Community Mental Health Journal
https://doi.org/10.1007/s10597-020-00699-0

ORIGINAL PAPER

Inspiring Muslim Minds: Evaluating a Spiritually Adapted Psycho-educational Program on Addiction to Overcome Stigma in Canadian Muslim Communities

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Received: 11 November 2019 / Accepted: 12 August 2020
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Abstract

The stigma of addiction in Muslim communities is a significant barrier to accessing mental health services. The objective of this study was to evaluate the impact of a newly developed spiritually-adapted addictions psychoeducational program with adult Muslims in the mosque setting. Ninety-three individuals were recruited from nine different mosques within Toronto, Canada. Ninety-minute seminars were presented. This study used a convergent mixed method design. There was a significant increase in the participants' self-reported knowledge ($t = 3.6$; $p < 0.001$), a more positive attitude on two scales ($t = 3.7$; $p < 0.001$ and $t = 2.9$; $p = 0.005$) and an increase in willingness to seek help from a medical doctor and mental health professional ($t = 4.4$; $p < 0.001$ and $t = 2.2$; $p = 0.03$, respectively) post-seminar as compared to baseline. Qualitative data confirmed these changes. Evidence-informed spiritually-adapted outreach program in the mosque setting can help reduce addiction related stigma in Muslim communities.

Keywords Muslims · Addiction · Psychoeducation · Knowledge · Attitude · Help-seeking · Mental health

Introduction

There are over one million Muslims in Canada (3.2% of the population) (Statistics Canada 2011). Muslims are the second highest faith-based population in Canada after Christianity (Statistics Canada 2011). Muslims experience substance use problems and addiction, as well as the mental health impacts of discrimination and stigmatization, including anxiety, trauma, depression, hopelessness, and a lack of belonging (Abu-Ras et al. 2010; Jisrawi and Arnold 2018). Overall, Muslims tend to struggle with various types of substance abuse and addictive behaviours in Muslim majority countries including alcohol, opioids, cannabis, tobacco, khat and pathological gambling (Algabbani et al. 2018; AlMarri and Oei 2009; Arfken and Ahmed 2016; Lee et al. 2014). A study conducted in Ontario, showed that 42.6% of Muslims consumed alcohol in their lifetime compared to 95% of other religious groups (Tuck et al. 2017). Although previous literature indicated that Muslims has significantly less rates of addictions compared to mainstream population such as Christian, it also showed that Muslims are more likely to struggle with addiction when living in Western cultures (Badr et al. 2014). Despite these mental health concerns, Canadian Muslim communities may underutilize mental

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Published online: 25 August 2020

health services compared with other populations (Fenta et al. 2006; Jisrawi and Arnold 2018). A study conducted in Ontario found that minority populations have delayed access to mental health treatment and present with poorer prognosis than the general population, which reflects the need to address minority populations' issues (Chiu et al. 2016). Another study indicated that Muslims are lacking education on addiction (Mauseth et al. 2016).

Stigma refers to negative attitudes, lack of knowledge and avoidance towards the affected group (Thornicrof et al. 2006). Addiction stigma is a barrier to accessing services, and many Muslims believe addiction issues are private or shameful matters that are not to be disclosed outside the family (Brondani et al. 2017). Some Muslims may have misconceptions about mental illness and limited awareness of Canadian mental health services. In addition, due to a lack of awareness of evidence-informed mental health management, Muslims may seek spiritual counseling or 'traditional healing', even when in dire need of mental health services (Fenta et al. 2006; Jisrawi and Arnold 2018). Although traditional healers and imams (Muslim clergy) are often the front-line individuals sought out for advice in the Muslim community, they are often not equipped with mental health training (Ali and Milstein 2012).

Creating a Faith-Adapted Psychoeducational Program (Inspiring Muslim Minds)

Psychoeducational interventions aiming to improve help-seeking attitudes have showed a significant positive impact in Canada (Jorm et al. 2006; Wei et al. 2013). However, these interventions need to be culturally and religiously adapted to effectively serve racialized and minority groups (Awaad 2017). This project was carried out in collaboration with a well-recognized not-for-profit community organization of physicians and allied healthcare professionals, the Muslim Medical Association of Canada (MMAC), in order to facilitate the embedding of this program into mosque programming and to recruit seminar presenters. Our team created and evaluated an interactive faith-based addictions psychoeducational seminar with the aim of increasing mental health-related knowledge, positive attitudes, and willingness to seek professional help among Muslims in Canada. The seminar provided evidence-based psychoeducation about addiction integrated with Islamic teachings and practice and was led by Muslim mental healthcare providers within the familiar and safe space of mosques.

