



User experiences of an online therapist-guided psychotherapy platform, OPTT: A cross-sectional study

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ABSTRACT

Introduction: In the last few years, online psychotherapy programs have burgeoned since they are a more accessible and scalable treatment option compared to in-person therapies. While these online programs are promising, understanding the user experience and perceptions of care is essential for program optimization.

Methods: This study investigated the experiences of end-users who had previously received online psychotherapy through a web-based platform. A 35-item multiple-choice survey was developed by the research team and distributed to past users to capture their perceptions of the program.

Results: The survey yielded 163 responses, with a 90 % completion rate. Participants were predominantly white and female, with an average age of 42 years. While most participants preferred in-person therapy, they also reported the benefits of the online psychotherapy program. Participants had positive perceptions of the platform, the quality and interaction of their therapist, and the homework assignments and skills covered. Lack of motivation to complete weekly homework assignments was cited as a common struggle.

Discussion: The findings support online psychotherapy as a beneficial digital mental health tool and highlight some areas for improvement. Scalability and accessibility are key benefits of the platform. At the same time, improvements in participant engagement, including those from equity-seeking and equity-deserving groups, may enhance the efficacy of the programs offered.

1. Introduction

1.1. Background

Mental health concerns have increased substantially over the last few years. The lifetime prevalence of mental health disorders has reached nearly 50% (Kessler et al., 2007) and 1 in 5 Canadians is diagnosed with a mental health disorder every year (Ahmad et al., 2015). The high demand for care has left the Canadian healthcare system overwhelmed, demonstrated by long service wait times (CMHO, 2020) and annual economic costs of over 50 billion CAD annually (Lim et al., 2008). The

inability to meet patient needs has highlighted the importance of developing new and innovative solutions. In response to the gaps exacerbated by restrictions related to the COVID-19 pandemic, there has been a rapid expansion in the development and use of digital mental health interventions (DMHIs) (Gooding, 2019; Sorkin et al., 2021). Additionally, the concomitant increase in mental health concerns like anxiety and depression during this time necessitated scalable treatment methods. DMHIs can support personalized patient care, reduce inequities, and improve treatment accessibility (Gratzer et al., 2021). Indeed, many healthcare organizations and clinicians, have integrated the use of virtual care platforms into their practices, translating into

Abbreviations: AI, artificial intelligence; CBT, cognitive behavioral therapy; DMHIs, digital mental health interventions; e-CBT, online cognitive behavioral therapy; OPTT, online psychotherapy tool; UX, user experience.

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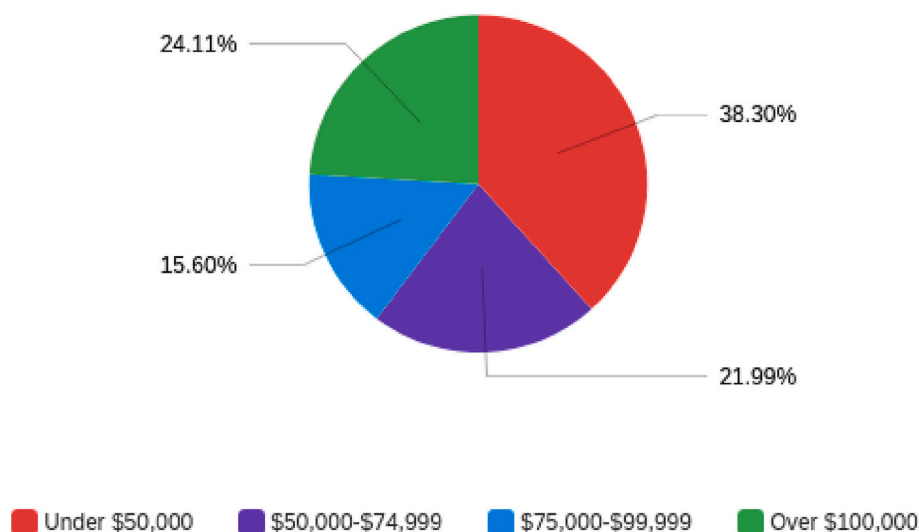


Fig. 1. The average annual income of participants ($n = 157$) represented in Canadian dollars (CAD).

large-scale shifts and substantial increases in patient visits (Gratzer et al., 2021).

DMHIs encompass various formats and are frequently disseminated via smartphones, the internet, and augmented or virtual reality (Mohr et al., 2013). Among these, internet-based interventions are the most frequently studied (Etzelmueller et al., 2020a; Wei et al., 2020; Lattie et al., 2019). Online psychotherapy interventions typically model traditional in-person psychotherapies and can vary in level of guidance, automation, and time (Baños et al., 2022). For instance, a common form of online psychotherapy is online cognitive behavioral therapy (e-CBT), which applies the widely validated principles of in-person cognitive behavioral therapy to address unbalanced thinking patterns and behaviors (Wright et al., 2019a; Alavi and Omrani, 2019). These online interventions can be fully self-guided or administered with asynchronous therapist guidance. In the latter, the therapist can interact with the patient remotely to answer any questions or concerns and provide feedback on therapy-related assignments (Wright et al., 2019a; Alavi and Omrani, 2019). Compared to in-person approaches, online psychotherapy has demonstrated several benefits, such as being resource and cost-efficient, accessible, and offering the patient the opportunity to go over therapy content at their own pace and as many times as needed (Alavi and Omrani, 2019). The online therapy experience can also be enriched through multimedia learning, online homework, and ethical tracking of patient engagement with the therapy platform (Wright et al., 2019b). Despite these benefits and the comparable efficacy between online and in-person psychotherapy interventions (Carlbring et al., 2018), the user experience (UX) with this treatment modality is typically underinvestigated (Lemon et al., 2020).

