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Improving adolescent lifestyles by promoting socioemotional competences in a community-based intervention programme

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ABSTRACT

The objective of this study is to identify clusters of lifestyle changes after participating in 'Building My Future', a community group-based programme that aims to promote competences in adolescents at psychosocial risk, and to examine the contribution of the activities performed and the level of competences reached. Participants were 407 adolescents who reported on health-related lifestyle behaviours, self-concept, task-oriented strategy, empathy, and community participation and integration before and after the programme. Facilitators also filled out a checklist with the activities performed. Results revealed a profile with all-round healthy habit changes (72%), and another with unhealthy changes (28%). Carrying out learning activities, games, shared meals, and a higher level of empathy and community integration after the programme increased the odds of a healthy lifestyle change. These results are promising and indicate that the promotion of socioemotional competences at the community level can be an effective strategy to embrace healthier lifestyles.

Adolescent lifestyles are highlighted daily in the media and are of special concern to parents, teachers, and the general society. Lifestyles comprise interacting patterns of health-related behaviours adopted by groups of adolescents in response to their social, cultural, and economic environment (Abel et al., 2000). Studies have found that adolescent lifestyle behaviours, such as performing physical activity, smoking, and consuming alcohol, co-occur forming different patterns, and that these types of lifestyle patterns are also related to personal and community

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competences (C. García-Poole et al., 2018a). The adolescent years are an important stage in which to study health-related lifestyles, as the reiteration of different types of unhealthy behaviours can potentially jeopardize adolescents' development (Moreno et al., 2013).

To improve adolescent lifestyles, intervention programmes have traditionally aimed at directly reducing problematic behaviours such as smoking, alcohol consuming, drug use, or sexual risk (Catalano et al., 2002; Hale et al., 2014). With the rise of the positive youth development framework (Benson et al., 2011; Ince et al., 2014; Lerner et al., 2013), prevention and intervention efforts are now focusing more on developmental competences and ways to enhance them, which, in the long run, are expected to sustainably reduce problematic lifestyle behaviours (Anderson-Butcher & Cash, 2010; Eichas et al., 2010, 2018). 'Competence' is an integrative concept that refers to the ability to generate and coordinate flexible and adaptive responses to life task demands, as well as the ability to create strategies to take advantage of the opportunities given in developmental contexts (Masten & Curtis, 2000; Waters & Sroufe, 1983). The promotion of competences may take place with interventions in different contexts, such as the family, school, peer or community environment.

One of the key contexts for adolescents to acquire and develop competences is the community (Smith et al., 2016). In particular, neighbourhood or community level interventions that provide opportunities to engage in leisure activities are especially relevant, supporting the process of both personal and social identity formation by providing a social context for the development of personal competencies (Cicognani et al., 2008; Eccles & Gootman, 2002; Flanagan et al., 2015; Iso-Ahola & Crowley, 1991; Kleiber & Kirshnit, 1991; Rogoff et al., 1995). Positive leisure, such as participation in creative and goal-oriented activities, is thought to have the potential to promote autonomy, initiative, decision-making skills, mental and physical health, and socioemotional competences during adolescence, providing important transitional situations that bridge the gap between childhood play and adult work (Caldwell & Faulk, 2013; Garst et al., 2001; Shaw et al., 1995). However, the modality of community-based intervention is less frequently used, implementation variables are poorly reported, and the quality of the evaluation designs should be improved in line with evidence-based standards (C. García-Poole et al., 2019).