This study aimed to assess whether the faith-adapted program changed participants' knowledge of addiction, their attitudes towards those living with addiction, and lastly, willingness and openness towards help-seeking.

Methods

The Faith-Adapted Psychoeducational Seminar

The ninety-minute seminar was created by A.H., edited by A.M., and incorporated Islamic teachings. The Islamic content was based on reading of the Quran and the Prophet Muhammad's teachings (Hadith). The Islamic content was incorporated with addiction scientific evidence. For example, the seminar went through the gradual prohibition of alcohol in the Quran and highlighted its parallel to current chronic treatment for alcohol use disorder. The order of the content of the seminar was changed in the later seminars to respond to the provided feedback. Similarly, examples of anonymous cases were provided in the last three seminars to address feedback from earlier sessions. The scientific evidence-based information about addiction was initially adopted from an information guide about addiction (Herie et al. 2007) then simplified and reviewed by two psychiatrists from the community. The final seminar/presentation can be found at: www.muslimmentalhealth.ca. The seminars were conducted in nine different mosques in Toronto by seven Muslim psychiatrists and Muslim psychiatry residents (2 men and 5 women) who were recruited through the Muslim Medical Association of Canada (MMAC). Presenters and team members varied in their ethnicity, racial background, and visible markers of Muslim identity, such as observance of hijab (Muslim women's headscarf) in order to accurately reflect the diversity within Muslim populations. All mosques provided space to conduct the seminars and advertised locally to their congregation and community. Study coordinators communicated with program organizers from each mosque to familiarize mosque organizers with the team, facilitate collaboration for the event and to review seminar objectives prior to the event. This allowed for the seminars to be supported by each of these mosques as they were embedded in mosque programming rather than being viewed as an external program. The seminars were advertised as mental health lectures and the topic of "addictions" was not disclosed to attendees prior to the event in order to minimize the effects of stigma associated with this particular topic in Muslim communities. Half of the seminars were conducted in the evenings and the other half were conducted after noon prayers. All of the seminars were held on Friday evenings or weekends. The delivery of the seminars was standardized. Brief meetings with each instructor were conducted prior to each seminar to orient the instructor about the seminar's goals, slides, and answer any questions. The study team ensure the availability of Urdu and Arabic speaking team members in each session, as the most prevalent languages in Canadian Muslim populations, to help where clarification was needed.

Study Design

This study used a mixed methods convergent design to collect and analyze both quantitative and qualitative data (Creswell 2015; Creswell and Plano-Clark 2011). Participants completed pre- and post- quantitative scales and 6 post-qualitative questions. All participants received the intervention and there was no comparison/control group.

Study Population

Ninety-three participants were recruited through announcements and distributed flyers at local mosques. Participants were included in the study if they self-identified as Muslim, fluent in English, an adult (18 + years old), and could attend at least 70 min of the 90-min seminar. Participants were excluded from the study if they did not meet at least one of the inclusion criteria or if they had previously attended the seminar (those who attended a previous seminar could attend but did not participate in the study or complete the questionnaires). All participants gave written and oral informed consent to participate in the study.

Measures

Quantitative Phase

Participants completed self-reported validated quantitative scales pre- and post-seminar. The following scales were used: (1) The Mental Health Knowledge Schedule (MAKS) (Evans-lacko et al. 2010), (2) the Reported & Intended Behavior Scale (RIBS) (Evans-Lacko et al. 2011), (3) the Attitude Toward Seeking Professional Psychological Help Scale (ATSPPHS) (Elhai et al. 2008), and (4) the Help Seeking Questionnaire (HSQ) (Wilson et al. 2005).