To supplement this gap, the current study investigated patient perceptions of an online psychotherapy platform. UX can delineate how an individual interacts and perceives DMHIs and is critical to enhancing and optimizing therapy content and design. For example, in a UX analysis of e-CBT for depression, users viewed the therapy format as convenient, discreet, and personalizable (Stawarz et al., 2018). Findings like these can help validate therapy design and improve treatment efficacy, effectiveness, adherence, and engagement.

1.2. Aims and objectives

The current study explored the experiences of individuals who had previously used the Online Psychotherapy Tool (OPTT). OPTT is a secure and interactive cloud-based online platform that administers diagnosis-specific therapist-guided asynchronous treatment programs (OPTT Inc, 2023). Given that this was one of the first studies to

investigate participant experiences with the OPTT platform, a robust survey was developed and disseminated to capture general perceptions and features that were important to previous users.

2. Materials and methods

2.1. Study design

This cross-sectional study was reviewed for ethical compliance by the Health Sciences and Affiliated Teaching Hospitals Research Ethics Board at Queen's University in Kingston, Canada. The study used purposive sampling to recruit individuals who had previously used OPTT in research studies conducted at Queen's University. A web link to the survey description and consent letter was emailed to eligible individuals. The consent letter and survey were administered online via Qualtrics (Qualtrics, Provo, UT). Upon completion of the survey, participants would be entered into a draw to receive 1 of 20 Amazon gift cards valued at 25 CAD. Participation was voluntary and anonymous. To ensure that emails and responses were unlinked and anonymized, consenting participants provided their email in the online consent letter to be contacted for the gift card draw. Subsequently, they were sent a separate link to the email address provided to complete the survey anonymously. The survey was available from November 6, 2022, to January 8, 2023. Weekly reminders were sent during this period to encourage participation. Individuals who were not interested were instructed to send an email response to remove their names from the contact list.

Between July 18, 2019, and September 15, 2022, several clinical trials were conducted at Queen's University to investigate the efficacy of online psychotherapy programs delivered through OPTT. These online psychotherapy programs are based on widely validated CBT principles which focus on the connections between thoughts, feelings, and behaviours, identifying and modifying maladaptive thoughts and behaviours, and coping with stressful situations (Alavi and Omrani, 2019; Padesky and Greenberger, 2016; Almlöv et al., 2011). These studies provided diagnosis-specific online psychotherapy and recruited adults 18 years of age and older with a variety of psychiatric conditions, including anxiety, depression, posttraumatic stress disorder, insomnia, obsessive-compulsive disorder, bipolar disorder, binge-eating disorder, and alcohol use disorder. All diagnoses were confirmed in these trials by a psychiatrist. Additionally, some of the online psychotherapy programs specifically addressed mental health problems faced by oncology and palliative care patients, correctional workers, and people experiencing depression and anxiety related to the COVID-19 pandemic (Alavi et al.,

Table 1
Demographic breakdown of survey participants.

Category	n (%)
Gender identity (n = 163)	
Woman	163 (70.1)
Man	44 (26.8)
Prefer to self-describe	2 (1.2)
Non-binary	2 (1.2)
Prefer not to answer	1 (0.6)
Biological sex (n = 163)	
Female	120 (73.2)
Male	44 (26.8)
Ethnicity (n = 163)	
White (European descent)	136 (82.9)
Multiethnic	7 (4.3)
South Asian (Bangladeshi, Indian, Indo-Caribbean, Pakistani, Sri Lankan descent)	5 (3.0)
Black (African, African Canadian, Afro-Caribbean descent)	3 (1.8)
East Asian (Chinese, Japanese, Korean, Taiwanese descent)	3 (1.8)
Middle Eastern (Arab, Persian, Afghan, Egyptian, Kurdish, Lebanese, Turkish descent)	2 (1.2)
Latin American (Hispanic, Latin American descent)	1 (0.6)
Southeast Asian (Cambodian, Filipino, Indonesian, Thai Vietnamese descent)	1 (0.6)
Indigenous (First Nation, Inuk/Inuit, Métis descent)	1 (0.6)
Other	4 (2.4)
Prefer not to answer	1 (0.6)
Marital status (n = 162)	
Married	66 (40.5)
Single, never married	53 (32.5)
Divorced	17 (10.4)
Common-law	14 (8.6)
Separated	8 (4.9)
Widowed	2 (1.2)
Other	3 (1.8)
Highest level of education completed (n = 162)	
Bachelor's degree	57 (35.0)
Diploma	37 (22.7)
High school diploma	30 (18.4)
Graduate degree	24 (14.7)
Advanced diploma	10 (6.1)
Other	5 (3.1)

2021a; Alavi et al., 2021b; Eadie et al., 2023; Philipp-Muller et al., 2021; Stephenson et al., 2021; Alavi et al., 2020). The programs were targeted at addressing the symptom severity of the primary diagnosis (i.e., anxiety severity for anxiety disorders, depressive symptom severity for depression, etc.). Participants with a comorbid diagnosis that met inclusion criteria for multiple programs would be enrolled in the program to address their diagnosis having the largest negative effect on their quality of life.

