see Appendix A). The Principal Components Analysis of ratings at week 4 identified one factor (Eigenvalue = 3.34; 66.85 % of variance), with the five items contributing significantly to the factor (determinant = 0.07; X^2 = 477.47, $p < .001$; KMO = 0.85). The combined item is referred to as 4-week SSQ. The internal consistency was good for the 4-week SSQ (a = 0.87). The Principal Components Analysis (see Appendix A) also identified only one SSQ factor at week 8 (Eigenvalue = 3.63; 72.50 % of variance), where all five items once again contributed significantly to the combined factor (determinant = 0.03; X^2 = 531.86, $p < .001$; KMO = 0.85). The combined item is referred to as 8-week SSQ. The internal consistency was very good for the 8-week SSQ (a = 0.90).

2.3.6. Treatment satisfaction questionnaire

Client satisfaction with the Wellbeing Course was assessed at week 8 with the Treatment Satisfaction Questionnaire as described in past research (e.g., Hadjistavropoulos et al., 2022). The scale includes ratings of overall satisfaction with treatment and lesson satisfaction on a 5-point scale (0 = "very dissatisfied and 4 = "very satisfied") and ratings of whether the course impacted client confidence to manage symptoms and motivation to seek treatment in the future if needed (0 = "greatly reduced" and 4 = "greatly increased"). Clients were then asked if the course was worth their time and if they would recommend the course to a friend ("yes" or "no"). The final question was open-ended and asked for feedback on the course. The main outcome variable used was overall satisfaction, with confidence and motivation as supplementary measures of satisfaction.

2.4. Procedure

Clients in this trial were enrolled in the Wellbeing Course, which is an 8-week transdiagnostic intervention targeting symptoms of anxiety and depression (Titov et al., 2015). This course was developed at the eCentreClinic at Macquarie University in Sydney, Australia and was adapted for use by the OTU in Saskatchewan, Canada. The Wellbeing Course, includes five lessons consisting of presentation-style slides, a downloadable guide with homework, frequently asked questions and case stories. The lessons are sequentially released to clients over an eight-week period with automated emails informing clients of the availability of new lessons. The lessons include (i) the cognitive behavioural model and symptom identification, (ii) monitoring and challenging thoughts, (iii) de-arousal strategies and pleasant activity scheduling, (iv) graduated exposure, and (v) relapse prevention (Titov et al., 2015). Clients also had access to a variety of additional resources at any time throughout the course. Topics included resources developed by the eCentreClinic (PTSD, anger, grief, worry, panic, sleep, communication skills, assertiveness, beliefs, mental skills, chronic conditions, pain) as well as several additional resources developed by the OTU on various topics (motivation, new motherhood, alcohol use, health anxiety, mental health in agriculture, workplace accommodations).

In terms of adaptations for the OTU, brief videos were included at the beginning of each lesson to provide an overview of each lesson. Language within the course was changed to remove idioms and advanced vocabulary, and the lessons displayed increased multicultural representation in the imagery used within the course to reflect the demographics of the users. Stories were also adapted as described below. Clients were additionally offered a booster lesson at week 12 if all 5 lessons had been reviewed, which was completed independently with no therapist check-in and prompted via an automated message at week 12. This lesson was developed to review and consolidate the skills and information covered during the treatment (Hadjistavropoulos et al., 2022).

2.4.1. Therapist support

Clients with clinically significant symptoms on the PHQ-9 and GAD-7 (as described above) had a choice of weekly or optional therapist support for 8 weeks, while those in the nonclinical range automatically received optional therapist support. In weekly support, clients received an email from their therapist on a designated day each week, while in optional support they received an email only if they requested support. Therapists spent approximately 15 min per email each week, and composed messages based on client emails sent to therapists, client progress on the completion of lessons, and completed questionnaires the previous week. In both regular weekly and optional support, therapists called clients when clinically indicated (e.g., questionnaire increased by five or more points, clients endorsed frequent suicidal thoughts, or client requested a phone call).

2.4.2. Client stories

This version of the Wellbeing Course included 11 stories of clients enrolled in the Wellbeing Course (8 were slight revisions from the original course while 4 were created for the OTU). Revisions and additions were made based on feedback from past clients and feedback from a working group made up of individuals with lived experience, therapists, or professionals working with clients of diverse ethnocultural backgrounds.

