

A student manual for promoting mental health among high school students

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Abstract

Objectives. We describe a school program based on a student manual for promoting mental health and preventing mental illness.

Methods. A preliminary version of the manual was assessed for face validity by two focus groups. The final version was evaluated for acceptability among 253 students in 10 high schools and 1 middle school in Italy.

Results. The manual included 18 chapters (or “units”) which address skills for enabling students to cope with their daily lives: communication skills, problem-solving, assertive skills, negotiation, stress management, anger management and conflict resolution. The manual was found to have been acceptable by high school students.

Conclusions. The effectiveness of the manual in actually promoting mental health and preventing mental illness is currently being evaluated.

Key words

- school
- adolescence
- mental health promotion
- school based program
- self-help manual

INTRODUCTION

According to the 2004 World Health Report of the World Health Organization (WHO), approximately 20% of individuals under the age of 18 years suffer from developmental, emotional or behavioural problems, and one in eight could be diagnosed with a psychiatric disorder [1]. Worldwide, increasing attention has been focused on the primary prevention of mental illness [2] and a number of initiatives targeting young persons have been undertaken to promote mental health and reduce vulnerability to mental illness [1].

Reviews of the literature suggest that the most promising programs for developing mental health are comprehensive school-based programs, with their wider approach, that is, the promotion of generic coping, competence, and social skills, as opposed to focusing on specific behavioural problems [2]. With specific regard to Italy, to the best of our knowledge, no such programs which were aimed at promoting mental health, have been put into action until 2008 [3]. In 2008 the Mental Health Unit of the Istituto Superiore di Sanità (ISS; Italian National Institute of Public Health) obtained a grant from the Ministry of Health to develop a school-based program for promoting mental health and preventing mental illness. The specific objectives of the program are: i) to provide students with the skills to maintain or improve their mental health when faced with the demands of everyday life; and ii) to provide students

with information about mental illness so that they can recognize the signs early in themselves and reduce the stigma attached to those who suffer from it. As the main output, a student manual was developed to guide students in implementing the program.

Objectives

The objective of the present report is to describe the development and the main features of the program and the preliminary results of its implementation, focusing on the student manual.

METHODS

Program

The program was designed for students between the ages of 13 and 18 years (*i.e.*, those in the last year of middle school and in high school) and addresses the issues of promoting mental health, recognising signs of mental illness, and decreasing the stigma associated with mental illness. The main focus of the program is that of promoting mental health, in particular, teaching skills that enable students to cope satisfactorily with the stress in their lives. To develop this part of the program, we adopted an experiential educational approach, in which people are trained to use structured problem-solving to address the problems that cause them the most stress in their lives, to prioritise their current personal goals, and to engage the support of the persons in their social

networks who are most willing and able to assist in resolving problems [4, 5].

Development and evaluation of the preliminary version of the student manual

The program was designed to be implemented in schools using a student manual. To develop the manual, we first performed a review of the literature on psycho-educational programmes that focussed on teaching mental health and illness in schools [6, 7]. We then discussed the project through a series of meetings with educators and professionals who conduct research on mental health and illness.

Based on the literature review and these discussions, we developed the contents of the program and a preliminary version of the student manual. To assess the face validity of the preliminary version, two focus groups were held. For each focus group, the participants consisted of 4 teachers, 4 students and 2 parents, from two high schools in Rome (one high school for each focus group). Before the focus groups were held, the participants were given a copy of the manual. The focus groups were coordinated by a member of the Mental Health Unit of the ISS, who provided information on the conceptual framework of the program. The participants were asked for their opinions on the

relevance, usefulness, and clarity of each unit of the student manual and to identify which parts they would eliminate. Most participants felt that the greatest barrier was finding time during the school day to implement the program, given that the manual was considered to be too long to be applied in classes that lasted about 60 minutes.