OPTT's online psychotherapy programs comprise 10 to 13 pre-designed weekly asynchronous psychotherapy sessions followed by homework assignments to reinforce the session's concepts. Participants submit their weekly homework assignments through the OPTT platform to their therapist, who then reviews the homework assignment and provides personalized feedback. Previous participants who completed a minimum of two OPTT psychotherapy sessions were eligible to take part in the survey.

2.2. Survey development

The post-participation self-reporting survey was developed by the research team and uploaded onto Qualtrics (Qualtrics, Provo, UT). The

survey was created following an extensive literature review, consulting previously validated instruments, and reviewing qualitative data from a previous study exploring the online care needs of a subset of the participants (Moghimi et al., 2022). A sample of $n = 12$ research team members tested the survey and provided feedback. Following revisions, the final 35-item survey (Appendix A - Survey with Responses) captured demographic variables (10 items), mental health treatment history (3 items), use and perceptions of OPTT (9 items), general impressions of the psychotherapy program (7 items), and written reviews and feedback of the program (6 items). General impressions were measured on a 5-point Likert scale, and feedback was in the form of open-ended question responses. The validity and reliability of the final survey were not assessed.

2.3. Data analysis

Qualtrics (Qualtrics, Provo, UT) statistical analysis software was used for all descriptive analyses. Missing data were not imputed, and each item was assessed individually. Therefore, reported count percentages were relative to the total responses of the specific item. Categorical variables were reported using the frequency of responses and percentages, and continuous variables were reported as medians, means, ranges, and standard deviations. Chi-squared tests were done to evaluate any possible correlations between the demographic characteristics of participants (i.e., race, gender, employment status, etc.), completion status, and perceptions of the program. Independent sample *t*-tests were used to assess continuous parametric variables and Mann-Whitney *U* tests were used to assess continuous non-parametric variables at a significance level of $\alpha = 0.05$. Quantitative analysis was conducted using IBM SPSS Statistics for Mac, version 24 (IBM Corp., Armonk, NY, USA). All analyses were conducted by co-authors not affiliated with OPTT Inc.

3. Results

3.1. Participants

The survey was sent to 352 eligible participants. Of these, 22 individuals asked to be removed from the contact list and explicitly indicated that they did not want to participate in the survey. No specific reason was indicated. Due to ethical and confidentiality reasons, only demographic data from those consenting to partake in the survey study were captured. In total, 163 responses were recorded (response rate = 46.3 %, completion rate = 89.6 %; $n = 147/163$) from previous users of the OPTT platform between November 6, 2022, and January 9, 2023. The average age of participants was 41.9 (SD = 14.6) years, ranging between 19 and 75 years. At the time of the survey, 71.2 % of participants ($n = 116/162$) were employed, and 52.8 % ($n = 85/162$) did not have children. Fig. 1 displays the average household incomes of participants. Additional demographic details of the participants can be found in Table 1. There were no demographic variables with a statistically significant relation to the likelihood of completing the program.

3.2. Patient mental health intervention profile

Most participants (64.2 %; $n = 104/161$) were receiving medication for their mental health at the time of survey completion. Additionally, most participants (63 %; $n = 102/161$) had received CBT (Fig. 2) before partaking in OPTT's psychotherapy program.

Not including OPTT, previous therapy experiences included in-person delivery (74.8 %; $n = 98/131$), video-call (50.4 %; $n = 66/131$), phone call (26.0 %; $n = 34/131$), in-person group therapy (22.1 %; $n = 29/131$), online delivery with therapist support (19.1 %; $n = 25/131$), group video-call (14.5 %; $n = 19/131$), online delivery without therapist support (5.3 %; $n = 7/131$), and other (3.8 %; $n = 5/131$). A small number of participants (3.8 %; $n = 5/131$) reported no previous therapy experiences other than OPTT. Participants were also asked to

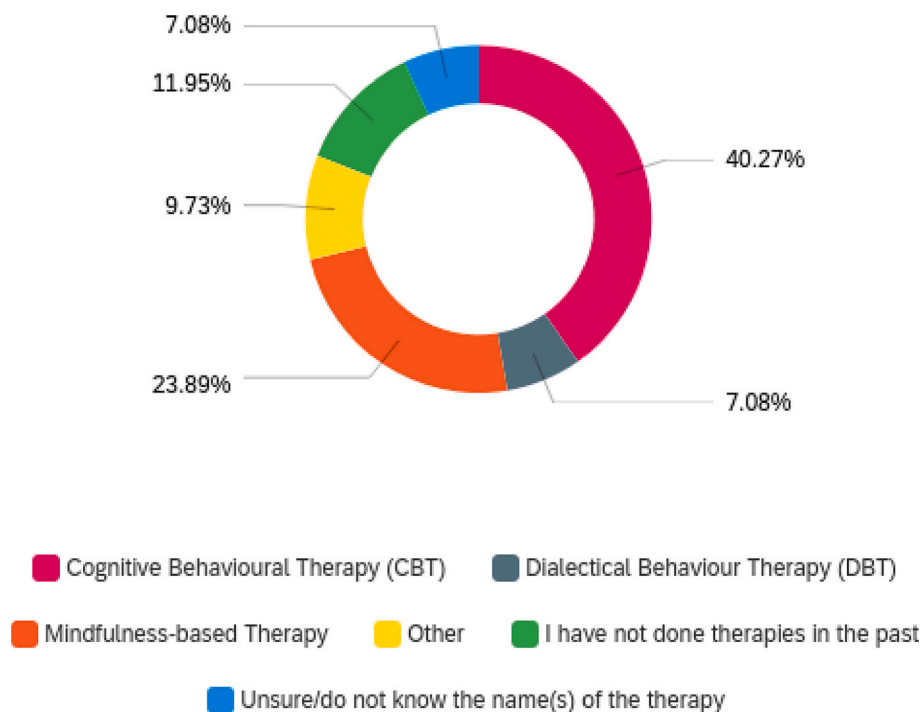


Fig. 2. Previous forms of therapy received by the participants ($n = 161$), not including the online program delivered through OPTT.