The 'Building My Future' programme (Rodrigo et al., 2006) is a community group-based intervention that does not aim to directly

reduce specific problematic behaviours, yet aims to strengthen personal, social, and community competences looking for better adjustment results and more sustained improvements in problematic areas. The programme engages adolescents into community action projects in which they are able to display multiple assets, make decisions, and achieve their project goals, being structured yet flexible and open to taking on different types of activities proposed and arranged by the participants (e.g. choreographies, nature excursions, or collaborations with mental health associations). Facilitators help put into action the chosen activities by facilitating contact with community resources, as well as emphasizing the planning of each action, the selection of strategies, and the reflection on the achievements made. These action projects are embedded in the work sessions of five modules: 1) 'Creating our group', 2) 'Getting to know our surroundings', 3) 'Making our surroundings better', 4) 'Clarifying my future', and 5) 'Boosting our relationships'. The programme is implemented throughout the whole region of Castile and Leon, Spain, as part of family policies strengthening competences in families at psychosocial risk. It is offered during the academic year (from October to June), with adolescents generally attending the sessions once a week during the weekend for approximately 2 h. Meetings are held at town hall facilities to work on the content of each module, which include group discussions to choose and plan activities and then reflect on the achievements made. Sessions can vary in location depending on the action projects that are being carried out by the group (e.g. park renovations, nature excursions, cultural visits, charity selling, etc.).

The novelty of this study is to illustrate how this community group-based intervention programme can improve health-related lifestyles by working on socioemotional competences through youth-led leisure activities. The first aim of the study is to identify clusters of lifestyle changes after participating in the 'Building My Future' programme, and to characterize these clusters by sociodemographic variables. The second aim is to examine the respective contribution of the types of activities performed during the programme, and the adolescents' level of competences achieved after the programme, to the types of lifestyle changes. In a previous study, some types of activities such as games, creative activities or volunteering were found to predict positive changes in personal and community competences (García-Poole et al., 2018b). Therefore, we hypothesize that these specific types of activities during

which the promotion of competences is taking place would also positively affect the adolescent's lifestyle behaviours.

Methods

Participants

Participants were 407 adolescents (52% girls), with an average age of 13.9 (SD = 1.6), with range going from 11 to 18 years of age. Participants were distributed in 47 groups of the 'Building My Future' programme with a total of 49 facilitators (the majority of groups with one facilitator), carried out in 15 municipalities (50% urban and 50% rural areas) throughout the region of Castile and Leon, Spain, as part of family policies strengthening competences in families at psychosocial risk. Participants labelled as 'at psychosocial risk' were referred to the 'Building My Future' programme by Social Service workers for having parents/carers attending the family preservation services. Family psychosocial risk situations can include a variety of problems such as interparental violence, parental substance abuse or economic difficulties that were not disclosed to the evaluation team at case level for ethical reasons. Regarding participants' fathers, 84% were employed, 54% had a low level of education (up to primary school), 31% had finished secondary school, and 15% had further education. As to their mothers, 52% were employed, 51% had a low level of education, 31% had completed secondary school and 18% had further studies. Primary caregivers of all participants gave informed consent and the procedures were approved by the Committee for Research Ethics and Animal Welfare at the University of La Laguna..

Measures

Lifestyle inventory
We applied a short version of the Lifestyle Questionnaire (HBSC; Mendoza et al., 1994), which has been extensively used in the European Study on Health Behaviours in School-aged Children (Moreno et al., 2016). The items included were the following: amount of reading (1 *never* – 4 *every day* scale); amount of time watching television during the week and weekends (number of hours a day); amount of time using the computer during the week and weekends (number of hours a day); frequency of going out at night (1 *hardly ever* – 5 *nearly every night* scale), hour returning home (1 before midnight, 2 between midnight

and 3 am, 3 after 3 am); frequency of smoking (1 *never – 5 every day* scale), frequency of drinking alcohol (1 *never – 5 every day* scale), amount of alcoholic drinks consumed during the weekend (1 *no drinks – 5 more than eight drinks* scale); frequency of playing sports and frequency of doing physical activities (1 *never – 4 every day* scales).