In light of the results of the focus groups, the manual was reduced from an initial 22 chapters (or “units”) to 18 units, so as to maximize its acceptability; these units were those that the focus-group participants considered to be the most relevant and important. We also reduced the theoretical content that had been provided as an introduction to each unit. Moreover, the manual was made more “user friendly” by eliminating a number of technical terms, by providing alternative examples of short-term and long-term objectives (as well as additional examples proposed by the students themselves), by changing the graphics for clarifying certain theories, and by adding more examples of assertive behavior and more suggestions on how to solve difficulties with relaxing.

Final version of the student manual

The main contents of the manual address skills for enabling students to cope with their daily lives, in

Box 1

Units of the student manual for mental health promotion

1. Introduction: purposes, limits and structure of the program
2. How to give constructive feed-back, the importance of distinguishing between judgments concerning behaviors and judgments concerning persons; the importance of distinguishing desires and needs; the importance of distinguishing different degrees of emotions
3. Defining realistic personal objectives
4. Method of structured problem-solving/definition of objectives: application to practical problems

Communication skills

5. Expressing unpleasant feelings and active listening
6. Expressing positive feelings and making requests
7. Assertive training

Defining and planning goals for improving interpersonal relationships

8. Increasing the social network
9. Conflicts and negotiation

Defining and planning goals for improving one's own characteristics

10. Improving self-discipline
11. Controlling one's own impulses and anger
12. Self acceptance
13. Functional and dysfunctional thoughts
14. Stress management: relaxation training, changing cognitive distortions, functional analysis

Recognition and treatment of mental disorders (informative units)

15. Mental disorders
16. Depression

Conclusive chapters

17. How to maintain progress
18. Solutions to some of the practical exercises

particular: communication skills, problem-solving, assertive skills, negotiation, stress management, anger management and conflict resolution. The manual also teaches the students to recognize and modify negative key thoughts and feelings that precede, accompany, and follow unpleasant emotions. These include attributional styles, that is, how individuals explain to themselves the events in their lives; for example, individuals with depression have a negative attributional style, in that they attribute the cause of bad events to themselves (personalization), perceive these events as being permanent (persistence), and engage in negative generalization following unsuccessful experiences (generalization).

The final version of the manual (available on: http://www.ccm-network.it/prg_area5_salute_mentale_interventi_scuole) is approximately 200 pages long and consists of 18 units (*Box 1*), to be read by the students themselves during the sessions held in school and at home. Unit 1 consists of an introduction to the program. Units 2-14 focus on teaching skills to promote mental health and include both information on the theory behind the development of these skills and instructions for carrying out discussions and role-playing exercises in small groups (see example in *Box 2*), as well as exercises to be performed at home. Units 15 and 16 provide information on, respectively, mental illnesses and depression (*i.e.*, causes, symptoms, prodromal and warning signs, and treatment), with the aim of increasing awareness and contrasting the stigma surrounding these illnesses. The illnesses covered in these units are: anxiety disorders, depression, manic-depressive disorder and schizophrenia, the choice of which was in large part determined by their prevalence among adolescents and the age at onset. Unit 17 addresses the issue of maintaining the progress made in the development of skills, and unit 18 provides possible solutions to the exercises in the other units.

Study population and implementation of the program

The participating schools were contacted in early 2009 using the “snowball” technique, a particular form of chain analysis that seeks to construct a sample of individuals with common characteristics within a wider universe [8]. The schools that participated in the focus groups served as agents for locating other schools by introducing us to these schools, which then put us in contact with the students and teachers. Once contact had been established, we gave a presentation of the program to the students and teachers in each of these schools. Ten public high schools and one public middle school located in two midsize towns (Orvieto, Treviglio) and three cities (Piacenza, Brescia and Roma) in northern and central Italy volunteered to participate in the program.

