

# Community intervention: assessment of parental training of a family prevention programme of substance use and associated risk behaviours\*

## Intervención comunitaria: evaluación de la formación de los padres de un programa de prevención familiar de consumo de sustancias y comportamientos de riesgo asociados

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### ABSTRACT

The manuscript presents the results of a family and community intervention project to prevent drug use. The project was theoretically based in two integrative models - Structural Model of Cowen and Eco-Developmental Model - taking a multicausal perspective and the methodological principle of empowerment. This study had two assessment moments: (T1) a week before the intervention and (T2) a week after the end of the intervention. Data was collected from 42 adults with parenting responsibilities and the results indicate significant changes in the increase of cohesion, expressivity, control, and the increase of the orientation for recreational activities. It has also observed a decrease of the educational strategies that characterise the authoritarian and permissive styles.

### Keywords

community intervention; drug addiction; parental skills; prevention

### RESUMEN

El manuscrito presenta los resultados de un proyecto familiar de intervención comunitaria de prevención del consumo de drogas. El proyecto se basa en dos modelos de integración: modelo estructural de Cowen y modelo ecodesarrollo, adoptando una perspectiva multicausal y guiándose por el principio metodológico de empoderamiento. Este estudio tuvo dos momentos de evaluación: (T1) una semana antes de

la intervención y (T2) una semana después del final de la intervención. Se presentan los datos reunidos de 42 adultos con responsabilidades parentales y los resultados indican cambios significativos en el ámbito familiar en el aumento de la cohesión, expresividad, el control y de la orientación de las actividades recreativas. También se observa una disminución de las estrategias educativas que caracterizan los estilos autoritarios y permisivos.

**Palabras clave**

consumo de drogas; competencias parentales; intervención comunitaria; prevención

According to the World Health Organization [WHO] (2012), the use and abuse of substances continues to be a serious health problem in developed countries, being responsible for 31% of all deaths and 25% of life years potentially lost (WHO, 2012). This is a serious problem if we also consider the fact that high prevalence of consumption is observed in very precocious ages. According to the data from the European School Survey Project on Alcohol and Other Drugs (ESPAD; Hibell et al., 2012), among the European youngsters and students between the ages of 15-16 that participated in this research, an average of 28% used tobacco and 2% of all students had smoked a pack of cigarettes a day, during the past 30 days. It is important to stress that 7% of the students said they would smoke daily since they were 13 years old. Furthermore, 57% had drunk alcohol and 43% of the students described episodes of drinking excessively during the past 30 days. Finally, 21% of the boys and 15% of the girls had used illicit drugs at least once in their lives, and 13% of the students affirmed that they had used marijuana or hashish during the past 12 months.

Among other measures, the implementation of prevention strategies in increasingly early stages of the initiation of the consumption becomes urgent, considering the scientific evidence that tobacco, alcohol, and cannabis experimentation before the age of 15 is associated with the increase of the risks either on the social level or the psychological one (European Monitoring Centre for Drugs and Drug Addiction [EMCDDA], 2007). Moreover, the earlier the beginning of consumption, the

stronger is the probability for the evolution of the process of drug use to drug addiction (Grant, Stinson, & Herford, 2001).

Nevertheless, these courses are not linear and are dependent on various factors that can decrease or potentiate the probability of the use and/or abuse of psychoactive substances, normatively denominated as protective factors and risk factors (Bonino, Cattelino, & Ciairano, 2005; Hawkins, Catalano, & Arthur, 2002).

Several studies emphasize the role of the family, as the main context in the primary development, as a source of protective and risk factors in the lives of children and adolescents (Fergus & Zimmerman, 2005; Nation & Helflinger, 2006; Schenker & Minayo, 2005; Simões, Matos, & Batista-Foguet, 2008; Toumbourou, 2001; Weitoft, Hjern, Haglund, & Rosén, 2003). At this level, studies have mentioned that the family structure, the quality of the established relations, patterns of communication, as well as the disciplinary practice, are related with the consumption of psychoactive substances (Camacho, Matos, & Diniz, 2008; Fergus & Zimmerman, 2005; Moreira, 2005; Schenker & Minayo).

