

# Assessment of an Intervention on Social Behavior, Intragroup Relations, Self-concept and Prejudiced Cognitions during Adolescence

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## ABSTRACT

The aim of this research was to design an intervention program for adolescents and to assess its effects on social and personal development factors. The study used a pretest-intervention-posttest design with control groups. 174 subjects participated as sample, aged 12 to 14 (125 were experimental subjects and 49 were control subjects). Before and after the program, six instruments were administered in order to measure: friendly and prosocial intragroup relations, social behaviors, behavioral problems, self-concept, and prejudiced cognitions. The intervention program applied consisted of a two-hours intervention session once per week throughout one academic year. The program contained 60 activities that stimulate communication, friendly cooperative interactions, expression and understanding of emotions, identification of perceptions and prejudices, and reflection on discrimination, ethnocentrism and solving of human conflicts. The MANCOVA results suggest a highly positive effect of the program. A decrease in prejudiced cognitions was observed. There were also an increase in behaviors with respect to take into account other people and prosocial intragroup relations, a decrease in antisocial behaviors, and an improvement in social self-concept.

*Key Words:* Adolescence. Social Development. Self-Concept. Prejudices. Antisocial and Prosocial Behavior.

## RESUMEN

El objetivo de este estudio fue diseñar un programa de intervención para adolescentes y evaluar sus efectos en diversos factores del desarrollo personal y social. El estudio utilizó un diseño pretest-intervención-posttest con grupos de control. La muestra consistió en 174 sujetos de 12 a 14 años, de los cuales 125 fueron asignados a la condición experimental y 49 a la de control. Antes y después de administrar el programa seis instrumentos de evaluación fueron aplicados para medir: relaciones amistosas y prosociales, conductas sociales, problemas de conducta, autoconcepto y cogniciones prejuiciosas. El programa de intervención administrado a los sujetos experimentales consistió en una sesión de intervención semanal de dos horas de duración durante todo el curso escolar. El programa contiene 60 actividades que estimulan la comunicación, las interacciones amistosas y prosociales, la expresión y comprensión de emociones, la identificación de percepciones y prejuicios, la reflexión sobre la discriminación y el etnocentrismo, así como sobre formas de resolución de conflictos humanos. Los resultados del MANCOVA sugieren un positivo efecto del programa. Se observó una disminución de las cogniciones prejuiciosas y de las conductas antisociales, así como un incremento de las conductas de consideración por los otros, de las relaciones amistosas prosociales intragrupo y del autoconcepto. *Palabras clave:* Adolescencia. Desarrollo social. Autoconcepto. Prejuicios. Conducta prosocial y antisocial.

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This study assesses the effects of an intervention program applied to groups of adolescents. The research is in the frame for the development of socio-moral values and education in human rights. The increase in racism and violence in Europe, also observed in the sociocultural context in which this work is developed, demonstrates the need to develop intervention programs for adolescents that foment behaviors to have others into account, acceptance and respect of differences, as well as to reduce discriminatory and antisocial behaviors. The current concerns with topics related to xenophobic attitudes, prejudiced cognitions and the violent behavior of adolescent groups, all of which have a high media profile, and constitutes the background of this study.

The work here is within the framework of research on the contributions to human development of games and cooperative interaction among peers, and employs a cognitive behavioral approach. It is part of a research line spanning roughly a decade, in which the effects of several cooperative game programs for children aged 6 to 12 were assessed (Garaigordobil, 1992, 1993, 1995a, 1995b, 1995c, 1996a, 1996b, 1999, Garaigordobil & Echebarría, 1995, Garaigordobil et al., 1996). These previous studies provided empirical evidence of the positive contribution of interventions that encourage communication and cooperative interactions among group members with regard to variables of children's social and personal development, such as self-concept, intragroup communication, relations of acceptance among peers, cognitive strategies of social interaction, ability to cooperate, etc.

The present study is supported by the conclusions derived from research showing the important role that positive, friendly and cooperative interaction among peers may play in personal and social development (Bijstra & Jackson, 1998; Boulton & Smith, 1996; Bukowsky et al., 1998; Miller et al., 1991; Putman et al., 1996; Roberts, 1997; Slavin & Cooper, 1999; Stephan & Finlay, 1999; Sterling, 1990). Studies with different epistemological approaches analyzing the effects of programs administered during adolescence have found positive results. Vernon's study (1998) concludes that the Passport Program had positive effects on socio-personal development. The program stimulates emotional, cognitive and social development, and the activities teach young people effective strategies for dealing with specific problems to their age group. From a conceptual point of view based on the principles of social learning, Bijstra and Jackson (1998) assessed a training program for developing social skills that had positive effects, with an increase in social interaction and self-esteem. Royer et al. (1999), evaluating the effects of a social skills training program, obtained results that showed a self-reported increase in assertion and empathy for the experimental group, though parents perceived no differences in behavior problems or social skills. Haney and Durlak (1998) made a meta-analysis of the results of 116 intervention programs, which indicated significant improvements in children's and adolescents' self-esteem and self-concept, and significant concomitant changes in behavioral, personality, and academic functioning.

In Spain, a relevant precedent of this research line are the studies carried out by Pelechano on interpersonal skills and problem solving (Pelechano, 1996; Pelechano & González, 1999). Within the Multiple Intelligence model, this researcher proposes that interpersonal skills take part of social intelligence, and he has designed and applied training programs of interpersonal skills with children and adolescents, obtaining positive

results.

Another line of research has confirmed the positive effects of programs that stimulate cooperative interaction. Buckmaster (1994) evaluated the effects of activities that promote cooperation in problem-solving, finding evidence of increased student's understanding of self and other. Similarly, Putman et al. (1996) confirmed more frequent positive changes in peer acceptance in cooperative groups than in competitive conditions. Boulton and Smith (1996) suggested that developing cooperative group work methods may enhance interracial linking and reduce racial prejudice. Finding ways to reduce prejudice and discrimination is the central issue in combating racism in our society (Johnson & Johnson, 2000; Stephan, 1999). Oskamp's (2000) recent work combines critical analysis of theories about how to reduce prejudice and discrimination with cutting-edge empirical research conducted in both real-world settings and controlled laboratory situations.

Early adolescence is a significant transitional period in human development, marking the crossroads between childhood and adulthood. Young people are concerned with making and keeping friends, and in this direction they invest a great deal of energy in group social life. Some studies (Coterell, 1996) stress the importance of young people's interactions and the role of peers and friends in strengthening social attachments and in establishing social identities. Friendship in early adolescence have been identified as playing an important role in psychosocial development. Recent studies (Bukowsky et al., 1998; Bishop & Inderbitzen, 1995) have demonstrated the relevant relationship between friendship during childhood and adolescence and cognitive and personality development. Furthermore, these studies underline the importance of intervention programs for developing social skills in children that lack close friends.

Other groups of studies have analyzed the effects of programs that stimulate positive interactions among peers, moral development or prosocial behavior in groups of adolescents with various types of problems. The findings of Putnins (1997) suggest the positive influence of victim awareness programs on socio-moral reasoning for young delinquents, a variable that is empirically demonstrated to be related to prosocial behavior among adolescents. Some researchers have designed interventions to reduce aggressive behavior (Gibbs, et al., 1996) or maladjusted social behavior (Shechtman & Nachshol, 1996), and the results show positive effects of these interventions. It has been suggested that experiences that stimulate peer acceptance in groups may prevent later behavioral problems.

Taking into account the studies that show the beneficial role of friendly, cooperative interaction in childhood and youth development, this research proposes the general hypothesis that the designed intervention program will have a positive impact on factors related to social and personal development. More precisely, it is hypothesized that the program will increase friendly and prosocial intragroup relationships and positive social behaviors, will decrease negative social behaviors, behavioral problems and prejudiced cognitions, and will improve self-concept. Furthermore, it is hypothesized that the program will stimulate a significant improvement in subjects who, in the pretest phase, had certain difficulties in development, such as a low self-concept, few positive social behaviors, many negative social behaviors and prejudiced cognitions.