The MAKS scale has a total of 12 question items on a Likert-type scale. The overall MAKS test–retest reliability had substantial kappa agreement (0.71). The internal reliability ranged from moderate to substantial agreement between two time points. The MAKS overall internal consistency was moderate using Cronbach's alpha (0.65) (Evans-lacko et al. 2010). It is used to measure stigma-related mental health knowledge and perspective of mental illnesses classification. The RIBS scale has eight items exploring current and future views for living or working with someone with mental illness. Items 5–8 are a Likert-type scale. The RIBS was found to have moderate-substantial agreement in test–retest reliability (0.75) and item retest reliability (0.62–1.0) between two time points. The overall RIBS' Cronbach's alpha was substantial for the scale items (0.85) (Evans-Lacko et al. 2011). The ATSPPHS is a 20 Likert-type scale items that proved to be reliable and valid in a sample close to our proposed population. It was shown to have a coefficient alpha of 0.77 and most of the scale items had a correlation higher than 0.4 (Elhai et al. 2008). The ATSPPHS was found highly valid in assessing individual's attitudes and beliefs. Aloud (2004) modified the wording of questions in the ATSPPHS, accounting for Islamic terms, to be used for a study for the Muslim-Arab population (Aloud 2004). The modified ATSPPHS had an internal consistency Cronbach's alpha of 0.74 and 0.72 for mental health services and stigma-related questions, respectively (Aloud 2004). We added the word "addiction" to be more specific to the seminar's topic. The HSQ is a 20-item Likert-type scale. HSQ measures willingness to seek help for addiction from professionals. It also has the ability to capture the degree of changed intention to seek help as the view of the problem changes. The correlation between intention to seek help and actual receiving help was significantly positive (Wilson et al. 2005). Its internal consistency, using Cronbach's alpha, was 0.85 and the test–retest reliability was 0.92 over 3-week period (Wilson et al. 2005).

Qualitative Phase

The qualitative phase used a written questionnaire to further explore the perceived impact of the program on knowledge, attitudes and help seeking, and to inform future interventions or psychoeducational programs. The qualitative questions can be found in Appendix. The purpose of the scenario presented is to evaluate the attitude toward individuals with addiction and if it can be recognized as a sign of seeking help.

Data Analysis

The quantitative data analysis was conducted in R software. We used paired t-tests to compare the pre- and post-intervention results for each of the four measurements scales. We also used either independent t-test or chi-square to compare the demographics of participants who did improve on the knowledge scale (MAKS) to the participants without improvement on the knowledge scale. For the qualitative phase, we conducted a content analysis to uncover the major themes in the participants' written responses to the qualitative questions (Erlingsson and Brysiewicz 2017). Four authors (A.H., F.I., H.R., and N.S.) independently coded the data into discrete categories. Two authors (A.H. and H.R) reviewed all of the codes and, through iterative discussions, organized them into sub-themes and overarching themes. Repeated and overlapped themes were combined into one theme after discussion between the two authors. These two authors identified supporting quotes best illustrating the meaning of the codes. NVivo software was used to manage the data.

The Centre for Addiction and Mental Health (CAMH) research ethics board approved this study.

Results

A description of the sample's demographics (n = 93) are presented in Table 1. Two individuals were eliminated from the study analysis but allowed to attend the seminar due to insufficient fluency of the English language. The average age of the sample was 37 years-old and the majority of participants (65.6%) were women. The sample reflected diverse ethnicities (37.6% South Asian, 26.9% African, and 18.3% Middle Eastern) with 82.8% of our participants having completed a college/university degree. Over half of participants (57.6%) reported living with someone with mental illness and half (51.6%) stated that they have a close friend with a mental illness. 45.7% and 31.5% indicated that they worked or lived close to a person with mental illness, respectively.

Table 1 Description of the sociodemographic of our sample

Participants' variables	Recruited participants (n = 93), n (%)
Age, mean ± SD	37.0 ± 14.2
Gender: female	61 (65.6)
Participants without children	46 (50.0)
Marital status	
Single	36 (38.7)
Married	45 (48.4)
Separated	5 (5.4)
Divorced	6 (6.5)
Widowed	1 (1.1)
Ethnicity	
African	25 (26.9)
Middle Eastern	17 (18.3)
South Asian	35 (37.6)
East Indian	2 (2.2)
Caribbean	3 (3.2)
Caucasian	3 (3.2)
Latino	1 (1.1)
Other	7 (7.5)
Education	
Under grade 12	2 (2.2)
High school	14 (15.1)
Undergraduate	36 (38.7)
College degree	15 (16.1)
Graduate degree	26 (28.0)
Unemployed	37 (39.8)
Annual income	
Less than $20,000	11 (16.4)
$20,000–34,999	11 (16.4)
$35,000–49,999	8 (11.9)
$50,000–74,999	15 (22.4)
Equal or greater than $75,000	22 (32.8)
English as primary language: No	38 (41.8)
Work or study in the mental health field: No	70 (78.7)