Regarding the quality of the family relations, the absence of investment in the bonds that unite parents and children, the insufficient maternal involvement, poor affection and intimacy manifestations, inadequate expectations relative to the behavior expected for the age of the children, and family conflicts with no negotiation outcome, are the main pointed risk factors. Regarding the disciplinary and educational practice, it is observed that an inadequate parental monitoring, difficulties in establishing limits, the tendency to overprotection, inconsistent or coercible disciplinary practice, and other practices that characterize the authoritarian (excessive control by the emphasis in obedience to aggressive norms and punishments), and permissive (low levels of demands, motorisation, and punishment of the children's behaviours) educational styles, are associated with a bigger consumption of substances (Fergus & Zimmerman, 2005; Magalhães & Fonte, 2007; Moreira, 2005;

Schenker & Minayo, 2005). The use of substances by the parents is also a risk factor for substance abuse by the adolescents (Fergus & Zimmerman, 2005).

On the other hand, it has been identified as protective factors: the presence of strong family bonds and positive parents-children relationships, support in the process of acquisition of autonomy by the adolescent, time-out strategies use, positive reinforcing, establishment of clear norms, good communication, support, and parental monitoring on the varied processes of the young person development (Fergus & Zimmerman, 2005; Paiva & Ronzani, 2009).

In this way, it is of extreme importance that the scientific and politic communities maintain, as a priority, the implementation of prevention programmes of drug addiction in family contexts, as well as the assessment of these programmes. On this level, we found several investigations that have identified some efficient preventive strategies (Ariza et al., 2013; Norberg, Kezelman, & Lim-Howe, 2013), and suggest that the involvement by parents and the community is positively associated with effective changes in the health behaviours of the minors (Busch, Leeuw, Harder, & Schrijvers, 2013). Several studies point out the following guidelines of the prevention programs: a) interventions at the family level; b) interactive programs that potentiate an active involvement and participation by the families of the children and youngsters, colleagues, teachers, and other technicians or key elements in the community; c) comprehensive and integrative prevention programs that include several intervention strategies and, finally, d) programs sensitive to the cultural and developmental specificities of the context and target population to intervene (Brounstein, Gardner & Backer., 2007; Nation et al., 2003; National Institute of Drug Abuse [NIDA], 2003; Simões et al., 2008).

It is on the base of this theoretical rationale that we intend to present part of the results of the assessment of a selective and indicated prevention project for drug abuse, implemented in the city of Oporto, Portugal. The Project,

under the denomination of Communitarian Strategies of Social Observation (ECOS - Estratégias Comunitárias de Observação Social, in Portuguese), aimed at the prevention of substance use and associated risk behaviours within families in a precarious social situation (such as parental unemployment or an unstable job, with children signaled in the juvenile justice mechanisms or with irregular school paths).

### Brief description of the project ECOS

Broadly speaking, the project sought to promote psychosocial competences by the various family elements (children, youngsters, and parents), in order to decrease the vulnerability of the children and youngsters in relation to the addictive behaviours and potentiate resilient developmental trajectories (Moreira, 2005). The project was theoretically based in two integrative models - Cowen's Structural Model (1982; 1986) and Felner, Silverman and Adix's Eco-Development Model (1991). These integrative models go beyond the individual level, immersing in ecological and communitarian notions (Tinoco, 2004). Thus, the various community settings, such as family, school, peer group, and other proximal entities were carefully analysed (Felner et al., 1991). Beyond this ecological and community dimension, Cowen's Structural Model (1982; 1986) predicts also another dimension set on an approach centered on the person and the acquisition of competences. Considering the individual dimension, the project also aimed to: promote specific competences on the emotional and social development of the children and adolescents; promote the adoption of adjusted disciplinary practices and parenting styles; stimulate positive affective relationships quality, generators of organization and autonomy. Regarding these goals, the project was based on a multicausal perspective, having as reference the social reality in question. Throughout the execution of the project ECOS, we were frequently adapting and improving the strategies used, guiding ourselves