## METHOD

### *Subjects*

The sample consisted of 174 Spanish adolescents aged 12 to 14 from two private schools in the Basque Country, in northern Spain. 125 subjects were randomly chosen as experimental (4 classroom groups) and 49 as control (2 classroom groups). There was one control group in each school. All the groups were from schools whose pupils came from a medium-level socio-cultural and economic background. There were 94 males (54,1%) and 80 females (45,9%). Subjects were white, Catholic and middle-class. 50% of parents were educated to university level, 30% to high school level and 20% to primary level. The study's results can therefore be generalized to this type of population. After selecting two schools randomly from the total of private schools in the Basque Country, a meeting with the schools' directors and teachers of the corresponding age groups took place. After the general presentation of the project, they unanimously agreed to participate in the study. The decision was made with the acceptance of the parents of the adolescents involved, after a meeting in which they were given information about the project. There were no rejection of participation, nor pretest-posttest attrition.

### *Design and Procedure*

This study used an experimental design with repeated pretest-posttest measures and control groups. 125 experimental subjects (4 groups) were compared with 49 control subjects (2 groups). The intervention program was the independent variable, and friendly and prosocial intragroup relations, various social behaviors, behavioral problems, self-concept and prejudiced cognitions were the dependent variables. The research was carried out in three phases. First, a pretest assessment was made at the beginning of the academic year, in which several assessment instruments were administered to the experimental and control adolescents in order to measure the variables upon which the program would have an effect, according to our hypotheses. Second, an intervention program was applied to the experimental subjects. It consisted of a two-hours intervention sessions developed once a week throughout the academic year.

The program was incorporated into the school curriculum, as part of the subject matter "ethic and human development", and timetabled in the same way as other ones, such as mathematics or physical education. Experimental subjects were presented the sessions on Tuesday afternoons, while control subjects had their usual tutorial activities. Control subjects carried out tutorial activities in groups that were included in the normal school curriculum, thus avoiding the Hawthorne effect, since they received another kind of training and the same level of attention. Finally, at the end of the year, a posttest assessment was carried out, with the administration of the same assessment instruments used in the pretest phase.

The study was carried out by a research team consisting of teachers, who implemented the program in the four experimental groups, four fifth-year Psychology

students, who carried out pretest-posttest assessment tasks, and the psychologists of the schools. of the schools. This team attended seminars in which they were given systematic training, both in relation to the program (conceptual aspects, methodology, etc.) and to its assessment (application and correction of the assessment instruments). The correction was made with no knowledge of the conditions or the hypotheses.

### *Materials*

In order to evaluate the effects of the program, six assessment instruments with psychometric guarantees were collectively administered before and after implementing the program.

*Sociometric Questionnaire: friendly and prosocial intragroup relations* (Garaigordobil, 2000a). This questionnaire presents 4 open items, in which each member of the group is asked to indicate: (a) the classmates they would choose as best friends; (b) those they would reject as friends; (c) the prosocial classmates, that is, those who help, collaborate and share with others; and (d) those who are not prosocial, that is, those who neither help nor collaborate. The questionnaire is administered collectively and the number of choices is open, so that each individual can indicate as many classmates as he/she wishes. In order to correct the questionnaire, the frequencies of mention of each member in 4 different concepts –choice of a friend, rejection of a friend, prosocial classmate, non-prosocial classmate– are taken into account. Classroom group was the reference for the sociometric assessment. In the pretest phase the adolescents making up each classroom group knew each other well, since they had been in the same group for several years. With the aim of validating the information obtained in the questionnaire, Pearson coefficients were calculated for the correlation between the sociometric scores (peers' opinion) and various social behaviors assessed by teachers through two instruments for the assessment of socialization with psychometric guarantees (Garaigordobil, 2000b). Results showed positive correlations between choice of a friend and leadership behaviors ( $r = .25$ ,  $p < .001$ ), and negative correlations between choice of a friend and social isolation behaviors ( $r = -.24$ ,  $p < .001$ ) and anxiety-shyness ( $r = -.25$ ,  $p < .001$ ). Positive correlations were obtained between rejection of a friend and isolation behaviors ( $r = .29$ ,  $p < .001$ ), and negative correlations between rejection of a friend and leadership ( $r = -.27$ ,  $p < .001$ ) and self-control ( $r = -.22$ ,  $p < .01$ ). Positive correlations were also found between the choice of a prosocial classmate and prosocial behavior ( $r = .38$ ,  $p < .001$ ), and negative correlations in the case of isolation behaviors ( $r = -.23$ ,  $p < .01$ ). Finally, positive correlations were observed between choice of non-prosocial classmate and isolation ( $r = .31$ ,  $p < .001$ ) and anxiety behaviors ( $r = .24$ ,  $p < .01$ ), and negative correlations were found between choice of a non-prosocial classmate and behaviors of consideration for others ( $r = -.22$ ,  $p < .01$ ), leadership ( $r = -.28$ ,  $p < .001$ ), and self-control ( $r = -.42$ ,  $p < .001$ ). Thus, adolescents that were frequently chosen by their classmates as friends presented, according to their teachers, many behaviors of leadership, high levels of self-control and few isolation behaviors. On the other hand, those frequently rejected showed the opposite characteristics, that is, few leadership behaviors, low self-control, high social isolation and anxiety-shyness. With regard to the subjects chosen as prosocial

classmates, teachers observed that these showed many prosocial behaviors and few isolation behaviors. However, those regarded as non-prosocial showed many behaviors of isolation and anxiety-shyness, in addition to few behaviors of consideration for others, leadership and self-control. The results obtained validated the sociometric questionnaire.

*FIEP. Incomplete sentences for the assessment of prejudiced cognitions* (Garaigordobil, 2000ab). This instrument consists of a group of 19 incomplete sentences referring to various socio-cultural groups. The task involves completing the sentences rapidly, with the first idea that comes to mind. The sentences begin with words such as: Moroccans..., Black people..., Boys/Girls..., Gypsies..., Muslims... Analysis of the answers given by the adolescents tells us about cognitions in relation to the various groups studied. *Negative and/or prejudiced cognitions* are those reflected by responses that underline the negative aspects of the socio-cultural group in question, allude to it pejoratively, reject it, or show negative discriminatory feelings toward it (for example, I hate them, they shouldn't leave their country, they smell bad, they are armed with knives, they are frightening, they shouldn't exist, they should be killed, etc). *Positive non-prejudiced cognitions* are those that tend to be based on experience and available information. They highlight the qualities and positive abilities of the socio-cultural group by using positive adjectives, expressing positive, empathetic feelings toward this group (for example, they sing and dance well, they are nice, they are good at sport, I like them, they have very interesting traditions and history, they are good and well-mannered people, etc.). *Neutral non-prejudiced cognitions* are represented by responses in which the group is more objectively defined, and which offer a description of objective features without expressing negative or positive feelings/thoughts toward the group (for example, they wear robes, they belong to the EU, they are African, they have a different culture and religion, etc.) or answers that present positive and negative feelings or thoughts in an integrated way (for example, they have a reputation for stealing, and some may steal but others don't, and they work). The criterion for categorizing a response as positive, negative or neutral is applied according to the emotional content of the cognition expressed, that is, of the semantic features of the response. In order to correct the test, one point is given to each answer given in the negative, positive or neutral category. The total number of responses given to the sentences is not fixed, since each subject can give more than one answer for each social group. The test consists of three scales corresponding to the three types of responses, allowing us to obtain raw scores for each of these responses, as well as a global rate about fluency of ideas. Correction was carried out independently and in a blind way by two assessors. For the analysis of inter-judge agreement, the traditional Kappa rates were calculated, showing satisfactory results in the three scales: for the prejudiced or negative cognitions scale (.94), and for the non-prejudiced scales, that is, for the positive (.92) and neutral (.92) scales. With regard to the reliability of the test, the Cronbach's Alpha coefficient (.84) and Spearman-Brown's method (.79), suggesting acceptable internal consistency.

