World Journal of Psychiatry

Online Submissions: http://www.wjgnet.com/esps/
wjp@wjgnet.com
doi:10.5498/wjp.v3.i2.18

World J Psychiatr 2013 June 22; 3(2): 18-24
ISSN 2220-3206 (online)

BRIEF ARTICLE

Intervention for reducing stigma: Assessing the influence of gender and knowledge

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Supported by The Spanish Ministry of Health, CIBERSAM
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Received: February 20, 2013 Revised: April 10, 2013
Accepted: April 17, 2013
Published online: June 22, 2013

Abstract

AIM: To evaluate the effectiveness in reducing social stigma of an intervention and to assess the influence of gender and knowledge.

METHODS: The program consisted in providing information and contact with users of mental health in order to reduce social stigma in the school environment. A total of 62 secondary school students (age 14-16 years) were evaluated with the Opinions on Mental Illness (OMI) questionnaire before and after the intervention. The subscales of the OMI were: authoritarianism, interpersonal etiology, benevolence, restrictiveness and negativism. The analysis was performed over the total sample, separating by gender and knowledge of someone with a mental disorder. *t*-test for repeated measures was used in the statistical analysis.

RESULTS: All the OMI subscales showed a significant change after the intervention ($P < 0.001$), except for benevolence. Women presented significant changes in the subscales of authoritarianism and restrictiveness, while men presented changes in negativism and interpersonal etiology rather than restrictiveness ($P < 0.001$-0.003). Students that knew someone with a mental disorder presented significant changes in authoritarianism, interpersonal etiology, and negativism ($P < 0.001$-0.003) and students that do not know anyone with a mental disorder improved in restrictiveness and authoritarianism ($P < 0.001$-0.001). In all the subscales of the instrument the students improved their perception of mental disorders, reducing their levels of stigma.

CONCLUSION: The intervention designed to reduce social stigma was effective, especially in the area of authoritarianism. The whole sample showed improved attitudes towards mental illness, although the areas were different depending on gender and knowledge.

Key words: Mental disorders; Stigma; Intervention; Contact; Information; Schizophrenia; Schools

Core tip: Stigma towards people with mental disorder is one of the most important facts that should be assessed in order to improve their integration to community. Interventions addressed to reduce their stigma should be necessary, especially in adolescents. Assess the influence of gender and previous knowledge of a people with a mental disorder could be interesting for addressing the interventions designed.

Martínez-Zambrano F, García-Morales E, García-Franco M, Miguel J, Villellas R, Pascual G, Arenas O, Ochoa S. Intervention for reducing stigma: Assessing the influence of gender and knowledge. *World J Psychiatr* 2013; 3(2): 18-24 Available from:

URL: http://www.wjgnet.com/2220-3206/full/v3/i2/18.htm DOI: http://dx.doi.org/10.5498/wjp.v3.i2.18

INTRODUCTION

Stigma is a multifaceted construct[1] that includes attitudes, feelings, beliefs, and behaviors. Barbato[2] defines it as a collection of negative attitudes and beliefs toward people labeled as mentally ill, and he adds that it has deep roots in society which affect not only the community, but also mental healthcare services. People with mental illness are one of the most stigmatized groups in our society, with the stigma abetted by fear, lack of understanding, and the disproportionate negative publicity of the media[3]. Stigma is an element that lowers the quality of life of the person suffering mental illness[4], and it can have social and legal repercussions such as loss of freedom and opportunity[5].

Rehabilitation programs for people affected by serious mental illness created in recent decades were begun with the aim of maximizing maintenance in the community and preventing institutionalization. The focus of these programs was on the individual, preventing deterioration and recovering capabilities. The development of community-based services has given rise to the need to broaden the focus of intervention. The need for exchange, participation, and the creation of channels of communication with the community has in fact become an essential part of the task of rehabilitation. It is evident that the stigma associated historically with mental disorders has a negative influence on the possibility of rehabilitation and on access to community resources, leading to discriminatory responses which in many cases impede a satisfactory evolution of the illness[6].

