Development and Evaluation of Culturally Adapted CBT to Improve Community Mental Health Services for Canadians of **South Asian Origin**

Final Report **2023**

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Executive Summary

To date, few formal culturally adapted treatments have been implemented or evaluated for mental health services.[1] Still, the studies that have been conducted indicate that culturally adapted CBT (CaCBT) is more effective than standard CBT and could be a valuable treatment option for people with mental health problems in Canada.

This study examined the development, use and evaluation of CaCBT in South Asian (SA) communities in Vancouver, the Greater Toronto Area and Ottawa to elicit key themes pertaining to the cultural adaptation of CBT across Canada.

There are 2.6 million Canadians of SA origin[a] in Canada, making them the largest racialized group in the country, constituting 7.1% of the total Canadian population.[2,3] SA Canadians are affected by higher rates of anxiety and mood disorders compared to other populations.[4] As well, depression is more prevalent among SA women than other women living in Canada, mainly due to cultural and socio-economic factors.[4]

People of SA descent living in Canada are impacted by various social determinants of health that can negatively influence their mental health and may decrease their access to care. South Asians in Canada with major depression are also 85 per cent less likely to seek treatment than other Canadians who experience the same illness.[5] The lower use of mental health services highlights the need for appropriate care for these populations.

With funding from Health Canada, the Centre for Addiction and Mental Health (CAMH) is working with the Mental Health Commission of Canada (MHCC) and partner agencies — Moving Forward Family Services (Vancouver), Punjabi Community Health Services (Greater Toronto Area) and Ottawa Newcomer Health Centre (Ottawa) — to create new mental health supports for South Asian populations in Canada.

This study used a mixed-methods trial design conducted in three phases.

- **Phase 1: Cultural Adaptation of Cognitive-Behavioural Therapy (CBT)** involved culturally adapting CBT for SA populations in Canada through stakeholder discussions, using qualitative methods of data collection.
- **Phase 2: Pilot Feasibility Testing of Culturally Adapted CBT (CaCBT)** involved testing the newly developed CaCBT for feasibility, acceptability and effectiveness through a randomized controlled trial method.

a The population for this project does not only include Canadian citizens, but also immigrants, refugees and newcomers who do not have Canadian citizenship.

- **Phase 3: Implementation & Evaluation of CaCBT** involved training therapists across Canada in CaCBT.

Both Phase 1 and Phase 3 included qualitative data collection as part of this mixed-methods study. Semi-structured, in-depth interviews were conducted and the interviewees were encouraged to talk freely about specific pre-determined topics.

In Phase 1 of the study, researchers conducted 42 interviews, which included interviewing people with depression and/or anxiety, caregivers and/or family members, community leaders and mental health professionals (MHPs). Participants were asked about their beliefs about mental health, illness and treatment relevant to the SA community. This information was used to develop a culturally adapted form of CBT. Common themes that arose from interviews with these stakeholders included increasing awareness surrounding mental health and illness; need for therapists to have cultural humility and understanding; and importance of modifying CBT techniques to better suit SA clients.

In Phase 2, quantitative data was collected to pilot test the newly developed CaCBT for feasibility and acceptability using a randomized control trial. The secondary outcomes were to test the effect of CaCBT on depression, anxiety, somatic symptoms and disability. Six licensed therapists with previous experience delivering CBT were hired to get training from the principal investigator, Dr. Farooq Naeem, on either the newly developed CaCBT from Phase 1 or standard CBT.

One hundred and 46 participants were enrolled in the study and randomly assigned to receive either CaCBT or standard CBT. Participants completed questionnaires before beginning therapy, right after completing therapy, and then six months later. Although not statistically significant, results showed that in all symptom measures, the CaCBT group scored lower than the standard CBT group, and that compared to standard CBT, the CaCBT group had higher levels of engagement and satisfaction. The findings also showed that South Asians born in Canada showed greater improvement in depressive symptoms than those born outside of Canada, indicating that CaCBT may be more widely accepted by those who are Canadian born. During the COVID-19 pandemic, we were forced to deviate from our protocol by using an online platform for recruitment and treatment. But even so, there was a high response to recruitment and a high retention rate in the online study, which yielded promising results on the feasibility, acceptability and engagement of CaCBT.

In Phase 3 of the study, we used both qualitative and quantitative methods. We trained 29 therapists on CaCBT, and evaluated their knowledge, competency and awareness before and after training. The results showed that therapists from various backgrounds had significantly greater knowledge of multicultural counselling following the training. There was a significant increase in cultural adaptation knowledge after training, with an average normalized gain in knowledge of 37% and average satisfaction post-training of 91.66%.

To obtain detailed feedback on improving CaCBT training, 13 therapists among the participants were interviewed. Using the feedback from the interviews from this phase, we made changes to the manual to reflect the diversity of the SA population: this included highlighting the importance

of not generalizing about this population, and choosing illustrations, with the help of a professional graphic designer, that captured the diversity of SA people rather than images that might perpetuate stereotypes. We also added training videos to the training package to supplement the manual.

Overall, the data collected across three phases of this study indicates that CaCBT is a viable treatment option for SA Canadians. The interviews we conducted in Phase 1 that were used to develop CaCBT demonstrated the need for more psychoeducation around mental health, illness and therapy within the SA community — both for clients and mental health service providers. Being flexible around homework (without rigid deadlines, with the option of written or verbal formats, and allowing for family members' support) made the treatment more effective, demonstrating the importance of adjusting CBT components to meet the cultural needs of SA Canadians. Individuals reported that including family in therapy was important to reduce therapy drop-out rates. Engagement with therapy was easier and made less stressful when the therapist understood the family dynamics. Many individuals also highlighted the effect of racism and its impact on their mental health.

Our economic evaluation revealed that people in the CaCBT group reported fewer visits to clinics and physician offices for any type of health problem, and less reliance on school services than people in the standard CBT group. At the 36-week follow-up, people in the CaCBT group also reported fewer visits to psychiatrists for mental health reasons than did people in the standard CBT group.

We cannot generalize our findings to every single SA individual or community because their experiences, beliefs and perspectives are so diverse. To capture this diversity, we need to develop best practices for health care in collaboration with the local community.

To conclude, our findings indicate that mental health services can be developed in a way that is culturally sensitive and culturally appropriate for Canadians of SA origin.

Key Recommendations

1. **Further Research:** There needs to be greater clarity and consistency in methodology, including larger samples of participants, to uncover the predictors of who will benefit most from CaCBT. Factors such as immigration, acculturation and language barriers should also be considered.
2. **Implementation of CaCBT:** The findings of this report show that CaCBT *is feasible and acceptable*, that service users and therapists find it helpful, and that it improves care for SA Canadians. This intervention could be implemented in Canada on a wider scale by training mental health professionals of all backgrounds to practise CaCBT with SA clients.
3. **Psychoeducation:** Greater investment in culturally appropriate education around mental health problems among the SA population would reduce the prevalent stigma surrounding mental health conditions within this community. Mental health professionals of all backgrounds also need culturally-appropriate awareness and education.
4. **Integration of Culturally Appropriate Mental Health Support:** SA participants reported seeing spiritual and religious advisors and healers for their mental health problems. *These support systems should be acknowledged and integrated into current pathways to care*.

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Project Overview

This report outlines a three-phased mixed-methods study focused on the cultural adaptation of CBT for South Asian (SA) populations in Canada experiencing depression and anxiety.

- **Phase 1:** Cultural Adaptation of CBT
- **Phase 2:** Pilot Feasibility Testing of CaCBT
- **Phase 3:** Implementation & Evaluation of CaCBT

Project activities were carried out in three geographic locations in Canada: Greater Toronto Area, Metro Vancouver and Ottawa.

Phase 1: Five themes were identified from the analysis:

- Awareness and preparation: matters that impact the individual's cognizance of therapy and mental illness
- Access and delivery of care: SA Canadians' perception of barriers, facilitators and access to treatment
- Assessment and engagement: experiences of receiving helpful treatment
- Adjustments to therapy: modifications and suggestions to standard CBT
- Ideology and ambiguity: racism, immigration, discrimination and other socio-political factors that affect mental health and access to care.

Phase 2: The CaCBT group scored lower than standard CBT on all symptom measures.

- The CaCBT group exhibited significantly greater levels of engagement and satisfaction than the standard CBT group, as evidenced by VSSS and WAI results.
- South Asians born in Canada showed greater reduction in depressive symptoms (approaching statistical significance) than those born outside of Canada, indicating that CaCBT may be more widely accepted among those born in Canada.
- The study had a high recruitment response and retention rate, demonstrating the feasibility of CaCBT.

Phase 3: There was significant increase in knowledge of both multicultural counselling skills and cultural adaptation after training.

- There was a significant increase in Southampton Adaptation Framework knowledge after training, with a 37% average normalized gain in knowledge
- Average satisfaction post-training was 91.66%.

The Findings

- Providing mental health support for SA Canadians with depression and anxiety disorders highlighted the need for adaptations to existing CBT interventions in mental health services.
- More culturally-appropriate information is needed to understand mental illness, such as depression and anxiety.
- Mental health service providers should understand that mental health among the SA community is influenced by family, biological, sociocultural and religious values.
- Services should use a co-operative approach that is acceptable to SA communities and that reflects the intrinsic and essential role of the family unit.
- Mental health treatments and services require a shift in therapist understanding, training and confidence that acknowledges the SA mental health experience and need for culturally competent services.
- While mental health services are inherently difficult to navigate, information in different languages would likely make access and treatment a real option for diverse groups who might not otherwise be aware of services, particularly ones available at no cost or for a reduced rate.
- When compared to standard CBT, people receiving CaCBT exhibit higher levels of engagement and satisfaction.
- South Asians born in Canada had decreased depressive symptoms compared to those born outside of Canada, indicating that CaCBT may be more widely accepted among those who are Canadian born.
- Overall, the study had a high recruitment response and retention rate, demonstrating the feasibility of offering CaCBT to clients and mental health professionals.
- Among mental health professionals, there was a significant increase in knowledge and awareness about multicultural counseling and CaCBT concepts.