At the beginning of the academic year, in each school the teacher who coordinated the program described it to the students and asked them to participate. Any student who refused could use the time to study in the library; students were provided with the option of dropping out of the program at any time. The program was held in 13 different classrooms during the 2009-2010 academic year and consisted of one-hour sessions held weekly. The program was designed so that one unit per session would be covered, for a total of 17 hours of class time (units 1-17). Given that the sessions were conducted during regular school hours, it was necessary to ask the teachers if they would be willing to give up one hour of their regularly scheduled weekly lessons; in most cases, the sessions were held in place of a lesson on Religion. Each session was coordinated by a facilitator, who was either a member of the project staff (*i.e.*, a psychologist or psychiatrist) or a university student trained by the project staff. Overall, three university students were trained. These students participated in a 1 day training session prior to the start of the program where they also

Box 2

Structured problem solving. Role-playing exercise

1. Form a group of three people. Have two members of the group perform a role-playing exercise using the six-step problem-solving method described in the manual: 1) pinpoint the problem or goal; 2) list all possible solutions; 3) evaluate each possible solution in terms of advantages and disadvantages; 4) choose the “best” solution; 5) plan to carry out the solution (consider existing skills and resources, required resources, impediments to the application of the plan and countermeasures); 6) review (evaluate if the plan needs to be revised). Have the other member of the group observe the exercise and provide feedback on how he/she thinks it went and what could have been done. Make sure all members of the group have a turn at being both persons in role-playing and the observer.
Possible problems include:
 - earning some pocket money;
 - deciding where to go for an outing;
 - initiating a conversation with someone you don't know but would like to get to know.
2. In the plenary session, for each group an elected reporter will describe what happened in his/her group.
3. Think of additional problems and practise problem-solving at home.

Table 1

Mean, standard deviation (SD), and median of the satisfaction and usefulness scores, by individual unit of the student manual (units 2-14)

Unit	SATISFACTION		USEFULNESS	
	Mean (SD)	Median	Mean (SD)	Median
2	3.4 ± 0.9	3.0	3.4 ± 1.0	3.0
3	3.5 ± 0.8	4.0	3.6 ± 0.9	3.0
4	3.5 ± 0.8	4.0	3.6 ± 0.8	4.0
5	3.3 ± 0.8	3.0	3.3 ± 0.8	3.0
6	3.6 ± 0.9	4.0	3.7 ± 0.8	4.0
7	3.5 ± 0.9	4.0	3.6 ± 0.8	4.0
8	3.5 ± 0.8	4.0	3.3 ± 0.9	3.0
9	3.4 ± 0.9	4.0	3.5 ± 0.8	4.0
10	3.0 ± 0.7	3.0	3.0 ± 0.7	3.0
11	3.7 ± 0.9	4.0	3.6 ± 0.8	4.0
12	3.2 ± 0.7	3.0	3.3 ± 0.8	3.0
13	2.7 ± 0.6	3.0	2.7 ± 0.7	3.0
14	3.6 ± 0.6	4.0	3.5 ± 0.9	4.0

received a guide for implementing the program. This guide provided practical information to identify and overcome barriers in order to effectively implement the program.

Acceptability

To evaluate the acceptability of the manual (i.e., the units with practical exercises, units 2-14), an anonymous questionnaire was administered to the students at the end of each unit; the questionnaire consisted of 2 items (*I liked it* and *I found it useful*) whose answers were expressed using a five-point Likert-type scale: 1 = very little; 2 = little; 3 = sufficiently; 4 = much; 5 = very much. Space was also provided for comments. The mean, standard deviation (SD), and median of the scores were calculated for each unit.

After each session, the facilitator wrote a report on his/her observations, focusing on: i) the students' engagement in the program; ii) the degree to which the implementation of the program followed the student manual; iii) obstacles encountered in implementation; and iv) factors that facilitated implementation. In this report, the facilitator also included all pertinent comments made by the students.