Certain educational programs can have a favorable effect on attitudes towards people who are stigmatized, and the changes found are mediated by knowledge about mental illness and the experience of contact with people who suffer from it. There have been few studies carried out to evaluate the change in stigma in adolescents[7]. Schulze *et al*[8], working with an intervention among adolescents (14-18 years old), found a reduction in social stigma among the students. Likewise, the study by Arbanas[9] found that the interventions made modified the stigmatized view toward people with mental illness in a sample of high school students (17-18 years old). Economou *et al*[10] found a reduction in stigma after an intervention in several high school students. However, only the changes in beliefs and attitudes were maintained after 1 year. Although there are few studies of this kind, we feel that it is of vital importance that programs be carried out among adolescents, as this group is interested in the subject and motivated to learn about it, and because it is in this developmental period that attitudes toward mental illness are consolidated. Moreover, Watson *et al*[11] indicated that adolescents hold more favourable attitudes than adults to people with mental illness.

Other studies have been done with medical, psychological and occupational therapy students[12-14], and they also found positive intervention results. However, it should be borne in mind that this is a biased population in the sense that those interviewed are individuals who are interested in helping people.

Programs designed to reduce stigma should take into account that contact with people who have a mental disorder, such as sharing experiences, facilites changes in the stereotypes[15]. Several authors state that contact and familiarity between the general public and people with serious mental problems may be the most important factor in reducing stigma. However no study, to our knowledge, has assessed the influence of knowing people with a mental disorder on the effect of the intervention[16-19].

The influence of gender on mental disorder stigma has been less evaluated although attitudes toward mental illness differ between men and women[20]. Rüsch *et al*[21] found that females presented positive attitudes toward people with mental disorders. Moreover, it seems that after an intervention females presented greater changes in the stigmatized beliefs[18] and were less authoritarian and restrictive than men[22].

The aim of the present study was to evaluate the effectiveness of an intervention program aimed at youths aged 14-16 years and designed to combat the social stigma surrounding people with mental illness. The second aim of the study was to explore differences in the intervention effect according to gender and personal knowledge of someone with a mental disorder. The hypothesis put forward was that working with adolescents in the school environment, offering information, and facilitating contact with mental healthcare professionals and affected people would reduce the stigma concerning mental illness and that attitude differences do exist depending on gender and personal knowledge of someone with a mental illness.

MATERIALS AND METHODS

This was an intervention-based study, measuring the effect of the reduction in social stigma before and after the psychosocial intervention program.

The study was organized around two mental healthcare centers: the Psychosocial Rehabilitation Center in El Prat and the Parc Sanitari Sant Joan de Déu Mental Health Center, El Prat. These attend to the needs of a catchment area of some 50000 inhabitants. The objective of these centers is integration into the community of people affected by severe mental disorders.

Subjects

The people evaluated in the study were youths aged 14-16 years attending two secondary schools near Barcelona, Spain. The students were from two fourth-year general studies classes at each of the schools. These two institutions were chosen because of their proximity to city mental health services and the sociodemographic homogene-

ity of the students. The two schools have a low-medium socioeconomic level.

Evaluation instruments

All the participants answered a questionnaire concerning social stigma at two different times: at baseline and at the conclusion of the intervention. Four weeks passed between the two assessments, with the intervention taking place during the two middle weeks. The questionnaire included identification of the gender of the respondent, his or her age, and whether or not they knew anyone with a mental illness.

The questionnaire administered in order to evaluate attitudes towards social stigma was the Opinions on Mental Illness (OMI), by Cohen *et al*[23] and validated into Spanish by Ozamiz[24]. It was originally designed for the study of attitudes of hospital personnel toward mental illness. However, it is the only questionnaire of its kind validated into Spanish and has been widely used among different sectors of the population. It consists of a total of 54 statements with a point scale ranging from total agreement to total disagreement (1-7 points), with the highest point value for disagreement with the statement at hand.