The stories featured characters with a range of experiences, including a broad range of ages (19–74), a moderately diverse array of ethnocultural backgrounds (undefined = 7, although 6 of stories depicted a Caucasian client in the accompanying photograph; Caribbean = 1; East Asian = 1; Indigenous = 1; Middle Eastern = 1), and a diversity of professions and employment statuses among those reported (currently in school or working = 4; currently laid off or retired = 4). Gender was only explicitly identified in one case, with four other cases using feminine pronouns (she/her) and referring to motherhood. Six cases did not identify gender. In terms of relationships, there were a mixture of those with partners (n = 5) and those without (n = 6), while some cared for children or other family members (n = 5) and others did not (n = 6).

Regarding clinical characteristics, the clients in the stories experienced a wide range of adverse experiences prior to seeking ICBT, including physical injuries, health concerns, occupational pressures, loss of employment, abuse, grief, assuming a caretaker role, as well as political unrest and geographic displacement. Clients also had a broad manifestation of psychological symptoms, including depression/low mood, generalized anxiety, social anxiety, panic disorder, PTSD, and difficulty with anger management, alcohol use, social isolation, insomnia, or managing chronic pain or other health conditions.

The stories were consistent with the Shafer and Zikmund-Fisher Model for effective narrative content (Shaffer and Zikmund-Fisher, 2013). The characters were presented in each lesson (one page per story; 11 stories with each lesson) and the stories evolved with each lesson. In terms of communicating information to clients, the demographics and clinical history of each character was provided in the first lesson, which outlined the scope of adverse life events and cognitive, behavioural, and physical symptoms experienced by clients. Later lessons highlighted how each character used lesson skills with varying degrees of success and challenges. Regarding engagement, all of the stories provided anecdotal, first-person accounts, from sympathetic characters, which allowed for an engaging experience for the client. For modeling behaviour, the characters described completing a variety of useful behaviours, depending on the lesson, such as recognizing symptoms, challenging unhelpful thoughts and beliefs, reaching out to family, trying breathing exercises and graded exposure, scheduling pleasant activities, reviewing and using skills in additional resources available, engaging in structured problem solving and creating relapse prevention plans, all without placing too much pressure on themselves for immediate recovery. Insofar as persuasion, the stories served to indirectly persuade behavioural change, however, at several points throughout the program, some characters express skepticism about the utility of the program, which was generally alleviated through persistence with the course. Finally, the stories also included successes in which clients expressed satisfaction with completing the course and overcoming challenges, serving to provide comfort to clients that they are not alone, while validating and normalizing setbacks. See supplementary material for details from one story.

2.4.3. Data analysis plan

2.4.3.1. Quantitative analysis. Data were analyzed using R (version 4.0.5). Descriptive statistics were calculated to examine client background information, and bivariate correlations were calculated to examine how 4-week and 8-week SSQ scores were related to pre-treatment and post-treatment variables. We next examined story ratings and whether perceptions of stories (e.g., relatability, increased knowledge) changed over time using a paired samples *t*-test. To explore how 4-week SSQ scores relate to client outcomes of ICBT at 8 weeks, multiple regression models tested the contribution of SSQ scores at 4 weeks to symptom severity at 8 weeks, when controlling for baseline symptom severity, age, and education.

2.4.3.2. Qualitative analysis. Conventional content analysis (Hsieh and Shannon, 2005) was used to code the responses. This approach allows for identification of different themes which can then be quantified (Vaismoradi et al., 2013). Two coders began by examining open-ended responses and discussing which information would be considered tangible suggestions. Next, the two coders individually coded the first 75 statements using NVIVO (12.0; QSR International, 2018). Each coder created categories based on their own interpretations of the responses. Both coders then met and reviewed the categories and the 75 statements. After review, the coders noted that there were minimal inconsistencies in the categories between each other and agreed upon common categories that were applicable to 4 and 8 week feedback. The process was repeated, with coders individually coding the next 75 statements and then discussing the minimal inconsistencies to reach consensus. The remaining items were then coded, with a final review and discussion until a consensus was reached for all coding.