Knowledge

There was a significant increase in the knowledge about addictions on MAKS after the seminars in comparison to baseline (prior to the seminar) ($t = 3.7$; $p < 0.001$) (mean difference = 1.2; 95% CI 0.5–1.8). Table 2 shows the differences in responses between participants who improved on MAKS scores (n = 52; 55.9%) and the participants without improvement on MAKS (n = 41; 44.1%). There were no differences in the demographics of these two groups except that the non-improved group were older (average 34 ± 12.3) ($p = 0.02$) and had a lower rate of unemployment (22.0%) than the improved group (59.5%) ($p = 0.001$). Three main themes emerged through the qualitative analysis of questions addressing knowledge acquisition.

Qualitative Themes

Participants were Receptive to Integrating Islamic Content as it Enhanced their Understanding of the Addictions Participants generally reported that the Islamic content was well received and 61.3% of the participants reported that it helped them better understand and internalize the scientific information in the seminar. One participant said, "The Islamic context clearly highlights engaging in addiction behaviors and I see that it agrees with science." Some reported that including Quranic verses and the Hadith emphasized the importance of the topic in the Islamic tradition. Some stated that including the Islamic context made them realize that the issue is prevalent in the Muslim community. One participant elaborated:

> *This seminar was very helpful in expanding my understanding of addictions. I appreciate the Islamic references and specific Quranic verses and Hadith which were mentioned. I also am appreciative of the speakers because they were Muslim, bringing their cultural and religious understanding to this challenging topic of addictions. I am glad to have attended this seminar. It is a very good start to open discussion on this topic in our community spaces.*

Some participants elaborated that understanding Islam's history of gradual prohibition helped them in understanding that treatment is a longitudinal and difficult process which increased their empathy, compassion and willingness to help individuals struggling with addictions. One participant wrote, *I found the Islamic context enlightening, as I was unaware of the revelations regarding substance use.* It is

Table 2 Self- reported changes in psychoeducation by participants on The Mental Health Knowledge Schedule (MAKS) in addition to sample qualitative responses

Component of Stigma	Positive quantitative changes of knowledge	Negative quantitative changes of knowledge
Self-reported changes in knowledge reported on MAKS	Positive changes on knowledge occurred by average of 3.1 points on MAKS in 52 participants	41 participants had either no change on their scores on MAKS or decreased scores after the seminar (average of 1.6 points decreased)
Examples of participants responses corresponding to changes in knowledge	History of Islamic approach toward addiction emphasized gentle approach to others with addiction Mental illnesses are recognized by Islam Seminars clarify misconception Addiction is an illness Addiction does not mean poor faith Requesting information about treatment process Requesting resources specialized for Muslims Participants requested "Ways to motivate a person with addiction to get help" No participants were found to be off put by or unreceptive to the Islamic content of the Psychoeducation seminar	Getting closer to God is protective from addiction Islamic content re-enforced commitment to help others. *Hard to assess impact, I was already pretty educated. Islamic context reinforced my commitment to helping people with addictions* The topic was familiar to several participants *this didn't help much since I knew most of the topic*. Another participant said *as a psychology student, the information was familiar. I enjoyed the Islamic perspective because it enriches our understanding. I think this is especially useful for our parents and elders* Participants requested *ways to motivate a person with addiction to get help* as well as information about *"coping"* with a person with addiction Requesting information about treatment process Requesting information about ethnicity & impact on addiction Requesting information about other mental illnesses Requesting resources specialized for Muslims

important to note that no participants reported being neutral, ambivalent or unreceptive to the Islamic context.