The questionnaire included five domains: authoritarianism, benevolence, interpersonal etiology, restrictiveness and negativism[25]. The authoritarianism scale describes opinions of the mentally ill as a class of people inferior to normal individuals. The benevolence scale represents attitudes that are encouraging of patients but exhibit a paternalistic attitude. The interpersonal etiology scale assesses the causes of mental illness resulting from bad interpersonal experiences. The restrictiveness scale assesses danger to society and suggests the mentally ill should be restricted both during and after hospitalization. And, finally, the negativism scale assesses issues related to treatment. In all the subscales, higher scores indicate higher levels of stigmatization, with the exception of benevolence where higher scores indicate lower levels of stigmatization.

Intervention design

On first contact with the students, they were informed of our interest in learning their opinions concerning mental health and were given the opinion questionnaire on mental health to complete. They were told that the questionnaires were anonymous but they were asked to put initials on them so that the baseline questionnaires could be matched with the final ones.

Two intervention sessions were carried out: one with information on mental illnesses and the other on experiences of people who had suffered mental illness. These two interventions were done over 2 wk. The interventions were based on previous research studies and on the need for information detected by our team in community interventions.

The first session was divided into three parts. Firstly, certain topics were tackled such as the concept of mental illness, its causes, symptoms and treatment, erroneous ideas about mental illness, hospital and community resources, the social network of those suffering from the illness, and how they feel. The concepts behind these sessions were devised to explain the identity perceptions of people with a mental illness, the causes of mental disorder, the guilt felt by sufferers, the idea of dangerousness, and rights that these people have independently of their condition.

With the aim of encouraging participation, cards were given out on which the students could express what the idea of mental health meant to them, and these were then commented upon later. Finally, a visual story based on the film "Cast Away" was used to illustrate people's feelings of isolation, loneliness, and suffering, and how to overcome them, with the aim of including new elements that might help modify stereotypes of mental illness.

The session was presented using audiovisual techniques to capture the students' attention, promote understanding and encourage participation. The session lasted for an hour and a half, and was given by the staff of the Mental Health Center and the Community Rehabilitation Service (2 psychologists, a social worker, and a nurse).

The second session was attended by three mental disorder sufferers from the association of users of mental healthcare services (ADEMM), accompanied by two monitors and a social worker from the Community Rehabilitation Service. The aim of this session was to permit both users of the mental healthcare services and their professional providers to relate their experiences and stories surrounding mental illness. A video was shown to present the experiences of people in sheltered accommodation apartments, day-to-day life, concerns, and so on. The monitors explained their experiences of daily contact with people suffering from mental illness and provided information on the functioning and aims of the activities carried out in the workshops run by the Community Rehabilitation Service.

A context for give and take and questioning/responding was established in the session, which allowed for the gathering of input representing a range of opinions, concerns, fears, and uncertainties related to mental health. Open dialogue with the users was encouraged as we feel that open forums of expression are required for destigmatization to take place.

In the final session the questionnaire was administered for the second time to measure the changes produced in the students.

Ethical aspects

The study was approved by the Parc Sanitari Sant Joan de Déu Research and Ethical Committee.

Statistical analysis

The *t*-test for paired samples was used to determine whether changes had occurred in results before and after the intervention in the instrument subscales. The same statistical analysis was performed stratifying the sample

by gender and knowledge of someone with a mental disorder. A Student *t*-test comparison was performed according to gender and knowledge of people with a mental illness at baseline. Taking into account the number of comparisons the Bonferroni correction was applied. The level of significance considered was $P = 0.01$. The analysis was carried out using SPSS19.

RESULTS

The total number of students participating in at least part of the program was 90. We analyzed the questionnaires only of those who attended both sessions and completed the two questionnaires, as we considered that the intervention had been completed. The drops-outs were students with some difficulty which prevented attendance at one of the four sessions (illness, in the majority of cases). Therefore, the total number of people included in the study was 62. These students did not participate in the program because of any prior interest in doing so, but rather as a result of the organization of their school timetables. We therefore feel that they are representative of the population studied as a whole.

