Effectiveness of a school-based intervention for enhancing adolescents' positive attitudes towards people with mental illness

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Abstract

High school students are a common target group in initiatives addressing discriminatory attitudes towards people with mental illness. However, these initiatives are rarely evaluated and documented. The aim of our paper is to evaluate the effectiveness of a school-based educational intervention for improving adolescents' attitudes and reducing the desire for social distance from people with mental illness living in their community. A total of 161 students aged 16-18 years old were questioned at baseline assessment and 86 of them received a three-workshop educational intervention while 75 students comprised the control group. A follow-up assessment 1 month post intervention evaluated its impact. Attitudes and the social distance were assessed through the Community Attitudes towards the Mentally Ill scale and a 10-statement questionnaire based on the Self-report Inventory of Fear and Behavioural Intentions, respectively. Data from 140 subjects were analyzed. All attitude dimensions and half of the measured social distance statements were significantly improved in the intervention group at follow up assessment compared to controls. However, the statements measuring more intimate types of social relationships did not change significantly post intervention. In conclusion, short educational interventions can be effective to some extent in reducing discriminatory attitudes towards people with mental illness. However, effective interventions to address deeply held negative stereotypes will require further research.

Introduction

Negative attitudes towards people with mental illness have been recognized as a major threat to effective treatment and psychosocial rehabilitation of mental health patients.[1] The impact of perceived stigma and discrimination against people with mental illness has been shown to be associated with lower self-esteem and self-efficacy, more avoidant behaviours and denial of mental illness,[2,3] reduced hope for recovery,[4,5] more difficulties in interpersonal relationships and social functioning,[6,7] higher levels of depression,[8] more disabilities and psychiatric symptoms,[9] less access to mental health services and treatment,[10] delayed help-seeking,[11] and reduced employment opportunities for those suffering from mental health problems.[12,13] The psychological burden experienced due to discrimination also affects substantially the relatives of people with mental illness.[14]

The World Health Report 2001 called for action addressing discriminatory attitudes,[15] while a few years earlier the World Psychiatric Association (WPA) had launched a global anti-stigma program for the development of national and local initiatives.[16] High school students are a common target group in these initiatives since students are more readily accessible and adolescence may be a stage where attitudes can be more easily influenced by education and predict to some extent future adult behaviours.[17] Besides, non-targeted public awareness interventions and mass media campaigns have shown only limited impact on self-reported attitudes towards the mentally ill.[18,19] However, these activities are rarely evaluated and/or published and yet a robust evidence base for effective best practices is not available. Some evidence supporting the effectiveness of relevant activities is provided by a review of local school projects of the WPA programme,[20] though the information reported is rather limited. A recently published review identified four studies on relevant educational interventions that described their content,[21] included control groups, and conducted both a pre-test and a post-test in order to evaluate their effectiveness.[22-25] To our knowledge, one more study not included in that review also meets the abovementioned sound criteria.[21,26]

The studies were conducted in different countries: Australia,[22] Germany,[23,26] Hong Kong,[24] and USA.[25] The number of participants varied, ranging from 40 to 457.[22,25] The studies aimed to change conceptions about mental illness,[25] to change negative attitudes,[24] to reduce the stigma towards mental illness,[22,23,26] and to increase the level of knowledge about mental illness.[22] Furthermore, some studies also aimed to improve help-seeking and to promote participants' mental health.[22,23,25,26] Most of the interventions provided factual information about mental illness, such as signs, symptoms and causes.[22-24,26] Myths about mental illness were also presented in one study.[22] Additionally, two interventions explained the psychiatric stigma and two interventions provided information on sources of community mental health care.[22,24,25] Finally, some studied included such issues as understanding what emotions are and dealing with anger,[24] identifying aims in life and the meaning of happiness,[23,26] and describing the experience of having a mental health problem.[23,26] Apart from discussion, the educational methods used in the interventions included written material,[22] exhibitions,[24] art work,[23,26] games,[23,26] and video presentation.[25] Some studies included also personal contact with mentally ill people either through meetings and individual discussions in day-patient wards of mental hospitals or through group discussions between participants and a young person with schizophrenia at school.[23,24,26] The length of intervention varied greatly, ranging from 50-90 min to 10 weeks.[22,24]