The Recommendations

1. **Awareness of mental health and illness, and preparation for therapy:** Both SA clients and mental health service providers should develop an understanding of culture-specific factors that influence mental health, illness and treatment.

   - More information is needed to understand mental health and illness in the context of SA culture and to integrate culture-specific language associated with experiences such as depression and anxiety into treatment and education.
   - Service providers should recognize that mental health among the SA population will be influenced by their family, sociocultural and religious values.
   - A collectivistic approach should be integrated into treatment that reflects an appreciation of various aspects in SA culture, such as the importance of family, gender roles, and the influence of stigma and shame.
   - Service providers should adopt a continuous, self-reflective approach that allows them to confront their conscious and unconscious biases while working with SA clients in a non-judgmental, anti-oppressive manner.

2. **Access and delivery of care:** Service providers should work to improve access to treatment by being aware of factors that influence availability of mental health services, such as immigration and settlement, financial difficulties, language barriers and interpreters.

   - Mental health treatments and services should focus on providing culturally competent care that reflects therapists' understanding of the SA mental health context.
   - Mental health services are part of complex systems that can be difficult to navigate. Information about health systems and how they work is needed, so individuals can learn about treatments that are available to them, some of which can be accessed free of charge or at a subsidized rate.

3. **Assessment and engagement in therapy:** Service providers should ensure that treatment for South Asians is culturally appropriate; this will increase their engagement in therapy.

   - Therapists may judiciously use culturally-appropriate self-disclosure as a way to relate with their clients and build rapport.
   - Assessing and learning about clients' acculturation and immigration status will help therapists to understand their clients' mental health experiences.
   - Involving family members in treatment, where appropriate, can improve retention and engagement.
   - Therapists should use active listening to learn about the client's beliefs about mental illness, its causes and treatment, and how this awareness is influenced by culture.

4. **Adjustments to therapy:** Therapists should be flexible and ready to modify standard CBT techniques and adapt them to the client's cultural framework.

   - Providers should incorporate the collectivistic South Asian culture into their treatment.
   - Understand that techniques will not be effective if SA clients are asked to go against their cultural or religious beliefs and values.
   - Underline the importance of confidentiality, safety and privacy, especially as they relate to stigma and shame within the SA community and in conversations surrounding mental health.
   - Recognize the need to be flexible with CBT techniques, such as homework assignments (e.g., deadlines, offering formats that are written or verbal, allowing for family members' support), in order to maintain therapeutic goals while still building on therapeutic alliance.

5. **Ideology and ambiguity:** Structural and institutional determinants, both covert and overt, influence the experience of mental illness and access to services and should be considered when developing interventions for the SA community.

   - Services need to be offered with a trauma-informed approach that integrates an awareness of how racism, immigration, discrimination and other socio-political factors influence clients' mental health.
   - Service providers should consider these social factors when developing interventions for SA populations, as not considering them will only exacerbate clients' distress.
   - Therapists need to understand intrinsic biases and consider factors that are beyond a client's control.

Detailed Report

Section 1: Background and Context

Since 2009, research and education have emphasized the need for culturally adapted evidence-based interventions that can be operationalised and distributed in varied clinical practice settings.[6] CBT has become the gold standard for psychotherapy[7] and has been incorporated in both the National Institute for Health and Care Excellence (NICE) and American Psychological Association (APA) guidelines for treating various mental health conditions. Bernal and colleagues (2009) define cultural adaptations of interventions as "the systematic modification of an evidence-based treatment or intervention protocol to consider language, culture, and context in such a way that it is compatible with the client's cultural patterns, meanings, and values" (p.1).[8]

Evidence suggests that CBT, in its current form, may not be suitable or useful for people from a non-Western cultural context. Canada is home to 2.6 million people of SA origin, the largest racialized group in the country.[2,3] This includes people from India, Pakistan, Afghanistan[b], Bangladesh, Sri Lanka, Nepal, Bhutan, the Maldives and Indo-Caribbean populations, which are a SA diasporic group that also traces its lineage and culture to South Asia.

Since the late-1700s, people of Asian heritage have made significant contributions to Canada's history and identity.[9] From 2021, there were 2,571,400 Canadians of SA origin, constituting about 7.1% of the total Canadian population and 35.1% of the total Asian Canadian population. One quarter of the permanent residents who arrived in Canada between 2016 and 2020 were born in a South Asian country, and one in five were born in India.[10] There is also great religious diversity among people of SA origin, with Hinduism, Sikhism, Judaism, Christianity, Islam and Jainism now all part of Canadian identity.[9] This growth in diversity is largely due to immigration.

b For the purposes of this project, we are including Afghanistan as a constituent country of South Asia to be as inclusive as possible to the ways individuals identify their heritage.

There are still limited mental health services in Canada that are culturally appropriate for SA communities. There are also little to no training packages for providers to offer adequate and timely support to SA communities in a way that is culturally appropriate. Misconceptions still exist suggesting that SA communities do not experience mental illness nor do they require help during times of extreme distress and change. Research by Islam and colleagues (2014) show that South Asian Canadian-born and South Asian immigrant populations do not vary significantly in estimated prevalence rates of mood disorders. However, SA immigrants experience higher estimated prevalence rates of anxiety disorders and report greater life stress than do their Canadian-born counterparts. Islam and colleagues also found that South Asians who are Canadian-born perceive their mental health as worse than do other immigrants.[4]

Because of the limited research around CaCBT, specifically as it relates to a large SA community, this study was set up to develop and evaluate a culturally adapted model of CBT for SA populations affected by depression and anxiety.

Implications

Policy decision makers and program managers need to consider the mental health needs of SA communities when developing and evaluating mental health services across the country and when implementing and using the training packages with South Asians in their communities. Both Ontario and Quebec have announced funding for structured psychotherapy programs, but neither have clarified how they plan to address issues of equity for immigrant, refugee, ethno-cultural or racialized (IRER) populations. This research can and has provided policy makers and service planners with evidence-based tools and a strong case for investing in CaCBT for SA populations living in Canada. Mental health providers will be able to use the information gained from this research to recommend and reform their everyday practice. Furthermore, service users, their families and carers will be able to identify with the results and compare their experiences or share them within their own communities so as to improve mental health care for SA communities. The results will also help to clarify unmet needs and gaps in service.

Data for this study was collected using various methods and sources, including interviews with service users, therapists, mental health providers, partner agencies and third-sector community partnerships to identify key recommendations.

Key Findings

1. CaCBT is an acceptable treatment option for SA Canadians and demonstrates that mental health care providers should offer care that is culturally sensitive and appropriate.
2. CaCBT requires that providers willingly train and be sufficiently experienced to address the SA population's needs, and their idioms of distress, cultural issues, family dynamics and effects of stigma. With sufficient training, specialized rollout amongst services can be structured.
3. CaCBT needs to be promoted in the appropriate SA languages so that people can more easily access mental health services and don't feel alienated by a treatment process that that they would otherwise not turn to in difficult times.
4. The study's findings suggest that SA communities are open to accepting input from formal services that meet their needs, based on their values, beliefs, family dynamics and language preferences. No one requiring mental health services should be turned away from treatment because it fails to address their specific needs, as has happened with treatment for SA communities in the past.
5. Culturally sensitive and appropriate services need to include family members as supports, and nurture a more trusting relationship between the provider and receiver of mental health services.
6. Local community mental health services should work with partner agencies to make CaCBT an informed choice for SA people living in Canada. Specific regions and provinces need to be aware of the SA demographic in their area and work toward an integrated system that does not exclude certain populations from receiving appropriate mental health supports.
7. Psychiatric services need to include accessible mental health care for the SA population in Canada.

Section 2: Approach

Ethical approval for this study was granted by the CAMH's Research Ethics Board (#071/2019). All participants provided written informed consent to participate in the study. Recruitment for all phases was conducted virtually through online surveys, social media and word of mouth.

CBT is an evidence-based psychological treatment that has proven to help people with mental illnesses, such as anxiety and depression. It focuses on changing negative thoughts and beliefs that people might hold, which in turn, have an impact on attitudes and behaviours. To ensure this treatment is relevant and appropriate for South Asians in Canada, we culturally adapted CBT and tested it with communities across Canada. This study was carried out in three phases:

Phase 1: Cultural Adaptation of CBT. Because this was the first study to develop and test CaCBT for South Asians in North America, we drew input from community members on how to adapt CBT to meet the needs of South Asians living in Canada. We consulted with people with lived experience, caregivers, mental health care providers and community leaders and gathered information to inform the development of a CaCBT manual.

Phase 2: Pilot Feasibility Testing of CaCBT. Once the CaCBT manual was developed, we tested CaCBT against standard CBT to determine if CaCBT was accepted by South Asians, if it was feasible to implement, and if CaCBT was better at improving mental health outcomes in South Asians experiencing depression and/or anxiety.

Phase 3: Implementation & Evaluation of CaCBT. The final phase of the study focused on training 29 therapists in CaCBT. We applied both qualitative and quantitative methods in our analyses.

Data from each phase was analyzed separately, according to the methodology for each phase.