Self-concept and social realization questionnaire

We used an adapted version of the validated Self-Concept and Social Realization Questionnaire (in Spanish AURE; De Mendoza et al., 2005). This questionnaire was created in Spanish and has been used for different adolescent programme assessments (Justo et al., 2011; Soriano et al., 2011). The instrument has a total of 42 items that are presented using Osgood's semantic differential scale where two affirmations are opposed and must be valued. Scoring nearer to 1 indicates a higher level of the construct, so scores were converted for easier interpretation. The items form three factors: 1) Self-worth (α =.90, reliability value found in this study, as all of those that follow), as the positive evaluation of one's personal qualities (e.g. *I feel good about myself* – 1 2 3 4 5 – *I feel uncomfortable with myself*; 2) Task-oriented strategy (α = .88), which includes the necessity to be efficient and to enjoy facing the challenges, activities or tasks that one is involved in (e.g. *I am usually constant and persistent once I start a job, chore or study* – 1 2 3 4 5 – *I am usually variable and get fed up of a job, chore or study that I start*); and 3) Empathy and Social realization (α = .89), which involves the capacity to enjoy caring relationships, a positive attitude towards communication and collaboration with others, and concern about other people's problems (e.g. *I enjoy meeting up and sharing my time with other people* – 1 2 3 4 5 – *I prefer to be on my own or with very few people*).

Perceived community support questionnaire

We applied two subscales of the Perceived Community Support Questionnaire (PCSQ; (Gracia et al., 2002; Herrero & Gracia, 2007) to cover the participants' community competences, a questionnaire that has been used effectively before with Spanish adolescent population (Crespo-Ramos et al., 2017; Martínez et al., 2011). Items are presented with a response scale going from 1 *strongly disagree*, to 5 *totally agree*. The two subscales used were: 1) Community Participation (α = .64), formed by 6 items measuring the level of engagement in the community's social activities and civic groups, for example, '*I collaborate in my community's*

organizations', and 2) Community Integration (α = .68), formed by 5 items, measuring the sense of belonging to a community or neighbourhood: feeling comfortable, well received, known and identified by the community. For example, '*I feel identified with my community*', '*My opinions are well received in my community*'.

Facilitator's group datasheet

The facilitator of each group also filled out a checklist with information related to the types of activities carried out by the participants during the programme. A panel of professionals not involved in the evaluation work categorized the intervention activities according to their content. *Sporting activities* included playing soccer, basketball, and volleyball; attending basketball games; multi-adventure park visits; ice-skating; archery; table soccer; horse riding; paintball; and rock climbing. *Creative/artistic* activities included: balloon modelling; graffiti drawing on paper; notebook and wallet handicrafts; gift-making; decoration of the programme's premises; photography; carolling; dance; hip-hop improvisation; choreographies; body language, voice, and improvisation; drama; and workshops in hand-crafted jewellery, fantasy make-up, stage decoration, magic, gardening, cooking, bread making, non-alcoholic cocktail making, percussion instruments, and clowning. *Volunteering activities* included collaboration with mental health, intellectual disability, and Alzheimer associations; collaboration with the non-governmental organization against poverty 'Joined Hands'; working with elderly people for the 'Red Cross'; collaboration with the Provincial Plan of Road Safety Education; participation in craft fairs for different non-profit organizations; and fundraising for the end-of-programme trip. *Excursion activities* included trips to a city, an amusement park, a heated swimming-pool or youth hostels; and camping and nature tours (snow, mountains, and natural parks). *Cultural activities* included visits to museums and exhibitions, cultural city walking tours, cinema visits and video forums. *Learning activities* included sign language classes, talks on topics of interest (drug abuse, urban tribes, affectivity and sexuality, and communication skills), and conflict-solving group dynamics. *Game activities* included traditional games ('Back to front hide and seek'), Trivial Pursuit, Twister, PlayStation championships and other games that were not specified. *Shared meals* included mid-afternoon light meals and evening meals shared with other groups of the programme.

The facilitator of each group also reported on the number of dropouts, with range going from cero to seven; and the frequency of group attendance on a scale from one (very low) to five (very high). Facilitators only gave three (average), four (high) and five (very high) scores in this last variable.