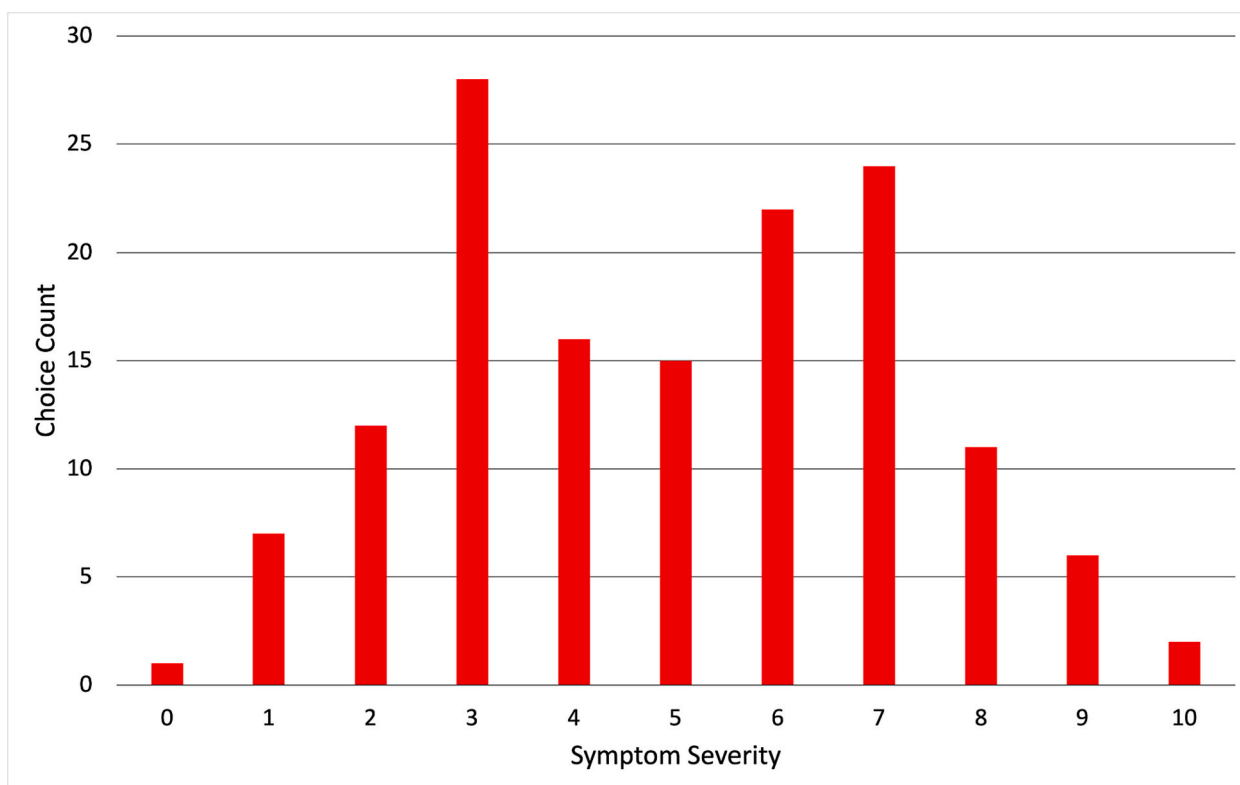


Fig. 3. Participant severity rating of their current mental health symptoms, with 0 being the lowest severity, and 10 being the most severe (x-axis). The y-axis represents the participant count.

rate the severity of their current mental health symptoms on a scale of 0–10, with 0 being the lowest possible severity, and 10 being the highest possible severity (mean = 4.92, $n = 151$; Fig. 3) There was no statistically significant relationship between symptom severity and year of program completion ($p = 0.680$; Table 2).

3.3. Treatment preferences

The programs with most enrollments on OPTT were the anxiety and depression programs (n anxiety = 100/160; n depression = 77/160) followed by posttraumatic stress disorder ($n = 16/160$; Table 3). Most

Table 2
Relationship between the year of program completion and current self-reported symptom severity.

Year of program completion (n = 96)	Average symptom severity (N)
2022	4.88 (42)
2021	4.36 (22)
2020	5.40 (5)
2019	5.00 (3)
2016	8.00 (1)
Unsure	5.25 (24)

Table 3
OPTT psychotherapy programs survey respondents were enrolled in.