The Seminar Clarified Several Misconceptions Related to Addiction Several participants indicated a lack of awareness regarding the lethal impact of substance withdrawal. More than 1 in 6 participants reported that the seminar clarified misconceptions they had about addictions. For example, one participant explained, "[The seminar] helped clear misconceptions around stopping "cold turkey" to get over an addiction. The Islamic context reinforced the guidance provided in the Quran in regard to addiction and substance use."

Participants reported that learning about the genetic, biological and neurological studies on addiction gave them a better understanding of how discontinuing substance use is very difficult. Some participants noted that individuals with addiction commonly relapse several times before they successfully discontinue substance use. This clarified the misconception that addiction is a disease rather than a habit or a choice. One participant reflected,

> [The seminar] helped me change my perspective on addiction from being an irresponsible choice to an illness. I really appreciated the Islamic perspective because it is rarely included in discussions, but it is a huge part of the experience for most Muslims.

Finally, some participants emphasized that addiction does not reflect someone's lack of faith or spirituality.

Participants Wanted to Further Increase their Mental Health Knowledge Participants demonstrated a strong interest for further learning and more psychoeducational seminars. 47.3% of participants requested more information on other topics and additional information on topics such as, neuroscience and the genetics of addiction, other forms of addictions such as social media, gaming, and electronics (screen time), and several other mental health topics. Some participants also sought information and resources to help family or community members or friends to motivate them to seek treatment or to take preventative approaches to prevent addictions and mental health issues.

Attitude Toward Others with Addiction

There was a significant increase in positive attitudes towards individuals with addictions on the ATTSPPHS scale ($t = 2.9$; $p = 0.004$) (mean difference = 1.8; 95%CI 0.6–3.0) and RIBS ($t = 3.8$; $p < 0.001$) (mean difference = 1.1; 95%CI 0.5–1.6) in comparison to baseline (pre-seminar). There was also a significance decrease on social stigma items on ATTSPPHS ($t = -2.4$; $p = 0.02$) (mean difference = -0.6; 95%CI − 1.1 to − 0.1).

Qualitative Themes

Integrating Islamic Context Motived Participant's Empathy, Compassion and Willingness to Help and Discouraged Judgment Towards Individuals with Addictions Related to the Islamic context, 48.4% of participants reported that integrating the Islamic content motivated them to help others. This was especially emphasized as participants learnt how historically respected individuals in Islam dealt with individuals with addiction with incredible compassion. The seminar also encouraged individuals to be non-judgemental in their approach to helping someone with an addiction. None of the participants reported being unreceptive to the Islamic context. One participant reflected "[I am] further encouraged to check my biases and offer more compassion to individuals with addictions. Despite the stigma in our community, it is important to consider what the Quran says about addictions."

59.6% of participants responded to the attitude question in Appendix with insight that the person in the scenario who is presenting repeatedly drunk at a mosque is a sign that they need help, and some offered to get this person to treatment. In addition, 25.5% of the responders recognized that the person struggling from addiction has a problem and that they would refrain from being judgmental. One participant responded, "After looking at the Islamic teachings, I wouldn't judge that person." In contrast, 14.9% indicated that they would not know how to react or would feel uncomfortable.

Holding the Seminar in the Mosque Promoted Raising Awareness and Community Safety, Support and Resilience 44 participants were asked about their preference to hold the seminar at a mosque. 29 individuals (65.9%) out of 44 participants responded that they favored the mosque as the place to hold psychoeducational seminars. Some participants elaborated that the mosque can serve as a community base for improved accessibility for educational seminars as well as other mental health services, as compared to medical or healthcare settings. Presenting the seminar at a mosque gave them trust and confidence in the material delivered. Many stated that the stigma related to addiction was reduced because it facilitated communication about addictions with other attendees leading to increased awareness, promotion of open dialogue and transformation of the mosque into a safe space to discuss addictions. One participant shared, "This seminar is in a spiritual space, [it] affects my openness to discuss the topic of addictions because I am with people who share the same religion as me. I feel comfortable, since it is a masjid (mosque) setting." Many participants expressed feeling apprehensive, fearful or distrustful to attend the seminars or receive services related to addictions in a hospital setting. For example, one participant noted, "Community centres are more open whereas hospitals are closed and rigid in practice."