Procedure

The Building My Future team of experts trained a group of social educators and social workers to become group facilitators, during an intensive 25-h programme that took place in the capital of the Autonomous Community of Castile and Leon, Spain. This training programme covered the core principles, methods, and evaluation of the programme, as well as guidance on how to implement it successfully. In order to engage adolescents into starting the programme and to create group adherence, the facilitators announced an attractive pre-intervention activity at the beginning of each edition (overnight stay, excursion, etc.), informing the public at a community level through different adolescent hot points. Once the programme had started (after the pre-intervention enrolment activity and two warm-up sessions), and during the last session of the programme (within a week of its completion), participants were asked to complete the self-report measures on lifestyle behaviours and competences as part of the initial and final evaluatioen of the programme. The average group attendance rate to the programme was 80%. The facilitators also filled out their group datasheets during the programme implementation. Data were accumulated from four separate editions of the programme (2012–2016) and each set of questionnaires was sent by the municipal social workers to the University of La Laguna, where all material was collected and processed.

Design and plan of analyses

This study follows a quasi-experimental pre–post-test design. For the first aim, a hierarchical cluster analysis was performed on the lifestyle behaviour change scores, using Ward's method, to examine whether it was possible to distinguish different patterns of changes in the adolescent's lifestyle behaviours (Ward, 1963). The change scores were obtained by subtracting each participant pre-test score to their post-test score. All the variables in the Lifestyle Inventory were standardized to prevent the

different scales from influencing the results of the analyses. Then, to examine whether these different patterns significantly differed in the lifestyle change measures, a MANOVA was performed with the obtained cluster solution as a predictor and the lifestyle behaviours as dependent variables. Before and after descriptive statistics (*M* and *SD*) were also reported for the lifestyle behaviours and competence variables in both clusters. We then performed Chi square and ANOVA analyses to compare the clusters in terms of age, gender, psychosocial risk status, place of residence and group attendance. For the second aim, a Binary Logistic Regression analysis was performed, including sociodemographic variables and group attendance in Step 1, the types of activities in Step 2, and the levels of adolescent post-test competences in Step 3, to help explain why adolescents could belong to the different lifestyle change profiles. To interpret the global significance of the model, at each step we examined the statistic *F*, the values for the adjusted R^2 (*Adj. R^2*), and the change in *R* (ΔR^2), as well as the specific contribution of each variable to the total variance explained by the model through the Odds Ratio (*OR*), and the regression coefficient (*B*). Data were analysed using SPSS-21 analytical software.

Results

A two-cluster solution was chosen for the lifestyle behaviour changes, as the clusters were theoretically meaningful and represented the best possible balance between cluster size and differentiation. The hierarchical two-cluster solution was replicated using iterative partitioning method k-means, and the MANOVA showed that the two clusters significantly differed in the lifestyle change behaviours (Wilks' Lambda = .757, *F* (12,394) = 10.51, *p* ≤ .001), with a large effect size (η^2 = .24). Clusters significantly differed in nine of the 12 variables with small to large effect sizes (Cohen, 1988), as shown in Table 1.

Cluster 1 (28%) was labelled as the *Unhealthy change* group, characterized by adolescents that had worsened their lifestyle after the programme. Thus, they watch television and use the computer more often, go out more nights a week, return later, smoke more, and drink more alcohol after participating in the programme. Cluster 2 (72%) was labelled as the *Healthy change* group, characterized by adolescents that had improved their lifestyle. They watch television and use the computer less often, go out less nights a week, return earlier, smoke less, and

Table 1. Centre of the final clusters and univariate contrast of variances between the clusters according to lifestyle behaviour changes (N = 407).