Of these students, 28 (45%) were females and 34 (55%) were males; additionally, 28 (45%) of them had had contact with people suffering from mental illness, while 33 (54%) had not. One student did not answer the relevant question on this point (1%).

There were no statistical differences in the results between the two schools included in the study with respect to sociodemographic data and further analysis.

Table 1 shows the significant differences between the OMI subscales at two points in time ($P < 0.001$). All the subscales were significantly different at the two assessment times, except for benevolence, where there is a tendency toward significance. The scores were closer to disagreement in authoritarianism, interpersonal etiology, restrictiveness and negativism, while in benevolence they were closer to agreement.

There were no statistical differences between men and women in the questionnaire scores at baseline apart from negativism, where women presented higher scores ($P < 0.001$). In relation to knowledge of someone with a mental illness, there were no statistical differences between the two groups at baseline.

Table 2 shows the information regarding changes between the two assessments by gender. Women presented significant differences at the two time points in authoritarianism ($P < 0.001$), and restrictiveness ($P < 0.001$). Men presented changes in their perception of stigma in the subscales of authoritarianism ($P < 0.001$), interpersonal etiology ($P = 0.001$), and negativism ($P = 0.003$). The highest scores were obtained in the area of negativism (higher means in women than in men) while the lowest mean was found in benevolence.

Regarding knowledge of someone suffering from a mental disorder, differences were found (Table 3). People who know someone modified their perception of mental illness in the areas of authoritarianism ($P < 0.001$), interpersonal etiology ($P = 0.001$), and negativism ($P = 0.003$). In the case of people who do not know anyone with a mental disorder, changes occured in the subscales of authoritarianism ($P < 0.001$), interpersonal etiology ($P = 0.031$) and restrictiveness ($P = 0.001$). Higher scores were found in the area of negativism (higher means in people who knew someone with a mental disorder) and lower in benevolence.

Table 1 Comparison of the Opinions on Mental Illness subscales between the baseline time and the final time

Variables	Baseline mean	Baseline SD	Final mean	Final SD	*P* value
Authoritarianism	3.75	0.51	4.21	0.54	< 0.001
Interpersonal etiology	4.06	0.60	4.43	0.66	< 0.001
Benevolence	2.18	0.60	2.00	0.52	0.022
Restrictiveness	4.02	0.80	4.31	0.82	< 0.001
Negativism	4.73	0.63	4.98	0.51	< 0.001

DISCUSSION

The results allow us to conclude that the intervention was effective, confirming the hypothesis that the program would be helpful in reducing social stigma among young adolescents.

All the instrument subscales show a reduction in stigma. The responses tended more towards disagreement in aspects such as authoritarianism, interpersonal etiology, restrictiveness and negativism. In the case of benevolence after the intervention, students were more likely to agree with the questions related to this area. The intervention was effective in reducing the stigma associated with these areas.

Different results were found in stigma reduction by gender and knowledge of someone with a mental illness. Only the authoritarianism subscale was reduced in all the groups. Moreover, women reduced their initial stigma scores in the area of restrictiveness while men did so in negativism and interpersonal etiology. Regarding knowledge of someone with a mental illness, people who knew someone added stigma reduction in the area of negativism while those who did not know someone showed reductions in the area of restrictiveness.

