



# Evaluation of a Pilot Intervention to Reduce Mental Health and Addiction Stigma in Primary Care Settings

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Published online: 17 July 2019  
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## Abstract

Healthcare environments are not exempt from the impact of stigma against mental illness and addiction, which contributes to barriers to client access and appropriate treatment. To address this concern, healthcare organizations have a growing interest in mental illness and addiction anti-stigma anti-discrimination programming as part of their staff-wide professional development. Though standard interventions demonstrate effectiveness in the short and mid-term, the evidence for long-term change is inconclusive. A flexible, innovative intervention was developed in collaboration with community health care centres to reduce mental illness and addiction stigma and discrimination at an organizational level. A mixed methods approach was utilized to develop the intervention design and evaluate the effectiveness of the intervention. 137 people participated in the survey component of the study and five senior management staff in interviews. Quantitative results showed that the intervention was effective in changing attitudes toward mental illness (e.g. 5.9% improvement in OMS-HC score,  $p < 0.05$ ) and substance use problems (e.g. 8.4% reduction in social distance for heroin dependence,  $p < 0.05$ ). Qualitative findings were positive for indicators of observed improvement in mental health knowledge and behaviour. The implications for future research that allows for the further evaluation of multicomponent anti-stigma interventions in healthcare settings are discussed.

**Keywords** Anti-stigma intervention · Mental illness · Addiction · Primary care

## Introduction

Mental health and substance use problems (MHSUP) have been identified as one of the most stigmatized conditions in Canada [1] and worldwide, with the most damaging impacts occurring during contact with the health care system [2].

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**Electronic supplementary material** The online version of this article (doi:<https://doi.org/10.1007/s10900-019-00706-w>) contains supplementary material, which is available to authorized users.

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In 2016, the Canadian Medical Association and Canadian Psychiatric Association formally recognized the consequent barriers to mental health care, treatment and recovery in a joint statement on access to mental health care [3]. The identification and elimination of MHSUP stigma within health care systems was articulated as a key recommendation. The integration of anti-stigma education into workplace-based professional development efforts was specifically recommended to facilitate improvements in the experience of obtaining mental health care, including the reduction of stigma and discriminatory behaviour.

In the context of health, stigma has been defined as "a social process, experienced or anticipated, characterized by exclusion, blame or devaluation that results from experience, perception or reasonable anticipation of an adverse social judgment about a person or group. This judgment is based on an enduring feature of identity conferred by a health problem or health -related condition" [p. 280, 4]. The stigma phenomenon occurs in an unbalanced power dynamic [5].

The primary care setting is often the first point of contact for people seeking care for MHSUP, accounting for

approximately 30% of time spent by family physicians in clinical contacts [2014 College of Family Physicians of Canada Longitudinal Survey, as cited in 3]. Community-based, collaborative approaches to mental health care such as those operationalized in the community health centre (CHC) model are regarded as the best practice for care of patients with mental health disorders [6]. Further, the CHC model is inclusive of social determinants of health, which allows for tailoring services for special populations (e.g., immigrants, visible minorities) that may have nuanced mental health needs (e.g., intergenerational trauma; AOHC 2008). Health care delivery is optimized for such patient groups who are often burdened with multiple stigmas (related to race, gender identity, poverty, etc.) that exacerbate their emotional challenges and result in additional barriers to care within more traditional health care models [7, 8].

CHCs in Toronto often serve large, ethnoracially and socioeconomically diverse populations facing challenges negotiating multiple stigmatized identities [9] in addition to MHSUP. These sites are ideally positioned to develop and test anti-stigma interventions for primary health care settings where early detection of mental health challenges often takes place [10]. Further, the holistic vision of health advanced by CHC organizational principles provides an ideal occupational environment to address stigma among health care workers impacting service delivery [10, 11]. Nurses, nurse practitioners, physicians, social workers, dietitians, counsellors, health promoters, community health workers are the typical health professionals participating on CHC teams. Reducing the stigma conveyed in such health care settings may improve patient's willingness to seek health care, improve the quality of care, and eventually lead to improved health outcomes.