*BAS-3. Battery of Socialization* (Silva & Martorell, 1989). By means of the self-report, this battery measures various social behaviors, such as leadership, self-control, isolation and anxiety-shyness. The task consists of reading 75 statements and answering

whether or not the content of the items can be applied to oneself. Examples of these statements are: "I worry about people being left out", "I help others when they have problems", "I am popular within the group", "I organize the work of groups", "I avoid situations involving lots of people", "I answer back to adults", etc. Studies of reliability of the test show that the internal consistency is satisfactory (alpha coefficient between .73 and .82 for the various scales). Data from the test-retest carried out with an interval of 4 months confirm that temporal stability of self-control ( $r = .66$ ), anxiety-shyness ( $r = .65$ ), and leadership ( $r = .61$ ) is satisfactory, but that it is quite low for consideration ( $r = .42$ ) and isolation ( $r = .43$ ). With regard to its validity, some studies have analyzed the results of the BAS-3 in non-delinquents and under-18 delinquents living in reformatories. It is observed that, in the group of delinquents, there are lower scores for consideration and self-control and higher scores for isolation. Correlational analysis shows the consideration scale to correlate positively with empathy ( $r = .42$ ) and negatively with psychoticism ( $r = -.37$ ); the self-control scale shows negative correlations with psychoticism ( $r = -.44$ ), antisocial behavior ( $r = -.40$ ) and impulsiveness ( $r = -.43$ ); the isolation scale shows negative correlations with extraversion ( $r = -.36$ ); the anxiety-shyness scale shows positive correlations with neuroticism ( $r = .40$ ); and finally, the leadership scale correlates positively with extraversion ( $r = .27$ ).

*EPC. Behavioral Problems Scale* (Navarro et al., 1993). This scale with 99 items to be completed by parents in order to assess behavioral problems such as: school problems, antisocial behavior, shyness-isolation, psychopathological problems, anxiety problems and psychosomatic problems. The task involves reporting whether the parents' son/daughter presents these behaviors frequently, sometimes or never. Examples of items comprising the test are: he/she cries a lot, he/she enjoys school, he/she finds it difficult to concentrate, he/she appears selfish and cruel, he/she can deal with failure, he/she acts without thinking, he/she has strange ideas or behaviors, he/she attacks people physically, he/she completes tasks or activities, etc. The EPC questionnaire was administered collectively to parents of each of the 6 groups in separate meetings, after a general explanation of the study and their unanimous acceptance to participate. Those parents that did not attend the meeting ( $n = 20$ ) received an explanatory letter requesting them to complete the questionnaire and to return it to the school within one week. With respect to the reliability of the scale, information was obtained on the internal consistency of the EPC ( $\alpha = .88$ ). Furthermore, the EPC was applied on two occasions with a time interval of 9 months being obtained coefficients between .71 and .88. With regard to short-term stability, Pearson's test-retest correlation coefficients with a 5-weeks interval were as follows: aggressiveness .81; school problems .87; anxiety .75; shyness-isolation .80; and somatic problems .80. For studying criterion validity, the instrument was applied to three different samples of children and/or adolescents: those sent to the educational psychologist because of school problems, those sent to a clinical psychologist and those sent to reformatories due to delinquency problems. The reformatories sample obtained the highest scores in school problems and antisocial behavior, while the clinical psychologist sample presented higher values in psychopathological disorders, anxiety problems and psychosomatic disorders.

*ASB. Antisocial Behavior Scale* (Martorell & Silva, 1993). The test contains 46

items for the self-assessment of antisocial behavior. The content of the items refers to behaviors such as loutishness and behaviors of infringement of social rules. Various activities are listed, such as breaking objects, hitting people, smoking, drinking, falsifying grades, being absent, attacking people, etc, and the adolescent must indicate whether he/she has carried out those action during the last 12 months, receiving one point for each behavior carried out. Examples of these items are: playing truant from school, carrying a weapon in case of a fight, stealing money, throwing stones at people, getting into fights, breaking windows of empty houses, drinking alcoholic drinks in pubs, and dirtying the streets with bottles and garbage. Reliability studies confirm the internal consistency of the test to be highly satisfactory (Cronbach's  $\alpha = .92$ ), and to have good temporal stability (test-retest with a time interval of 4 months =  $.67$ ; with an interval of one year =  $.62$ ). For the study of criterion validity, we used a group of under-18 delinquents living in a reformatory and a group of non-delinquents. Mean score of the group of under-18 delinquents was much higher ( $M = 32.28$ ) than that of the sample of non-delinquents ( $M = 14.07$ ).

*AFA. Self-concept* (Musitu et al., 1991). This self-report consists of 36 statements that allow the assessment of various dimensions of self-concept: academical, family, emotional, social and total. The subjects must indicate the frequency (always, sometimes, never) with which they think or feel what is reflected in the statements. Examples of these statements are: "It is difficult for me to keep friends", "I am good at schoolwork", "I can draw well", "I am afraid of some things", "I am aggressive with my friends and family", "I am a cheerful person", "I get nervous when I speak in class", etc. Psychometric analyses support the internal consistency of the scale: Spearman-Brown coefficient =  $.86$  and Cronbach's alpha coefficient of internal consistency =  $.82$ . As far as temporal stability is concerned, the questionnaire was applied 3 and 6 months later (test-retest), and Pearson's correlation, calculated between the total scores, gave a coefficient of  $.66$  for the first period and  $.59$  for the second period. Other validity studies have shown significant positive correlations ( $r = .46$ ,  $p < .001$ ) between total self-concept in AFA and in the adjective check list for self-concept assessment (Garaigordobil, 2000a).

#### TREATMENT

The intervention program consisted of two-hours sessions once a week throughout the academic year. Two activities and their corresponding debates were generally carried out. Sessions were directed by the teachers-tutors, who gave instructions for the activities, observed while the group carried out the tasks, gave help when the group asked for it, and guided the discussions or debates after the activities. The objectives of the 60 activities of the intervention program (Garaigordobil, 2000a) were what follows: (a) to improve self-concept; (b) to encourage intragroup communication, peer acceptance and friendly interactions; (c) to develop positive social behaviors, such as prosocial behaviors, leadership behaviors, self-control behaviors, etc., and to reduce negative social behaviors; (d) to identify perceptions and prejudices and to analyze discrimination; and (e) to learn techniques for the analysis and solution of conflicts, etc. The program was made up of seven intervention modules, each one including between 8 and 10 activities. The mo-

dules were the following: self-knowledge/self-concept, intragroup communication, expression-understanding of feelings, help-cooperation relationships, perceptions-stereotypes, discrimination-ethnocentrism, and conflict-solving. A reflection on human rights arises through activities with contents that revolve around dialogue, tolerance, equality, justice, solidarity, freedom and peace.