3. Results

3.1. Preliminary data analysis

Client ($N = 324$) demographics and symptom severity are presented in Table 1, and treatment experiences are presented in Table 2. Generally, clients were middle-aged adults ($M = 38.14$, $SD = 13.80$), women (68.21 %), and living in a city (68.83 %). Higher education was common (80.56 % pursued training or education beyond high school) and 81.79 % self-identified as White. At baseline, on average, client scores were in the clinical range for both depression and anxiety. Most clients with clinical scores preferred regular weekly support (73.55 %) rather than optional support (26.45 %), and the majority of clients completed all lessons (60.19 %). At baseline, on average, client scores were in the clinical range for both depression and anxiety. Descriptively, treatment satisfaction ratings suggested that clients were satisfied with the overall treatment, lesson satisfaction, that they felt more confident after the course, and more motivated to seek treatment in the future should it be needed.

At 4-weeks, 185 clients indicated that they had reviewed the stories (out of the 234 who filled out the SSQ) and at 8 weeks 159 clients indicated they reviewed the stories (out of the 221 who filled out the SSQ). Bivariate correlations are presented in Fig. 1 showing the relationship of study variables with 4- and 8-week SSQ scores from −0.13 to 0.44. The SSQ scores at week 4 were significantly positively correlated with treatment satisfaction, lesson satisfaction, perception of course being worth time taken, increased confidence, and increased motivation to seek future treatment if needed. SSQ scores at week 8 were significantly negatively related to 8-week symptom severity and significantly positively related to treatment satisfaction, lesson satisfaction, perception of course being worth time taken, increased confidence, and increased motivation to seek future treatment if needed.

3.2. Quantitative results

3.2.1. Perceptions of stories at 4 and 8 weeks

Ratings of the stories at 4 and 8 weeks are reported in Table 3. Most clients who responded to the SSQ reported they had reviewed the stories (i.e., read at least some of the stories; $n = 185$; 79.06 %) at week 4, and this proportion was comparable at 8 weeks ($n = 159$; 71.95 %). Descriptively, ratings suggested positive perceptions of stories on all dimensions at 4 and 8 weeks. The highest rating at 4 weeks was on the item assessing whether the stories made clients feel less alone. The highest rating at 8 weeks was on providing ideas to use skills. Story satisfaction did not significantly differ from 4 to 8 weeks.

3.2.2. Symptom improvement

3.2.2.1. Model 1. Multiple Regression Predicting GAD-7 Scores at 8 weeks. Our first regression model was built to examine whether SSQ scores at 4 weeks predicted variance in GAD-7 scores at 8 weeks (Table 4) while controlling for GAD-7 scores at baseline, age, and education. The four variables significantly predicted one-fifth of the variance in GAD-7 ($R^2 = 0.22$), $F(4,153) = 10.60$, $p < .001$; specifically, SSQ scores at 4 weeks significantly predicted lower GAD-7 scores, $b = -0.16$, 95 % CI [−0.31, −0.02], $p = .028$.

3.2.2.2. Model 2. Multiple Regression Predicting PHQ-9 Scores at 8 weeks. Our second regression model was built to examine if SSQ scores at 4 weeks predicted variance in PHQ-9 scores at week 8 while controlling for baseline PHQ-9 scores, age, education (Table 5). These four