In a review of the effectiveness of existing workplace anti-stigma interventions, Hansich and colleagues [12] reported that published interventions consisted of at least two of the following three components: improving attitudes (e.g., openness toward people with mental illness), behaviours (e.g. proxy indicators such as confidence in managing mental health issues, readiness to provide support), and knowledge (e.g., identifying mental health problems, knowledge about effective treatments) about mental health and addictions. They also varied in intensity from one hour up to a maximum of two days. Evidence for sustained improvements in knowledge and behaviour in the short-term (i.e., post-intervention) and mid-term (i.e., 2 year follow up) was robust, although findings related to attitudinal changes were mixed. The implication that attitudinal change is not necessary for behavioural change challenges established theories of health education [13]. However, given the methodological challenges of evaluating the long-term effectiveness of workplace anti-stigma interventions, the importance of attitudes mediating actions cannot be dismissed. Future intervention

research tailored to a setting, targeting specific populations, and of different intensity was recommended to strengthen the evidence base for optimal duration and program content. There is an urgent need to advance the development and testing of appropriate anti-stigma interventions in primary care settings regarding MHSUP [14, 15].

This paper presents the evaluation results of an innovative pilot initiative [16] aimed at developing and implementing an anti-stigma, anti-discrimination, pro-recovery intervention targeting healthcare providers to people with MHSUP within community health centres (CHCs) in Toronto. The anti-stigma initiative focuses on discrimination, the behavioural component of stigma, as a critical element that results in unequal access to care and/or poor quality of care.

The specific objectives of the project were to (i) understand and describe the contributors and the existing challenges related to stigma among primary health workers who are involved in the care of people with mental health and substance use problems; (ii) design an intervention that promotes recovery and reduced mental illness and addiction stigma in primary health settings by involving clients to promote contact-based learning; and, (iii) evaluate the efficacy and impact of contextualized interventions using a mixed-methods model within various sites. The initiative was coordinated by the Office of Transformative Global Health (OTGH) at the Centre for Addiction and Mental Health (CAMH), and executed in three phases over 5 years with the funding and resource support of Opening Minds, an initiative of the Mental Health Commission of Canada to reduce the stigma of mental illness across Canada and CAMH Development and Dissemination Fund.

## The Intervention

The evaluated intervention was created in collaboration with and implemented at three primary health care centres in Toronto. These CHCs provide mental health and substance use services to areas with large concentrations of vulnerable populations, as compared to the rest of Toronto.

Figure 1 illustrates the process of developing the intervention (data not presented). In summary, a mixed methods approach was used to gather data related to the organization setting, structure, stigma situation, ideas for an anti-stigma initiative, and preparedness. A knowledge synthesis and

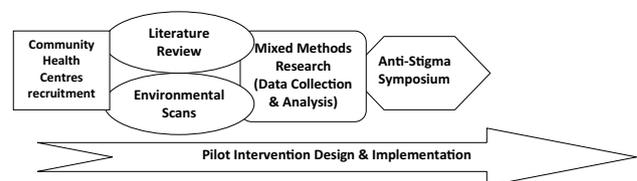


Fig. 1 Overall process of intervention development

translation symposium was held to facilitate planning of the comprehensive stigma reduction and recovery promotion initiative at the CHCs. The symposium format emphasized interviewing, involvement of peer workers, and included perspectives from services users. A set of recommendations and principles to guide implementation the project was generated. The following key intervention elements were identified; facilitating contact, organizational planning, and innovative education. Figure 2 summarizes the final multicomponent, ‘all-staff’ intervention design, which would be flexibly integrated into the respective visions, goals, and evaluation plans of each CHC before implementation.

The overall process of designing, implementing and evaluating the intervention lasted about five years.

## Methods

This study was approved by the Research Ethics Board at the Centre for Addiction and Mental Health (Protocol #: 190/2010).

### Study Design

This is a mixed methods evaluation design [17]. Qualitative and quantitative outcome measures were used to evaluate the intervention. Data collection was run in two waves: the baseline in 2010 and the final evaluation at the end of the intervention. The self-report questionnaire completed pre-intervention was re-administered post-intervention. To contextualize these findings, five structured interviews with senior management were simultaneously completed to gain an organizational perspective on the overall success of the intervention.

### Quantitative Component

For the quantitative component, a self-report survey designed to assess mental illness and addiction stigma and discrimination among health care professionals was administered. Respondents were also asked to suggest interventions that would potentially reduce these negative attitudes and provide sociodemographic information.

### Recruitment

CHC employees were recruited via a convenience sampling strategy to complete a questionnaire package at baseline and at the end of the project. A census approach was used to recruit participants from the three CHCs. All staff members who had direct contact with clients were invited to complete the questionnaire. Due to high rates of staff turnover at the CHCs, a repeated measures design was not logistically

feasible. However, a cross-sectional design was determined to be well-suited for the purpose of the study to examine the overall change of CHC staff in response to the anti-stigma intervention.