Other individuals explained that this openness is due to a feeling of community support from others who share the same beliefs. As one wrote, "It helps to reduce the stigma and shame and be more open to free-speech." In addition, others expressed that the mosque seemed to foster community resilience for participants.

In contrast, only one participant (2.3%) expressed that they felt restricted because the seminar was held in the mosque. This participant noted,

> The environment felt restrictive because I feel many Muslims are either unaware or in denial about the extent of addiction problems in our community and society at large. Domestic abuse, drug addiction, depression is rampant in many of the people [who] don't come to the masjid (mosque).

Also, Only one participant (2.3%) felt ambivalent about holding the psychoeducational seminars in the mosque because of fear that other Muslims would hear about his problems. Three participants (6.8%) reported having no preference to have seminars in the mosque as opposed to in a community centre or hospital setting.

Help-Seeking Behaviors

Qualitative Themes

Increased Help-Seeking Behaviour 18.3% of participants expressed they would be likely to reach out for addiction services to get help currently or in the future if needed. Some commented that the seminar reduced their shame in seeking both medical help and religious services for problems with addictions. For example, one participant shared, "After this seminar, I would like to share the mental illness sickness with my doctor."

Supporting Friends and Family, Community Members in Receiving Addictions Services 63.4% of participants reflected that the seminar motivated them to help other family or friends who are struggling with addiction. The major-

ity of participants expressed they were compelled to help others and requested more information and resources so they can learn how to help. For example, one participant compassionately shared, “As a community member, [I would] politely ask if they [individuals struggling with addiction] want help or offering your friendship to open doors for potential future interventions.” Several participants inquired about how to help someone who is not aware of their addiction issue or someone who is resistant to seeking assistance. Only 4.3% of participants were ambivalent or unmotivated to help individuals who have struggles with addiction and continued to hold the belief that they need more spiritual guidance or practice.

Barriers of Addiction Service Access More than 50% of participants indicated that the primary barrier to accessing services was stigma. Interestingly, participants’ responses clarified that the stigmatization of Muslim communities is far more complex than simply being stigmatized for addictions issues. Several participants expressed fears of being judged by mental health practitioners and some participants explicitly noted a significant fear of discrimination as well as fears of loss of employment, being misunderstood or feeling ashamed and other barriers to accessing services. Many participants also feared social repercussions, such as being ostracized, shunned or “seen in a negative light”. A common fear expressed by several participants was concern over how family members might react negatively to an individual disclosing their struggle with addictions. Despite these fears, the majority of participants expressed that the seminar effectively reduced stigma and helped create a safe space to discuss an important issue within the Muslim community.

Confidentiality was a key factor for participants. If they felt confidentiality was safeguarded, they felt safe to access care. Fears around breach of confidentiality were a significant barrier to access for Muslim populations. About one fifth of participants (20.4%) expressed fears in accessing services as they worried about the ramifications such as loss of employment if confidentiality was not maintained. One participant expressed that one barrier would be “lack of confidentiality and [its] impact on future career prospects.” In addition, 32.3% of participants cited cost as a barrier to accessing services and 26.9% of participants noted that there is a lack of availability in services. Some participants elaborated that waitlists had been very long, mental health professionals had been unresponsive, their cultural needs had been dismissed or that they felt pressured to take medication when they did try to access services. Finally, more than 16.1% participants noted that a non-Muslim practitioner or one who isn’t culturally sensitive would be a barrier to accessing mental health or addictions services. One participant explained “Psychologists and panels that are non-Muslims [are barriers] because they are not aware of the religious and social constraints [of Muslims]. Another participant recommended that mental health practitioners should have “an understanding of current social issues and problems of people who identify as Muslim Canadians, and the implications of having different identities”.

Facilitators of Addiction Service Access 14% of participants shared that they would be compelled to access services if their service provider adapted cultural or spiritual competencies in their practice. A quarter of participants (25.8%) requested that their mental health provider be Muslim as they felt it would be important that their counsellor share the same understanding of their beliefs and faith. Several participants expressed that they would still seek spiritual counseling or counseling from an imam, spiritual leader, or member of the clergy, highlighting that religion plays a central role in their lives. Thus, the majority of participant responses in this study reflect a strong need for addictions services that are faith-adapted. For example, one participant wrote, “This seminar was a reality check for me about how addictions are real even in our Muslim communities. Addiction is a growing problem and the Muslim community needs to be more educated about how to break the stigma”.