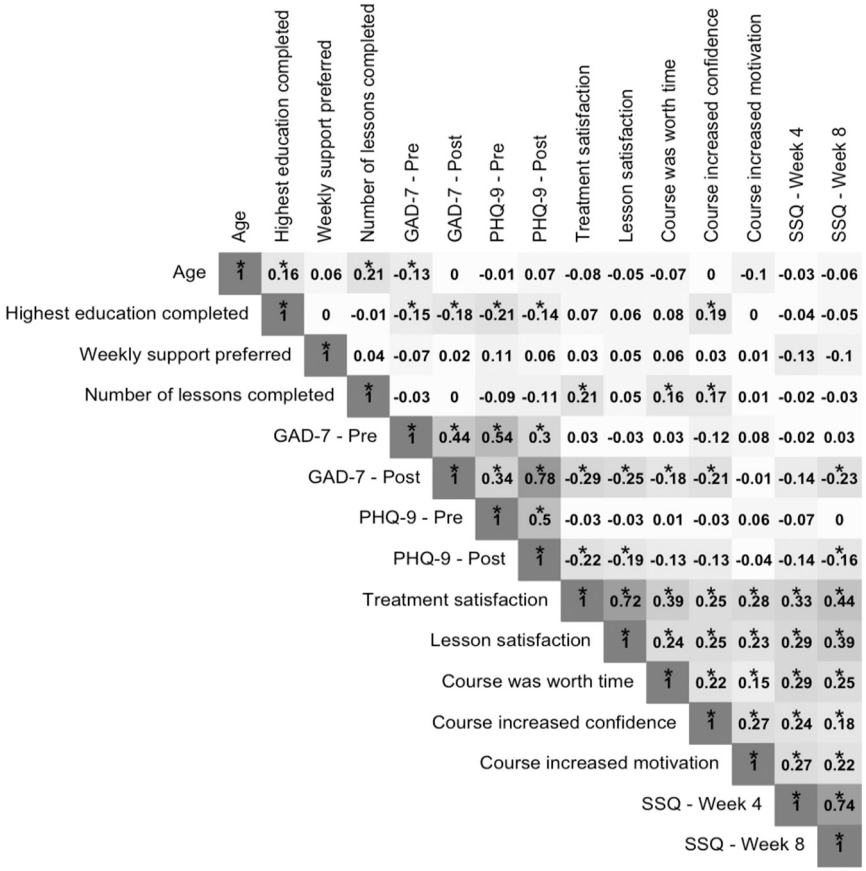

Fig. 1. Bivariate correlations among study variables.
Note. * $p < .05$. GAD-7: Generalized Anxiety Disorder Scale (7 items), PHQ-9: Patient Health Questionnaire (9 items), SSQ: Story Satisfaction Questionnaire.

variables significantly predicted one-quarter of the variance in PHQ-9 scores ($R^2 = 0.23$), $F(4,153) = 11.19$, $p < .001$; although, SSQ at 4 weeks did not significantly predict lower PHQ-9 scores, $b = -0.10$, 95 % CI [−0.22, −0.02], $p = .09$.

3.3. Qualitative results: Story feedback

At week 4 ($n = 185$), 73.51 % ($n = 136$) of clients who reviewed the stories did not provide a suggestion, specifically with some clients making no comment at all ($n = 8$; 4.32 %), some making a positive statement ($n = 42$; 22.70 %), and some stating they did not have a suggestion ($n = 86$; 46.49 %). At 4 weeks, only 49 of the 185 (26.49 %) clients who reviewed the stories provided tangible feedback. At 8 weeks, 33.33 % ($n = 53$ of the 159 who reviewed the stories) provided tangible feedback. Five themes emerged in the suggestions including to: 1) expand variety of issues in stories, 2) improve relatability of the stories; 3) make stories more realistic; 4) improve formatting; and 5) shorten stories. See Table 6.

3.3.1. Expand variety of issues in stories

At 4 weeks, clients ($n = 11$) reported a desire for more variety in the types of issues in the stories, such as parenting, neurodiversity, sexual orientation, minority experiences, varying types of anxiety, varying ages, and varying situations. At 8 weeks, clients ($n = 22$) also suggested increasing diversity of issues in stories, including experiences of different economic statuses, neurodiversity, varying kinds of anxiety and mental health disorders (e.g., postpartum depression and anxiety, eating disorders), parenting challenges and various triggers.

3.3.2. Improve relatability

At both 4 ($n = 18$) and 8 weeks ($n = 13$), clients explained the stories needed to be more relatable and shared why the stories were not as relatable as they desired. For example, the problems they were facing were more or less severe than the ones in the stories. Clients provided suggestions to generally write more relatable stories or have a process that would allow them to select and follow a story tailored to them.

3.3.3. More realistic

At 4 ($n = 9$) and 8 weeks ($n = 7$), some clients felt the stories needed to be more realistic, stating the stories felt too general in their problems and solutions, were too fake or perfect, too similar to each other, not complex enough, and that they seemed made up.

3.3.4. Improve formatting

At 4 ($n = 7$) and 8 ($n = 6$) weeks, some clients provided suggestions for altering the format of stories. Clients noted that formatting changes could include audio or video narrations, aesthetic changes to font and colour, and different ways of prompting or displaying the material.

