Efficacy of an intervention to reduce stigma beliefs and attitudes among primary care and mental health professionals: two cluster randomized-controlled trials

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Abstract: Although it may seem paradoxical, primary care and mental health professionals develop prejudices and discriminatory attitudes towards people with mental health problems in a very similar way to the rest of the population. The main objective of this project was to design, implement and evaluate two awareness interventions respectively tailored to reduce stigma and discrimination beliefs and attitudes towards persons with a mental health diagnosis among primary care (PC) and mental health (MH) professionals. These interventions were developed by Obertament, the Catalan alliance against stigma and discrimination in mental health. The TLC3 (Targeted, Local, Credible, Continuous Contact) methodology was adapted to the Catalan PC and MH professional contexts. Activists with lived experience of mental health diagnosis carried out awareness-raising interventions in PC and MH health centres. The efficacy of these interventions was evaluated using two prospective double-blind cluster-wait-list-randomized-controlled trial experimental designs. Stigmatizing beliefs and behaviours were measured with the Opening Minds Stigma Scale for Health Care Providers in primary care centres and with the Beliefs and Attitudes towards Mental Health Service users’ rights in mental health centres. Positive reductions in both PC and MH professionals’ stigmatising beliefs and attitudes were found in the 1-month follow-up, although a ‘rebound effect’ at the 3-month follow up was also detected. This emphasizes the importance of the continuity of the presence of anti-stigma activities and messages. Attrition rates where high, which can hamper the reliability of the results. Further follow-up studies should enquiry effects of long-term interventions aimed at reducing stigmatising beliefs and attitudes among primary care and mental health professionals.

Keywords: activism; discrimination; mental health; Obertament; primary care; participation; stigma

1. Introduction

Although it may seem paradoxical, primary care and mental health professionals (those who maintain a more direct and constant contact with people diagnosed with mental disorders) develop prejudices and discriminatory attitudes towards people with mental health problems in a very similar way to the rest of the population [1,2]. Older physicians tend to be more attuned to these attitudes and when these occur, there is overshadowing of the diagnosis and pessimism about adherence to treatment [3]. Illustratively, one of the best-designed and largest observational studies carried out so far on this topic [4], found that in 2008 91% of people using mental health services in England had experienced at least an episode of discrimination. This figure dropped to 88% in 2011, according to the authors, due to the impact of the Time to Change campaign. Despite this and possible
subsequent drops attributable to the multitude of anti-stigma campaigns implemented around the world, levels of discrimination remain intolerable [5] and prevents affected people from seeking professional help [6]. However, this professional group is also one of the possible keys to change since the way in which they conceptualize mental disorders ends up influencing the rest of the population. Despite of these facts, the systematic inclusion of these contents in initial or continued health professional training or the implementation of awareness campaigns is a relatively new phenomenon.

According to recent reviews [1,7–9], studies examining mental health stigma reduction interventions carried out with healthcare professionals have generally found positive results. However, until recently, most studies have been pilot studies focused on a single professional sector (e.g., students, medical doctors, nurses, etc.) or a very specific health and/or population characteristic (e.g., pregnant women with substance abuse disorders, people diagnosed with borderline personality disorder inflicting themselves harm, etc.).

To date there have been two national-wide campaigns, encompassing all types of healthcare professionals and possible mental health conditions, with available evaluations of interventions in healthcare settings. The Canadian campaign Opening Minds carried out a grounded theory model [10] to design a guide of recommendations to implement anti-stigma interventions in primary care. Following these recommendations, different providers throughout the geography of this large country implemented a series of interventions. Although there was some freedom in the format of the interventions, given the vast experience of the recovery and anti-stigma movements in Canada, all used a unified assessment methodology with a unique measurement instrument [11]. A pooled analysis of their impact has shown statistically significant decreases, especially for younger professionals with higher initial levels of stigma [12]. Additionally, through a qualitative analysis, the campaign has produced a synthesis of the six structural ingredients key to the success of such interventions. Programs including a recovery emphasis, personal testimony from a trained speaker who has lived experience of mental illness, employing multiple forms of social contact, teaching skills involving what to say and what to do, that employed myth-busting, and that used an enthusiastic facilitator, performed significantly better than programs that did not include all these ingredients [13].