by Albee and Kessler's methodological principle of empowerment (cit. in Cowen, 1986). We also favoured the integrated component of the intervention, conducting preventive strategies based upon a proximal articulation with several partner entities (with special emphasis on local juvenile justice system devices), in order to carry out an integrated intervention, promoting transversal and complementary intervention strategies.

The intervention was subdivided into 5 actions: (1) Individual and Family Support; (2) Parental Training; (3) Diversification of Cultural Experiences Programme; (4) Children's Group Intervention; and (5) Youngsters Group Intervention. Although the project ECOS was designed to offer intervention actions to all the members of the family system - parent, young children, and youngsters - the participation of the whole family was not compulsory. Thus, children attending the children's group intervention not necessarily had their parents in parental training, and vice versa. A complete description of the Project ECOS intervention is presented in the respective guiding manual (Rodrigues, Moura & Martinho, 2012).

Although the project has had a quite broader implementation, the present paper aims only to present the results of the participants of the second action mentioned, parental training. The general goal of the parental training was to increase in the adults of the families participating in the ECOS project the educational and relational competences to decrease risk factors and potentiate protective factors in the family context.

The parental training action was directed at parents/caretakers of minors, with whom it was intended to shape relevant dimensions for the personal development and for the practice of parenthood. Competencies, knowledge, and strategies of action-education were shaped. In a perspective of active participation, we carried out group sessions having in mind the joint construction of themes to focus on and strategies to implement, as well as the collection of interests and negotiation of activities. These sessions were the base for the construction of

the Prevention Programme for Parents (PPP), which was subsequently implemented. Within the PPP, we promoted debates, exercises, and group dynamics through active and participatory methodologies, starting from real situations. The activities mentioned above were executed through the following procedures: a) sessions for the survey of interests and needs; b) intervention sessions based on the Prevention Programme for Parents, with a weekly frequency; and c) articulation and collaboration with parent associations of the schools and other entities of the community. Additionally, under the intervention of project ECOS, a theatre group based on the Theatre of the Oppressed methodology intervention (Boal, 1999) was developed with some of the parents. This methodology consisted in the following phases: liberation of the body and exploration of their expressive and creative potential; exploration and dramatization of real life situations lived as oppressions by the individuals; sharing of impressions and reflection about the individual and group experiences; integration moments that mobilised the ability of observation, hearing the other and self-awareness and; recognition and social validation of the developed competences.

## Method

### *Specific Objectives*

Specifically, the objectives were the following: 1) promote an increase of the families' parental involvement in the life journey of their descendants; 2) increase parental monitoring and supervision; and 3) promote personal, social, and parental skills.

### *Participants*

Participants of this study were parents who were involved in the ECOS project. These parents were involved in the project due to one or several of the following reasons: children with school absenteeism or school dropout,

problematic behaviour of children in the school (e.g., aggressive behaviour, drug use), or family conflicts (e.g., difficulties in the relationships with children, intimate partner violence). All the participants experienced severe economic hardship or were unemployed. This paper reports the evaluation of the parental training action, and presents the data collected with the parents that participated in the two moments of evaluation - T1 pre-intervention, and T2 post-intervention. This target group was made of 42 participants, 33 of which (82.5%) are female. The average age of the participants was 40.86 (DP = 8.94) years old and about half of the sample (N = 19) were married or in a conjugal union, 9 were single, 10 were divorced and 1 participant was a widow. Thirty-nine of the participants (95.1%) attended the 4th, 6th, and 9th grades of the mandatory formal education; two participants did not attend any level of education and just other two completed the secondary education (12 years).