Discussion

This mixed methods study is the first community psychoeducation intervention aimed at reducing stigma around mental health and addictions in Muslim populations in Canada. The findings from this study support that low-cost, psychoeducation programs that combine Islamic principles and medical knowledge can successfully reduce stigma in Muslim populations. The quantitative and qualitative results demonstrate significant improvements in areas of knowledge, attitudes, and willingness to seek professional help and help others with addictions through this Muslim faith-adapted psychoeducation program.

Stigma, service accessibility, and factors related to healthcare providers’ were corroborated in our study as common barriers to access mental health services, which is consistent with the report by the Mental Health Commission of Canada (McKenzie et al. 2016). Stigma was identified as the greatest barrier to mental health service access for Muslim populations in Canada. Fear of stigma was more complex for this population due to fear and shame of judgment and ostracizing from their own community, a heightened fear of discrimination from non-Muslims in addition to the stigma of addiction itself. For Muslim populations in the US, mental health stigma, compounded with cultural mistrust of Western mental health systems, posed major barriers to help-seeking (Amri and Bemak 2013). Mental health stigma was also cited by various other racialized and

migrant populations as the major barrier preventing people from seeking care for mental health and addictions issues (Chiu et al. 2005; Thomson et al. 2015; Whitley et al. 2006; Wynaden et al. 2005).The literature supports that anti-stigma awareness and psychoeducation campaigns are successful in increasing willingness to disclose mental health issues to family and employers and increase the likelihood of seeking help. Mass media mental health campaigns (Cheng et al. 2016) and multi-family psychoeducation groups for families of clients in mental healthcare (Chow et al. 2010) carried out in hospital settings in Toronto, Canada and been found to be effective in reducing mental health stigma and increasing willingness to seek mental healthcare. This study demonstrates that psychoeducation program carried out in community settings like the mosque can also be impactful in faith communities.

Many of the participants noted that holding seminars in the mosque setting reduced stigma, increased awareness, facilitates more positive attitudes towards people living with addictions and improved community resilience. The finding of this study indicates that collaborative community programs embedded within faith-based institutions might be suitable for controversial or stigmatized topics such as addictions. However, strategic planning, including collaborating with existing community Muslim organizations to provide a sense of familiarity and trust to community members attending workshops is essential. Additionally, given the cultural, racial, and ethnic diversity within the Muslim community, creating an inclusive and evolving process in soliciting and implementing feedback from community leaders and constituents is essential to the development of tailored seminars that truly meets the unique needs of various Muslim communities. Future studies would benefit from comparison of the efficacy of these programs in the community versus hospital settings. Many participants reported their fears of being discriminated against, judged or misunderstood by a non-Muslim practitioner. Indeed, many participants shared that non-Muslim practitioners lack an understanding of important social, spiritual and historical dimensions that are central to Muslims and pertinent to their life and service provision. The lack of acknowledgment of spirituality by Western psychology, psychiatry, and medicine remains a major barrier, impeding the ability of faith communities to seek mental health and addictions services (Islam et al. 2017; Jisrawi and Arnold 2018).

Mental healthcare seeking was facilitated by accessibility, supportive mental healthcare providers and the availability of Muslim mental healthcare professionals. This study supports the further development of culturally and spiritually adapted models of care that can appeal to racial and religious minorities like Muslim populations. The development of Islamically-integrated psychotherapy and counseling is beginning to make strides globally (Ahmed and Amer 2013, 2018; Rassool 2016). Many mosques and spiritual centers in Toronto, Canada offer professional counseling, which has greatly advanced the capacity for Islamically-integrated mental healthcare in the country.

Participants' perception of confidentiality was a significant biggest barrier to accessing care. Mistrust of services and concerns around confidentiality are large barriers in accessing mental health services in our sample. It is evident that mental health practitioners treating Muslims and individuals of other minority groups need to emphasize patient-clinician confidentiality and highlight the limits of confidentiality clearly.