The program used several group dynamics techniques in order to carry out the activities. Two techniques of the program were games and drawings. Communication games were included to structure situations of tolerant dialogue in relation to various topics. Cooperative games were designed to stimulate prosocial interactions between group members, and dramatic games to promote emotional expression. Games and drawings are techniques that stimulate the expression of thoughts, feelings, experiences, and so on, and they have a positive influence on emotional development. Another technique of the program was small discussion groups, with teams of 5 or 6 members interchanging different ideas on a topic, solving a problem or making decisions, after which they must present their conclusions to the rest of the group, which finally gets at some conclusions on the topic. Brainstorming stimulates imaginative capacity to process original ideas and the search of effective alternative solutions to problems. First, they described the problem or theme. For a period of 5 or 10 minutes the group members present ideas for solving the problem. These ideas are then discussed and evaluated for about 10 minutes, and finally the group members choose the three most suitable. The incomplete phrases technique allows the identification of the group members' concept with regard to diverse topics. Basically, it consists in the rapid completion of one or more incomplete phrases whose content refers to the issues to be analyzed. Subsequently, the answers are analyzed in order to discover the concept underlying them. Finally, the role-play technique consists in the representation of a real-life situation assuming roles, so that the situation can be visualized and therefore better understood by the group. After the representation there is a discussion phase so that appropriate conclusions can be drawn.

The use of the intervention program with the experimental groups involved a serie of constant variables that shaped the methodological framework of the intervention. These constant variables were the following: (a) intersession constancy, which involved carrying out one session per week; (b) space-time constancy, with all sessions being held in a large, barrier-free physical space on the same day of the week and at the same time; (c) constancy of the adults that implemented the program, since the sessions were led by the teacher-tutor of the group with the help of a collaborator, who observed the sessions; and (d) constancy of the structure of the session, since they always followed the same procedure. First, the members of the group sat on the floor in a circle, while the objectives and instructions of the activity were explained. Second, the group carried out the activity, usually in small teams. At the end of the activity, the members of the group sat on the floor, again forming a circle, and the teams presented their conclusions, after which there was a discussion or debate on the activity performed. This debate phase was a time for thought and dialogue (guided by the teacher), in which the results of the activity carried out by the group were analyzed. By following this structure, approximately 2 activities were carried out in each intervention session. As a sample,

3 activities of the program are described below.

In the module of intragroup communication the activity “electrical polarization” had four objectives: (a) to stimulate the development of active listening habits, (b) to become aware of perceptions, beliefs and stereotypes, (c) to highlight different opinions with respect to a certain subject or issue, and (d) to identify discrimination attitudes stimulating cognitive restructuring through communication processes. In this activity, one wall of the classroom represented “yes”, while the opposite one represented “no”. The players stood in the middle of the classroom and the teacher read aloud one statement or sentence, clapped his/her hands, and the group members moved to one of the walls, according to whether or not they agree with the statement. Later, the teacher asked for the reasons of the participants to moved to the respective pole. When the main arguments had been set out, the teacher suggested that those who agree with an argument stated by the other group move to the opposite wall, depending on the extent to which the arguments of the other group convince them. It is eventually attempted to arrive at a statement upon which they all agree. By means of this technique, several topics were discussed. Examples of the statements are: "We could solve the problem of racism if different races lived in different places"; "Historically, men have dominated the world, and they should go on doing so"; "Moroccans take jobs away from local people; A person's worth depends on his/her wealth and education"; "The death penalty should be abolished in all cases and in all countries", etc.

One activity of the expression-understanding of feelings module is “aggression”, which has as its objectives: (a) to face up to a situation of aggression and to analyze ways of coping with it, (b) to stimulate intragroup communication, and (c) to express emotions through dramatization. A specific problem situation is set out in which a person is arbitrarily attacked by another person. The group is divided into teams of 7-8 members, who begin by listing the feelings the attacked person may experience and their thoughts about what he/she could do to cope with such a difficult situation. Next, through a debate weighing up the pros and cons of the suggested solutions, each team has to come to an agreement with regard to the most suitable way to face up to the situation. In a second phase, each team dramatizes a scene in which the chosen solution is presented and, after all the dramatizations are displayed, the debate begins. Group members sit in a circle and analyze the solutions dramatized by the teams. Each team informs to the other ones of the reasoning that led them to consider such a solution as the most effective. Apart from analyzing whether the dramatized solutions are passive, aggressive or assertive, a debate is carried out about other ways of problem-solving suggested by each team.

In the discrimination-ethnocentrism module the activity “international restaurant” has the following objectives: (a) to experience discrimination by becoming familiar, to a small extent, with the unfair international economic order through the matter of the food, (b) to illustrate the implications of poverty in the world and the way how resources are distributed among people, (c) to stimulate conflict analysis and reflection on conflict-solving strategies. In this activity, a situation is suggested in which the unequal world distribution of resources is represented by arbitrarily assigning different conditions of food possession to the members of the group. Initially, a wide variety of

foods were distributed into 4 unequal piles: pile A includes the best food, and represents half of the total food available; pile B contains a variety of sufficient basic food, though in less quantity and of poorer quality, and represents a quarter of the food available; pile C has dry cookies, bread and water, and represents a quarter of the total food available; and pile D has only water. Group members are unequally distributed in 4 groups: group A, made up of 5 members, is given pile A; group B, with 10 members, is given pile B; group C, with 10 members, is given pile C, and group D, with 5 members, is given pile D. The teacher then explains that the distribution of resources symbolized by the different piles reflects the world perception of distribution of wealth and consumption, and tells participants that each group will only have at its disposal the pile of food assigned to it. This information generates excitement in the participants, and a debate begins in which the groups are asked to describe the food they have and the feelings they experience towards it. First, they express their feelings about belonging to that specific group; subsequently, they discuss the causes of the unequal distribution of wealth and reflect on possible solutions. At the end of the debate, all the food is put together in the middle of the classroom, the participants sit around it and a shared meal is organized. During the meal, the feelings experienced on sharing out the food equally are compared with those experienced in the previous phase.

## RESULTS

### *Effects of the program on the dependent variables*

With the aim of assessing the changes in the variables examined, means and standard deviations of each variable for experimental and control subjects were obtained with regard to pretest and posttest phases and the posttest-pretest difference (see Table 1). Furthermore, multivariate analyses of variance (MANOVA) were carried out. Where significant differences between experimental and control groups were found in the pretest, covariance analyses (MANCOVA) of the differences posttest-pretest were carried out by taking into account the existing differences. The MANOVA (Multivariate Pillai) jointly carried out for the 25 variables of the pretest phase revealed significant differences between the experimental and control groups,  $F(1,172)= 7.19$ ,  $p < .001$ . Using pretest scores as covariates, the MANCOVA results of the differences posttest-pretest were significant,  $F(1,172)= 2.98$ ,  $p < .001$ . The effect size was very large ( $\chi^2 = .372$ ,  $r = .60$ ). These results show that there are significant posttest-pretest differences between the experimental and control groups, a fact that reflects the positive effect of the program on social and personal development ( $p < .05$ ).