Time to change in England, have released the results of a pilot project carried out with mental health professionals [14]. Multi-wave surveys carried among professionals who participated in the pilot social contact workshops carried by mental health activists were compared with a control group. Results showed increased understanding and confidence attitudes among professionals who participated in the workshops.

This article deals with the implementation and evaluation of awareness interventions, aimed at reducing stigma beliefs and attitudes among primary care and mental health professionals, carried out by the Obertament Catalan alliance against stigma and discrimination in mental health.

2. Materials and Methods

During 2017 and 2018, there were a series of meetings to prepare this project. Representatives of the main primary care (PC) and mental health (MH) providers in Catalonia expressed their views on the implementation of awareness interventions in their centres together with Obertament technicians and activists with lived experience of mental health diagnosis. There was an independent organization in charge of the moderation of the co-creation process, Spora Synergies1, which analysed these meetings. The results of these analyses indicated that a local referent (a professional in charge of supervising the coordination with Obertament) was necessary for the development of awareness interventions. In the same way, it was deemed necessary to combine a theoretical part (that professionals requested to understand the need for the intervention) with first-person accounts. Additionally, it was concluded that, for the message to be truly internalised, all health centres must develop self-diagnosis activities that can be used to envision actions

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1 http://www.spora.ws/
against stigma in an autonomous way, but with the accompaniment of the activists who have carried-out the intervention. Two activists were recruited to perform the interventions.

2.1. Interventions

The interventions aimed to raise awareness toward the discrimination faced by people diagnosed with a mental disorder when they use primary care and mental health services. The methodology was based on the TLC3 principles (Targeted, Local, Credible, Continuous Contact) as described by Corrigan [15]. The content of the awareness interventions included both theoretical and practical contents, aimed at improving professional care, promoting the participation of mental health users in decisions related to their treatment and the exercise of their rights; always combining the view of service users with the therapeutic framework from which professionals act. The workshop interventions consisted of four parts: a 4-hour training workshop, a 4-hour self-diagnosis workshop, a self-organised activity, and a follow-up session.

Figure 1 shows a flow diagram of the intervention structure. The contents of each session are detailed below.

![Flow diagram of the intervention structure](https://obertament.org/ca/sanitat/per-que-sanitat)

**Figure 1.** Flow diagram of the intervention structure. The sessions supported by the activists are coloured in white, the activity self-organised by the professionals is coloured in grey.

2.1.1. First workshop

In this part, pedagogical contents were combined with different Obertament videos that had been used during the social-marketing campaigns2 as well as first-person accounts of how activists have coped with mental ill-health and how discrimination affects recovery outside and inside the healthcare system. Participants were invited to ask questions and were provided with information on peer- and family support organizations. The contact component of the intervention had a recovery emphasis and tried to refute myths about mental illness and recovery. The pedagogical contents of the session follow.

2.1.1.1. First block: mental health and mental illness

After a presentation, professionals were invited to participate in a dynamic group conversation to estimate and discuss the prevalence of mental health problems. The opinions of the participants were contrasted with the fact that, according to the World Health Organization, one in four people will have a mental health disorder during their lives. Therefore, it became patent that mental disorders are not exceptions but commonplaces. Next, activists gave a lecture combined with personal accounts focused on the following components: mental health as more than mental illness, mental health in the community,

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2 https://obertament.org/ca/sanitat/per-que-sanitat
social determinants of mental health, myths about mental health problems, mental crises as an exception and not a rule in the lives of diagnosed persons. After a break, the concepts of recovery and discrimination were discussed also using personal accounts. The key messages were: 1) recovering a purpose in life is different from being cured and 2) a good part of distress experienced by diagnosed persons is not due to the symptoms of their disorder but to the discrimination they suffer because of being identified as having a mental disorder. This happens by making public that a diagnosis has been received or simply by involuntarily showing the side effects of medications.