### Measures

The questionnaire (see Supplementary Material Appendix 1 for more details) included: (1) Opening Minds Scale for healthcare providers (OMS-HC), a short scale designed by Mental Health Commission of Canada (MHCC) to assess various dimensions of stigma and to evaluate anti-stigma interventions in health care settings [18] and recently validated in Community Health Centres in Ontario, Canada [19]; (2) Mental Illness: Clinician’s Attitudes Scale (MICA), another instrument developed in United Kingdom to assess the attitudes of students and professionals [20]; (3) The five-item Willingness Scale healthcare disciplines towards people with mental illness created by the project team; (4) Modified Borgadus Social Distance Scale [21, 22]; (5) The Recovery Assessment Scale [23]; designed to explore the extent to which health providers believe in the concept of recovery, including 13 items focusing on mental illness and 13 items focusing on addiction; (6) The 27-item Attribution Questionnaire [24] aimed at assessing emotional reactions and discriminatory responses based on answers regarding a vignette about a man with schizophrenia; (7) The Canadian Community Health Survey (CCHS) Stigma [25]; and (8) the six-item Empowerment Scale [26] aimed at capturing a more hopeful perspective about stigma reduction were also included. All study scales performed good internal reliability with Cronbach’s alpha ranging between 0.77 and 0.87. Basic demographic information was also collected.

### Analysis

Changes in participants in response to the intervention at CHCs was calculated using chi-square tests [27]. The results of the participants’ responses to various scales were also compared using independent sample t-tests. Several stratified analyses were completed to detect differences by gender, exposure to the full intervention (employed at CHC for > 5 years), previous training, and country of birth. Lastly, comparative analyses of the MICA scale were completed. These a priori comparisons and stratifications were selected based on the initial qualitative interviews conducted in phase 1. Statistical significance was accepted at a *p* value of 0.05.

### Qualitative component

A series of interviews were conducted at the end of the project involving senior management at all participating CHCs (*n* = 5). These interviews used the

**Fig. 2** Main components of the intervention

**i) Organizing site-based teams** of local champions composed of staff at each CHC to lead an action plan for the anti-stigma intervention as well as act as an advisory board along with clients and community members with lived experience. Their specific responsibilities included:

- a) Providing input and recommendations during the development of the CHC action plan to reduce stigma and discrimination and promote pro-recovery practices
- b) Utilizing the CHC action plans as the basis for developing anti-stigma and discrimination initiatives and promote recovery
- c) Leading the implementation of the action plans in collaboration with the CHC management, staff teams, patient/community advisory group and other stakeholders
- d) Monitoring the achievement of each action area within the action plan
- e) Serving as champions and advocates for anti-stigma and discrimination and pro-recovery practices in service delivery throughout the organization

**ii) Innovative contact-based training** including a series of educational workshops to promote anti-stigma and recovery-oriented competencies using didactic, interactive, and contact education components. The key element of these workshops was contact with individuals with experience of mental health and substance use problems who served as presenters and facilitators. Workshops at each CHC were designed in collaboration with the local champions to optimize the utility of the sessions. Workshops were designed as part of the scheduled staff meetings and intended to build upon one another. Workshop 1 focused on setting the stage for the attendees to recognize stigma and operationalize a recovery-oriented approach within the CHC. Workshop 2 built on the teaching objectives of workshop 1 and provided the participants with specific tools and strategies to challenge stigma and support recovery. Workshop 3 aimed to empower participants to be a catalyst for recovery. The client-centred content and approach focused on lived experience to demonstrate application of the tools and strategies learned throughout the workshops.

**iii) Anti-stigma awareness campaigns** were also conducted among health care providers and the general public at the CHC level. Posters aimed at promoting self-reflection changing personal behaviours rooted in stigma against people with MHSUP were translated in widely spoken languages and posted throughout the CHCs, their websites, newsletters, and provided to community partners for further dissemination.