*Changes in friendly and prosocial intragroup relations:* With the data obtained in the pretest-posttest of the sociometric questionnaire, several analyses were carried out in order to identify the changes occurred over the school year with regard to intragroup relations or peer acceptance relationships. The MANOVA (Multivariate Pillai) jointly carried out for the 4 variables of the pretest phase revealed significant differences between the experimental and control groups,  $F(1,172)= 33.76$ ,  $p < .001$ . The MANCOVA results of the differences posttest-pretest were significant, taking into account pretest

*Table 1.* Means and Standard Deviations in experimental and control groups in the pretest, posttest phase and in the posttest-pretest difference for all the variables.

| Variables                    | Experimental Group<br>(n = 125) |      |          |      |                                |      | Control Group<br>(n = 49) |      |          |      |                                |  |
|------------------------------|---------------------------------|------|----------|------|--------------------------------|------|---------------------------|------|----------|------|--------------------------------|--|
|                              | Pretest                         |      | Posttest |      | Posttest-Pretest<br>Difference |      | Pretest                   |      | Posttest |      | Posttest-Pretest<br>Difference |  |
|                              | M                               | SD   | M        | SD   | M                              | SD   | M                         | SD   | M        | SD   | M                              |  |
| Choice of friend **          | 5.89                            | 3.99 | 7.90     | 4.68 | 2.01                           | 3.53 | 3.69                      | 2.01 | 4.73     | 3.28 | 1.04                           |  |
| Rejection of friend          | 2.06                            | 3.32 | 2.31     | 3.61 | 0.25                           | 2.59 | 2.80                      | 2.89 | 2.98     | 4.24 | 0.18                           |  |
| Prosocial classmate ***      | 6.89                            | 4.18 | 11.07    | 5.84 | 4.18                           | 5.87 | 9.10                      | 3.63 | 8.14     | 4.82 | -0.96                          |  |
| Non-prosocial classmate      | 2.35                            | 3.29 | 2.98     | 3.90 | 0.63                           | 2.57 | 4.61                      | 3.69 | 4.39     | 5.28 | -0.22                          |  |
| Positive cognitions ***      | 7.47                            | 3.08 | 11.38    | 5.09 | 3.91                           | 4.80 | 6.77                      | 3.63 | 6.57     | 2.99 | -0.27                          |  |
| Negative cognitions ***      | 6.33                            | 3.38 | 5.33     | 3.24 | -1.00                          | 3.42 | 6.08                      | 3.29 | 7.41     | 3.74 | 1.46                           |  |
| Neutral cognitions ***       | 6.23                            | 3.86 | 10.38    | 5.41 | 4.14                           | 4.99 | 7.27                      | 3.70 | 6.67     | 3.29 | -0.63                          |  |
| Fluency of ideas ***         | 20.03                           | 2.68 | 27.09    | 7.69 | 7.06                           | 7.96 | 20.15                     | 2.88 | 20.65    | 3.79 | 0.54                           |  |
| Consideration for others *** | 12.37                           | 1.74 | 13.06    | 0.84 | 0.70                           | 1.77 | 13.02                     | 1.35 | 12.55    | 1.74 | -0.47                          |  |
| Self-control                 | 10.48                           | 2.41 | 10.22    | 2.68 | -0.26                          | 2.38 | 10.24                     | 2.79 | 10.04    | 3.16 | -0.20                          |  |
| Social isolation             | 0.66                            | 1.20 | 0.54     | 1.14 | -0.11                          | 1.19 | 1.02                      | 1.38 | 1.06     | 1.68 | 0.04                           |  |
| Anxiety-shyness              | 3.83                            | 2.54 | 3.47     | 2.88 | -0.36                          | 2.58 | 3.82                      | 2.83 | 3.73     | 3.25 | -0.09                          |  |
| Leadership                   | 5.14                            | 2.19 | 5.54     | 2.53 | 0.40                           | 2.33 | 6.47                      | 2.05 | 5.92     | 1.91 | -0.55                          |  |
| School problems              | 5.16                            | 5.09 | 5.51     | 5.32 | 0.42                           | 3.17 | 6.70                      | 5.57 | 6.22     | 5.43 | -0.43                          |  |
| Antisocial behavior +        | 6.71                            | 4.29 | 5.48     | 4.16 | -1.17                          | 3.54 | 5.91                      | 4.80 | 5.67     | 4.50 | -0.02                          |  |
| Shyness-isolation            | 7.38                            | 3.91 | 5.93     | 3.65 | -1.50                          | 3.24 | 8.47                      | 5.03 | 7.78     | 4.86 | -0.72                          |  |
| Psychopathological problems  | 3.60                            | 3.14 | 2.69     | 3.05 | -0.97                          | 2.58 | 4.09                      | 2.90 | 3.41     | 3.33 | -0.72                          |  |
| Anxiety problems             | 5.59                            | 2.85 | 4.57     | 2.48 | -1.03                          | 2.21 | 6.40                      | 3.63 | 5.55     | 3.10 | -0.89                          |  |
| Psychosomatic problems       | 1.30                            | 2.30 | 1.18     | 2.09 | -0.11                          | 1.56 | 1.74                      | 2.14 | 1.57     | 2.00 | -0.15                          |  |
| Antisocial behavior ***      | 8.82                            | 5.00 | 11.06    | 5.77 | 2.23                           | 4.56 | 7.71                      | 6.92 | 13.21    | 9.92 | 5.38                           |  |
| Academic self-concept +      | 24.25                           | 2.71 | 24.84    | 2.77 | 0.59                           | 2.42 | 24.29                     | 2.84 | 24.18    | 3.26 | -0.10                          |  |
| Social self-concept *        | 13.31                           | 1.59 | 13.72    | 1.50 | 0.41                           | 1.66 | 13.57                     | 1.57 | 13.31    | 1.60 | -0.27                          |  |
| Emotional self-concept       | 17.73                           | 2.67 | 18.36    | 2.60 | 0.63                           | 2.63 | 17.14                     | 3.45 | 18.02    | 2.88 | 0.88                           |  |
| Family self-concept          | 15.34                           | 1.63 | 15.30    | 1.67 | -0.04                          | 1.86 | 15.55                     | 1.81 | 15.73    | 2.05 | 0.18                           |  |
| Total self-concept           | 70.62                           | 5.33 | 72.22    | 4.99 | 1.59                           | 5.01 | 70.55                     | 5.86 | 71.24    | 7.08 | 0.69                           |  |

+  $p < .09$  \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

differences,  $F(1,172) = 4.31$ ,  $p < .005$ . The effect size was large ( $\chi^2 = .095$ ,  $r = .31$ ). These results show that there are significant posttest-pretest differences between the experimental and control groups, a fact that reflects the positive effect of the program on friendly and prosocial intragroup relations. The results of the ANCOVA confirm that posttest-pretest differences were significant with regard to choice of a friend,  $F(1,172) = 6.03$ ,  $p < .01$ , and of a prosocial classmate  $F(1,172) = 21.15$ ,  $p < .001$ . Comparing the change in the experimental and control subjects means (see Table 1) it can be observed that, with respect to choice of a friend, experimental subjects increase their group mean score ( $M = 2.01$ ), while control subjects increase their score by a half as much ( $M = 1.04$ ). In choice of a prosocial classmate, experimental subjects show a high increase ( $M = 4.18$ ) compared to control subjects, who actually decrease ( $M = -0.96$ ). These results show that the program has had a positive effect, as it has stimulated: (a) an increase in the number of classmates considered as friends, that is, an increase in friendship relations within the group; and (b) a significant increase in the number of classmates considered as prosocial, that is, there is an improvement in the image of classmates, who are regarded as people that help, share and collaborate.