The previously reported studies seemed to increase knowledge about mental health and mental illness;[22] to improve opinions regarding authoritarianism, social restrictiveness and interpersonal aetiology about mental illness;[25] to have positive effects on stereotypes;[23,26] and to reduce separatism.[24] However, it should be noted that most interventions did not manage to significantly reduce social distance and one study did not reinforce benevolence and combat restrictiveness towards the mentally ill.[22-24] Moreover, the fear of the mentally ill seems to be change-resistant, although there is some evidence from interventions with adult populations that education has a positive effect on this dimension.[27]

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Overall, research on the effectiveness of mental health educational interventions among secondary school students is very limited worldwide. Although most of the reported interventions provide positive outcomes, their methodology or their results are not presented very clearly or in a detailed manner so as to inform future practice. The aim of the present study was to expand the existing evidence base through evaluating in a quasi-experimental controlled study design the effectiveness of a school-based educational intervention for improving adolescents' attitudes and reducing the desire for social distance from people with mental illness living in their community.

Materials and Methods

Subjects

The study was conducted during the year 2006 in Athens, Greece. Participants were recruited from year-2 students of two randomly selected public high schools in a municipality where psychosocial rehabilitation facilities had been recently located in. A total of 161 adolescents (aged 16-18 years) were asked to participate. No one declined participation. Participants at one school were assigned to the intervention (n=86) and participants at the other school were assigned to the control group (n=75). The sample characteristics of the two groups are shown in Table 1. The two groups did not differ significantly according to sex, previous contact with people with mental illness, and mental health awareness, all of which have been shown to be associated with attitudes towards the mentally ill. Assessments were carried out 1 week prior to and 1 month after the end of the intervention (*i.e.* 2 months after the baseline assessment). Adolescents who did not complete the follow-up assessment did not differ significantly from those completed both two assessments in terms of all variables under study at baseline assessment. Adolescents were asked to complete the questionnaire at school. All participants were informed of the study aims and objectives. Written informed consent was obtained from school principals and from parents in agreement with the adolescents. In addition, it was highlighted that participation in the study was voluntary and that all information would be treated confidentially. Ethical approval was attained from the National Ministry of Education. In return for participation, adolescents received brochures regarding mental health services and help-seeking advice after completing the follow-up assessment.

Instruments

To assess adolescents' attitudes towards people with mental illness, the Community Attitudes towards the Mentally Ill (CAMI) scale was used.[28] The CAMI scale contains 40 items (small sentences), categorized into four scales of 10 items each: i) authoritarianism: a perspective considering the mentally ill to be inferior and require a coercive approach; ii) benevolence: a perspective characterized by sympathy towards the mentally ill and based on humanistic principles; iii) social restrictiveness: a perspective considering people with mental health problems to be a threat to society, and iv) community mental health ideology: a perspective supporting the therapeutic value of the community and accepting de-institutionalized care. Each of the 40 items necessitate a response as to the level of agreement/disagreement on a 5-point scale ranging from 1=strongly disagree to 5=strongly agree. All 10 items for each scale can be summed up to a total score measuring the respective dimension, with higher scores indicating more positive attitudes towards the mentally ill. Cronbach's alphas for the benevolence, social restrictiveness and community mental health ideology were above 0.70 in the present sample (0.80, 0.73, and 0.87, respectively). The lowest alpha was found on the authoritarianism scale (0.79).

Adolescents' desire for social distance from people with mental illness was measured through a questionnaire based on the Self-report Inventory of Fear and Behavioural Intentions toward the Mentally Ill.[29,30] The FABI is a 10-item questionnaire measuring behavioural intentions related to the desire for social distance from people with mental illness. In the present sample the original FABI item *Would you be worried about visiting somebody with a mental illness?* was removed due to semantic similarity with the item *If somebody who had been a former psychiatric patient came to live next door to you, would you visit them?* and the item *Would you object to having mentally ill people attending your school?* was added as an age- and situation-specific question. Responses to negatively worded questions are coded from 1 to 5 and range from 1=strongly agree to 5=strongly disagree for the item measuring fear and from 1=very likely to 5=very unlikely for the nine items measuring behavioural intentions. Responses to positively worded questions are reversely coded, with higher scores indicating more positive behavioural intentions towards people with mental illness. Due to the specific content of the items measuring social distance in different contexts (neighborhood, workplace, school) and in relationships of varying intimacy (*i.e.* friendship, marriage, acquaintance), each item was assessed separately in the analysis in order to examine the possible impact of the intervention on these aspects of social distance. Cronbach's *alpha* of the instrument was 0.86 in the present sample. In order to combat inherent weaknesses of cross-cultural adaptation (*e.g.* semantic and scale equivalence) of the CAMI and the FABI questionnaires, the research team in the present study followed a standardized translation methodology according to international cross-cultural translation guidelines.[31] The first step of the translation procedure employed a forward-backward-forward translation technique by two translators. A conference was held to resolve inadequate concepts of translation as well as discrepancies between alternative versions. A pre-test followed by cognitive interviews took place to ensure the feasibility of the questionnaires.