Partners

The study was conducted at CAMH, and partners in this research included:

- Mental Health Commission of Canada (MHCC)
- Moving Forward Family Services (Vancouver)
- Ottawa Newcomer Health Centre hosted at Somerset West Community Health Centre (Ottawa)
- Punjabi Community Health Services (Greater Toronto Area).

Phase 1: Cultural Adaptation of CBT

In Phase 1, 42 interviews were conducted. This included 13 people with lived experience, nine caregivers, 10 mental health care providers and 10 community leaders (see Table 1). Five interviewees were from Ottawa, 21 were from the Greater Toronto Area, and 16 were from Vancouver. The smaller number of people recruited from Ottawa likely reflected the smaller population of South Asians living in that city compared to Toronto and Vancouver.

About 50 per cent of people contacted to participate in the study were lost at follow-up. Most of these people, particularly those with lived and living experience, could not be reached even after our research assistants made numerous attempts to reach them. In some cases, people were successfully contacted but were no longer interested in participating in the study. The low response rate was likely due to the six-month gap between when participants were recruited (mid-March) and when research assistants began contacting potential participants (mid-September). The pervasive impact of the COVID-19 pandemic may have also contributed to the low participant response rate.

We determined that the sample size was sufficient to inform the development of the CaCBT manual. We reviewed interview transcripts through the course of data collection to identify themes until eventually no new themes were emerging from the participant interviews.

Table 1 Number of Individuals Interviewed by Participant Group

	Individuals with Lived and Living Experience	Caregivers	Mental Health Care Providers	Community Leaders
Number of Participants	13	9	10	10

The analysis was informed by an ethnographic approach[11] using the principle of emergent design.[12] Collected data were analyzed for systematic content and themes. Researchers carefully read transcripts several times and identified emerging themes and categories.[13,14] Regular project team meetings were held throughout data analysis to further explore participants' responses, and reach agreement on recurring themes. Identified themes were converted into codes and organized into wider themes and categories (e.g., barriers to therapy). NVivo 9 software facilitated the analytical process. The researchers involved in collecting data began analysis as interviews were being conducted. They used multiple methods to compare themes emerging from the different participant groups to test the validity of the data. Three researchers independently analyzed the randomly selected transcripts using the thematic framework and then compared results to test the validity.

Once no further themes emerged from the interviews, the analysis was deemed complete. We developed wider themes and categories based on the results from the qualitative data. And we culturally adapted the existing standard CBT manual that the study's principal investigator had developed[15] using the qualitative results and incorporating important cultural aspects identified in the data (e.g., centrality of religion, extended family structures).

Phase 2: Pilot Feasibility Testing of CaCBT

The goal of this phase was to enroll 140 SA Canadians — 70 in the CaCBT group and 70 in the control group. We had a good response to the recruitment process, which was conducted through social media and word of mouth between May and December 2021. We received 299 responses, with 209 participants consenting. Due to the COVID-19 pandemic, we deviated from our protocol by switching all recruitment to online.

Almost all participants were self-referred, which may indicate a higher motivation in the SA Canadian community to participate. However, we acknowledge that this may not have been the case in a more clinical setting. Amongst the 209 consented participants, 146 participants met our eligibility criteria and were enrolled. This included participants who identified as South Asian, were ages 18–64, had access to an electronic device and scored eight or higher on the Hospital Anxiety and Depression Scale (HADS). The 146 participants then completed their baseline evaluation, which included the Hospital Anxiety and Depression Scale (HADS), the Bradford Somatic Inventory (BSI), the World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0) and an Economic Evaluation questionnaire. By the end of recruitment, 75 participants were randomly assigned to the CaCBT group and 71 to the standard CBT group, with both groups to receive eight to 12 weeks of therapy. After 12 weeks, participants were then asked to complete the same set of baseline surveys, as well as the Verona Service Satisfaction Scale (VSSS) and the Working Alliance Inventory-Therapist (WAI-Therapist) and Client (WAI-Client) surveys. Then after 36 weeks from baseline, participants were asked to complete the same series of questionnaires as baseline.

We followed the CONSORT guidelines for randomized controlled trials,[16] with statistical analysis of the data conducted by a statistician who was "blinded" (in other words, who did not know which treatment group results he was analyzing).

For the economic evaluation of CaCBT, health service use and outcomes were analyzed according to published guidelines[17] to understand the costs associated with implementing CaCBT.

Phase 3: Implementation & Evaluation of CaCBT

After testing the newly developed CaCBT intervention with the participants in Phase 2, mental health professionals were trained in CaCBT to further improve the intervention.

Twenty-nine therapists not involved in previous phases were recruited from partner agencies and through word of mouth. Participating therapists completed questionnaires that measured their knowledge, competency and satisfaction before and after training.

The training consisted of a half-day virtual session delivered by the CaCBT therapists from Phase 2. The participants were also provided with the latest version of the CaCBT manual to review before the virtual session.

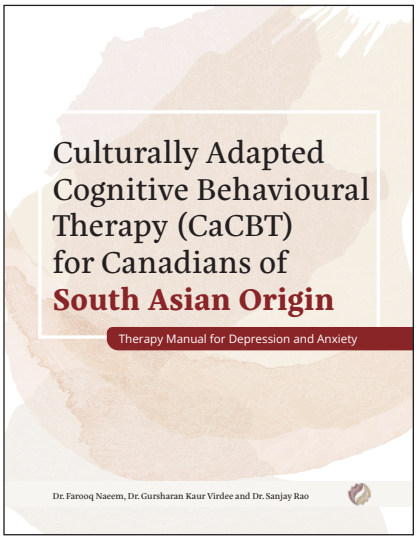
We measured changes in the pre- and post-training scores on the questionnaires to observe whether the manual and CaCBT training session influenced participants' multicultural counselling knowledge and awareness of the CaCBT framework concepts.

We also interviewed a subset of the participants to obtain further feedback to improve the CaCBT manual and training.

Dissemination Plan

Dissemination of the data analysis and findings have been written up and submitted to peer review journals, and will be presented at both national and international conferences. We will target our results dissemination to both academics and clinicians. The intended project outputs (products) to showcase include:

1. a CaCBT training package for therapists working with SA clients affected by depression and anxiety, which includes:
   - **a CaCBT manual for SA clients** that gives mental health professionals hands-on techniques for implementing the therapy
   - **training videos** to supplement the manual and enrich trainees' experience while learning about CaCBT
2. knowledge translation products developed for specific target audiences (i.e., service providers and service users). Products will include knowledge translation flyers for the public and mental health professionals, and a public launch of findings.
3. articles highlighting research findings submitted to peer reviewed journals to communicate the results to the research community, clinicians and decision makers.



Phase 1: Cultural Adaptation of CaCBT

Qualitative data was collected via semi-structured in-depth interviews. Research staff facilitated semi-structured interviews and recorded, transcribed and validated the interviews. Research staff took field notes including information on non-verbal communication and behaviours.

Several questions were explored, including: What is mental health? Why do you think mental health is important? What is depression? What is anxiety? How would you describe these mental health problems? What are some symptoms of anxiety and depression? Who can treat anxiety and depression? What kind of treatment is available for anxiety and depression? How do you think psychotherapy — or treatment in general — for these mental health problems could be improved?

Of 42 participants interviewed, there were 13 participants with depression and/or anxiety, nine caregivers and/or family members, 10 community leaders and 10 mental health professionals (MHPs). Sixteen participants were from Vancouver, 21 from the Greater Toronto Area and five from Ottawa. Participant demographic data is summarized below (See Table 2).

Table 2 Participant Demographic Information

	Individual with Anxiety/ Depression (n = 13)	Caregiver/ Family Member (n = 9)	Community Leader (n = 10)	Mental Health Professional (n = 10)	Total (n = 42)
MEAN AGE					
Mean (SD)	36 (11.5)	42 (11.0)	35 (10.3)	39 (6.4)	**38 (10.1)**
GENDER					
Female	11 (84.6%)	8 (88.9%)	9 (90%)	8 (80%)	**36 (85.7%)**
Male	2 (15.4%)	1 (11.1%)	1 (10%)	2 (20%)	**6 (14.3%)**
BORN IN CANADA					
Yes	7 (54%)	3 (33.3%)	7 (70%)	4 (40%)	**21 (50%)**
No	6 (46%)	6 (66.7%)	3 (30%)	6 (60%)	**21 (50%)**

We identified five themes that emerged from the qualitative interviews:

1. **Awareness and preparation: Matters that impact the individual's understanding of therapy and mental illness.** Participants' recognition and ownership over their mental health included how they understood signs, symptoms and causes of mental illness and what they knew about acceptable treatment options (see Appendix A: Table 2).
2. **Access and delivery of care: SA Canadians' perception of barriers and access to treatment.** SA Canadians identified various barriers to accessing treatment such as immigration and settlement issues, financial difficulties, therapists not speaking their language, poor level of acculturation and not being aware of what mental health services offer (see Appendix A: Table 3).
3. **Assessment and engagement: Experiences of receiving helpful treatment.** Mental health professionals reported that they applied therapies based on clients' needs. All the interviewed therapists identified active listening as a primary component of their treatment. The therapeutic process involved open-ended questions; identifying clients' negative thoughts and the changes they wanted to see in their life; goal setting; and finally, engaging the client in the care plan during therapy (Appendix A: Table 4).
4. **Adjustments to therapy: Modifications to and suggestions for standard CBT (with both individual and community level suggestions).** Participants identified ways to improve the overall therapy, including making it culturally appropriate and identifying what worked and didn't work in the therapy.

What worked in therapy: Providers need to consider the collectivistic SA culture.