2.1.1.2. Second block: stigma and discrimination

The block began with a lecture on stigma that had the following components: Definition of stigma and categorization, stigma and prejudices, prejudices in mental health. The objective was for the participants to be introduced to the concept of stigma and to become aware of how human beings need to label behaviours and social groups to feel safe. Although this has an evident adaptive role, when we label disadvantaged groups, we tend to justify the discrimination to which they are subjected. This is a process with varying levels of awareness. Therefore, it is important to be able to make our feelings conscious analysing the prejudices we have towards other people and groups. This allows health professionals to make decisions more adapted to each situation and therefore less biased.

Once the concept and scope of stigma was clear, the lecture followed by explaining and exemplifying how stigma causes discrimination and in which domains, including health contexts. For example, many people think unjustifiably that people with a mental disorder cannot study or work. This makes it less likely that a person with this condition can complete a course or get a job, reinforcing the prejudices. In this way, both diagnosed people (by not trying), employers (by negatively evaluating this characteristic in a selection process) and the society as a whole (by taking for granted the fact that people diagnosed cannot achieve it) contribute to fulfilling this unfounded prophecy.

2.1.1.3. Third block: Healthcare and primary care / mental health care

This part had some different components depending on whether it was implemented in PC or MH health centres. The block commenced with a discussion on the differences of personal treatment and professional treatment. This discussion was contrasted with examples and personal experiences of the activists. The message was that although there are available professional quality treatments, sometimes users perceive that the personal treatment they receive does not help them to recover. Next, data about treatments and care load adapted to PC and SM contexts was offered. This was contrasted with the data available on discrimination suffered by service users at both PC and SM facilities.

2.1.1.4. Fourth block: Fighting Stigma

In this final part, the activists briefly described the Obertament project and its objectives as well as similar initiatives around the world. Special attention was paid to other projects that have developed interventions in other countries such as Canada and the United Kingdom (see introduction).

2.1.2. Second session

The second session was focused on a self-diagnosis carried out by the PC and MH teams in relation to stigma and discrimination. That is, it aimed to give tools to professionals so themselves can define jointly what stigmatizing practices they detect in their own work environment and how they could reverse them. A group dynamic was used with three main objectives: 1) Identifying the stigmatizing and discriminatory practices and behaviours that take place in their own working centre and 2) defining proposals agreed between the team to deal with the practices and behaviours identified as stigmatizing and 3) prioritizing the proposals and plan their implementation. Before finishing,
the implementation referent of the self-organised activity (a professional from each PC or MH centre), explained the following steps.

2.1.3. Follow-up session

In this session of shorter duration, carried out approximately month after the baseline assessment, in addition to administering the first follow-up assessment, it was used to reinforce the concepts learned in addition to sharing the progress of the self-organised activities. In the event that these activities include a public presentation, this will be done at this time.

2.2. Procedure

The anti-stigma interventions were evaluated through a prospective single-blind cluster-wait-list-randomized-controlled trial experimental design. Each cluster was a health centre. The design was single blinded since the evaluators did not know which centres have been evaluated as case or control. Only the organisers of the intervention workshops had this information. The twelve centres (6 PC + 6 MH: 2 adult MH, 2 children and adolescent MH and 2 substance abuse) taking part in the study were designated by the Department of Health of the Catalan Government.

Upon enrolment, each centre was included in a randomisation table with a fixed number of control (3 PC + 3 MH) and intervention (3 PC + 3 MH) sites. In this way each centre had the same possibilities of belonging to the experimental or to the control conditions. Once the centre was randomised, professionals received a registration questionnaire, which included the baseline assessment. It was composed by sociodemographic (including gender, age, and educational level) and professional (profession category) information + a tailored beliefs and attitudes sale (see below instruments section). The centres included in the experimental group accessed the course immediately, while the centres included in the control group waited, giving time to carry out the follow-up assessments within the intervention group before beginning the course. This allowed investigators to know the impact that the intervention had on the experimental compared to the control group, who did not have received the intervention but, for ethical reasons and to maximize the impact of our interventions, did so afterwards. Figure 2 shows a flow diagram of the design.

![Flow diagram of both evaluation designs](image)

Figure 2. Flow diagram of both evaluation designs.