Additionally, adolescents were asked if they *have a family member with mental health illness* (yes/no), if they *have a friend with mental illness* (yes/no), and if they *have any prior contact with mental health services* (yes/no). Finally, three additional items examined if adolescents *are aware of existing mental health services in Greece*, if they are aware of the terms *de-institutionalization* and *psychiatric care reform*' (yes/no), and if *they know that psychosocial rehabilitation facilities for people formerly restricted to psychiatric institutions are located in their community* (yes/no).

Intervention

The educational intervention consisted of

Table 1. Sample characteristics for intervention and control group at baseline assessment.

	Intervention %	Control group %	P χ^2 test
Sex, male	47.10	50.70	0.71
Age (years), mean±standard deviation	16.78±0.50	16.91±0.41	0.08*
Having a family member with mental illness	3.20	5.10	0.57**
Having a friend with mental illness	4.30	7.70	0.38**
Having a previous contact with mental health services	8.2	14.7	0.19
Being aware of existing mental health services	34.10	32.00	0.82
Being aware of the terms *deinstitutionalization* and *psychiatric care reform*	22.40	25.30	0.63
Being aware of mental health facilities located in their community	27.30	23.30	0.55

*Student's t-test; **Fisher's exact test .

three weekly 90-minute workshops and was implemented at school with four groups of approximately 20 adolescents each. Two trained mental health professionals (child psychiatrists and psychologists) facilitated all three workshops for each group.

Workshop 1 aimed at educating about mental health and mental illness and challenging stereotypical perceptions regarding the mentally ill. The workshop included a warm-up exercise about the concept of *mentally ill* and a presentation of the following topics: i) definitions of health and mental health, ii) brief description of mental disorders, iii) false stereotypes and clarification of issues such as the violent behaviour of the mentally ill, therapeutic interventions, the prevalence and incidence of mental disorders, attributions of mental illness, and the confusion of mental illness with mental retardation, iv) the mentally ill's ability to work and the value of work for psychosocial health and rehabilitation, v) the mentally ill's ability to make decisions for themselves and vi) inpatient and community-based treatments.

Workshop 2 aimed at enhancing attitudes of social acceptance, tolerance and benevolence toward the mentally ill and shaping a community-based psychiatric care ideology. The workshop included a presentation of the following topics: i) brief overview of the history of psychiatry, ii) psychiatric care reform: definitions, aims, services and their objectives, iii) the mentally ill's rights, iv) definition and description of psychiatric stigmatization, acts to combat psychiatric stigma, and stigma management.

Workshop 3 aimed at enhancing, consolidating and emotionally processing the messages communicated through the previous sessions. The workshop included the show of a specifically designed film based on a documentary depicting the resettlement process of chronic inpatients from a psychiatric asylum to residential care and on various films presenting services of psychosocial rehabilitation.[31-33] Every workshop concluded with a thorough discussion of the presented material.

Statistical analysis

All categorical variables are reported as relative (%) frequencies. The continuous variables of the sample were tested for normal distribution using the Shapiro-Wilk test. The FABI variables were not normally distributed. The non-parametric Mann-Whitney U statistic was used to test for differences in the FABI variables between the two groups at baseline and follow-up assessment. Also, the Wilcoxon signed-rank test was used in order to estimate significant changes in FABI variables between the baseline and follow up measurement. The parametric independent Student's t-test was used for the comparison of mean values between the intervention and control group. Chi-square and Fisher's exact test were used for the comparison of proportions between the two study groups. Differences in CAMI scales the intervention and control group at follow up were further assessed using analysis of covariance (ANCOVA) adjusting for baseline measures. All P-values reported are two-tailed. Statistical significance was set at 0.05 and analyses were conducted using SPSS statistical software (version 13.0).