> *"I think CBT, … [like] any types of therapy … need to take a […] cultural perspective … acknowledging that there's like transgenerational trauma, and acknowledging that the trauma that your client has now … could be rooted from the trauma that their parents had [or] what their grandparents had and that it can be passed down."* (Individual with depression/anxiety, Vancouver)

What did not work in therapy: Participants identified techniques that are not effective for the SA community, particularly asking SA clients to go against their cultural beliefs and values.

> *"It's really funny when like a counsellor tells me, "oh maybe you just need to put in boundaries with your parents" like that's really hard to do with South Asian parents."* (Patient, Vancouver)

> *"Like for a [South] Asian woman, if you tell her, just like go party, enjoy yourself, go to a bar […] Or if you tell a [South Asian] man that from today you are going to cook, clean, do everything that your wife does, and that'll make you happy, it's not going to happen. So, you cannot modify the behaviour just because of their culture. Cognitive-behavioural therapy depends on modifying the behaviour of a person and if it is not culturally appropriate, it will just not work."* (Community leader, GTA)

5. **Ideology and ambiguity: Racism, immigration, discrimination and other socio-political factors that individuals' felt they did not have control over but predisposed them to mental health challenges.**

   Study participants cited socio-political factors that are beyond one's control as having a substantial impact on one's identity, role in society and mental health. Findings suggested that it was important for therapists to understand their own inherent biases and consider factors beyond a patient's control that affect their mental health.

> *"There's that whole race issue as well that we have to look at. And it has become very prominent ... in the Western society right now [...], we have to keep in mind that there is, inherently, there is bias. And there's bias in therapies and there's bias in systems, and there's bias in people who control these systems [sigh]. They're not aware of it or, even if they are, they're in denial of these biases that are, that are so wrapped [up] within these systems. And these biases will definitely impact the way therapies are delivered to people who are marginalized, and people who're disadvantaged, people who belong to equity seeking groups."* (Caregiver, GTA)

   Poverty, cultural barriers and access to health services play a significant role in exacerbating symptoms associated with depression and anxiety.

Development of Culturally Adapted CBT Manual

Interview transcripts were reviewed to identify key areas of CBT that needed to be adapted for South Asians experiencing depression and/or anxiety. The key areas were centred on therapists developing cultural competence to work with South Asian clients. Topics included building rapport, identifying cultural expressions of distress, and making adjustments to homework assignments.

In general, CBT was adapted to address the importance and influence of culture, religion and spirituality in therapy; to understand client beliefs about mental health, illness and treatment; and to identify pathways to care and help-seeking behaviours within the SA community. A draft of the manual was shared with the Research Team and Expert Advisory Committee and a detailed review process was conducted to verify its accuracy.

After incorporating feedback from the Committee, the next draft of the manual was prepared for Phase 2.

Phase 2: Pilot Feasibility Testing of CaCBT

The recruitment process for the pilot feasibility testing of CaCBT was conducted from May to December 2021. We received a positive response from the general public, primarily via self-referral, with 299 recruitment responses in total, and 209 participants consenting to take part in the study. The outcomes for Phase 2 are listed below in Table 3.

Table 3 Outcomes for Phase 2 of the Study

Outcomes	
Primary	To pilot test the newly developed CaCBT for feasibility and acceptability using a randomized control trial (RCT)
Secondary	To test the effect of CaCBT on depression, anxiety, somatic symptoms and disability

Due to the COVID-19 pandemic, we had to deviate from our protocol by recruiting all participants virtually. The high number of self-referred participants in the study may indicate a higher motivation to participate in the SA Canadian community because being online removed many barriers. We may not have had as many people self-referring if the study had been in a clinical setting, which would have involved expense and time to travel and the possible discomfort of being in an unfamiliar setting.

Out of the 209 participants who consented, 146 met our eligibility criteria. This included participants who identified as South Asian, were ages 18–64, had access to an electronic device and had an HADS score of eight or higher. Exclusion criteria included excessive substance use, significant cognitive impairment, active psychosis and receiving CBT within the past 12 months. These criteria are summarized below.

Inclusion criteria:

- *Self-identified as South Asian*
- *Ages 18–64*
- *Access to an electronic device*
- *HADS score of 8 or higher*

Exclusion criteria:

- *Excessive substance use*
- *Significant cognitive impairment*
- *Active psychosis*
- *Received CBT in the last 12 months*

The 146 participants then completed their baseline evaluation, which included the Hospital Anxiety and Depression Scale,[18] the Bradford Somatic Inventory,[19] the World Health Organization Disability Assessment Schedule 2.0 and an Economic Evaluation.

We trained six therapists in either CaCBT (n=3) or standard CBT (n=3). There were two SA therapists and four non-SA therapists. To avoid cross-contamination, training for the experimental and control groups was provided separately.

Seventy-five participants were randomly assigned to the CaCBT group and 71 to the standard CBT groups — with both groups receiving 8 to 12 weeks of therapy. After 12 weeks, participants were then asked to complete the same set of surveys as well as the Verona Service Satisfaction Scale (VSSS)[20] and the Working Alliance Inventory Client survey.[21] After 36 weeks from baseline, participants were asked to complete the same series of questionnaires again.[21]

Research staff — including the research analyst, assistant and statistician — were not given information on which group participants were allocated to during recruitment, follow up or analysis to avoid any unwanted bias.

Participant Demographic Profile

Approximately 81 per cent of the participants were female, about 18% were male and one participant identified as non-binary. The average age of the participant sample was 30.7 years (Table 4).

Table 4 Gender and Mean Age (n=146)

Gender	Frequency (%)		
	CaCBT (n=75)	**Standard CBT (n= 71)**	**Total (n=146)**
Female	62 (82.7%)	57 (80.3%)	**119 (81.5%)**
Male	13 (17.3%)	14 (19.7%)	**26 (18.5%)**
Non-Binary	0 (0.0%)	1 (1.4%)	**1 (0.68%)**
Mean Age (SD)	29.9 (9.4)	31.5 (10.7)	**30.7 (10.0)**
Min- Max Age	18–62	19–63	**18–63**

Appendix A shows a more detailed breakdown of participant demographics, sexuality and religious or spiritual affiliations.

Primary outcomes of Phase 2

Working Alliance Inventory — Client and Therapist

Clients and therapists from both the CaCBT and standard group completed the Working Alliance Inventory (WAI) after treatment. The WAI evaluates three key aspects of the therapeutic alliance:

Task

agreement on therapeutic tasks

Goal

agreement on therapeutic goals

Bond

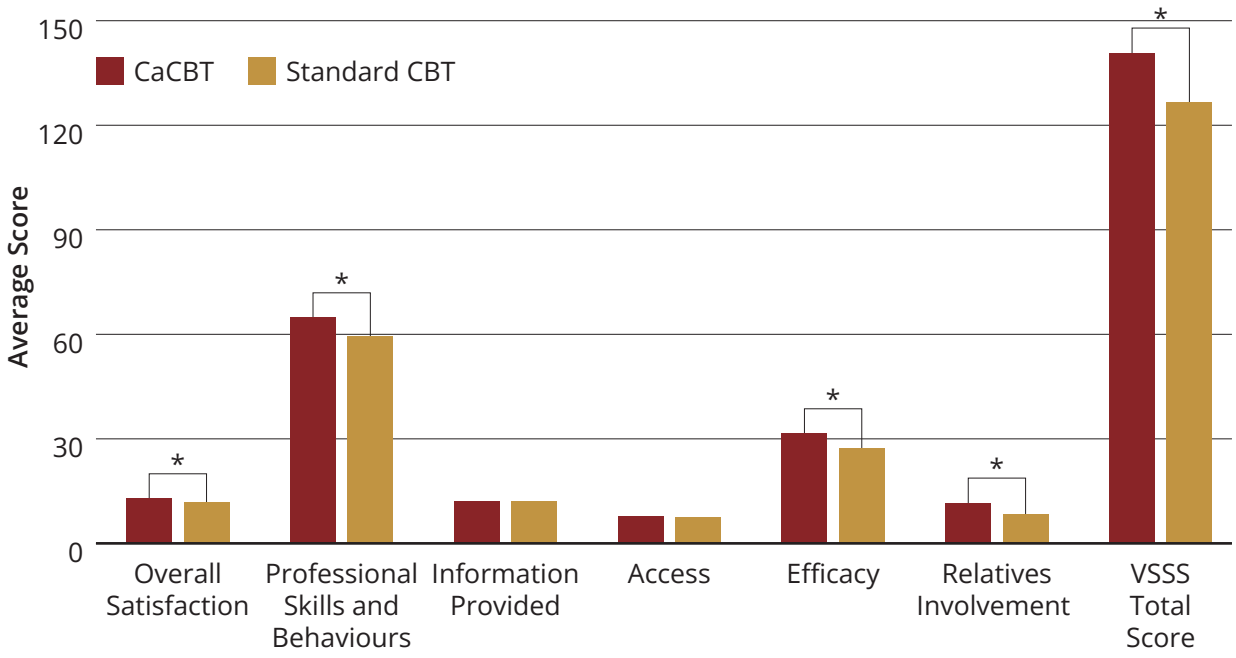
development of an affective bond between client and therapist

Participants from the CaCBT group showed significant effects for WAI Total score and Bond score in comparison to the standard CBT group. All WAI therapist subscales (task, goals, bond and total) were significantly different between groups, with higher scores for the CaCBT group.

Verona Service Satisfaction Scale

The results from the Verona Service Satisfaction Scale (VSSS) showed that participants' overall atisfaction with therapy sessions, the therapist's professional skills and behaviour, efficacy of the therapy and therapist's approach, involvement of relatives and total score for VSSS were all significantly higher in the CaCBT group than the standard CBT group (Figure 1).