3.3.5. Shorten stories

At 4 ($n = 4$) and 8 ($n = 5$) weeks, some clients noted the stories were too long, there being too many, or that the stories were too taxing on their attention span.

4. Discussion

Our results demonstrate that overall, stories were positively perceived throughout treatment and played important roles (e.g., to feel less alone or provide ideas for using skills) and that stories were positively associated with treatment satisfaction. Moreover, as hypothesized by Shaffer and Zikmund-Fisher (2013), story perceptions were predictive of 8-week symptom severity (although only for anxiety and not

depression). While there have been numerous studies of ICBT programs featuring client stories (e.g., Beahm et al., 2021; Hadjistavropoulos et al., 2018; Xiang et al., 2021), this study provides novel insight into perceptions and correlates of stories as part of ICBT. The use of a novel scale (SSQ) with both open-ended and closed-ended questions allowed us to calculate correlations with other treatment and client characteristics, while the open-ended question gathered tangible suggestions for improving the stories.

4.1. Story satisfaction

Ratings of stories showed they were perceived positively on all dimensions across the course, particularly with making clients feel less alone early in the course (week 4) and then providing ideas to use skills later on (week 8). Our correlational results showed those who were satisfied with stories overall (at any timepoint) tended to feel the stories were worth their time, which may have increased their confidence in managing symptoms and motivation to seek future treatment if needed. When stories were perceived positively at the end of the course, treatment satisfaction was particularly strong. Story satisfaction and perceptions seem to form a key characteristic of the overall treatment experience, worthy of further investigation on how to maximize their utility in ICBT. As story perceptions or overall satisfaction were not related to specific demographic variables, it may be that despite diversity among clients, there is consistency in how stories are perceived.

We expected that positive perceptions of the stories would be related to post-treatment scores while controlling for pre-treatment scores, education and age, which was partially supported. Story satisfaction was significantly correlated with post-treatment symptom severity for both depression and anxiety, but only of anxiety when controlling for pre-treatment anxiety, age, and education. As the finding is correlational in nature, future research is needed to determine if reading the stories is playing a contributory role in anxiety symptom reduction as described in the literature (Drewniak et al., 2020; Shaffer and Zikmund-Fisher, 2013).

4.2. Story feedback

At 4 and 8 weeks through the Wellbeing Course, clients provided feedback on their experience with the stories. Clients from previous adaptations of the Wellbeing Course have reported liking the stories while also noting the need for further improvement (Hadjistavropoulos et al., 2018; Beahm et al., 2021). In the current study, approximately a third of clients who read stories similarly suggested making adaptations including increasing the variety of issues in stories, ensuring they are relatable and realistic as well as making improvements in formatting and length. Most significantly, many clients felt the issues presented in stories could be more varied and include contextual dimensions relevant to their specific circumstances like parenting, neurodiversity, sexual orientation, or socio-economic status. Concern of not being able to relate to the people in the stories or having trouble applying the lessons to their life situations has been identified as a theme in the literature on ICBT (Xiang et al., 2021), especially as those living with depression may have difficulty attending to events or other people (Hoffmann et al., 2016). That is, the cognitive experience of struggling to relate to others may be an inherent characteristic of mood disorders such as depression as such individuals generally have more self-focused attention than non-depressed people (Alcaro et al., 2010).

The concern of stories being generic or having low relatability has been previously reported with earlier versions of the Wellbeing Course (Hadjistavropoulos et al., 2018), where about one-quarter of the clients felt unable to relate to the stories, finding them boring or artificial representations of what it is like to struggle with depression and anxiety. By addressing clients' previous suggestion of increasing contextual dimensions in the stories (e.g., parenting, neurodiversity), the stories may also become more realistic to clients. Some clients noted room for improvement on formatting, which has been previously reported (Beahm et al., 2022), although current desires for the stories to be more concise or fewer in number is a new finding that has not been reported in previous evaluations of the Wellbeing Course.