Results

The two groups of students did not differ significantly in any CAMI scale at baseline assessment. At follow-up 1 month post intervention mean scores on all CAMI scales were significantly higher in the intervention than in control group (Table 2). The results were similar when follow-up assessments between the two groups were compared after adjusting for baseline measures. Similarly, at baseline assessment fear and behavioural intentions towards people with mental illness did not differ between the two groups (Table 3). However, at follow-up assessment adolescents in the intervention group reported that it would be more unlikely to object to having mentally ill people living in their neighbourhood (P=0.05) and attending their school (P=0.00) than adolescents in the control group. Moreover, adolescents having received the intervention reported significantly more compared to controls that it would be likely to be willing to work with somebody with a mental illness (P=0.03), to greet occasionally a former psychiatric patient came to live next door to them (P=0.04), and to have casual conversations with neighbours who had suffered from mental illness (P=0.02). Additionally, when follow-up assessments were compared to baseline assessments it was found that all the above mentioned differences except for the item concerning the objection to having mentally ill people living in their neighbourhood were still significant. No other significant differences between the two groups were observed at follow-up (Table 3).

Discussion

The present study was an effort to provide evidence about the effectiveness of a school-based intervention for improving adolescents' attitudes and reducing social distance from people with mental health illness living in adolescents' community. The data analysis revealed that various aspects of attitudes and behavioural intentions related to social distance were significantly improved in the intervention group compared to the control group at 1-month follow-up post intervention.

More specifically, adolescents that received the intervention became less authoritarian, more benevolent, more supportive to the therapeutic value of the community and the de-institutionalized care, and considered to a lesser extent the mentally ill to be threat to society compared to the control group. Similar results concerning positive attitude statement changes have been reported elsewhere.[23,25,26] However, the present study assessed not only a few attitudes mostly related to the mentally ill's negative attributes, but rather a wide range of attitude statements with a focus on community-based care. This elaborate examination was, on the one hand, more relevant with the content and the aims of the present intervention and allowed, on the other hand, to draw more specific conclusions about the effectiveness of the intervention in terms of attitude change towards people with mental illness living in the respondents' community.

Table 2. Mean values on adolescents' Community Attitudes towards the Mentally Ill (CAMI) scales in the intervention (*n*=70) and control group (*n*=70) at baseline and follow-up assessment.

	Baseline assessment			Follow-up assessment			
	Intervention Mean±SD	Control group Mean±SD	P*	Intervention Mean±SD	Control group Mean±SD	P*	P**
Authoritarianism	30.42±4.23	31.09±3.61	0.26	34.03±4.86	31.20±4.07	0.00	0.00
Social restrictiveness	35.6±5.01	36.21±4.21	0.52	38.17±4.96	35.41±4.66	0.00	0.02
Benevolence	38.02±4.99	39.25±4.58	0.73	40.91±5.25	38.80±5.22	0.02	0.00
Community mental health ideology	36.01±6.20	36.58±3.89	0.38	38.69±6.21	35.61±5.66	0.00	0.01

SD, standard deviation. *Students t-test; **Analysis of covariance for the comparison of follow-up assessments between the two groups after adjusting for baseline measures.

With regard to adolescents' desire for social distance from people with mental illness, the effects of the present intervention were somewhat mixed. Although half of the examined social distance statements - used as proxy indicators of planned reported behaviour - were shown to be improved post intervention, the other half did not demonstrate significant positive changes, though slightly did improve. In fact, a closer examination of the statements that did not change in the intervention group compared to controls reveals that these statements refer to more intimate areas or close types of social relationships (*e.g.* to invite or visit a person with mental health illness or have a former psychiatric patient as friend). This finding supports the view that short educational interventions cannot be effective in altering deeply held stereotypes which prevent people from intending to engage in various interpersonal interactions with someone with mental health illness. Coping with these stereotypes may require innovative interventions in the framework of the mental health education programmes with clear specific messages, systematic working-through of emotions and cognitions, higher doses of intervention activities, and programme sustainability.