At first the students showed stigmatizing responses, many as a result of lack of information and erroneous belief. The intervention carried out in the schools would appear to have been successful, reducing some stereotypes that the students held concerning people suffering from mental illness. The work with young adolescents (younger than the ones participating in other studies) showed positive results suggesting that this is a group predisposed to making changes in attitudes towards mental illness. The intervention should contain information, attacks on myths, discussion of the topic, and contact with people with a mental illness. These results are in agreement with those of Schulze *et al*[8], Arbanas[9] and

Table 2 Comparison of the Opinions on Mental Illness subscales between the baseline time and the final time by gender

Gender	Subscales of OMI	Baseline mean	Baseline SD	Final mean	Final SD	*P* value
Women = 28	Authoritarianism	3.79	0.52	4.32	0.47	0.000
	Interpersonal etiology	4.08	0.62	4.45	0.66	0.017
	Benevolence	2.02	0.43	1.89	0.37	0.131
	Restrictiveness	3.95	0.75	4.44	0.64	0.000
	Negativism	5.04	0.50	5.16	0.56	0.118
Men = 34	Authoritarianism	3.71	0.51	4.12	0.59	0.000
	Interpersonal etiology	4.04	0.59	4.42	0.67	0.001
	Benevolence	2.31	0.68	2.08	0.60	0.079
	Restrictiveness	4.07	0.85	4.20	0.94	0.321
	Negativism	4.48	0.61	4.83	0.42	0.003

OMI: Opinions on Mental Illness.

Table 3 Comparison of the Opinions on Mental Illness subscales between the baseline time and the final time by knowledge of someone with a mental disorder

Know someone with a mental disorder	Domains of stigma	Baseline mean	Baseline SD	Final mean	Final SD	*P* value
Yes = 28	Authoritarianism	3.78	0.54	4.32	0.59	0.000
	Interpersonal etiology	3.94	0.64	4.41	0.80	0.001
	Benevolence	2.16	0.68	1.90	0.47	0.044
	Restrictiveness	4.16	0.80	4.31	0.92	0.298
	Negativism	4.74	0.69	5.03	0.49	0.003
No = 33	Authoritarianism	3.72	0.50	4.11	0.49	0.000
	Interpersonal etiology	4.19	0.52	4.43	0.52	0.031
	Benevolence	2.22	0.51	2.09	0.54	0.221
	Restrictiveness	3.87	0.79	4.28	0.75	0.001
	Negativism	4.69	0.54	4.91	0.51	0.045

Economou *et al*[10] from interventions carried out with groups of high school-aged students designed to change their attitudes toward people suffering from mental illness. It would appear that intervention programs that include information and contact with persons suffering from mental illness create an environment in which students call into question some of their beliefs about mental illness.

The intervention carried out included psycho-educational aspects related to mental illness as well as contact with users of mental healthcare services. Some authors have stated that information alone does not modify stigmatizing attitudes[26]. It is necessary to make contact and "feel" the people suffering from the stigma in question[16,27,28]. Some have stated that knowledge does not serve to change beliefs and feelings of individuals toward people with schizophrenia, and they propose, as an alternative, working with the possibility of "feeling" rather than informing[29]. On the other hand, the interventions based on videos that included the experiences of people with mental illness were also positive[30-32]. Our program included both aspects, which makes it difficult for us to determine to what extent each measure played a role in influencing the reduction of the students' stigmatizing beliefs.

The level of stigma in the area of authoritarianism was reduced in all the samples independently of gender and knowledge of someone with a mental illness. One of the objectives of the intervention was to provide information about the causes of mental disorders and training in illness etiology. The program, including contact and education, allowed the students to identify the problems of mental illness sufferers and avoid falling into the belief that the mentally ill are inferior to normal individuals.

The intervention had a slightly greater influence on women than on men. Women reduced their stigma levels in the areas of authoritarianism, and restrictiveness while men did so in authoritarianism, interpersonal etiology and negativism. Although women did not reduce the level of stigma in negativism, their baseline levels were higher than those for men at the end of the intervention. Other authors have reported that girls are more positive towards patients[10,18,33].