Figure 1 Phase 2 — Verona Service Satisfaction Scale



* statistically significant difference ($p<0.05$)

The positive feedback provided by CaCBT group participants is further supported by the quotes below (Table 5). Participants responded positively about the therapist being aware of cultural perspectives, because it meant they didn't have to spend time informing, training and educating the therapist about their culture and thus wasting time when there were only limited sessions.

Table 5 Phase 2 — Verona Service Satisfaction Scale Responses

◗ *"The [therapist] was great to work with. [Therapist] understood my problems from a cultural perspective and was helpful and compassionate."*
◗ *"The [therapist] really understood me and I knew I would feel more empowered and more confident after every session — even when I had tried CBT tools on my own and was still anxious. Excellent counsellor — informative, helpful, empathetic, non-judgmental and positive."*
◗ *"I received [one-on-one] communication and [they] provided documents according to need. As a Muslim woman I was definitely looking for resources that could help me to get help while staying in touch with [my] religion."*
◗ *"I felt like the mental health service provided was very professional, my [therapist] was very knowledgeable, conscious and responsive to my needs, circumstances, boundaries and traumas. [The therapist] encouraged me in ways I needed, but also respected my needs/speed/limitation. I always felt like I was in the driver's seat… [Therapist] knew the culture and could relate — I didn't have to spend time informing/training/educating her about my culture or realities of being historically and culturally persecuted."*

Participants felt that CaCBT responded well to their needs, in terms of the pace of the therapy, and helping them stay connected to their religion and spiritual values when appropriate. Despite the study focus on CaCBT, both religion and culture were discussed as topics in the CaCBT manual because the two are inextricably linked in SA cultures. The VSSS and WAI results show that the CaCBT group exhibited higher levels of engagement and satisfaction compared to standard CBT.

Our findings for secondary outcomes (measured via the HADS, BSI and WHODAS 2.0) suggest that the CaCBT group scored lower than the standard CBT group on all symptom measures, which indicates that the CaCBT group experienced reduced symptoms, but not to a degree that was statistically significant. Further analysis of the HADS—Depression subscale revealed that among South Asians born in Canada, those in the CaCBT group experienced greater improvements in their mental health than those in the standard CBT group, with this result approaching statistical significance. This difference between treatment groups was not seen among South Asians born outside Canada, suggesting that CaCBT may be more widely accepted among South Asians born in Canada. A breakdown of the secondary outcomes can be seen in Appendix B.

Economic evaluation of CaCBT: Health service use

CaCBT group participants reported on average higher self-rated health, as measured on the EQ-Visual Analog Scale (EQ-VAS),[22] than those in the standard CBT group at 12-week follow-up post therapy. However, at the 36-week follow-up there was no significant difference between the two groups.

Both groups visited or spoke to spiritual advisors about their emotions and mental health. However, on average, people in the CaCBT group reported more visits to a spiritual advisor in the past 12 months at baseline than those receiving standard CBT. This demonstrates that South Asians seek mental health support from religious and spiritual advisors outside of "traditional" mental health care, underlining the need for these non-traditional or complementary services to be integrated into standard mental health care. The CaCBT group's greater reliance on religious and spiritual advisors is consistent with CaCBT guidelines that encourage people to connect with religious and spiritual healers to complement therapy and address beliefs that may be based in religious understanding.

At the 12-week follow-up, the CaCBT group reported significantly fewer mental health visits to psychiatrists, psychologists and other medical doctors compared to the standard CBT group. This is encouraging as it shows that using CaCBT reduces reliance on health services.

Despite deviating from our recruitment and treatment protocol by using a fully online platform during the COVID-19 pandemic, the study nonetheless had a high recruitment response and retention rate, demonstrating the feasibility of CaCBT.

To conclude, in all symptom measures, participants in the CaCBT group had lower scores than standard CBT. After completing therapy, people who received CaCBT reported higher satisfaction and engagement, fewer mental health visits and higher self-rated health than those who received standard CBT.

The combination of the trends shown in the primary and secondary analyses demonstrate promising results on the feasibility, acceptability and engagement of CaCBT. Further work needs to be undertaken in a definitive trial.

Phase 3: Implementation and Evaluation of CaCBT

The research aim in this stage of data collection was to evaluate how the newly developed CaCBT training enhanced the cultural competence, knowledge and awareness among therapists already delivering CBT.

Therapists not included in previous phases of the study were trained in CaCBT. The CaCBT manual was provided for review before the training session. The Phase 2 CaCBT therapists and principal investigator developed and led a half-day training session.

Participants were recruited through partner agencies, other community organizations, and by word of mouth. To be eligible, participants needed to be mental health professionals trained in CBT with at least one year's experience administering CBT.

During Phase 3 of the study, two questionnaires were administered pre- and post-training to measure therapists' changes in knowledge, competency and satisfaction. One of these questionnaires was the Multicultural Counseling Knowledge and Awareness Scale (MCKAS),[23] which is a 32-item self-report record of perceived multicultural counselling knowledge and awareness. The other was a Knowledge Questionnaire, derived from concepts of a culturally adapted therapy framework used in Phase 1 of the study. As part of Phase 3, participants also reported their overall satisfaction with the training after reviewing the manual and attending the half-day virtual session.

The findings from the questionnaires post-training showed a significant increase in therapists' multicultural counselling knowledge (11 points) and overall knowledge and awareness (12 points). There was a significant (37%) increase in knowledge of the Southampton Adaptation Framework after training (4.5 points), and 91.66% average satisfaction post-training (Appendix C: Table 6).

Qualitative data from Phase 3

Thirteen therapists were interviewed to obtain detailed feedback on the manual and half-day training in order to further improve the materials.

Quotes were extracted from the transcripts to show some of the recurring themes around what the therapists found useful in both the manual and the training. See Appendix C: Tables 4 and 5.

The themes identified were:

- self-disclosure as a helpful culturally adapted technique
- positive response to directive techniques in therapy
- inclusive and diversity of SA populations
- use of faith healers

Changes were made to the knowledge translation materials based on the feedback we received. For example, we incorporated feedback about the importance of not generalizing about the SA population, because it is so diverse. As such, illustrations in the manual were made to depict South Asians of various backgrounds in traditional and non-traditional clothing. Based on participants' recommendations, we also developed training videos to supplement the manual and enhance learners' experience during CaCBT training. Details can be found in Appendix D.

Section 4: Discussion and Recommendations

Betancourt et al. define cultural competence as the ability of providers and organizations to effectively deliver health care services that meet the social, cultural and linguistic needs of patients.[24] The increasing diversity of the Canadian population has brought both challenges and opportunities for mental health care providers, health care systems and policy makers in Canada to provide culturally competent services and train culturally competent professionals. A culturally competent health care system can help improve health outcomes and quality of care, and can contribute to the elimination of racial and ethnic health disparities.[25] While not a definitive trial, this mixed-methods study of CaCBT—to pilot test the newly developed CaCBT for feasibility, acceptability and effectiveness via quantitative methodology and to conduct a randomized controlled trial – did reveal a high satisfaction score from participants, and positive feedback from both participants and the therapists who received CaCBT. This demonstrates the feasibility of CaCBT. However, our secondary outcomes were not statistically significant.

Despite there being interpreters available for various SA languages during Phase 2 recruitment, potential participants were not interested in attending sessions with an interpreter present if the therapist did not speak their language. Their reticence was likely due to feelings of stigma and shame about mental illness, which could have been exacerbated by having a third person (the interpreter) present in the session. Having interpreters present could also raise participants' concerns around confidentiality, trust and engagement, which are so important to the therapeutic process.

Language and communication problems could also result in patient dissatisfaction, poor comprehension and adherence, and a lower quality of care. Previous research has found that the Spanish-speaking Latinos were less satisfied with the care they received and more likely to report overall problems with health care than were the English speakers.[26] The type of interpretation service has a significant effect on people's level of satisfaction. A study comparing various methods of interpretation found that patients who use professional interpreters are as satisfied with their overall health care visit as patients who use bilingual providers.[27] Patients who use family interpreters or non-professional interpreters — such as nurses, clerks and technicians — are less satisfied with their visit.[27]

During the recruitment stage, we found that WhatsApp and word of mouth were most helpful in increasing our recruitment numbers. Use of technology to communicate, engage and maintain contact for follow-up was immensely useful and participants responded quickly.[28] Many participants shared that virtual therapy had increased accessibility for them. This could have been because the appointments were easy to arrange, with no cost or time required to travel, and no need for child care, unlike traditional site-based clinical trials that place huge demands on participants.[28]

A key research finding is that CaCBT training can be useful for therapists from all cultural backgrounds: anyone can learn and understand how to provide culturally sensitive and appropriate care for SA clients without necessarily being South Asian themselves.

COVID-19 Impact

In March 2020 the WHO declared a pandemic due to the global spread of COVID-19. As cases began to rise in Ontario, the province entered lockdown to curb the spread of the novel virus. At CAMH, all research activities, including our study, were temporarily halted before measures were quickly developed and implemented for research activities to continue in spite of the pandemic. Research activities that would normally take place in person were then offered virtually, which required us to change how data would be collected.

For Phase 1 of CaCBT, the original plan was to conduct 15 in-person focus groups and eight to 10 in-person individual interviews. However, with the new pandemic guidelines, we decided that the most feasible method to gather data virtually would be through individual interviews. Participant recruitment targets were also adjusted to balance project timelines with garnering a reasonable number of participants. We aimed to interview 80 community members. After receiving approval from the CAMH Research Ethics Board to proceed with our virtual research activities, we proceeded with online interviews. By December 2020, we had completed 42 interviews. Our qualitative analysis showed that no additional themes were being uncovered, and a point of "data saturation" had been reached, so we decided not to recruit additional participants to meet our original target numbers, especially given the delays already imposed by the pandemic.