4.3. Limitations and future directions

This study is correlational and exploratory in nature. Therefore, it was not designed to experimentally examine the contribution of case stories to treatment satisfaction, engagement or outcomes but rather examine relationships. It also could not examine complex interactions between client characteristics, story characteristics and treatment characteristics that may exist. It would be valuable in the future to compare programs with or without stories or compare programs with stories of different types, matched or mismatched with client characteristics. Similarly, it could be helpful to explore if improving stories as described in the current study would improve outcomes beyond current levels. In the future, it may be valuable to examine how stories impact other outcomes such as change in thoughts, behaviours, or other emotions. It would also be valuable to explore if stories play a greater role in therapist-guided compared to self-guided programs. It would also be beneficial to conduct in depth interviews with clients to better understand if it would be preferable for clients to select one story to follow (as suggested by one client in this study) rather than having many stories to follow and to better understand the variables that are important to match clients on (e.g., symptom severity, nature of symptoms, demographics) given the many diverse ways that clients can differ. This study also reports on one program (the Wellbeing Course) and we do not yet know if current findings will apply to other programs that use stories. Finally, it should be noted that some clients did not respond to questions at week 4 and week 8 and it is possible that these clients had more negative views of the stories than clients who responded.

4.4. Strengths

Our mixed-method approach was beneficial for gaining a more in depth understanding of client responses to stories. Collecting open-ended information about the stories, identified opportunities to improve stories that can be implemented in the future. Future research is then posed to explore if making improvements to stories increases the effectiveness of ICBT. The pre/post design was able to show that story perceptions are positive and remain positive over time and correlate with treatment satisfaction as well as lower post-treatment symptoms. We were also able to see that the stories are not related to demographics, which suggests there is not a group of individuals who are more satisfied or dissatisfied with the stories.

4.5. Conclusions

The results of this study indicate that stories may play several important roles in treatment, especially in terms of providing comfort to clients and ideas for using skills. It also demonstrates that story satisfaction is related to overall treatment satisfaction and is related to post-treatment anxiety scores while controlling for baseline scores, education and age. This begins to fill a gap in the literature as we know the general recipe for ICBT involves the delivery of cognitive behavioural treatment materials in the form of online lessons, but to date, little is known about the role and impact of stories. This study shows that, overall, story perceptions are positive and remain positive over time and correlate with treatment satisfaction. However, story perceptions do vary with some clients not finding the stories relatable, and with refinement, client stories may play a more significant role in future ICBT programs.

Declaration of competing interest

The authors declare that they have no known competing financial

interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Principal Components Analysis for Story Satisfaction Questionnaire

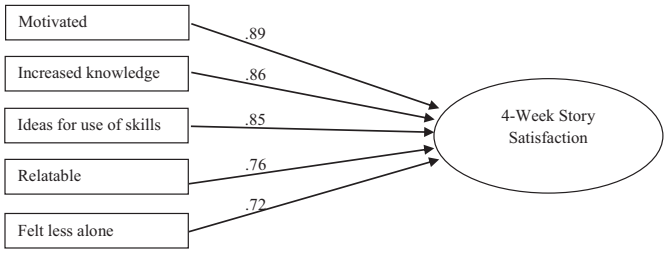

Fig. 1. Matrix loading for 4-week Story Satisfaction Questionnaire.

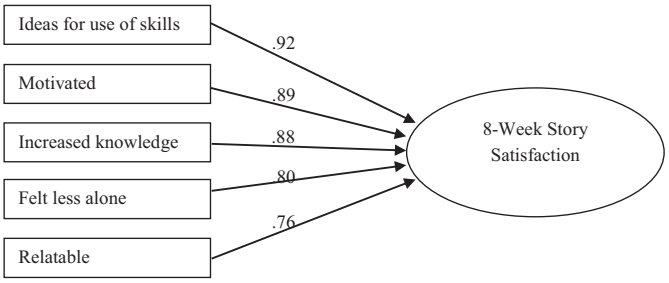

Fig. 2. Matrix loading for 8-week Story Satisfaction Questionnaire.

Table 1
Demographic and clinical variables.