People with knowledge of someone with a mental illness reduce stigmatizing attitudes in all areas with the exception of restrictiveness and benevolence. The restrictiveness area assesses dangerousness associated with a mental disorder. It is possible that people who have more experiences with people with a mental disorder know that they are less dangerous than the general population believes. In fact, Boisvert *et al*[34] suggest that they are more frequently the victims of crimes than the perpetrators of them. This area is one of the most important because it is related directly to stigmatizing attitudes and reduces the possibility of integration into society of people with a mental illness[35]. People without experience of contact

with those suffering from a mental illness improve their perception of them in all areas with the exception of benevolence. Benevolence is one of the areas where the intervention had no effect in all groups. The reason for this could be that the levels of negative attitudes at baseline were low.

Some authors suggest that familiarity with mental illness has been found to be associated with more positive attitudes[18], coinciding with our results. However, the intervention was just as effective in the reduction of negative attitudes in those who had not had previous contact with someone suffering from a mental disorder.

In conclusion, our program, consisting of education and contact with people with a mental disorder, has improved attitudes towards sufferers among adolescents. Women and those without previous contact with a mental illness sufferer showed the greatest improvement in reduction of stigmatizing attitudes.

Some limitations should be considered. First of all we did not use a control group to assess the influence of evaluation of stigma itself as a reducer of stigma attitudes. A second limitation is that we observed modifications in the perception of stigma after the intervention, but we could not be certain that these changes would be maintained over time. Another of the limitations that we identified was in determining the sense of some of the items on the questionnaire; some authors have previously criticized this instrument (Haghighat[36]). This led us to conclude that it would be advisable to improve the instrument itself for future studies. We are planning to introduce improvements in this kind of intervention program in several areas. One area in which we see a need to intervene in future programs is that of information on the causes of illness related to drug abuse; this is an area where the students showed a great deal of interest, as well as uncertainty. In the time reserved for questions the majority of inquiries that came up referred to this question, which was only slightly, and tangentially, touched upon in the questionnaire. Perhaps because of both the type of population (focus of interest) and of our intervention (need to differentiate), the relationship between mental disorders and the consumption of controlled substances remained poorly defined. Moreover, future interventions should be designed to inform, reduce stigma, and detect and prevent cases of mental illness and consumption of substances. The intervention should be repeated in another socioeconomic group of student in order to confirm the results.

Furthermore, it would be of interest in future studies to evaluate the effect over time (1 year or more) of this kind of intervention. Some authors have maintained that public educational campaigns are not effective because their effect is not long-lasting (Pinto-Foltz *et al*[26]).

ACKNOWLEDGMENTS

We thank the following people from the School of Social Work of the University of Barcelona: Azuaga L, Badía C, Cano I, Carretero M, Duran I, Egea M, Español Y, Font T, Gálvez M, González C, López A, Moro N, Pérez D, Rabadán N, Romero V, and Zorzo P. We also thank Comin J, Odena D, and Ferrer A from the ADEMM Mental Healthcare Users' Group, the Estany de la Ricarda Institute, and the Salvador Dalí Institute.

COMMENTS

Background

People with a mental disorder are one of the most stigmatised groups. However, few strategies for reducing stigma in the school environment have been developed.

Research frontiers

Different community strategies have been developed in order to reduce stigma for people who have a mental disorder.

Innovations and breakthroughs

Few studies have developed interventions in schools for reducing stigma regarding mental disorders. This intervention was based in information and contact with users who have a mental disorder in the schools. Moreover this is the first study to assess the influence of gender and knowledge of people with a mental disorder in this context.

Applications

The results of this study indicated that gender and knowledge are important variables to take into account in the design of intervention programs to reduce stigma.

Terminology

Stigma is a multifaceted construct that includes attitudes, feelings, beliefs, and behaviors.

Peer review

This paper evaluates the effectiveness of a psychosocial programme on the level of stigma against mental illness in secondary school students aged 14-16 years. It is a prospective interventional study in which two sessions were included in the timetable of students over a period of 2 wk that were designed to combat stigma. This is an interesting study that presents original data of interest for specialists in this area of psychiatry. The review of the relevant research literature is solid. The study hypothesis is clear and the methods are clearly articulated. The statistical analysis is well presented and appropriate in light of the intervention method used in the study.

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