*Changes in prejudiced cognitions:* With the data obtained in the FIEP, pretest-

posttest changes were analyzed in relation to cognitions towards various socio-cultural groups. The MANOVA (Multivariate Pillai) results show that there were no significant differences between experimental and control groups with regard to the cognitions in the pretest phase,  $F(1,172)= 1.55$ ,  $p> .05$ . However, the MANCOVA of the difference of posttest-pretest means between the experimental and control groups were significant,  $F(1,172)= 25.52$ ,  $p< .001$ . Effect size was very large ( $\chi^2= .313$ ,  $r= .56$ ). Variance analysis (ANOVA) shows that, in the pretest phase, there were no significant differences between conditions with regard to the positive cognitions variable,  $F(1,172)= 1.62$ ,  $p> .05$ , to the negative-prejudiced cognitions,  $F(1,172)= 0.18$ ,  $p> .05$ , to the neutral cognitions,  $F(1,172)= 2.57$ ,  $p> .05$ , and to fluency of ideas,  $F(1,172)= 0.06$ ,  $p> .05$ . Nevertheless, posttest-pretest differences were significant with regard to positive cognitions,  $F(1,172)= 30.85$ ,  $p< .001$ , negative cognitions,  $F(1,172)= 16.27$ ,  $p< .001$ , neutral cognitions,  $F(1,172)= 34.95$ ,  $p< .001$ , and fluency of ideas,  $F(1,172)= 28.92$ ,  $p< .001$ . Comparing the changes occurring in the group mean (see Table 1), we observe that: (a) with regard to positive cognitions, experimental subjects increase their mean score ( $M= 3.91$ ), whereas control subjects slightly decrease theirs ( $M= -0.27$ ); (b) with regard to negative or prejudiced cognitions, experimental subjects decrease their mean score ( $M= -1$ ), whereas control subjects show an increase ( $M= 1.46$ ); (c) with regard to neutral cognitions, experimental subjects increase their mean score ( $M= 4.14$ ) and control subjects decrease theirs ( $M= -0.63$ ); and (d) with regard to fluency of ideas or number of ideas expressed, experimental subjects present a significant increase ( $M= 7.06$ ) compared to control subjects, whose increase is much lower ( $M= 0.54$ ). These data show that the control group mean decreases with regard to positive and neutral cognitions and increases with regard to prejudiced cognitions. However, the experimental group increases its positive and neutral cognitions, as well as its fluency of ideas, and decreases its prejudiced cognitions. The results obtained reveal that the program produced a significant positive effect on the prejudices assessed at a cognitive level. The adolescents participating in the program: (a) increased the number of sentences with positive emotional content towards other socio-cultural groups (they are good at sport, they dance well, they are nice, I like them); (b) decreased the number of sentences with negative emotional content full of prejudices and rejection (they steal, they shouldn't exist, I hate them, they shouldn't be allowed to leave their country); (c) increased the number of sentences with neutral emotional content, in which the social group is more objectively defined (they speak Spanish, they belong to the EU); and (d) increased the number of ideas expressed in the task, a fact that may be related to the greater availability of information and knowledge of the socio-cultural groups studied after carrying out the program.

*Changes in social behaviors:* With the pretest-posttest data obtained with the BAS-3 socialization scale, changes in various social behaviors among peers were analyzed. The pretest MANOVA (Multivariate Pillai) results reveal that there were significant differences between experimental and control subjects,  $F(1,172)= 4.16$ ,  $p< .001$ . A MANCOVA of the posttest-pretest differences was carried out, taking into account the existing differences, and the results confirmed that the posttest-pretest differences in experimental and control subjects were significant,  $F(1,172)= 2.86$ ,  $p< .02$ . Effect size was large ( $\chi^2= .081$ ,  $r= .28$ ). Results of the ANOVA reveal that, in the pretest phase,

there were significant differences between experimental and control subjects with regard to behaviors of consideration for others,  $F(1,172)= 5.57, p < .01$ , and leadership behaviors,  $F(1,172) = 13.30, p < .001$ . The ANCOVAs of the posttest-pretest differences only confirmed significant posttest-pretest differences in the consideration for others variable,  $F(1,172)= 11.96, p < .001$ . Comparing the change in experimental and control subjects (see Table 1), it can be observed that, with regard to behaviors of consideration for others, experimental subjects significantly increase their mean score ( $M= 0.70$ ), whereas control subjects' mean score actually decreases ( $M= -0.47$ ). These data suggest a positive effect of the program, since the experimental adolescents significantly increased their behaviors of social awareness, concern and consideration for their classmates.

*Changes in behavioral problems:* The results of the MANOVA (Multivariate Pillai) for the series of behavioral problems assessed by parents through the EPC scale show that, in the pretest phase, there were no significant differences between experimental and control subjects,  $F(1,172)= 1.76, p > .05$ . Neither were the MANCOVA results of the posttest-pretest differences significant,  $F(1,172)= 1.44, p > .05$ . The ANOVA results confirm that, in the pretest phase, there were no significant differences between the two conditions with regard to any of the behavioral problems assessed by parents. Posttest-pretest differences were only significant with respect to antisocial behavior,  $F(1,172)= 3.42, p < .06$ . Comparing the change in antisocial behavior (see Table 1), experimental subjects significantly decreased their group mean ( $M= -1.17$ ), whereas control subjects' mean hardly varied ( $M= -0.02$ ). The results suggest that, according to the parents, the intervention program had a significant positive impact on the decrease in antisocial behaviors that can be categorized as aggressive (they argue a lot, they break others' things) and on other behaviors that are not aggressive but can make appropriate social relations difficult (he/she has sudden changes of mood, he/she is stubborn and irritable, he/she lies, he/she disobeys). Nevertheless, the program did not affect the remaining behavioral problems assessed.

*Changes in antisocial behavior:* In order to confirm the effects of the program on antisocial behavior, an analysis of the pretest-posttest data obtained with the self-report antisocial behavior scale (ASB) was carried out. The ANOVA results show that there were no significant differences between experimental and control groups in the pretest phase,  $F(1,172)= 1.38, p > .05$ , although the posttest-pretest differences were significant,  $F(1,172)= 12.22, p < .001$ . Effect size was medium ( $\chi^2 = .067, r = .26$ ). If we compare the change in the two conditions (see Table 1), it can be observed that experimental subjects increase their mean score ( $M= 2.23$ ), and that control subjects increase it much more ( $M= 5.38$ ). Even though an increase in antisocial behaviors was not expected in any of the conditions, this rise may reveal that there is a tendency for such behaviors to increase during early adolescence. The data suggest that the program had a significant positive effect, on antisocial behaviors such as lying, falsifying grades, breaking objects, hitting, smoking, drinking, etc, preventing greater increases in them.

*Changes in self-concept:* With the data obtained in the pretest-posttest administration of the self-report AFA, various analyses were carried out in order to assess the changes in this variable. The MANOVA (Multivariate Pillais) jointly carried out for the 5 variables of the pretest phase revealed no significant differences between the experimen-

tal and control groups,  $F(1,172) = 0.74$ ,  $p > .05$ . The posttest results,  $F(1,172) = 2.41$ ,  $p < .05$ , and the posttest-pretest differences between the two conditions were significant for all the variables,  $F(1,172) = 2.32$ ,  $p < .05$ . Effect size was medium ( $\chi^2 = .052$ ,  $r = .23$ ). These results show that there are significant posttest-pretest differences between the experimental and control groups, a fact that reflects the positive effect of the program on self-concept. The ANOVA results confirm that there were no pretest differences between experimental and control subjects with regard to global self-concept,  $F(1,172) = 0.006$ ,  $p > .05$ , or any of the dimensions of self-concept: academic,  $F(1,172) = 0.007$ ,  $p > .05$ , social,  $F(1,172) = 0.94$ ,  $p > .05$ , emotional,  $F(1,172) = 1.42$ ,  $p > .05$ , family,  $F(1,172) = 0.57$ ,  $p > .05$ . Nevertheless, posttest-pretest differences were significant with regard to social self-concept,  $F(1,172) = 6.13$ ,  $p < .01$ , and tendentially significant with regard to academic self-concept,  $F(1,172) = 2.87$ ,  $p < .09$ . A comparison of the degree of change occurring (see Table 1) shows that experimental subjects present an increase in their social self-concept score ( $M = 0.41$ ), whereas control subjects present a decrease ( $M = -0.27$ ). These results suggest that the program had a significant positive effect on social self-concept, which was one of the aspects on which it concentrated.

In sum, the analyses of variance showed significant differences for 11 of the measured variables. The MANCOVA of the posttest-pretest differences carried out for these 11 variables using pretest scores as covariates revealed significant differences between the experimental and control groups,  $F(1,172) = 6.80$ ,  $p < .001$ . Effect size was very large ( $\chi^2 = .324$ ,  $r = .56$ ). The adjustment for multiple comparisons (Bonferroni) and the T-test carried out showed the same significant variables. All the analyses confirmed the program's effects in these 11 variables.