Fig. 2 (continued)

**iv) A recovery-based arts workshop series** was developed to provide clients with a central role in their recovery. These 10-week workshops focused on contact-based education and were part of the operationalization of the recovery-oriented approach within PHC. 5 to 10 clients and 1-3 staff members from each CHC consented to participate in the workshops. Clients were invited to participate through local referrals or direct recruitment. Inclusion criteria for this component of the intervention were: accessing primary health care services (for clients), direct or indirect experience of MHSUP (for clients), working as part of the team in the CHC (for staff members), ability to commit to 10-week workshop series, willingness to share, reflect, and listen to experiences of stigma, and interest in expressive arts

**v) During the last stage of the intervention, *internal policies and procedures*** were analyzed with the goal of identifying potential systemic stigmatizing and discriminatory practices or procedures that present barriers to recovery. A tool was specifically developed for the interventions based on existing frameworks in policy literature (e.g., Eichler & Burke, 2006; WHO, 2012; HEIA, 2012) to evaluate the degree to which policies supported an anti-stigma, anti-discrimination environment. Due to internal challenges at the participating CHCs, only one of the sites completed the policy analysis component of the intervention. In that case, the following policies and procedures were selected for consideration: (1) Managing Disruptive Behaviour/Threatening; (2) Violent and Aggressive Behaviour Protocol; (3) Primary Care Client Intake Protocol; (4) Non-Insured Intake Protocol Acute Mental Disturbance Protocol; (5) No Show Protocol; and (6) Terminating Client Relationship Protocol. Based on the policy analysis, a set of recommendations were developed to strengthen the organizational anti-stigma/anti-discrimination strategy.

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strengths-weakness-opportunity-threats (SWOT) [28] approach and were 1–2 hours in duration. The information collected from the three CHCs was synthesized and analyzed using a thematic approach to identify meaningful patterns [29].

## Results

In total, 137 people responded to the baseline survey compared to the 110 participants at the final survey. Considering 15% increase in staffing during the study period, we estimate a 19.7% of the participants declined to respond.

Table 1 describes the demographics of the samples at baseline and at the end of the intervention. There was a considerable amount of missing information in all measures (> 10%).

Table 2 presents the differences in the baseline and final scores for all scales. Overall the OMS-HC scale demonstrated a 5.9% improvement ( $p < 0.05$ ) following the intervention, indicating a reduction in stigmatizing attitudes toward people with mental health and substance use problems. At a subscale level, significant post-intervention improvements were demonstrated in the ‘disclosure of mental health or addiction’ (6.6% change,  $p < 0.05$ ). Three scales indicated significant post-intervention improvement in attitudes regarding people with substance use problems, namely

**Table 1** Respondent demographics

Survey item	Categories	Baseline		Final	
		Count	%	Count	%
Gender	Male	25	18.2	14	12.7
	Female	95	69.3	73	66.4
	Other (transgendered, genderqueer, prefer not to answer)	3	2.1	5	4.5
Age	(1) 18–29 years	21	15.3	12	10.9
	(2) 30–39 years	37	27.0	25	22.7
	(3) 40–49 years	31	22.6	23	20.9
	(4) 50–59 years	25	18.2	21	19.1
	(5) 60–69 years	5	3.6	8	7.3
Marital status	Married	45	32.8	43	39.1
	Common-Law	25	18.2	11	10.0
	Widowed/separated/divorced	23	16.8	14	12.7
	Single/never married	28	20.4	21	19.1
	Missing	16	11.7	21	19.1
Born in Canada?	Yes	64	46.7	52	47.3
	No	59	43.1	39	35.5
	Missing	14	10.2	19	17.3
Educational attainment	High school	1	0.7	0	0.0
	Some college/special training	20	14.6	14	12.7
	Bachelor's degree	44	32.1	41	37.3
	Graduate or professional training	54	39.4	37	33.6
	Missing	18	13.1	18	16.4
Primary care area	Clinical team	44	32.1	34	30.9
	Community health team	37	27.0	22	20.0
	Administrative	9	6.6	17	15.5
	Other	27	19.7	16	14.5
	Missing	20	14.6	21	19.1
Length of employment	< 6 months	8	5.8	9	8.2
	6 to < 12 months	13	9.5	4	3.6
	1 to < 2 years	19	13.9	5	4.5
	2 to < 5 years	26	19.0	23	20.9
	5 to < 10 years	28	20.4	24	21.8
	10 years or more	26	19.0	26	23.6
	Missing	17	12.4	19	17.3