	Cluster 1 Unhealthy change (n = 113)	Cluster 2 Healthy change (n = 294)	$F_{(1,406)}$	ES η^2
Reading	0.12	0.04	2.12	.01
TV (week)	0.23	−0.10	8.87**	.02
TV (weekend)	0.45	−0.20	37.77***	.09
PC (week)	0.67	−0.28	91.68***	.19
PC (weekend)	0.80	−0.32	146.80***	.27
Going out at night	0.62	−0.26	76.94***	.16
Hour returning home	0.30	−0.14	17.51***	.04
Smoking	0.65	−0.28	89.12***	.18
Drinking alcohol	0.68	−0.27	93.94***	.19
Glasses alcohol (weekend)	0.23	−0.11	13.77***	.03
Sport	0.03	−0.00	0.11	.00
Physical activity	0.14	−0.03	2.41	.01

**p≤.01; ***p≤.001

Table 2. Descriptive statistics of lifestyle and competence variables in the unhealthy and heathy lifestyle change groups, before and after the intervention (N = 407).

	Unhealthy change (N= 113)		Healthy change (N= 294)	
	Before M (SD)	After M (SD)	Before M (SD)	After M (SD)
Lifestyle behaviours				
Reading	2.0 (0.6)	1.9 (0.7)	2.0 (0.8)	2.0 (0.8)
Watching TV (week)	2.9 (2.0)	3.2 (1.7)	3.1 (1.5)	2.9 (1.7)
Watching TV (weekend)	3.4 (2.1)	4.6 (2.0)	3.7 (1.8)	3.7 (2.0)
Using PC (week)	1.3 (1.3)	2.4 (1.6)	2.1 (1.9)	1.6 (1.6)
Using PC (weekend)	1.4 (1.5)	3.8 (2.5)	2.2 (1.9)	2.2 (1.9)
Going out at night	2.3 (1.3)	3.1 (1.2)	2.5 (1.4)	2.3 (1.3)
Hour returning home	1.9 (0.8)	2.2 (0.8)	1.7 (0.7)	1.7 (0.8)
Smoking	1.7 (1.2)	2.5 (1.4)	1.5 (1.1)	1.5 (1.1)
Drinking alcohol	1.9 (0.9)	2.6 (0.9)	1.8 (0.8)	1.8 (0.9)
Glasses alcohol (weekend)	1.7 (1.1)	2.1 (1.1)	1.5 (1.0)	1.5 (0.9)
Sport	2.3 (1.1)	2.3 (1.0)	2.5 (1.0)	2.4 (1.0)
Physical activity	2.5 (0.9)	2.7 (0.9)	2.6 (0.9)	2.7 (0.9)
Competences				
Self-worth	2.3 (0.7)	2.2 (0.6)	2.1 (0.7)	2.1 (0.6)
Task-oriented strategy	2.6 (0.8)	2.7 (0.8)	2.3 (0.8)	2.3 (0.7)
Empathy and social realization	2.0 (0.7)	2.0 (0.6)	1.9 (0.7)	1.9 (0.6)
Community participation	2.6 (0.7)	2.4 (0.8)	2.9 (0.7)	3.0 (0.8)
Community integration	3.3 (0.7)	3.2 (0.7)	3.4 (0.7)	3.5 (0.7)

drink less alcohol after participating in the programme. Adolescents did not significantly differ in reading or practicing sport and psychical activities.

Descriptive statistics of the lifestyle and competence variables in the unhealthy and heathy lifestyle change groups, before and after the intervention, can be seen in Table 2.

Table 3. Binary logistic regression analysis of sociodemographic variables, group attendance, activities, and competences on lifestyle change profiles (N = 407).

Variable	Lifestyle change profile			
	B	SE	Wald	OR
Step 1				
Age	−0.229	0.211	1.181	0.795
Residence	0.403	1.618	0.062	1.496
Attendance	0.110	0.844	0.017	1.117
Step 2				
Sport	−5.694	1.696	11.270	0.003***
Creative/artistic	−0.653	0.782	0.697	0.520
Volunteering	−2.204	1.316	2.802	0.110
Excursions	3.025	1.896	2.544	20.595
Cultural	1.218	1.136	1.150	3.380
Learning	4.200	1.689	6.184	66.690*
Games	4.485	1.681	7.118	88.646**
Shared meals	2.947	1.198	6.048	19.053*
Step 3				
Self-worth	−0.094	0.434	0.047	.910
Task-oriented strategy	−1.029	0.401	6.598	.357**
Empathy	0.879	0.432	4.532	2.411*
Community participation	0.323	0.329	0.963	1.382
Community integration	0.890	0.408	4.748	2.434*