### Measures

Considering the wide intervention in the family system of the Project ECOS, as well as the intervention directed specifically to the parents, there were selected for the intervention assessment, 1) the Family Environment Scale from Moos & Moos (1986; cit in Gonçalves, 2006), and, 2) the Parenting Styles and Dimensions Questionnaire (PSDQ) (Robinson, Mandlco, Olsen & Hart, 2001).

*Family Environment Scale* (Moos & Moos, 1986; cit in Gonçalves, 2006, and in Matos & Fontaine, 1992). This instrument is based in the systemic perspective of the family, assessing elements of the Bronfenbrenner micro system, and has been largely used in the assessment of interventions in family therapy (Gonçalves, 2006). With the use of this scale, the family system to the level of the Relationship was assessed by the subscales of a) Cohesion - indicates the degree of commitment, help, and support the members of the family provide to each other; b) Expressiveness - indicates to

which point the members of the family are encouraged to act openly and express their feelings; and c) Conflict - indicates the quantity of quarrels, aggressions, and conflicts that are openly expressed between the family members. The Personal Growth dimension was assessed by the subscales of d) Independence - indicates up to what point the members of the family are assertive, self-sufficient, and make their own decisions; e) Achievement-Oriented - indicates up to what point some activities (such as school and work) are included in an orientation for success or competitive work; and f) Active-Recreational Orientation - indicates up to what point there is participation in social and recreational activities. Lastly, the dimension of Maintenance was also assessed by the subscales of g) Organization - indicates the degree of importance of a clear organization and structure in the planning of family activities; and h) Control - indicates up to what point sets of rules and procedures to manage family life are used. Each of these dimensions were assessed in a Likert's type scale, that varies between 1 (Disagree almost always) and 4 (Agree almost always). In the study conducted under the assessment of the project ECOS, the analysis of the psychometric qualities of the scales sought solely to verify the internal consistency of each subscale. Of this analysis, it was observed that the majority of the dimensions manifested dissatisfying values of internal consistency. The elimination of problematic items allowed that, with more reduced versions of the subscales, more adequate values of internal consistency to be obtained. The following values of the Cronbach's Alpha were observed, in the two assessment moments: Cohesion (5 items) - 0.83 and 0.90; Expressiveness (4 items) - 0.58 and 0.63; Conflict (5 items) - 0.72 and 0.83; Independence (3 items) - 0.57 and 0.70; Achievement-Oriented (4 items) - 0.62 and 0.69; Active-Recreational-Oriented (5 items) - 0.80 and 0.82; Organization (5 items) - 0.64 and 0.64; and Control (3 items) - 0.64 and 0.50. It was observed that, in some dimensions, the values of the internal consistency were low. These results may be due to the fact

that the scale had not been validated for a population with characteristics of the existent sample (people with an average age of 40 years, with reduced levels of schooling). Thus, these analyses are exploratory for the population in question, which justifies the lower values of internal consistency (Hair, Anderson, Tatham, & Black, 2005). Nevertheless, due to the pertinence in studying the different dimensions of the family environment, we opted to include all the dimensions in the analysis because they were all necessary for the assessment of the intervention's impact.

*Parenting Styles and Dimensions Questionnaire* (Robinson et al., 2001). The Parenting Styles and Dimensions Questionnaire aims to assess the parenting styles, based on Baumrind's Conceptual Model (1971). The scale operationalizes the parenting styles a) Authoritative (assessment of affection and involvement, argumentation and the democratic participation), b) Authoritarian (verbal hostility, physical punishment, and directivity), and c) Permissive (lack of disciplinary consistency, ignoring inadequate behaviour, and lack of self-confidence in the practice of discipline). Authoritative, Authoritarian, and Permissive styles were assessed in a Likert's type answer scale of 1 (Never) to 5 (Always). On the analysis of the psychometric qualities of the subscales, it was observed that the majority of the dimensions manifested unsatisfactory values of internal consistency. However, the use of reduced versions of the subscales, through the elimination of problematic items, allowed us to obtain more adequate values of internal consistency. We can observe the following values of Cronbach's Alpha, in the two assessment moments: Authoritative Style (12 items) - 0.83 and 0.86; Authoritarian Style (12 items) - 0.83 and 0.79; and Permissive Style (5 items) - 0.58 and 0.56. In the Permissive style low values of internal consistency are observed. Once more, this result could be related to the fact that the scale is not validated for the population with the characteristics of the sample (Hair, et al., 2005). Nevertheless, due to the pertinence in studying the different parenting styles, it was considered