Variable	*M (SD) or N (%)*
Age	38.14 (13.80)
Gender	
Woman	221 (68.21 %)
Man	93 (28.70 %)
Other gender	10 (3.09 %)
Resides In urban area	223 (68.83 %)
Highest education attained	
High school diploma	52 (16.05 %)
Some post-secondary or diploma	136 (41.98 %)
Post-secondary degree(s)	125 (38.58 %)
Ethnic background	
Asian	17 (5.25 %)
Black	6 (1.85 %)
Indigenous	21 (6.48 %)
Other	8 (2.47 %)
White	265 (81.79 %)
Baseline anxiety severity (GAD-7)	13.64 (6.00)
Baseline depression severity (PHQ-9)	12.89 (5.21)
8 week anxiety severity (GAD-7)	4.30 (5.05)
8 week depression severity (PHQ-9)	4.49 (2.50)
Prefer optional support among clients with clinical scores	73 (26.45 %)
Prefer regular weekly support among clients with clinical scores	203 (73.55 %)

Note. Living in an urban area reflects "small city" or "city" or "large city." Only clients who were at or above the clinical range for anxiety and depression were asked preference for level of support ($n = 276$). Measures taken at baseline ($N = 324$); 8 week measures ($N = 221$).

Table 2
Treatment experiences.

Clinical variable	*N (%) or M (SD)*
Completed all lessons	195 (60.19 %)
Treatment satisfaction (0 to 4)	3.12 (0.74)
Lesson satisfaction (0 to 4)	3.29 (0.72)
Feel more confident after course (0 to 4)	2.90 (0.90)
Motivated to seek future treatment if needed after course (0 to 4)	3.11 (0.74)

Note. Responses to these questions (n) ranges from 217 to 324 because of varying data collection time points.

Table 3
Story Satisfaction Questionnaire Scores at 4 weeks and 8 weeks.

	M (SD) or n (%)	
	4 weeks	8 weeks
Reviewed stories	185 (79.06 %)	159 (71.95 %)
Worth time to review	166 (89.73 %)	133 (83.65 %)
Relatable	3.50 (1.01)	3.25 (1.01)
Made to feel less alone	4.04 (1.04)	3.93 (1.19)
Provided ideas to use skills	3.50 (1.01)	4.53 (1.08)
Motivated to use skills	3.41 (1.09)	3.40 (1.14)
Increased knowledge	3.66 (1.15)	3.50 (1.20)
Story Satisfaction Questionnaire (SSQ) Score	3.59 (0.87)	3.52 (0.95)

Note. All scores range from 1 to 5. 234 clients responded to SSQ at week 4 and 221 clients responded to SSQ at week 8.

Table 4
Multiple Regression Predicting GAD-7 Scores at Week 8.

Predictors	Estimates	std. Beta	95 % CI	standardized CI	*p*
GAD-7 Week 4	0.39	0.41	0.25–0.54	0.26–0.56	**<0.001**
Age	0.00	0.01	−0.01–0.01	−0.13–0.16	0.866
Education	−0.05	−0.09	−0.12–0.03	−0.24–0.06	0.222
Story Satisfaction Questionnaire Week 4	−0.16	−0.16	−0.31 to −0.02	−0.30 to −0.02	**0.028**
R^2 0.22	$F(4, 153) = 10.60$, $p < .001$				

Note. GAD-7 = Generalized Anxiety Disorder-7.

Table 5
Multiple Regression Predicting PHQ-9 Scores at Week 8.

Predictors	Estimates	std. Beta	95 % CI	standardized CI	*p*
PHQ-9 Week 4	0.38	0.43	0.25–0.50	0.28–0.57	**<0.001**
Age	0.00	0.03	−0.00–0.01	−0.11–0.18	0.636
Education	−0.04	−0.09	−0.09–0.02	−0.23–0.06	0.227
Story Satisfaction Questionnaire Week 4	−0.10	−0.12	−0.22–0.02	−0.26–0.02	0.092
R^2 0.23	$F(4, 153) = 11.19$, $p < .001$				

Note. PHQ-9 = Primary Health Questionnaire-9.

Table 6
Categories identified in coding of suggestions.

Suggestion	Week 4 frequency	Week 8 frequency	Example details
Expand variety	11	22	Increase variety of issues presented in stories
Improve relatability	18	13	Own experience is more or less severe than story
Increase realism	9	7	Too general, lacking complexity or depth
Improve formatting	7	6	Audio and video narrations, colour and font
Shorten stories	4	5	Too long, taxing

Note. 49 of 185 clients provided feedback at week 4 and 53 of 159 clients provided feedback at week 8.

Appendix B. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.invent.2023.100692.

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