Program (n = 160)	n (%)
Anxiety	100 (62.1)
Depression	77 (47.8)
Posttraumatic stress disorder	16 (9.9)
Insomnia	10 (6.2)
obsessive-compulsive disorder	10 (6.2)
correctional workers and other public safety personnel	9 (5.6)
Oncology and palliative care	8 (5.0)
COVID-19	5 (3.1)
Bipolar disorder	2 (1.2)
Binge-eating disorder	1 (0.6)
Relapse prevention	1 (0.6)
Other	2 (1.2)
Unsure	11 (8.5)

(69.6 %; n = 111/160) participants completed all sessions in their psychotherapy program. Among non-completers, the reasons cited for stopping the program included the therapist being impersonal (n = 18/45), sessions not being engaging (n = 17/45), not seeing a change in symptoms (n = 15/45), preference for in-person format over online format (n = 15/45), not enjoying completing the homework assignments (n = 10/45), finding the homework assignments overwhelming (n = 9/45), not wanting to write as much (n = 9/45), lack of time (n = 3/45), spending too much time completing the therapy sessions (n = 3/45), personal reasons (n = 3/45), symptoms improving (n = 2/45), the program being too long (n = 1/45), and other (n = 25/45). Most participants (72.7 %; n = 111/153) accessed OPTT through their computer, with 20.8 % (n = 32/153) using their cellphones, 5.8 % (n = 9/153) using their tablets, and 0.6 % (n = 1/153) using another type of device.

3.4. Post-treatment perception

Upon completion of the program, 60.6 % (n = 94/154) of participants said they preferred in-person psychotherapy to other delivery mediums. Moreover, 38.7 % (n = 60/154) preferred to interact with their therapist through video call, 21.9 % (n = 34/154) preferred phone call interaction, 14.2 % (n = 22/154) preferred online text only, 12.3 % (n = 19/154) had no preference, 2.6 % (n = 4/154) selected “other,” and 9.0 % (n = 14/154) were unsure. Most participants rated their perceptions of the online psychotherapy programs (Fig. 4), exercises, and homework assignments (Fig. 5) as good. Additional perceptions of the technology, therapists, sessions, and long-term effects of the program can be seen in Table 4. Fig. 6 details participants' agreement with various statements regarding the skills covered in the program.

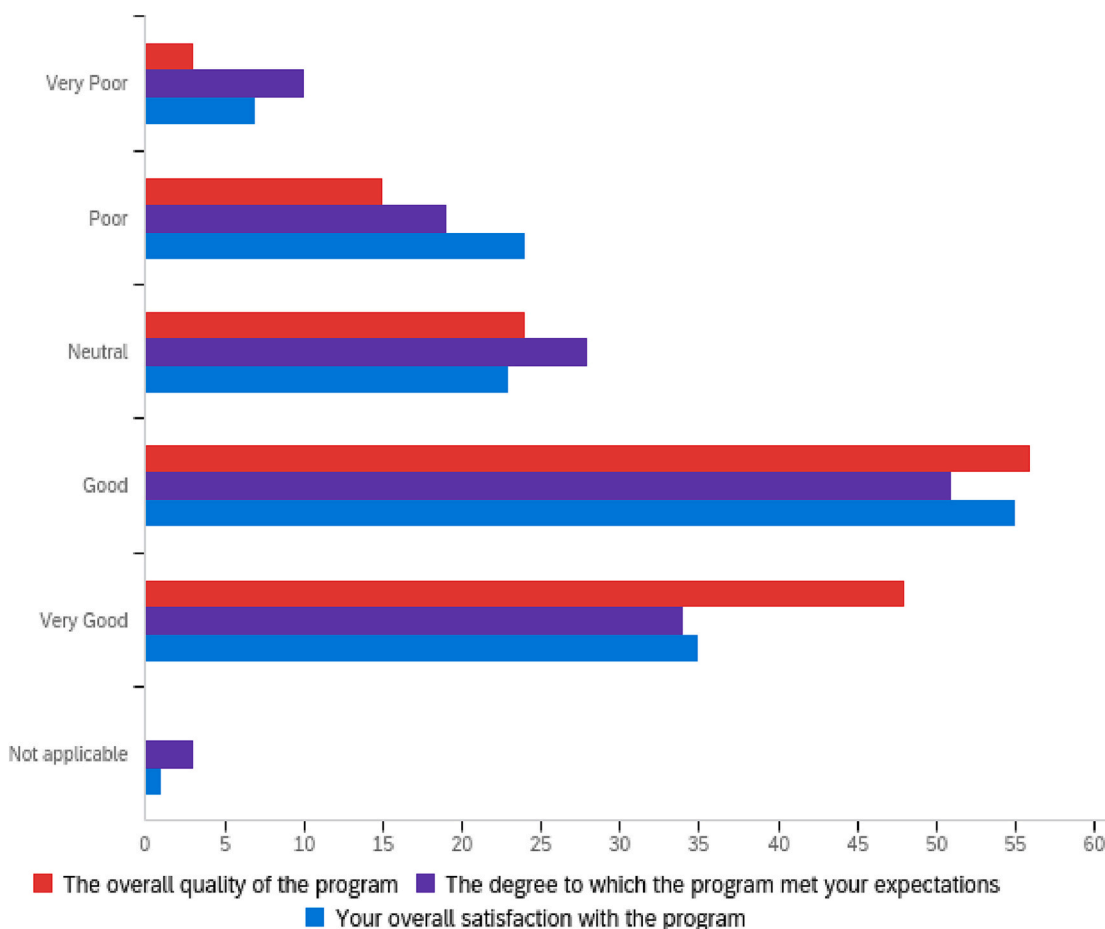


Fig. 4. Participants (n = 153) general impressions of the online psychotherapy program. The x-axis represents the number of respondents for each impression (y-axis).