Improvement in the knowledge component was most evident in the younger cohort of the sample. A possible explanation for why older participants did not internalize the psychoeducational material as effectively is that they may be more likely to use English as a second language than the younger cohort. Another possible explanation is that older participants might have been more resistant to shifting their beliefs due to longstanding, preconceived cultural and religious ideas around addictions. Over 40% of our sample had college or graduate degree but the rate of unemployment was also high 39.8%. This high rate of unemployment along with its financial consequences could pose as a risk factors for addiction and mental illnesses. Therefore, it seems more critical to combat stigma related to addiction/mental illnesses and facilitate access to mental health resources with intervention programs.

There are some study limitations that should be noted. The finding that older Muslim populations did not experience the same reduction in addictions stigma after completing the program suggests that this psychoeducation intervention needs to be revised for older adult populations. For example, providing language options beyond English and having presenters that older adults can relate to may be beneficial. Participants who self-reported no change in their knowledge pre- and post-seminar seemed to have lower rates of employment in our sample. Lower rates of employment could reflect lower levels of educations. Further investigation is needed to better understand how age, employment, and education effect knowledge transfer from a psychoeducational seminar.

While the quantitative leg of the study employed various measures, the short answer and written nature of the qualitative phase did not allow for in-depth data collection. Future interventions could employ the use of in-depth interviews or focus group discussions. Furthermore, performing follow-up testing and interviews 1 year after the intervention would be beneficial in assessing the long-term impact of the anti-stigma intervention. Securing community buy-in by speaking to mosque congregants to understand their unique

Table 3 Summary of recommendations by participants to improve the under-utilization of mental health or addictions services by Muslims

Factor	Recommendations
1. Practitioners	Services should be provided by a practitioner who is trained in cultural and faith adaption or co-facilitated by a spiritual leader
2. Place to provide services	Psychoeducational and prevention services can be provided in mosques. Some outpatient services can be provided in community centres. If it is necessary to provide services in hospital settings, accommodations for patients' spirituality should be taken into account. Participants are likely to drop out if they feel pressured to take medication
3. Confidentiality	Reassurances about protecting confidentiality need to be reinforced multiple times in a way patients understand and trust
4. Feasibility	Services need to be feasible in terms of cost, wait times, and accessibility (e.g. distance)
5. Safety	Services need to be free of stereotyping, discrimination, judgement, and stigmatization in order for community members to feel safe in accessing services
6. Program or policy development	It would be helpful to establish a system of cultural brokers to better represent the cultural needs of Muslim communities when designing a program that serves this population

perspectives and to provide them an opportunity to shape the intervention would help increase the effectiveness of anti-stigma efforts. Involving the imam, or religious leader of the mosque, or other well-known members of each mosque's congregation in the presentation could also help in facilitating the education of mosque leaders and demonstrating a unified approach to addictions. Ensuring the delivery of seminars in different languages according the community's need would ensure reaching a larger Muslim population. Table 3 summarizes recommendations to better serve Muslim communities.

Acknowledgements Our research team acknowledges the hard work and great collaborative efforts done by our research Coordinators: Shirin Ahmed and Sairah Uddin. We would also like to extend our appreciation to the volunteer efforts of the Psychiatry Residents and Psychiatrists who delivered the seminars throughout our study, which included: Dr. Bassaam Salim, Dr. Zainab Furqan, Dr. Saadia Sediqzadah and Dr. Rida Hashmi.

Funding This work was supported by Bhasin Consulting Inc. Fund for Inclusion in Mental Health, Centre for Addiction and Mental Health (CAMH). Partial funding was also provided through by Student-Assembly Merit Award from the Johns Hopkins Bloomberg School of Public Health.

Data Availability The data and materials used in this study are available upon request.

Compliances with Ethical Standards

Conflict of interest The authors declare no conflict of interest.

Ethical Approval This research study has been approved by the research ethics board of the Centre of Addiction of Mental Health in Toronto, ON, Canada.

Appendix

See Table 4.

Table 4 Qualitative questions subdivided by the subcomponents of stigma that they are addressing

Sub-components of stigma	Questions addressing each component
Knowledge	How did this seminar impact your understanding of addictions? How did the Islamic context influence your understanding of this topic? What additional information would you like to understand on addictions?
Attitude	What are your thoughts about someone who shows up repeatedly intoxicated at your local mosque?
Help-seeking behaviors	What would make you more likely to access mental health supports? What would make you less likely to access mental health supports?

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