### *Changes in subjects with low development*

One hypothesis of the study suggests that the program stimulates a significant improvement in subjects that presented developmental difficulties before the intervention. Thus, subjects were initially classified according to their pretest score in the dependent variables, in order to analyze to which experimental subjects the program was most effective. Using the pretest scores, subjects were classified in three profiles: (a) profile 1 (P1) includes subjects that obtained low direct scores in all variables, that is, those corresponding to a percentile lower than 25; (b) profile 2 (P2) includes those that obtained direct scores in the pretest corresponding to percentiles between 25 and 75; and (c) profile 3 (P3) refers to subjects that obtained direct scores corresponding to percentiles over 75. Subsequently, in relation to the 11 variables in which significantly positive effects of the program were found, the differences in posttest-pretest means were calculated according to the profile (see Table 2), and variance analyses were carried out in order to assess the change in each profile (P1, P2, P3).

*Choice of a friend and a prosocial classmate:* The ANOVA results for posttest-pretest differences with regard to choice of a friend were significant,  $F = 3.65$ ,  $p < .05$ . The data show a significant improvement both in subjects of P1 (low), that is, those that had scarcely been chosen as friends by their classmates before the intervention was carried out ( $M = 2.61$ ), and subjects of P2, those frequently moderate chosen as friends

by their classmates ( $M= 2.60$ ), compared to subjects of P3, those very frequently

Table 2. Posttest-pretest Differences Means and Standard Deviations in each profile and condition for the variables which program had significant effects

| Variables                                | Profile 1    |           |          |           | Profile 2    |           |          |           | Profile 3    |           |          |           |
|--|--------------|-----------|----------|-----------|--------------|-----------|----------|-----------|--------------|-----------|----------|-----------|
|  | Experimental |           | Control  |           | Experimental |           | Control  |           | Experimental |           | Control  |           |
|  | <i>M</i>     | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i>     | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i>     | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Choice of friend *                       | 2.61         | 2.82      | 0.96     | 2.74      | 2.60         | 2.75      | 1.08     | 3.16      | 0.79         | 4.61      | 1.50     | 2.12      |
| Prosocial classmate ***                  | 5.93         | 5.02      | 0.60     | 4.34      | 4.83         | 5.38      | -0.57    | 4.78      | -0.59        | 6.20      | -2.13    | 3.07      |
| Positive cognitions                      | 5.21         | 3.75      | 2.28     | 2.78      | 3.83         | 4.80      | -1.20    | 2.28      | 2.14         | 5.78      | -3.00    | 2.83      |
| Negative cognitions ***                  | 0.66         | 2.76      | 3.17     | 3.63      | -0.79        | 2.88      | 1.60     | 3.68      | -3.74        | 3.59      | -1.90    | 3.41      |
| Neutral cognitions **                    | 5.61         | 4.72      | 4.43     | 3.31      | 4.44         | 4.74      | -0.29    | 3.02      | 1.80         | 5.10      | -4.00    | 3.38      |
| Fluency of ideas                         | 8.39         | 8.41      | 1.25     | 1.14      | 7.33         | 7.90      | 1.76     | 4.15      | 4.93         | 7.42      | -2.20    | 4.37      |
| Consideration for others ***             | 2.54         | 1.87      | 4.86     | 1.55      | 0.55         | 1.01      | -5.26    | 1.47      | -0.77        | 0.67      | -0.92    | 1.32      |
| Antisocial behaviors (parents) ***       | 0.71         | 2.33      | 0.86     | 2.35      | -1.44        | 3.22      | 6.90     | 2.81      | -3.83        | 4.62      | -5.33    | 3.51      |
| Antisocial behaviors (self-evaluation) * | 4.27         | 3.64      | 5.68     | 5.09      | 1.91         | 4.4       | 4.78     | 6.25      | 0.40         | 5.43      | 5.82     | 9.37      |
| Social self-concept ***                  | 2.38         | 1.63      | 1.80     | 2.28      | 0.40         | 1.64      | -0.26    | 1.13      | -0.50        | 0.66      | -0.88    | 1.22      |

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

chosen as friends in the pretest ( $M = 0.79$ ). With respect to choice of prosocial classmate, ANOVA results for posttest-pretest differences in experimental subjects from different profiles were significant,  $F= 11.21$ ,  $p < .001$ . A significant improvement was observed both in subjects of P1, that is, those that had hardly been chosen as prosocial by their classmates before the intervention ( $M= 5.93$ ), and those of P2 ( $M= 4.83$ ), compared to subjects of P3 ( $M= -0.59$ ). The results suggest that the program stimulated an increase the number of classmates considered as friends and as prosocial, particularly with regard to those that had scarcely or only moderately often been chosen or nominated as friends or prosocial classmates in the pretest.

*Cognitions about other socio-cultural groups:* In relation to positive cognitions, the ANOVA results for posttest-pretest differences in experimental subjects assigned to different profiles were not significant,  $F= 2.75$ ,  $p > .05$ . With respect to negative cognitions, ANOVA results for posttest-pretest differences in experimental subjects assigned to different profiles were significant,  $F= 17.50$ ,  $p < .001$ . It was confirmed that those with P3 in the pretest, that is, those who expressed many negative cognitions in relation to other socio-cultural groups, experienced the greatest improvement, since they reduced the use of such expressions ( $M= -3.74$ ) to a greater extent than those included in P2 ( $M= -0.79$ ), or in P1 ( $M= 0.66$ ). These data indicate that the program significantly decreased prejudiced cognitions, particularly in adolescents who were quite prejudiced in the pretest. With regard to neutral cognitions, the ANOVA results for posttest-pretest differences were significant,  $F= 5.32$ ,  $p < .01$ . A significant increase was confirmed both in subjects of P1 ( $M= 5.61$ ), that is, those who had few neutral cognitions before the program started, and in those of P2 ( $M= 4.44$ ), who showed a medium level with regard to this kind of *a priori* cognitions. In relation to experimental subjects of P3, even though they presented many neutral cognitions, and the program increased them ( $M = 1.80$ ), this increase was significantly lower. Thus, a significant increase in neutral cognitions was observed in experimental subjects that, *a priori*, had low or medium

scores in this variable. With regard to fluency of ideas the ANOVA results for the posttest-pretest differences were not significant,  $F= 1.48, p> .05$ .

*Behaviors of consideration for others:* The ANOVA for the posttest-pretest differences of the experimental subjects of different profiles were significant,  $F= 66.88, p< .001$ . Significant differences were observed among the three profiles. Experimental subjects of P1, who presented few behaviors of consideration for others in the pretest phase, experienced the greatest increase in such behaviors due to the effects of the program ( $M= 2.54$ ). Those of profile 2 also showed an increase ( $M= 0.55$ ), contrary to experimental subjects of profile 3, who decreased in this kind of behavior ( $M= -0.77$ ). The data suggest that experimental subjects with the highest increase were those who, a priori, showed few behaviors of consideration for others.

*Antisocial behavior:* The ANOVA for the posttest-pretest differences in experimental subjects of different profiles with regard to antisocial behaviors assessed by parents were significant,  $F= 12.20, p< .001$ . Experimental subjects of P3 that presented many antisocial behaviors in the pretest phase showed a significantly greater decrease ( $M= -3.83$ ) than those of P2, who, a priori, had a medium level of antisocial behaviors ( $M= -1.44$ ) or more than the P1 subjects ( $M= 0.71$ ). With respect to self-assessed antisocial behavior, the ANOVA results for the posttest-pretest differences were also significant,  $F= 4.16, p< .05$ . Antisocial behavior increased more in subjects of P1 who presented very few antisocial behaviors a priori ( $M= 4.27$ ), than in those of P2 ( $M= 1.78$ ), and P3 ( $M= 0.63$ ). These data suggest that adolescents of profile 3 who, a priori, presented many antisocial behaviors, were those that showed the smallest increase.