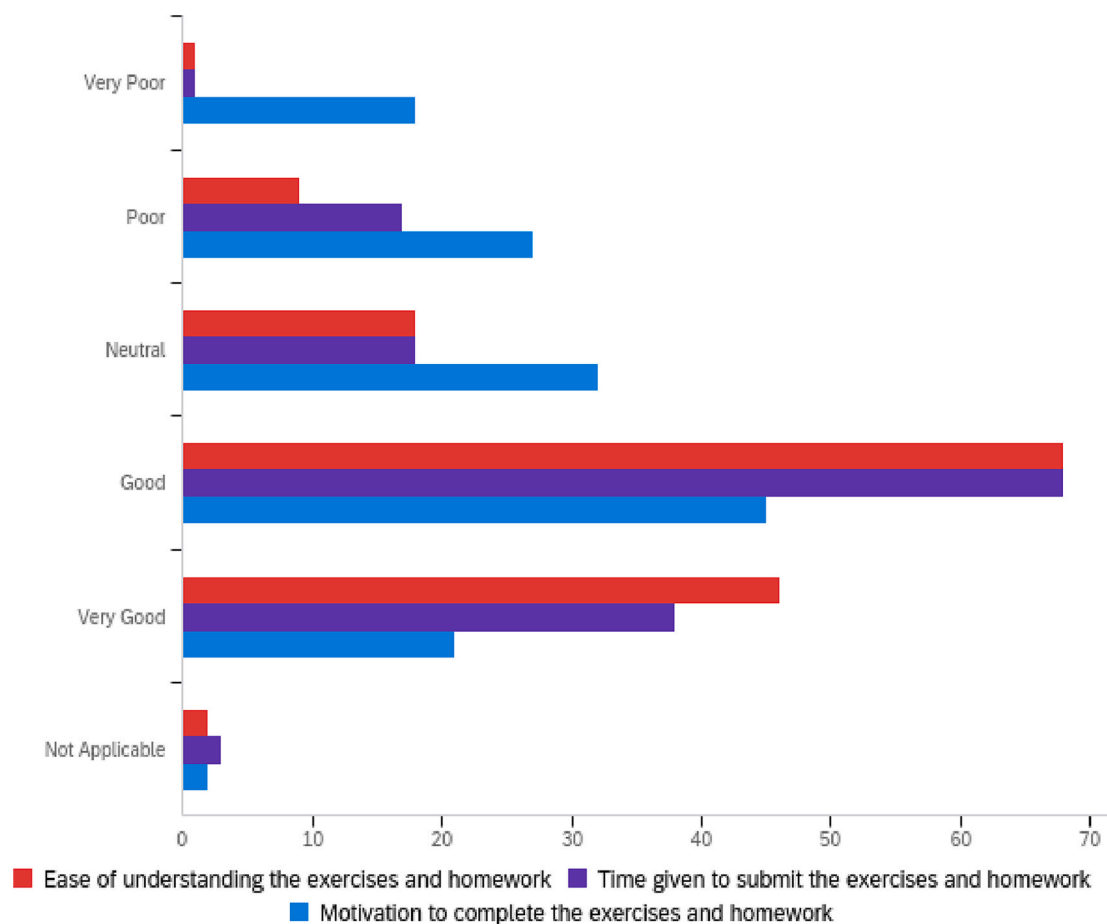


Fig. 5. Participants ($n = 148$) impressions of the exercises and homework assignments. The x-axis represents the number of respondents for each impression (y-axis).

Most (49.0 %, $n = 75/152$) participants said they were more confident in their ability to manage their mental health symptoms after completing the program, with 29.4 % ($n = 45/152$) saying no, and 21.6 % ($n = 33/152$) being unsure. Most participants (75.6 %) did not experience any unwanted negative events related to the program's on-line format.

4. Discussion

The current study explored the UX and treatment perceptions of OPTT users. Overall, participants were pleased with the therapy and reported therapeutic benefits. Most participants considered their interactions with the therapists to be positive. Some concerns over the helpfulness and relevance of the therapy content were highlighted by participants, as well as some citing low motivation levels to complete weekly sessions. The survey results also provided critical information to support program development, such as improving skills covered in the psychotherapy programs.

Despite the benefits of online psychotherapy and the generally positive user perceptions, asynchronous delivery may impact perceptions of and motivation to participate in the program (Schmidt et al., 2019; Fernandez et al., 2015; Kobak et al., 2017). In line with previous studies (Stawarz et al., 2018; Pedersen et al., 2020), the UX survey presented a mixed response regarding motivation to complete the online therapy sessions and homework assignments. Half of the participants reported good or very good motivation levels; the other half ranged from neutral to poor and very poor. Future studies should investigate therapy components associated with low motivation among users. Focusing on engagement, other programs have used group chats (Hucker and McCabe, 2015), video games (Lohse et al., 2013), and more periodic

reminders (Schneider et al., 2013) to increase patient motivation and treatment adherence in online psychotherapy programs. Individuals who completed online psychotherapy programs previously have cited an enhanced feeling of control, a sense of duty to themselves and the research team, and a sense of needing to complete a task as motivating factors (Donkin and Glozier, 2012). Future iterations of the OPTT program should consider methods to increase participants' accountability without sacrificing autonomy.