the most adequate not to exclude this dimension of the analysis.

*Socio-demographic Questionnaire*. Used for the gathering of information referring to gender, age, marital status, and level of education.

### *Design*

The investigation, carried out in order to assess the intervention with the adult group with parental responsibilities, adopted an experimental design with a single group (with no control group). There were two assessment moments; the first (T1), before the intervention, and the second (T2), a week after the end of the intervention.

### *Procedure*

The gathering of the sample was carried out at the ADILO (Integrated Development Agency of Lordelo do Ouro). All participants in the Parental Training were invited to answer the questionnaires and informed that the questionnaire aimed to assess the intervention of the project ECOS. A full description of the Parental Training project can be found in the Project ECOS guiding manual (Rodrigues et al., 2012). Participants were informed that the filling up of the questionnaires was anonymous and confidential. To pair up the answers of the participants of the two assessment moments, a personal code was created. The researchers who carried out the gathering of data, external to the project, were graduated in Psychology and had professional experience in the area.

## **Results**

In order to assess the efficiency of the intervention, the evolution of the averages of the participants' results on the Family Environment Scale and the Parenting Styles and Dimensions Questionnaire was analysed. In order to assess the significance of the observed differences in the dimensions in the two assessment moments

(T1 and T2), the Student's *t* test for paired samples was used. To assess the magnitude of the intervention impact, the effect size was calculated by means of the calculation of the Cohen's *d* for paired samples (Cohen, 1988). The statistical analysis was carried out on the Statistical Package for Social Sciences (SPSS Inc., Chicago, IL), version 19.0. The average values obtained in the two moments of assessment - T1, pre-intervention, and T2, post-intervention - on the assessed dimensions, as well as the results of the *t* test for paired samples and the Cohen's *d* values (1988, 1992), to assess the size of the effect of the found differences are described below, and can be consulted on Table 1.

**TABLE 1**  
*Results of the Family Environment Scale and the Parenting Styles and Dimensions Questionnaire*

	n	T1		T2		<i>t</i> (gl)	<i>P</i>	<i>d</i> of Cohen
		M	(DP)	M	(DP)			
<i>Family Environment</i>								
Cohesion	41	3.05	(0.81)	3.35	(0.76)	-3.51 (40)	0**	0.55
Expressiveness	41	2.95	(0.69)	3.21	(0.65)	-4.05 (40)	0**	0.63
Conflict	41	2.10	(0.73)	1.91	(0.81)	1.90 (40)	0.06*	0.30
Independence	41	2.52	(0.89)	2.31	(0.89)	1.98 (40)	0.05*	0.31
Achievement-O.	41	3.45	(0.54)	3.42	(0.52)	0.34 (40)	0.73	
Active-Recreational-O.	41	3.03	(0.79)	3.35	(0.62)	-2.83 (40)	0.01*	0.44
Organization	41	3.15	(0.57)	3.22	(0.51)	-1 (40)	0.32	
Control	41	3.21	(0.68)	3.47	(0.60)	-2.72 (40)	0.01*	0.42
<i>Parental Styles</i>								
Authoritative	39	4.04	(0.68)	3.97	(0.79)	0.52 (38)	0.61	
Authoritarian	39	2.46	(0.64)	2.22	(0.50)	2.33 (38)	0.03*	0.37
Permissive	39	2.00	(0.72)	1.74	(0.52)	2.11 (38)	0.04*	0.34

\**p* < 0.05; \*\**p* < 0.01; +0.05 < *p* < 0.10.