2.3. Participants

Considering effect sizes of an intervention carried out with social work students [16], using a similar methodology, the number of participants was estimated according to the following calculation of statistical power. Accepting an alpha risk of .05 and a beta risk of .2 in a two-sided test, assuming a correlation between the first and second measure of $r = 0.6$, 99 subjects were considered necessary in each group to recognize as statistically significant difference greater than or equal to 0.4 standard deviations.

The intervention workshops were implemented in PC and MH centres comprising a total of 371 professionals (185 PC + 186 MH). The recipients were professionals working in such settings: administrative officers, general practitioners, odontologists, nurses,
psychiatrists, psychologists, and social workers. Figures 3 and 4 show flow diagrams of the recruitment and follow-up process.

![Flow diagram of the primary care centres recruitment and follow-up process.](image1)

2.4. Instruments

The Opening Minds Stigma Scale for Health Care Providers [OMS-HC; 11], is an 15-item scale that measures stigma levels and has been specially designed for use in primary care. The overall internal consistency for the whole scale (α = .79) and three subscales, namely Attitudes (α = .68), Disclosure (α = .67) and Social distance (α = .68) has been found to be acceptable. Internal consistency is also satisfactory across different health
professional groups (physicians, nurses, etc.). The scale has been successful in detecting positive changes in various anti-stigma interventions (SRM ≤ 0.50 to ≤ 0.91).

The professionals’ Beliefs and Attitudes towards Mental Health Service users’ rights scale [BAMHS; 17] has been developed by our group for this project. In preliminary analyses carried out within cross-sectional studies, we have found four subscales: justification beliefs (α = .70), coercion (α = .65), paternalism (α = .71) and discrimination (α = .65) with good global reliability (α = .87).

2.5. Statistical analyses

Instrument reliability was measured using Cronbach’s alpha. Baseline comparability between groups (including sociodemographic and professional data and scale scores) was assessed using χ² tests or Fisher’s exact tests for categorical data and ANOVAs/Student’s t test for continuous data. All the participants were included in the analysis in the group to which they were randomised irrespective of whether they have missing data. To evaluate the differences between groups before the follow-up session (1 month after baseline) and the 3-months follow-up assessment, we used repeated measures t-tests in each group separately and general linear models considering the evolution of intervention and control groups. Due to the high attrition rate, we used multiple imputations with chained equations to account for missing information. We carried sub-analyses for the adult, children and adolescent, and substance abuse mental health centres. Additionally, we used multilevel mixed-effects linear models.

3. Results

3.1. Primary care

The reliability of the stigma measure (OMS-HC) was acceptable staying above α = 0.7 for the instrument as a whole and above α = 0.5 for all subscales (attitudes, disclosure, and social distance), except for the disclosure subscale in the second follow-up (α = 0.4).

Regarding baseline characteristics, there was a statistically significant difference between the intervention and control groups in the total score of the scale (t = 2.138, p < .05), although not in any of the subscales. There were also differences between the control and intervention group in terms of gender (67% vs. 82%; χ² = 5.223; p = 0.022).

Repeated measures t-tests showed no statistically significant change in the control group while in the intervention group statistically significant decreases were seen between baseline and first follow-up for the OMS-HC total score (t = 2.813, p = 0.006) and the disclosure subscale (t = 2.534, p = 0.013). There was not enough sample to make comparisons between the first and second follow-up without multiple imputations. When performing multiple imputations to recover lost data, similar results were observed between baseline and first follow-up. This allowed us to estimate that differences in evolution between first and second follow-up were statistically significant (downward in the intervention group) for the total score, and the disclosure, and social distance subscales.

The general linear models showed a statistically significant drop between the first observation and the second for the OMS-HC disclosure scores with statistically significant effects (F = 26.881; p < 0.001) on the quadratic evolution, which implies a ‘rebound effect’ (there was a very marked drop in the intervention group which then returned to higher values). These results for the disclosure subscale were generally confirmed and expanded to the OMS-HC total score using imputed data. Finally, multilevel mixed-effects linear models showed no effects for any of the scores. Figure 5 shows the evolution in the OMS-HC total score and the different subscales using averaged imputed data.
3.1. Mental health

The reliability of the beliefs and attitudes measure (BAMHS) was acceptable, remaining above $\alpha = 0.7$ for the instrument as a whole and above $\alpha = 0.4$ for all subscales (beliefs, coercion, paternalism, and discrimination), except for the disclosure subscale in the second follow-up ($\alpha = 0.16$).