**Table 2** Response to intervention by measure

Measurement scale	Pre-intervention			Post-intervention			Difference
	Mean	N	SD	Mean	N	SD	%
Opening minds survey*	45.2	136	8.4	42.5	109	8.4	5.9
Mental illness: clinicians' attitudes	36.9	134	8.6	35.0	103	9.7	5.0
Bogardus: Schizophrenia	11.9	125	3.2	11.1	94	3.0	6.7
Bogardus: Heroin*	13.6	124	3.9	12.5	94	3.7	8.4
Recovery assessment scale: mental illness	51.3	120	13.9	49.6	96	14.2	3.3
Recovery assessment scale: addictions*	53.9	121	14.7	48.8	92	15.2	9.4
Willingness scale	20.1	128	4.4	20.6	103	4.3	-2.6
Attribution questionnaire	83.1	128	26.3	81.2	102	25.6	2.3
Empowerment: mental illness	6.1	125	3.9	5.9	94	4.5	2.8
Empowerment: addictions	7.1	125	4.7	6.5	92	4.5	8.2
Stigma: Depression*	22.6	118	4.4	17.9	88	3.8	21.0
Stigma: Schizophrenia	17.1	118	4.7	17.6	88	3.9	-2.9
Stigma: Personality disorder	16.4	119	4.7	17.6	88	3.9	-6.9
Stigma: Alcohol dependence	16.5	118	4.8	17.6	88	3.9	-6.3
Stigma: Cocaine dependence*	14.1	117	5.0	17.4	88	4.0	-24.1

\*  $p < 0.05$ 

the Bogardus social distance for heroin dependence (8.4% change,  $p < 0.05$ ), the recovery assessment scale for addiction (9.4% change,  $p < 0.05$ ), and the CCHS stigma module on cocaine dependence (-24.1% change,  $p < 0.05$ ).

The results of post-intervention interviews shed light on the effectiveness of the intervention and areas for improvements. The main challenges for implementing the intervention were competing demands for time and resources. As one manager pointed out, "I'll speak specifically to clinical – every time you pull a staff from their clinical services role [there is] an access issue, so it's one less appointment for a client." They mentioned the challenges of meeting the "immediate demands" and "commitment to quality of services" given the current funding situation that "scrutinizes" providers' time." The managers' following remark summarize the point: "I think the obstacles are really, for us anyways, is it's always challenging within in our organization for people to take time away from frontline work ... it's easier if you're a health promoter ... than if you're physician because you have more flexibility in your schedule than somebody who is seeing one-to-one clients every half hour".

Furthermore, managers consistently reported that the questionnaires took too much time to complete and strongly recommended changing the tools in future interventions. While the intervention was tailored for each CHC, it was pointed out that the workshops should have been more aligned with the needs of specific staff groups and that future interventions should consider developing multiple presentations for specific staff groups at CHCs. One of the participants said: "Making sure that the trainings actually fit the audience you're working and understanding that audience before doing it is critical...each CHC has

different audiences, difference pool of people, or strategies or interventions".

Overall the interviewees agreed that the intervention helped to address stigma and resultant barriers to accessing to care. The benefits of establishing a culture of reflective practice and continuous improvement were also noted. CHCs indicated a commitment to continue with certain components of the intervention including the team of champions, art workshops, and policy reviews. Specifically, the art-based workshops were identified as one of the strengths of the intervention because it provided a forum for stronger relationships to be developed between staff and clients. The multi-component initiative was also applauded by the interviewees and was largely regarded as helpful to improving knowledge, attitudes, and behaviours related to stigma and discrimination. As one manager emphasized, through this intervention the staff were better able "to look through the lens of the client and therefore find a difference, more knowledgeable, and better awareness of the client's experience around stigma." Another manager expressed appreciation for the opportunity to gather knowledge and familiarize themselves with the language needed to inform their CHC's strategic directions.

Qualitative data confirmed that the intervention helped clarify the discourse around stigma, discrimination and recovery. It allowed health professionals to recognize that MISUP were not only struggles faced by service users – they may also have affected their own lives. Some managers considered that the intervention yielded a better appreciation between the twinning of mental health and substance use and fostered the existent harm reduction approach being conducted. One participant indicated that

there were many opportunities for implementing this type of intervention because the CHC is still “on a steep learning curve in terms of mental health and substance use-related stigma”.

## Discussion

The results of this study confirm that a multi-component anti-stigma intervention can be applied within CHCs to improve knowledge and attitudes of the health providers. Specifically, such interventions can be helpful in improving the understanding of the social determinants of health and the stigma associated with MHSUP. Deconstructing stigma and fostering balanced perspectives on the etiology of MHSUP is critical practice as clients often encounter judgements based on misinformation. Further, the stakeholders identified the intervention as a catalyst for improving the culture of the CHCs. They committed to continuing with aspects of the intervention in order to sustain positive changes.