Source: own work.

The comparative analysis of the average results obtained in the two assessment moments by the Family Environment Scale, using the Student's *t* test for paired samples, reveals that concerning the quality of the relationships, there was a significant increase in the average levels of Cohesion, Expressiveness, and the tendentious significant decrease in the Conflict (see Table 1). The analysis of the size of the effect associated to the differences observed reveals that these are of moderate (in the Cohesion and Expressiveness), and of small magnitude (in the Conflict).

In general, and according to the content of the items, the results suggest that there was an increase of the communication levels, and affection and experience sharing,

as well as a decrease of the level of criticism, conflict, and aggression. In regards to what the dimensions related with Personal Growth are concerned, significant increases of small to moderate magnitude in the levels of Achievement-Oriented and of Active-Recreational-Oriented were observed (see Table 1).

According to the content of the items, these results seem to indicate that by the end of the intervention the members of the family revealed themselves to be more assertive and autonomous in the decision making. Additionally, the families seem to be more invested in the quality and planning of their free time.

The results further reveal a significant increase of small to moderate magnitude in the levels of Control. This evolution is associated to the functioning of the family system and suggests a bigger structuring of the routines and daily norms of the family life.

Concerning the assessment carried out by the Parenting Styles and Dimensions Questionnaire, the comparative analysis of the average results obtained in T1 and T2 reveals that a significant decrease of small magnitude in the Authoritarian and Permissive styles occurred (see Table 1). Thus, these results suggest that there was a decrease in the use of educational strategies that appeal to obedience without argumentation, physical punishment, and a decrease in the levels of parental hostility. Additionally, the minor levels of permissiveness reveal that fathers and mothers are more aware of their children's behaviours, they feel more confident about their parental capacity, namely in the disciplinary practice.

In general, these results suggest that the educators (fathers/mothers), beneficiaries of the intervention, present above all an Authoritative educational style and the use of educational strategies associated to this style seems to have been reinforced during the intervention of the Project ECOS, through the decrease of the behaviours associated with the authoritarian and permissive styles.

## Final considerations

This project aimed to intervene in the potential of the entities that are source of socialisation for the subject, such as the family, school, peer group, and other proximal entities (Felner et al., 1991). Nevertheless, beyond this ecological and communitarian dimension, the project also fell upon in another dimension established in an approach centered on the person and the acquisition of competences (Cowen, 1982; 1986). It intended to promote specific competences from the level of emotional and social development of the children and adolescents intervened to the level of reinforcement and adjustment of disciplinary practice and parenting styles, generators of organization and autonomy. The results presented here are related with the reinforcement and adjustment of disciplinary practices and parenting styles, as well as the positive affective relationships between parents and children.

Regarding the results concerning the family environment, it can be observed an expressive improvement in relation to the quality of the relationships between members of the families, namely by the increase of the Cohesion and Expressiveness, as well as a decrease of Conflict. Regarding the parental styles, it is observed that there was an improvement in the educational strategies, namely by the decrease of the levels of authoritarianism and permissiveness. The improvement of the levels of Cohesion and Expressiveness within the family suggests that the family system can now be composed with a stronger source of affectionateness, communication, and social support. This is a very relevant result, considering that the increase of affectionateness within relationships, communication, and social support are related with less consumption of alcohol and drugs among adolescents (Fergus & Zimmerman, 2005; Paiva & Ronzani, 2009; Schenker & Minayo, 2005).

Relatively to the results observed concerning Personal Growth, it is verified a significant and elevated increase in the indicator Active-

Recreational-Orientation. This result seems to be the product of the intervention in the Diversification Programme of Cultural Experiences action, by which the involvement between parents and children in cultural and recreational activities were stimulated. Literature tells us that participations in extracurricular activities in a community context are associated with a positive adjustment, constituting itself as a protecting factor regarding the adoption of risk behaviours for adolescents (Fergus & Zimmerman, 2005).