The educational process of the present intervention seems to share many components with previously reported effective interventions in the field. Mental health awareness components, discussion about perceptions of mental health and mental illness, video viewing of people with mental illness are some of the elements that have been used in other published relevant programs.[22-25] However, the present intervention focused more on the issue of attitudes towards people with mental illness living in the community and did not include components about self-efficacy or help-seeking behaviours. Moreover, the intervention presented here was probably administered at higher doses (three weekly 90-minute workshops) compared to most of the previously reported educational interventions. Lastly, the present intervention did not employ people with mental health problems as co-facilitators of the intervention, since existing evidence did not support any robust effect of the presence of people with mental health problems on the intervention impact.[20] Future research is needed in order to examine which of these strategies are more beneficial in terms of cost-effectiveness.

As the present study did not collect data on process evaluation, it could not demonstrate evidence for participants' satisfaction or suggestions for future implementation according to their needs. Moreover, the impact evaluation of the intervention could not test differences within groups between baseline and follow-up assessment. For the same reason, this analysis could not examine which characteristics at baseline assessment (*e.g.* sex, previous personal experiences with mental illness, mental health awareness, attitudes and desire for social distance from people with mental illness) could predict attitudes' change post intervention. Besides, it remains the question about the long-term effectiveness of this intervention and the sustainability of improvements in attitudes and behavioural intentions over time. The abovementioned questions deserve future research.

The present intervention seems that it managed to significantly improve adolescents' attitudes and reduce to some extent the desire for social distance from people with mental health illness living in adolescents' community. Although there is no sufficient evidence that support best practices in the field of programmes combating psychiatric stigmatization, the present study along with previous experience in various countries support some preliminary conclusions. First, small interventions that target specific populations and that use interpersonal ways of communication seem to be more effective. Second, there are still complex patterns of awareness, attitudes and behaviours among people that have not been fully understood. Awareness about the mental illness cannot consistently predict attitudes or behaviours. Therefore, large-scale public awareness campaigns are probably ineffective in improving attitudes or behaviours. Lastly, the extent to which attitudes predict behaviours of social distance or discrimination

Table 3. Mean values on adolescents' statements about the desire for social distance from people with mental illness in the intervention (n=70) and control group (n=70) at baseline and follow-up assessment.

	Baseline assessment			Follow-up assessment			
	Intervention Mean±SD	Control group Mean±SD	P*	Intervention Mean±SD	Control group Mean±SD	P*	P**
I am afraid of people with mental illness.	3.50±1.10	3.47±1.31	0.89	3.67±1.13	3.57±1.29	0.76	0.39
Would you object to having mentally ill people living in your neighbourhood?	3.81±0.95	3.78±1.02	0.82	4.09±0.97	3.69±1.17	0.05	0.08
Would you avoid conversations with neighbours who had suffered from mental illness?	3.90±1.19	3.69±1.20	0.35	4.17±1.12	3.77±1.33	0.06	0.20
Would you be willing to work with somebody with a mental illness?	2.06±0.95	2.20±1.20	0.51	2.44±1.28	2.00±1.22	0.03	0.04
Would you invite somebody into your home if you knew they suffered from mental illness?	2.23±1.31	2.10±1.21	0.56	2.51±1.20	2.26±1.18	0.16	0.18
If somebody had been a former psychiatric patient, would you have them as a friend?	2.71±1.09	2.49±1.01	0.29	2.80±1.03	2.46±1.09	0.07	0.71
If somebody who had been a former psychiatric patient came to live next door to you, would you greet them occasionally?	3.41±0.71	3.57±0.73	0.20	3.68±0.72	3.47±0.81	0.04	0.02
Would you have casual conversations with neighbours who had suffered from mental illness?	3.17±0.90	3.29±0.89	0.41	3.46±0.79	3.06±1.09	0.02	0.03
If somebody who had been a former psychiatric patient came to live next door to you, would you visit them?	2.58±1.10	2.40±0.98	0.38	2.64±1.04	2.50±1.25	0.66	0.75
Would you object to having mentally ill people attending your school?	4.00±1.00	4.10±1.10	0.61	4.37±0.95	3.87±1.14	0.00	0.02

*Mann-Whitney U statistic; **Wilcoxon signed-rank test for differences between baseline and follow-up assessments in the intervention group.

regarding mental illness remains mostly unknown. This information would be important in any effort of developing interventions aiming at changing the way that local communities perceive the mentally ill. In any case, the behaviour is multiply determined. Every attitude and behaviour holds several components and is influenced by several factors. Using a complex model of behaviour may lead to the study of the relationship between a series of attitudes and behaviours.

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