A preference for in-person versus online therapy was also observed - a sentiment that is commonly reported in the literature (Holst et al., 2017; Richardson et al., 2020a). While the benefits of online psychotherapy have been noted previously in the literature, the low uptake of online resources from the general population highlights the need for better promotion of these interventions (Richardson et al., 2020a). Factors associated with this preference include the therapist-patient therapeutic relationship and perceptions of the level of personalized care (Casey and Clough, 2015). Previous work has found that while patients have a generally positive view of online psychotherapy, comparing it to its in-person counterpart reveals a lack of therapist rapport as a limiting factor, particularly during the transition to online care during the COVID-19 pandemic (Richardson et al., 2020b; Giordano et al., 2022). The current findings further highlight the need to find a more optimal balance between face-to-face interaction and asynchronous delivery (Etzelmueller et al., 2020b). One way to accomplish this can be through a stepped-care model where the intensity of treatment (i.e., therapist interaction) is personalized to each patient (Nicholas et al., 2019; Mohr et al., 2019; Cornish, 2020). This could involve having various levels of treatment intensity ranging from fully asynchronous delivery, scaling up to asynchronous delivery with some therapist interaction, to fully synchronous delivery with a therapist,

Table 4

Participants overall perceptions of the technology, therapists, sessions, and long-term treatment effects. Values represent the percentage of participants for each category.

	Very poor-poor	Neutral/not applicable	Good-very good
General impressions of the technology (n = 153)			
General experience using the platform	17.5	16.9	65.6
User-friendliness of the platform	16.3	15.7	68.0
Ability to access the program without significant technical barriers	7.8	16.3	75.8
Helpfulness of the IT support	3.9	61.0	35.1
General impressions of interactions with the therapist(s) (n = 149)			
Quality and relevance of the therapist feedback	16.8	15.4	67.8
Helpfulness of the therapist	12.7	23.3	64.0
Overall experience working with the therapist	12.1	20.1	67.8
Degree of comfort disclosing to the therapist	10.1	15.4	74.5
Degree of empathy displayed by the therapist	9.3	18.7	72.0
Availability of the therapist	8.1	27.5	64.4
Therapists ability to guide participants through the program	8.0	21.3	70.7
Ease of understanding the therapists feedback	7.4	12.2	80.4
Confidence in the therapists knowledge	4.0	25.5	70.5
The speed at which the therapist provided feedback	2.0	16.7	81.3
General impressions of the online psychotherapy sessions (n = 149)			
Motivation to complete the sessions	26.7	22.0	51.3
Helpfulness of information received to effectively deal with mental health problems	18.7	18.0	63.3
Overall impression of the sessions	18.7	17.3	64.0
Relevance of the sessions to mental health problems	15.4	16.8	67.8
Impressions about receiving new sessions once per week	9.3	21.3	69.3
Appropriateness of the time spent on each session	8.7	23.3	68.0
Appropriateness of the number of sessions	8.0	30.7	61.3
Clarity of the information in each session	5.3	8.0	86.7
Appropriateness of the order of sessions	2.7	25.3	72.0
General impressions of the long-term effects of the program (n = 148)			
Likelihood to reference the material covered in the future	42.6	29.1	28.4
Likelihood to repeat the program in the future if seeking help	40.3	23.5	36.2
Likelihood that positive outcomes of the program will be sustained	23.0	33.1	43.9
Likelihood to recommend the program to someone else in the future	22.8	24.8	52.3
Likelihood to seek more treatment in the future	4.0	23.5	72.5

depending on each patient's needs. To maintain the scalability benefits of online psychotherapy when personalizing care level, automating this intensity decision can be used (Saarni et al., 2022; Ah Lee, 2018; Jacobson and Nemesure, 2021; Matson et al., 2022) Accordingly, OPTT has recently begun using artificial intelligence (AI) technologies to determine the appropriate level of therapist involvement for each user based on their symptomatology level (Rodrigues et al., 2022). Similarly, a review from Graham and colleagues highlights the utility of AI in the mental healthcare system, allowing for more objective measurement of patient progress and classification, personalizing treatment plans, and

automating patient monitoring (Graham et al., 2019).

Concerning long-term perceptions of the program, many participants were unlikely to use the therapy material in the future or use the platform again. Nevertheless, nearly three-quarters of participants said they were likely to seek more treatment in the future. This suggests that even if they were unlikely to use OPTT again, most participants were open to receiving additional psychiatric treatment in the future. In contrast, treatment-seeking behaviours are typically low in people with mental health problems (Henderson et al., 2013). This result may be associated with the widely reported accessibility and convenience of online psychotherapy, which has been found to have a destigmatizing effect (Goh et al., 2021). However, it is important to recognize the inherent bias of this assumption as the sample of users who used OPTT and chose to complete this survey may be conformed by individuals with strong help-seeking behaviours (Haapea et al., 2007).