Regarding the baseline, there were no statistically significant differences in any sociodemographic characteristics or in the scores of the questionnaire.

The results of the repeated measures t-tests showed a statistically significant decrease in the control group of the discrimination subscale between the first and second follow-up. In the intervention group there was a trend in the decrease of the total score ($t = 1.708; p = 0.091$) and a statistically significant decrease of the coercion subscale ($t = 3.056; p = 0.003$) between the baseline and the first follow-up. When we carried out calculations by type of centre, we saw that these results corresponded mainly to adult mental health centres (where both total and coercion had statistically significant decreases between baseline and first follow-up). In the case of children and adolescent centres and addiction centres, the sample size only allowed comparisons between baseline and first follow-up. In the case of children and adolescent centres, the intervention group had a statistically significant decrease between baseline and first follow-up in the total score and in beliefs about the system (which reflects an increase in self-criticism). In the case of substance abuse, no statistically significant changes were found in any of the samples or difference in evolution. General linear models showed different evolutions just in the case of the discrimination subscale ($F = 5.450; p < 0.01$).

Calculations carried out with imputed data clearly confirmed the results on coercion although, as was the case in the primary care, there was a ‘rebound effect’. In addition, general linear models showed differences in overall evolution between the control and intervention groups in the discrimination scores, with decreases in the intervention group in the first follow-up, which are then softened in the second in most of the imputed scenarios. Finally, multilevel mixed-effects linear models showed statistically different evolutions in the total ($F = 3.922; p < 0.05$) and beliefs ($F = 5.277; p < 0.05$) scores. Figure 6 shows a graphical representation of the evolution of average imputed scores.

Figure 5. Evolution of the OMS-HC scores among primary care participants using imputed data.
4. Discussion

This study showed the effectiveness of two awareness interventions respectively tailored to reduce stigma and discrimination beliefs and attitudes towards persons with a mental health diagnosis among primary care and mental health professionals. These positive results show intervention effects close to those registered in other countries where similar activities have taken place [1,7,9].

Despite these general positive results, a rebound effect is generally seen after the intervention. This may be due to the short duration of the interventions and the fact that the first follow-up assessment of the intervention groups was done just at the end of a follow-up session of self-organised activities with a high degree of motivation on the part of participants. This emphasizes the importance of the continuity of the presence of the anti-stigma movement through reinforcement activities. Therefore, to implement and consolidate a cultural change, it is necessary to continue working in this line. Such changes require time and a strong alliance between the organisations involved and the public administrations. In this sense, the project has been an active agent of change, promoting awareness and changing attitudes to advocate for the rights of people with mental health problems in healthcare contexts.

Stigma in the field of mental health care causes delays and resistance to the use of services that contribute to the aggravation of mental health conditions [2]. At the primary care level, many people do not get the treatment they need since many health professionals attribute somatic symptoms to the mental health problems. Cases have been reported in which this “diagnostic overshadowing” has meant that heart attacks could not be detected correctly, or transplantation have been delayed or even denied [12]. In the case of mental health, many people delay coming to these services due to fear of stigma and discrimination [4]. The results of the project will serve to justify anti-stigma projects at the local and international levels. This is a very important aspect in a context of scarce resources.

Among the limitations of this study, the attrition rate is particularly remarkable. Although it is somewhat common in this type of interventions [18], in which prejudices about service users are disclosed, discussion on this issue is needed. Problems carrying out follow-ups, included the high healthcare pressure of professionals and several strikes and civil servant evaluations that coincided with the implementation of this study. This situation may create doubts about the reliability of this study results that must be resolved with further follow-up studies.

5. Conclusions

This project has achieved a generate a reflection on the stigma experienced by people with mental health problems in the healthcare field promoting reflection on clinical practice among healthcare professionals who have reflected to promote a change of attitudes and practices in relation to the need to guarantee the rights of service users. Although the results point to positive effects, interventions with long-term follow-up activities must be
implemented and evaluated to ensure the impact of the anti-stigma movement in the healthcare field.

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