For Phase 2 pilot feasibility testing of CaCBT, virtual protocols of research activities were still in place at CAMH and our partner agencies, so we proceeded to amend our recruitment and data collection to virtual therapy sessions and research study visits. We had great success reaching our recruitment targets with social media as our primary recruitment method.

Participants from Phase 2 said they appreciated having therapy online, because it was easy to schedule appointments, and convenient for them to have sessions from the comfort of their own home with less disruption to their family and job commitments. However, some participants felt that having therapy online was a barrier to being fully open and transparent with their therapist. Other participants found it difficult to find private space in their home for the sessions. And some participants felt disconnected during online therapy sessions, as if they were not really "in" the therapy sessions because they were virtual.

For Phase 3 on implementation and evaluation of CaCBT, recruiting new therapists and administrating the training session was fully virtual. Although the online training sessions and research administration required more co-ordination to suit participants' schedules and achieve our recruitment target, the virtual sessions allowed participating therapists to be in various locations, with participants in British Columbia, Alberta and Ontario attending the training. The virtual nature of the study allowed for more flexibility and accessibility for participants to join from any city in Canada, without needing to be close to one of the partner site offices as would have been necessary for sessions held in person.

Challenges and Success

Overall, we encountered both challenges and successes while completing this study. Because of our virtual research recruitment, people who were not comfortable using technology or didn't have access to the Internet or to a device would not have been able to connect with us. We also had some difficulty following up with participants exclusively via email and over the phone. As well, some participants experienced issues with the online survey platform while completing their study assessments, underlining how technology can impose a barrier for some people.

However, despite these challenges, this study occurred at a very opportune time. Given the exacerbation of mental health disparities among racialized communities during the COVID-19 pandemic, culturally appropriate and sensitive care is more needed than ever to ensure that communities are able to receive services that suits their unique needs.

The feedback and support we received from the inception of this project demonstrated the crucial need for this adapted form of mental health care among the SA community. During Phase 2 specifically, we surpassed our recruitment targets and received responses across Canada, demonstrating that Canadians of SA origin are taking steps to manage their mental health and actively seek support. Our feasibility and acceptability results show that CaCBT is well received and accepted by South Asians across Canada, with high satisfaction rates. Our economic evaluation showed that people in the CaCBT group reported fewer visits to clinics and physician offices for any type of health problem than did the standard CBT group. We found similar results at 36-week follow-up, with people in the CaCBT group reporting fewer visits to psychiatrists for mental health reasons.

Given the great diversity of the SA population within Canada, mental illness will undoubtedly be expressed and experienced in diverse ways. Best practices for care must be determined in collaboration with the local community. SA mental health professionals are not solely responsible for caring for their own community members. As we observed, many SA participants preferred to see non-SA mental health professionals. This is consistent with our findings that suggest that mental health professionals of different backgrounds can offer culturally appropriate care to South Asians.

Future research should test the effectiveness of CaCBT versus standard CBT in a non-virtual setting. Online self-referral to the study might mean higher levels of motivation and therefore offer a naturalistic design to test the intervention in real-life settings. The lack of homogeneity in our sample of participants — with participants born both outside of Canada and in Canada — indicates that CaCBT should also be tested in larger, more homogenous samples of participants to better understand what predictors influence response to the intervention. Other forms of psychotherapy outside of CBT can also be adapted to cultural contexts and explored to determine their benefits.

To conclude, CaCBT should be expanded across racialized groups in Canada, as it is accessible and incorporates cultural awareness and competency that can be used in transcultural formats. There is an urgent need for mental health care that is culturally appropriate, sensitive and evidence-based to remove barriers, both visible and invisible, for people who are the most marginalized and overlooked in our communities. This study highlights preliminary evidence in favour of CaCBT and provides the rationale for developing mechanisms to implement CaCBT on a wider scale.

Table 6 Key Lessons from CaCBT

Challenges	◗ *Virtual nature of study led to difficulty connecting and following up with participants and technological difficulties* ◗ *Extreme need for mental health services beyond research*
Successes	◗ *High follow-up rates and participant retention* ◗ *Participant satisfaction with CaCBT and therapist satisfaction with CaCBT training* ◗ *Great deal of interest and support throughout study*
Lessons learned	◗ *Language barriers due to discomfort with presence of interpreters* ◗ *Successful community recruitment methods, such as WhatsApp and word of mouth* ◗ *Virtual intervention improves accessibility for some but provide barriers for others who don't have private space* ◗ *CaCBT is relevant and useful for mental health practitioners of all racial and ethnic backgrounds*

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Appendix A

Phase 1: Additional Data

Table 1 Participants' Demographic Profile

	Individual with anxiety/ depression (n = 13)	Caregiver/ family member (n = 9)	Community leader (n = 10)	Mental health professional (n = 10)	Total (n = 42)
MEAN AGE					
Mean (standard deviation)	36 (11.5)	42 (11.0)	35 (10.3)	39 (6.4)	**38 (10.1)**
GENDER					
Female	11 (84.6%)	8 (88.9%)	9 (90%)	8 (80%)	**36 (85.7%)**
Male	2 (15.4%)	1 (11.1%)	1 (10%)	2 (20%)	**6 (14.3%)**
BORN IN CANADA					
Yes	7 (54%)	3 (33.3%)	7 (70%)	4 (40%)	**21 (50%)**
No	6 (46%)	6 (66.7%)	3 (30%)	6 (60%)	**21 (50%)**
DISABILITY[a]					
Chronic illness	2 (15.4%)	2 (22.2%)	2 (20%)	1 (10%)	**7 (16.7%)**
Mental illness	7 (53.8%)	1 (11.1%)	2 (20%)	1 (10%)	**11 (26.2%)**
Developmental disability	1 (7.7%)	0	0	0	**1 (2.4%)**

	Individual with anxiety/ depression (n = 13)	Caregiver/ family member (n = 9)	Community leader (n = 10)	Mental health professional (n = 10)	Total (n = 42)
DISABILITY[a]					
Learning disability	0	0	1 (10%)	0	**1 (2.4%)**
Other[b]	1[c] (7.7%)	0	0	0	**1 (2.4%)**
None	4 (30.8%)	6 (67.7%)	6 (60%)	8 (80%)	**24 (57.1%)**

[a] *Question allowed for multiple responses*

[b] *Other disability reported: chronic anxiety and ADHD*

EDUCATION					
Graduated from high school	1 (7.7%)	0	0	0	**1 (2.4%)**
Attended but did not complete college	0	1 (11.1%)	0	0	**1 (2.4%)**
Completed a college diploma	3 (23.1%)	0	0	0	**3 (7.1%)**
Completed a Bachelor's degree	5 (38.4%)	3 (33.3%)	3 (30%)	1 (10%)	**12 (28.6%)**
Completed a Master's degree	3 (23.1%)	5 (55.6%)	7 (70%)	8 (80%)	**23 (54.8%)**
Completed a doctoral or professional degree	1[c] (7.7%)	0	0	0	**1 (2.4%)**
No response	0	0	0	1 (10%)	**1 (2.4%)**

	Individual with anxiety/ depression (n = 13)	Caregiver/ family member (n = 9)	Community leader (n = 10)	Mental health professional (n = 10)	Total (n = 42)
TOTAL HOUSEHOLD INCOME					
$30,000–$39,999	2 (15.4%)	0	0	1 (10.0%)	**3 (7.1%)**
$40,000–$59,999	4 (30.8%)	0	1 (10.0%)	1 (10.0%)	**6 (14.3%)**
$60,000 or more	5 (38.5%)	7 (77.8%)	6 (60.0%)	6 (60.0%)	**24 (57.1%)**
Do not know/ Prefer not to answer	2 (15.4%)	2 (22.2%)	3 (30.0%)	2 (20.0%)	**9 (21.4%)**

Table 2 Awareness and Preparation for Therapy – Participant Quotes[c]

Sub theme	Quotation
Awareness of mental illness: While some SAs living in Canada have a basic understanding of mental illness, participants reported an overall lack of understanding of mental health in SA culture.	*"Like you can treat a broken arm with a sling and go to the doctor and get medication, but when someone can't get out of bed or is having an outburst because of their anxiety and [is fearful] of something that's unknown … you can't really give … a treatment, like go to the hospital and get your arm fixed, right?"* (Individual with anxiety/depression, GTA)
The SA population's awareness of mental health was influenced by their sociocultural and religious values. They often cited superstitious beliefs during interviews.	*"You have to take into account different cultural values and the dynamics within your culture. So, like, being paranoid or [having] a lot of superstitions in our culture, like […] people give power to the evil eye, or [believe] that people are out to get you or they are doing magic on you, or this or that."* (Caregiver, Vancouver)

c Quotes have been revised slightly for clarity and ease of readability.