*Social self-concept:* The ANOVA for the posttest-pretest differences from different profiles were significant,  $F= 21.75, p< .001$ . Adolescents of P1, who showed low social self-concept in the pretest phase, changed most significantly as a result of the program ( $M= 2.38$ ), compared to those of P2 ( $M= 0.40$ ) and those of P3 ( $M= -0.50$ ). These results suggest that the experimental subjects who experienced the greatest change were those that had low social self-concept before starting the program.

To sum up, the results obtained suggest that the program had a significant positive effect on the experimental subjects who before the intervention: (a) were scarcely chosen as friends and as prosocial by their classmates, that is, they suffered low acceptance in the peer group; (b) showed many negative or prejudiced cognitions in relation to various socio-cultural groups and expressed few neutral cognitions; (c) presented few behaviors of consideration for others and many antisocial behaviors; and (d) had low social self-concept. These data suggest that this experience proved to be particularly positive for the adolescents who, before the intervention, had some developmental problems.

## DISCUSSION

The results show that the program had a positive effect, since it stimulated several significative changes in different personal and social development variables. Firstly, it was confirmed that there was an improvement in friendly and prosocial intragroup relations, which was highlighted in an increase in the number of classmates

chosen as friends, as well as an important increase in the number of classmates considered as prosocial; that is, there has been an improvement in the image of the classmates, who were considered as friendly people that help, share and collaborate. Thus, there was a significant increase in the nominations of experimental subjects by their peers, that is, the program increased peer acceptance relationships. Secondly, it was demonstrated a decrease in prejudices, through the observation of an increase in positive cognitions towards other socio-cultural groups, a decrease in prejudiced cognitions, an increase in neutral cognitions (which offer more objective definitions of the group) and an increase in the number of ideas offered during the task. Furthermore, from a qualitative perspective, a change is observed in that experimental subjects move from formulating categorical, generalized and prejudiced statements to a greater relativization about other socio-cultural groups, which avoids generalization.

From a behavioral point of view, there was also observed an increase in social behaviors of consideration for others and behaviors of social awareness or concern for others, as well as a significant impact of the program on antisocial behavior, which refers to aggressive behaviors and other behaviors that are not aggressive but make social relations difficult. Even though parents reported a significant decrease in antisocial behaviors in experimental subjects, the self-assessment shows only a smaller increase in these behaviors in experimental subjects as compared to control subjects. These discrepancies may be due to the fact that some of the antisocial behaviors of the ASB do not appear in situations in which parents can observe their sons/daughters (smoking, drinking, breaking objects or other types of rules infringement). Nevertheless, the fact that the impact on antisocial behaviors was significant both in the assessment by the parents and in the self-assessment suggests a positive effect of the program on these kinds of behaviors.

Finally, an increase in social self-concept was confirmed. Future research needs to examine the causal connection between changes occurring in self-esteem and other areas of adjustment, to assess intervention success for different ethnic groups and for children of different ages and sex, and to determine the long-term impact of interventions. Furthermore, the results suggest that the program stimulated a significant positive effect in experimental subjects who in the pretest phase were scarcely chosen as friends and as prosocial classmates, had many prejudiced cognitions and few neutral cognitions, showed few behaviors of consideration for others and many antisocial behaviors, and had a low social self-concept. The data suggest that the experience of the intervention was particularly positive for those adolescents who, beforehand, had had some developmental difficulties.

As it can be seen, the program had a positive influence, stimulating changes in cognitive variables (prejudices), relational variables (friendship and prosocial behavior) and personality variables (social self-concept). It also had a positive effect at behavioral level (antisocial behavior, behaviors of have regards for others), but these changes were of less magnitude. Moreover, the main influence of the program seems to have been the increase of positive behaviors, while with regard to various negative behaviors (rejection of friends, social behaviors of shyness and anxiety, psychopathological problems, psychosomatic problems, etc.) the program did not have a statistically significant effect.

A possible explanation of this absence of results is that, in order to produce more behavioral changes, it would be necessary to implement the program during a longer period of time. Nevertheless, it may be that the program does not have a significant effect in the case of serious problems, such as psychopathological disorders, regardless period of time during which it is administered. Thus, the results suggest the need to carrying out an evaluation of the program after its implementation for a two-years period.

These data validate the effectiveness of the program with regard to the factors related to personal and social development, and point in the same direction as other studies (Bijstra & Jackson, 1998; Boulton & Smith, 1996; Buckmaster, 1994; Bukowsky et al., 1998; Garaigordobil, 1992, 1996a, 1999; Gibbs, et al. 1996; Haney & Durlak, 1998; Johnson & Johnson, 2000; Putman et al., 1996; Roberts, 1997; Slavin & Cooper 1999; Stephan, 1999; Stephan & Finlay, 1999; Vernon, 1998) that highlight the positive effects of this kind of experience that combines various techniques of group dynamics in the context of activities in order to stimulate communication, empathy, cooperation, self-confidence and confidence in others, respect for differences, etc. This study has some implications for groups in educational environments, and reveals that the experience designed may facilitate personality development during adolescence and may be preventive. Furthermore, the results of the study suggest that positive peer interaction may play a vital role with regard to behavioral and cognitive variables of adolescents' development, and support the theories that emphasize the value of this kind of interaction for human development.

The results suggest a positive effect of the program, and raise questions about the factors that may have been most relevant in the change stimulated by the program itself. The impact on dependent variables may be associated with the program activities, since these activities stimulate: (a) friendly interaction among the members of the group, with many of them involving processes of intragroup help and cooperation; (b) identification and neutralization of discriminatory attitudes towards other people and human groups; (c) reflection upon the impact of prosocial and antisocial behavior on others, suggesting cognitive assertive strategies of expression of aggressiveness; and (d) identification of positive characteristics of group members.

On the bases of observation, three factors can be indicated as having promoted change: (a) the very structural characteristics of the activities of the program, which generate situations of respectful communication and cooperative interaction; (b) the important metacognitive value of the phase of debate and discussion following each activity; and (c) the socio-personal characteristics of the adult that leads the intervention. These observations suggest that the program can reach higher levels of effectiveness when led by a tolerant, respectful, communicative adult who does not express value judgments and who has the ability to observe and to understand the complex world of interpersonal relations that exist within the group and who is able to arbitrate situations of conflict among humans.

In the training course that the teachers who would implement the program received were included instructions or methodological suggestions related to their role in the guidance of the intervention sessions, such as: to show a tolerant attitude, to be a model of respectful communication, to do not express value judgments, to observe and reflect

upon the interactions and emotions expressed by the group, and so on. In this study there was no analysis of the relationship between the characteristics of the teacher's personality or behavior and the effects of the program in his/her group, and this could be seen as a limitation of the work. However, the systematic observation of numerous sessions directed by different adults allows us to suggest the importance of this variable, and of some of the characteristics mentioned above that have shown to facilitate the guidance of the intervention sessions.

The work presented here contributes to understanding how to link theory and research to effective strategies for positive change with this age group. The research carried out provides a psycho-educational tool and a methodological model for assessing programs, but it is not free of limitations. In general, this kind of study has a number of limitations, given the appearance of many variables that are difficult to control. The results of the assessment of a program may be affected by personal, social and motivational characteristics of the individuals involved, by the scientific guarantees of the assessment instruments, by the standardization of the procedure used for data collection, etc. Although this study has taken into account such variables, further research will permit the replication of the results obtained or the identification of new perspectives.

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