RESULTS

A total of 253 students participated, and none of them withdrew from the program at any time. Regarding acceptability, the mean, SD, and median of the scores for determining the satisfaction and perceived usefulness of units 2-14 of the manual are shown in *Table 1*. All items had a good spread (SD of approximately 1 on the scale of 1-5), suggesting that the scale was valid. Mean values of less than 3 and median values of less

than 4 clearly indicated a need for improvement. The most negative opinions concerned units 2 and 3, which, according to the students, included text that was too technical. However, most of the problems with these two units were found with middle-school students. In fact, at the end of the program, it was concluded that these students may be too young for this manual to be effective.

According to the facilitators' reports, most of the program was implemented in accordance with the manual. Moreover, the majority of students showed enthusiasm in performing role-playing. Some students commented that they felt more able to understand both their own and others' emotions. However, many students also commented that the sessions were often too short to achieve the objectives. In fact, in more than half of the cases it was necessary to extend the duration of the program to around 20 hours, compared to the expected 17 hours. Based on these results, additional modifications were made to the manual; these modifications mainly consisted of simplifying the manual to make it more "user friendly".

DISCUSSION

School-based interventions have been increasingly recognised as effective means of promoting mental health [2]. For example, they have been shown to be effective in improving mental well-being, coping strategies, social skills, and school achievement, and in decreasing anxiety, depressive symptoms, aggression and bullying [1, 9, 10]. However, the effectiveness of many programs has not been confirmed with replication studies, whether in the same context or in a different one. In replicating programs, it is important

that they are implemented using the same procedures, in that differences can obviously have important effects on the outcomes. To this end, detailed protocols and structured manuals are very useful, as confirmed in our evaluation, which showed that most of the program was implemented in accordance with the manual.

The student manual was a fundamental aspect of the program described herein. It allowed us not only to replicate the program in different schools but will also allow us to more accurately evaluate the effectiveness of the program. Moreover, the manual can contribute to increasing empowerment, not only because students were directly involved in developing it but also because it is geared towards the students themselves, as opposed to teachers or facilitators, stressing that the students are the protagonists and have the power to make their own decisions and determine their own fate.

The contents of the manual were based on diverse school-based programs for teaching social skills [2]. However, an important distinction is that in developing the manual, we adopted an approach based on cognitive-behavioral psychotherapy and psycho-educational models, placing more emphasis on the definition of personal objectives and communication skills and using more structured problem-solving techniques [4, 5]. Moreover, the manual contains numerous practical exercises to be conducted in school or at home. Many studies have shown that, in order for health education programs to be effective, the information provided by these programs must be combined with activities for changing attitudes and promoting social skills and a sense of self-efficacy [11-13]. In fact, it is generally accepted that students learn best from situations in which they are encouraged to use the information with which they are provided, as opposed to passively absorbing it.

With regard to the implementation of the program, our results show that acceptability was high and that the students were enthusiastic about engaging in the practical exercises. Moreover, none of the students withdrew from the program, even in those schools in which the session was held instead of the first or last lesson of the day and the students could have opted to arrive late to school or go home early. However, many students also commented that the sessions were often too short to achieve the objectives. Despite the fact that efforts had been made to shorten the manual, in more than half of the cases it was necessary to extend the duration of the program. We also found that the manual was not suitable for middle-school students, though all efforts had been made to render it as "user friendly" as possible. In light of this, we have developed a version of

the manual specifically for middle-school students.

It now remains to be determined whether or not the program is truly effective in terms of maintaining or improving mental health and preventing mental disorders. To this end, in the 2011-2012 academic year we performed a randomized controlled trial in 16 high schools; the results of the trial are currently being analysed.

We hypothesize that the program would yield significant effects across skill, attitudinal and behavioral domains. This program is likely to be effective because it uses a sequences step-by-step training approach, uses active forms of learning, focuses sufficient time on skill development, and targets specific skills rather than positive development in general terms. The literature suggests that school-based preventive programs which follow these practices are likely to be effective [14].

With regard to the costs of the implementation of the program, we presume that this intervention is potentially cost-effective because it requires few resources; that is, it doesn't require outside personnel and can be delivered by trained university or peer students during the regular school day.

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Conflict of interest statement

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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