Table 3 Access and Delivery of Care – Participant Quotes[c]

Sub theme	Quotation
Stigma Participants reported that a stigma associated with mental illness continues to influence their ability to seek treatment. Participants expressed stigma around not displaying such emotions as anger, fear and sadness in a way that is deemed "socially appropriate."	*"In South Asian culture, often seeking treatment doesn't happen, because [of] the taboo and the stigma around it so often people are left suffering in silence, and not getting the help that they need."* (Individual with depression/anxiety, Vancouver)
	"How can I express my feelings when they're so shameful or they're so embarrassing? What if I get attacked for them?" (Caregiver, GTA)
	"[…] many people don't go and seek help, myself included. For a very long time, [I] didn't go and seek any assistance from therapy or counselling, even knowing that there was stuff out there, knowing that we had school counsellors, I never went because I was scared that 'oh my God, what if my parents find out?… [and I was] fear[ful] of being judged … like, 'why do you need therapy?' And 'why are you stressed? You have everything you need. Why would you need to go to a therapist?" (Individual with anxiety/depression, Vancouver)
Gender roles Participants, were afraid of being judged and ridiculed in society if they went to therapy.	*"I think there would be an even greater stigma on men […] Going to a therapist would mean that they don't have control or they don't know what they're doing and they need additional help, [or] they aren't doing a good job as man of the house… Somebody else telling them what to do or how to do something better would be a major issue for them too."* (Caregiver, Vancouver)
Virtual care	*"… I think due to the stigma and just people feeling uncomfortable accessing services on site, I wasn't getting a lot of clients, but then when I start offering [therapy] on the phone or video, more people [started] contacting [me] just because there was, I guess, less embarrassment around getting mental health support."* (Mental health professional, GTA)
Family Family plays a significant role in decision making and determining whether individuals will access therapy.	"The other thing with South Asian households is like sometimes there's a lot of people living in the same house…if somebody manages to go to therapy or thinks that he should go, they might not get the support that they need from everyone in the house. So in that case I don't know if, like, family involvement might hinder [the person from getting therapy]." (Mental health professional, GTA)

[c] *Other disability reported: chronic anxiety and ADHD*

Table 4 Assessment and Engagement – Participant Quotes[c]

Sub theme	Quotation
Patient-therapist relationship: Therapists from Western cultures who lacked an understanding of SA cultures, values and norms were thought to lack understanding of SA clients. However, we acknowledge that SA therapists can also misunderstand SA cultures: There are many SA cultures and belief systems and SA therapists may make erroneous assumptions about individuals' values. Training within a model of Western psychology could also influence SA therapists' work.	*"I can say, as someone who has accessed help before I knew of any South Asian organizations … a barrier for me was, yes, I could speak the language, but my therapist who was White did not understand my culture. So, there was a […] block in my treatment always, in that form of understanding which is deeply rooted in my culture. Even though I'm born here, I'm very connected to my culture. I think my mental health really suffered in the beginning when I first started to access services for my mental health because I wasn't connecting to someone that was giving me a […] wholesome approach of you know, understanding me, who I am as a human being as a South Asian woman, my culture."* (Individual with anxiety/depression, GTA) *"Even a South Asian individual that seeks South Asian therapists may find [having a therapist of the same background to be] a barrier because we're taught within our community that you don't speak about these things within your community… there's so much shame linked to depression and anxiety because […] there's such stigma within our community [with] having open dialogue about it.* (Individual with anxiety/depression, GTA)
Cultural understanding: Mental health professionals from a different culture who did not understand the SA culture contributed to disengagement from treatment.	*"I was helping …a lady who was undergoing therapy with a Western therapist. And she had been abused in her childhood, and the therapist was trying to get her to say that it was her parent's fault and they failed to protect her… this woman, being from [South Asian] culture, stopped going to therapy because there is no way she is going to blame her parents…There is no way we are going to blame our parents in any way. And we might not even seek help if that is what it involves, right?"* (Community leader, GTA)
Religion and spirituality: Mental health and recovery are seen as intertwined with religion and a belief in god. As such, ill health is part of a 'test': if your belief is strong then you will recover. Otherwise, it is karma.	*"I think in our culture, people defer to religion for everything, 'just pray and it will go away, just praying you will feel better. If you just believe in God, it will get better' […] I think that sometimes if you want to pursue therapy, there is resistance against it because, you know, this is your karma and you have to work through it […]. What is therapy gonna do for that? I think there is definitely that kind of resistance towards it."* (Caregiver, Vancouver)

Sub theme	Quotation
Influences that improved engagement: Educating the community in a culturally sensitive manner and making information visible in the community was identified as a factor that improves engagement.	*"I think talking about Hindu mythological beings and like you know finding some sort of overlap between the mentally ill people or mental illness and how it's represented or displayed in like Hindu scriptures [...] I think that sort of thing would make people feel a lot more comfortable and on board as opposed to feeling like they're doing something really wrong by going to the therapist."* (Caregiver, GTA) *"[The person giving treatment should] have a good understanding of the transgenerational trauma that's passed down [...] or just like [understand] the hard conversations or like the lack of boundaries cause [it's] really funny when like a counsellor tells me, 'oh maybe you just need to put in boundaries with your parents'. Like that's really hard to do [with] South Asian parents [...] and so, having someone who understands that [would improve] access to treatment."* (Individual with depression/anxiety, Vancouver)

Appendix B

Phase 2: Additional Data

Table 1 Participants' Sexual Orientation

	Frequency (%)		
	CaCBT (n=75)	**Standard CBT (n= 71)**	**Total (n=146)**
SEXUALITY			
Heterosexual	64 (85.3%)	61 (85.9%)	**125 (85.6%)**
Gay	0 (0.0%)	0 (0.0%)	**0 (0.0%)**
Lesbian	1 (1.3%)	2 (2.8%)	**3 (2.1%)**
Bisexual	6 (8.0%)	3 (4.2%)	**9 (6.3%)**
Queer	1 (1.3%)	3 (4.2%)	**4 (2.6%)**
Other	3 (4.0%)	2 (2.8%)	**5 (3.4%)***

* Other sexual orientation participant identify: Do not know, Prefer no labels, Prefer not to answer

Table 2 Participants' Religious or Spiritual Affiliations

	Frequency (%)		
	CaCBT (n=75)	**Standard CBT (n= 71)**	**Total (n=146)**
RELIGIOUS OR SPIRITUAL AFFILIATIONS			
Hinduism	12 (16.0%)	14 (19.7%)	**26 (17.8%)**
Islam	29 (38.7%)	28 (39.4%)	**57 (39.0%)**
Sikhism	18 (24.0%)	15 (21.1%)	**33 (22.6%)**
Buddhism	2 (2.6%)	4 (5.6%)	**6 (4.1%)**
Christianity	7 (9.3%)	6 (8.5%)	**13 (8.9%)**
Zoroastrianism	2 (2.6%)	0 (0.0%)	**2 (1.4%)**
Agnostic	5 (6.7%)	7 (9.9%)	**12 (8.2%)**
Atheist	1 (1.3%)	3 (4.2%)	**4 (2.7%)**
Other	8 (10.7%)	2 (2.8%)	**10 (6.8%)**

* Other: Do not know, prefer not to answer

Table 3 Participants' Birth Country

	Frequency (%)		
	CaCBT (n=75)	**Standard CBT (n= 71)**	**Total (n=146)**
Born in Canada	**31 (41.3%)**	**36 (50.7%)**	**67 (45.9%)**
Born Outside of Canada	**44 (58.7%)**	**35 (49.3%)**	**79 (54.1%)**
Afghanistan	1 (1.3%)	0 (0.0%)	**1 (0.7%)**
Bangladesh	3 (4.0%)	5 (7.0%)	**8 (5.5%)**
India	16 (21.3%)	10 (14.1%)	**26 (17.8%)**
Nepal	1 (1.3%)	1 (1.4%)	**2 (1.4%)**
Pakistan	17 (22.7%)	10 (14.1%)	**27 (18.5%)**
Sri Lanka	1 (1.3%)	5 (7.0%)	**6 (4.1%)**
Other	4 (5.3%)	4 (5.6%)	**8 (5.5%)**

Table 4 Therapy Sessions Attended

	Frequency (%)		
	CaCBT (n=75)	**Standard CBT (n= 71)**	**Total (n=146)**
SESSIONS COMPLETED			
8 to 12 sessions	56 (74.7%)	50 (66.7%)	**106 (72.6%)**
5 to 7 sessions (partial completion)	11 (14.7%)	12 (16.0%)	**23 (15.8%)**
≤4 sessions (incomplete therapy intervention	8 (10.7%)	9 (12.0%)	**17 (11.6%)**

Table 5 Phase 2 RCT Follow-up Visit Completion*

There was a high completion rate for 12- and 36-week follow-ups after baseline. The high completion rate for both therapy sessions attended and follow-up completed may indicate the feasibility of CaCBT.