This study is one of the few that has directly investigated the UX of end-users for online mental health interventions, and the most robust investigation into the OPTT platform specifically (Pedersen et al., 2020; Apolinário-Hagen et al., 2017; Lillevoll et al., 2013). Previous work has mainly investigated usage rates and patterns, with some comparisons between the patient perception of general online versus in-person mental health care (Richardson et al., 2020a; Richardson et al., 2020b; Giordano et al., 2022). However, this current study provides true novelty in the in-depth investigation into one specific online platform and a focus on patient perceptions of various aspects of care. Despite its novelty, the study's limitations must be addressed. First, the ethnicity of this sample was predominantly cisgender white (European descent) and well-educated (bachelor's degree or higher) Additional efforts are needed to understand the unique needs of equity-seeking and equity-deserving groups and provide more equitable and accessible mental healthcare (Moagi et al., 2021; Myers, 2019; Memon et al., 2016). Since members of these groups face significant barriers to accessing mental health care including language, physical, and cultural barriers (Moagi et al., 2021; Myers, 2019; Memon et al., 2016), recruiting these groups is essential for informing inclusive and equitable programs. Additionally, the survey did not include a demographic question regarding sexual orientation, another important study variable that will be incorporated into future versions of this survey to better understand the perspectives of marginalized groups (Moagi et al., 2021). Finally, the validity and reliability of the survey were not assessed in this study, despite going through several iterations of construction and revision by a group of qualified team members. However, the main goal of this survey was to be exploratory, providing insight into participant perceptions of online care and any potential demographic trends that came with these perceptions. The findings should be interpreted accordingly, and future work will be done to assess the validity and reliability of this survey.

4.1. Conclusions

This study found that the overall perception and impression of the online psychotherapy program delivered through OPTT was generally positive, citing beneficial therapist interaction, easy-to-comprehend and complete homework assignments, and relatable and engaging content. Most survey participants reported that they left the program feeling more confident in their ability to manage their mental health symptoms. Though participants were mixed in their motivation to complete the online therapy sessions and homework assignments, most reported a preference for in-person therapy, suggesting further emphasis needs to be made on adapting the program to support consistent engagement and motivation week-to-week. The scalability benefits of online psychotherapeutic interventions are promising as the demand for high-quality care continues to grow. As these programs become further refined over time, they can continue to contribute to supporting the healthcare system as an effective treatment option for patients.

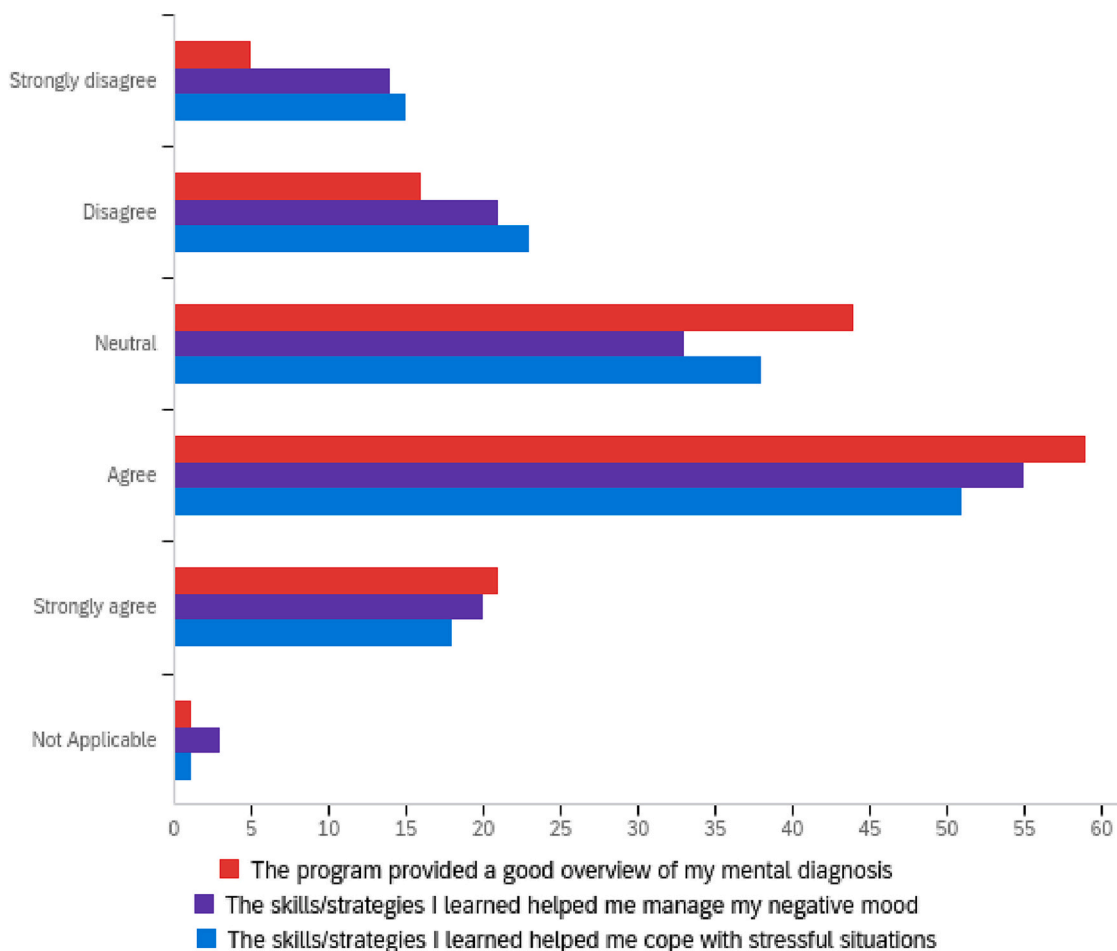


Fig. 6. Participants ($n = 148$) agreement with statements regarding the skills taught in the online psychotherapy program. Values represent the percentage of participants for each category.

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Declaration of competing interest

NA and MO co-founded the Online Psychotherapy Tool (i.e., OPTT) and have ownership stakes in OPTT Inc. The remaining authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.invent.2023.100623>.

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