The findings are consistent with other studies that demonstrate how anti-stigma interventions can result in improved knowledge, attitudes, and behaviours in the workplace [30]. Our tailored intervention sustained organizational-level changes over five years. This period is considerably longer term than what has been published in the effectiveness literature for this kind of intervention. It may be argued that the multiple interfaces of the intervention design optimized the mechanism of change. It demonstrated that contact between health providers and clients can be critical in challenging stigma and creating a recovery-oriented environment for the clients. For example, the art-based aspect of the intervention was applauded by the stakeholders for such effects. Syntheses of several studies also point to the effectiveness of such interventions for various outcomes including mental health [31, 32].

The significant changes demonstrated in the addiction scales in pre-post comparison suggest there was more room for improvement in attitudes concerning substance use problems compared with mental health issues. This result mirrors current societal perspectives that blame individuals with substance use for their challenges [33]. Interestingly, the CCHS stigma scale for depression demonstrates relatively worse attitudes. However, the questionnaire assesses participants' perceptions of societal views of the condition. These results could indicate that participants realized the condition was more stigmatized than they initially recognized.

One of the strengths of this study is the use of a mixed-method approach [17]. The goal of mixed methods research is to draw from the strengths and minimize the weaknesses of both approaches [34]. In particular, the qualitative results enriched the research results by providing a deeper understanding of specific aspects of the stigma phenomenon: a) contextual complexities and the role of social determinants

of health, (b) differences between mental illness and substance use stigma, (c) cultural beliefs and assumptions, and (d) overall structure of healthcare at an organizational and systems level, (e) the power of language, and (f) provider challenges and crises (e.g., frustration at inadequate systems, burnout).

## Limitations

There were several limitations to this study that came to light during the implementation of the intervention. The time-consuming nature of the surveys were commented on repeatedly by managers. Some staff also expressed discomfort with the content of the questions which they felt reflected unfair judgments of their points of view. These challenges could explain the large amounts of missing data and the high rate of refusals to participate. We attempted to minimize such concerns by using validated instruments and by protecting confidentiality and anonymity. The results of the intervention could be underestimated due to staff turnover during the 5 year course of the intervention. It was reported that 29% of the staff were not employed at the CHC for the full duration of the intervention. Lastly, logistical difficulties may explain the amount of missing quantitative data and reduced response rate for measures near the end of the questionnaire package, which further limited the ability to interpret the results. The findings from the qualitative aspect of the research suggest that the response rate is likely a function of limited time, despite the fact that all respondents were offered opportunities to complete the questionnaires in full. There is also the possibility of selection bias, since individuals who did not complete some of the questionnaires may be those who did not benefit from the intervention.

A cluster randomized controlled trial designed to test the effectiveness of this anti-stigma intervention for Community Health Centres (CHCs) is needed to confirm the impact of this initiative. It has been recently implemented and results will be available soon [35].

This pilot project demonstrates that a multi-component anti-stigma intervention within CHCs can improve staff knowledge and attitudes toward people with MHSUP. The benefits of using contact-based interventions and recovery-oriented art workshops to reduce stigma was demonstrated through this mixed-methods evaluation. Future interventions within community health settings can utilize similar methodology to design and evaluate their stigma-reduction strategies and incorporate new components. The mixed-methods evaluation approach provided CHCs with the ability to tailor the project to their context. Future studies can utilize this methodology to identify other interventions and mechanisms for anti-stigma and anti-oppression service delivery in health facilities serving diverse communities.

**Acknowledgements** We thank our community health centre collaborators for their partnership and dedication to this initiative: Angela Robertson, Joseph Bortolussi and Lorraine Barnaby; Michelle Joseph, Paulos Gebreyesus and Tamara Robert; and Jason Altenberg, Gurpreet Karir and Wanda Georgis. We also thank our research team for their contributions: Maureen Murney, Erica Suh, Jewel Bailey, Ayesha Nayar, Bethel Woldemichael, Erin Lee and Mark van der Maas. In addition, Jaime C. Sapag's participation in the final stage of preparation of the manuscript was connected with the project "Stigma toward mental illness among primary care professionals in Chile" which was supported by FONDECYT Regular 2016 #1160099 Grant by the National Fund for Scientific and Technological Development (FONDECYT), National Commission for Scientific and Technological Research (CONICYT), Chile.

**Funding** This study was funded by Opening Minds, Mental Health Commission of Canada; and Development and Dissemination Grant, Centre for Addiction and Mental Health, Ontario, Canada.

## Compliance with Ethical Standards

**Conflict of interest** The authors declare that they have no conflict of interest.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.

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