In turn, the observed increase referring to the dimension Control seems to indicate that these parents/educators clearly are now establishing to a greater extent the rules and expectations associated to the behaviour of their children. This evolution in the family environment is also positive because it is recognised by the scientific community that the establishment of clear norms, as well as a parental monitoring adequate to the children's activities, constitute themselves as protecting factors of the adoption of risk behaviours (Fergus & Zimmerman, 2005; Schenker & Minayo, 2005).

Finally, the decrease observed in the use of Authoritarian or Permissive educational strategies by the educators may be associated with a decrease of a risk factor at the family level for the consumption of substances, given that inconsistent and coercible disciplinary practice, excessive permissiveness, and authoritarian education are associated to the consumption of PAS (psychoactive substances) (Magalhães & Fonte, 2007; Moreira, 2005; Schenker & Minayo, 2005).

Statistically, the effect size of the observed differences concerning the assessed dimensions of the family environment and parenting styles is, in general, of a small to moderate magnitude. However, we believe that the effective impact of these changes should not be underestimated. When an improvement in family interactions is contemplated, we should consider the long term impact that it will proportionate to the development of each family member, since the behaviors that were changed are repeated over time within families (McCartney &

Rosenthal, 2000). Thus, it is considered that the intervention of the Project ECOS was efficient, seeing that it clearly contributed to the improvement of the various dimensions of the psychological well-being of the studied families, and with that, it is believed that it diminished the risk associated with the adoption of some socially deviant life trajectories, such as the abuse of psychoactive substances (Nation & Helfinger, 2006; Simões, et al., 2008; Toubourou, 2001; Weitoft et al., 2003). Once proved its efficiency concerning the dimensions and the sample presented, we consider that more interventions of this nature should be carried out with similar populations. The design of the assessment should also be integrated parallel to the intervention, so, as to make possible, not only a follow-up assessment, but also an effective one that captures the reality of the intervention performed during the entire process. We consider, thus, that more studies of evaluative nature must be conducted in Portugal, orienting the action of prevention programs and alerting for the necessity of effective changes in at risk populations.

## Limitations

One of the main limitations in the study of the assessment of the Project ECOS is related to the absence of a control group in the design of the investigation. The inclusion of a control group would allow for the comparison of results obtained with the values reported by families not involved in the intervention. In turn, this comparison would allow for the exclusion of the possibility that the observed significant differences are due to family changes, provoked by occurrences external to the intervention. Nonetheless, the direction of the observed evolutions, as well as the significance of the differences found, reinforce the conclusion that the observed results are the product of the intervention of the Project ECOS.

One other limitation associated to the assessment of the project is related to the psychometric properties of the scales used and

the need for the reformulation of the tools for shorter scales (through the elimination of problematic items). To this level, we would like to point out that, in other studies carried out in Portugal with the Family Environment Scale (Gonçalves, 2006), and with the Parenting Styles and Dimensions Questionnaire (Miguel, Valentim & Carugati, 2009), similar problems were observed regarding the internal consistency and structure of some dimensions. Nevertheless, the satisfactory values of internal consistency obtained with reduced versions of the scales, as well as the correct adaptation of the semantic content of the items allows us to assure fidelity of the constructs/dimensions to which the items were made to evaluate (Hair et al., 2005). In contrast, the dimension of the sample and the fact that it is homogenous can be seen as an additional limitation, so we suggest caution when generalising the obtained results.

Despite the limitations mentioned above, the results are clear when it comes to demonstrate the efficiency of the intervention. All the significant results obtained were in the direction of the increase of the protective factors and decrease of the risk factors at the family level, regarding the consumption of psychoactive substances. Thus, it is considered that the replication of this intervention of community prevention in other populations with similar characteristics can equally promote changes on the individual, family, community and, consequently, social levels.

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## Notes

- \* Research article.