	Frequency (%)		
	CaCBT (n=75)	**Standard CBT (n= 71)**	**Total (n=146)**
Baseline	**75**	**71**	**146**
FOLLOW-UP 1 POST-THERAPY, 12 WEEKS FROM BASELINE			
Completed	65 (86.7%)	57 (80.3%)	**122 (83.6%)**
Partial	5 (6.7%)	3 (4.2%)	**8 (5.5%)**
Incomplete	5 (6.7%)	11 (15.5%)	**16 (11.0%)**
FOLLOW-UP 2 36 WEEKS FROM BASELINE			
Completed	67 (89.3%)	59 (83.1%)	**126 (86.3%)**
Partial	2 (2.7%)	3 (4.2%)	**5 (3.4%)**
Incomplete	6 (8.0%)	9 (12.7%)	**15 (10.3%)**

* 8 participants withdrawn between baseline and Follow up 1

Secondary Outcomes

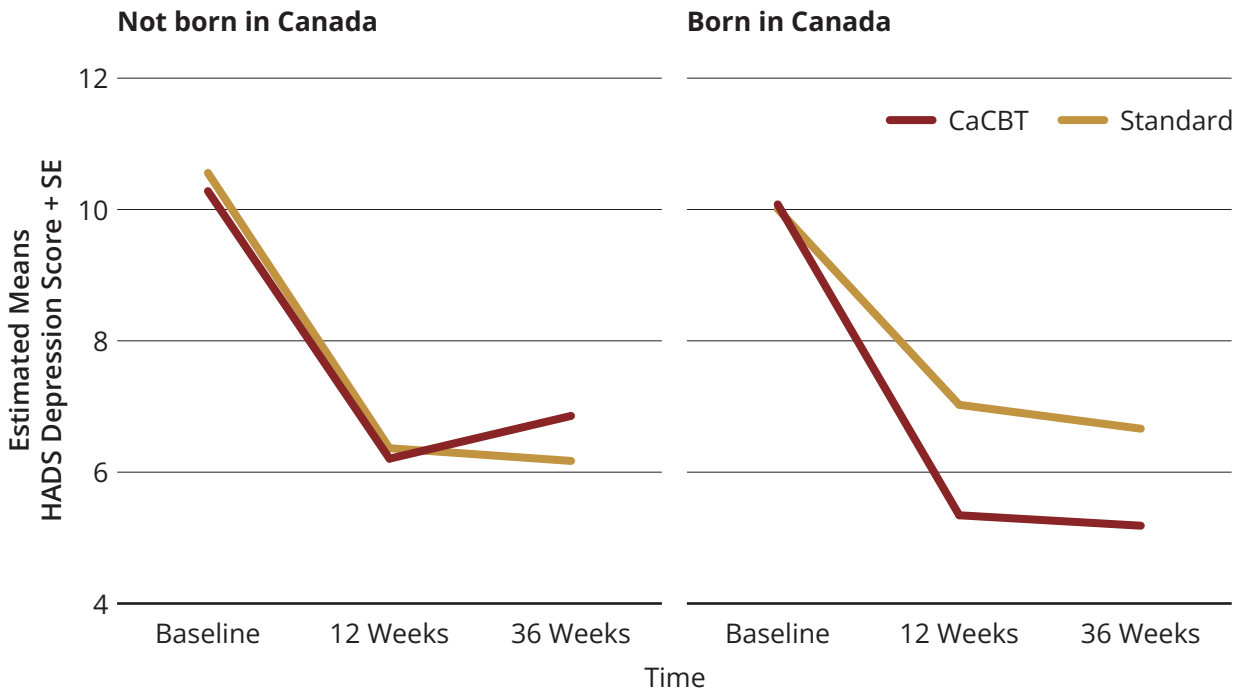
Hospital Anxiety and Depression Scale (HADS) Total Score

The Hospital Anxiety and Depression Scale Total Score showed that participants in the CaCBT group had a lower average HADS score than the standard CBT group at both 12- and 36-weeks post treatment (Figure 1). However, these differences were not statistically significant. Similar results were found for both the anxiety and depression subscales overall.

HADS- Depression Subscore

Our secondary analysis of the HADS—Depression subscale score found that place of birth had an influence on the differences in scores between the standard CBT and CaCBT group. South Asians born in Canada who were in the CaCBT group had lower depressive symptoms than people in the standard CBT group. This moderating effect approaches significance and can be represented by the graph in Figure 1, where we see CaCBT improving symptoms of depression relative to standard CBT, but only among those born in Canada.

Figure 1 HADS Depression Subscale Score



Bradford Somatic Inventory

Although the Bradford Somatic Inventory (BSI) results revealed lower average total score for CaCBT at week 12 this trend disappeared at week 36 (follow-up 2), and the difference was not statistically significant.

WHODAS 2.0—Total Score

Similar results were observed for the WHODAS, where lower average total score for CaCBT was observed at week 12 (follow-up 1), but this trend disappears when we approach week 36 (follow-up 2). The results had no statistical significance between the two groups.

Appendix C

Phase 3: Additional Data

Table 1 Therapist Demographic Profile

Demographics	Total=29
Female Male	21 (72.4%) 8 (27.6%)
Mean age (SD) Min-Max age	41.34 (10.2) 28–59
Mean Years of Experience (SD) Min-Max Years	5.16 (5.4) 1–20

Table 2 Therapist Ethnicity

Ethnicity	Frequency (n=29)
Asian-East	3 (10.3%)
Asian-South	14 (48.3%)
Asian-South East	1 (3.4%)
Black-African	1 (3.4%)
Black-Caribbean	1 (3.4%)
Mixed Heritage	2 (6.9%)*
White European	2 (6.9%)
White North American	4 (13.8%)
Prefer Not to Answer	1 (3.4%)

* Mixed Heritage: Black-Caribbean and Asian-South & White-European and Asian-South

Table 3 Therapist Occupation

Occupation	Frequency (n=29)
Registered Psychotherapist	3 (10.3%)
Registered Social Worker	13 (44.8%)
Registered Clinical Counselor	5 (17.2%)
Case Manager	3 (10.3%)
Psychiatrist	1 (3.4%)
Occupational Therapist	3 (10.3%)
Other	1 (3.4%)*

* Other Occupation: Shelter Worker

Table 4 Useful Aspects of the Manual and CaCBT Training[d]

Therapists' quotes	Themes
"Discussion around [...] the utilization of faith healers [...] expanded my thoughts of who to involve and [...] the need to engage with the family and look at different approaches to communication, especially with elders."	**Collective approach to family and inclusion in therapy and treatment**
"In the training, they were talking about being directive, which is something I hesitate to do [but] now I have been more directive since attending the training, and that's been working for my clients. [The directive approach] was like one of the best parts of the training."	**Directive approach Therapist-led discussions**
"I think what stood out to me the most ... [were the] self-disclosure pieces, because I reflected that that is definitely something I don't do. [...] I really enjoyed that piece of it, because I'm continuing to use it."	**Self disclosure— Trust Reflection— Awareness**

Table 5 Factors That Therapists Felt Could Be Improved[d]

Therapists' quotes	Themes
"I appreciate that ... aspects of intersectionality ...surfaced [in the case examples...] and I think ...additional case examples and maybe a [small] section in the manual about [intersectionality] and carrying multiple identities and, and [the complexity of] what that can mean [...] would be really helpful."	**Intersectionality Complexity**
"I find some of the images in the manual [...] almost [...] stereotypical [...] Like I wouldn't show this [homework sheet with illustration of people in sherwanis] to my clients [because] I think some of them would be offended... you could just use images of like South Asian people in what we would call Western clothing."	**Stereotypes Diversity Inclusion Acculturation**

[d] *Other disability reported: chronic anxiety and ADHD*

Table 6 Results of the Quantitative Questionnaires

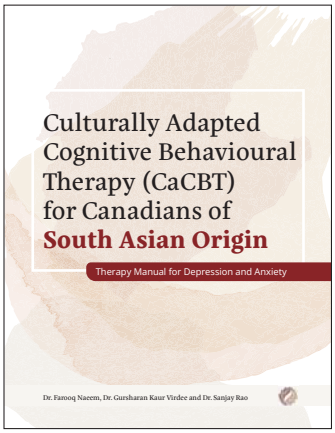
	Mean Difference (post-pre)	Std. Deviation of Difference	Significance (2-tailed)	Effect Size (Cohen's d)
MCKAS Knowledge Subscale	11.000	12.997	<0.001**	0.846
MCKAS Awareness Subscale	0.966	6.587	0.437	0.147
MCKAS Total Score	11.966	14.836	<0.001**	0.807
Knowledge Questionnaire Total Score	4.448	3.747	<0.001**	1.187

	Minimum	Maximum	Mean	Std. Deviation
Post-Training Satisfaction (%)	70	100	91.66	8.213

Appendix D

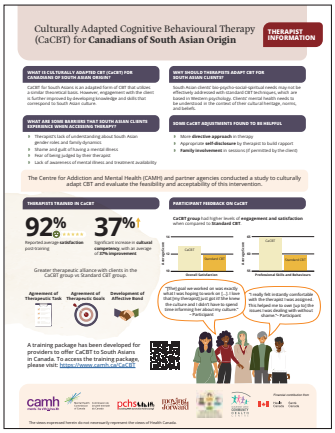
Materials for the study can be found on the CAMH website, at www.camh.ca/cacbt

The following materials can be found on this website:



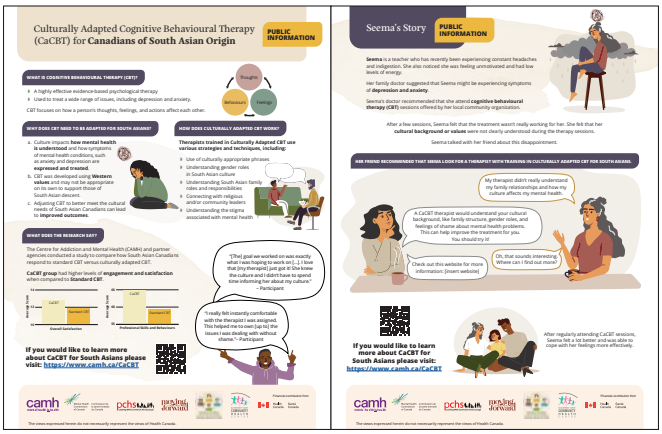
- **a CaCBT manual** that gives mental health professionals hands-on techniques for implementing the therapy

- **training videos** to supplement the manual and enrich trainees' experience while learning about CaCBT. Videos include role-play scenarios, learning activities and summary of concepts to help learners enhance their CaCBT training experience.



- **a one-pager for mental health professionals** providing details about CaCBT, along with feedback from service users and mental health professionals

- **a two-pager for service users** with CaCBT information to help them understand what to expect from the therapy



For any questions, please email cbt-sa@camh.ca.