The two clusters were then compared in terms of socio-demographic and group attendance variables. No gender differences were obtained, yet age differed significantly among the two groups, with the *Unhealthy change* group being older (mean = 14.2; *SD* = 1.4), than the *Healthy change* group (mean = 13.7; *SD* = 1.6), (*F* (1,406) = 7.19, *p* ≤ .01, η^2 = .02). The groups also differed in residential area, with the *Unhealthy change* group being overrepresented by adolescents from urban areas, and the *Healthy change* group by adolescents from rural areas (X^2 (1) = 46, *p* ≤ .001). No differences were obtained in terms of number of group dropouts, yet the frequency of group attendance was significantly higher in the *Healthy change* group (*M* = 4.08; *SD* = 0.6), than in the *Unhealthy change* group (*M* = 3.75; *SD* = 0.6), (*F* (1,406) = 13.37, *p* ≤ .001, η^2 = .04).

Finally, Table 3 presents a summary of the Binary Logistic Regression analysis of sociodemographic and group attendance variables, types of activities, and post-test competences on the lifestyle change profiles. The model was significant in the three steps: Step 1 (x^2 (3) = 13.25, *p* ≤ .01), Step 2 (x^2 (8) = 38.97, *p* ≤ .001) and Step 3 (x^2 (5) = 20.81, *p* ≤ .001), explaining 47% of the variance. Transforming the Odds Ratios into percentages, adolescents who performed sports and had higher task orientation were found to have 100% and 64% fewer odds of having a positive lifestyle change respectively, while adolescents that carried out learning activities, games, shared meals and had higher empathy and a higher sense of belonging to the community

were found to have higher odds of belonging to the healthy lifestyle change group (6569%, 8765%, 1805%, 141% and 143%, respectively).

Discussion

For our first aim, we have identified two patterns of lifestyle changes after participating in the 'Building My Future' programme. Almost three-quarters of the participants had improved their lifestyle profile, whereas just over one-quarter of adolescents presented an unhealthier pattern of change in the same lifestyle behaviours. This is an interesting finding, bearing in mind that the 'Building My Future' programme does not include specific content on lifestyle habits such as smoking, drinking alcohol, or screen time. These lifestyle changes have occurred in the setting of a community programme that offers opportunities for groups of adolescents to plan, carry out, and reflect on constructive and prosocial leisure activities, during which cognitive and socioemotional competences are able to unfold. This result is in line with the Positive Youth Development framework and studies that find that problematic adolescent behaviours can also decrease whilst promoting competences (Eichas et al., 2018; Lerner et al., 2013).

In general, the 'Building My Future' programme has had a more positive effect by changing the lifestyles of younger adolescents, indicating the need to aim the programme at the early years of adolescence. Being younger might also explain the higher frequency of participation, as younger adolescents may be more supervised by their parents and attend to more sessions, resulting in a healthier lifestyle change. The programme has also been more effective in improving lifestyles in rural areas, where adolescents face more limited options for how they use their out-of-school time, participate in fewer organized activities, report more unsupervised time, have access to fewer resources, and have greater constraints around transportation compared to their urban and suburban counterparts (Hardre et al., 2009; Pettigrew et al., 2012). Thus, the impact of the programmes' actions could be more of a novelty for rural adolescents, filling more of their discretionary time.

Interestingly, significant gender differences were not obtained, with the consumption of alcohol, smoking, and screen use being nowadays seen as normalized social behaviours equally found in boys and girls (Hernando et al., 2013; Sánchez Pardo, 2002).

With regard to the lifestyle change profiles, it is interesting how screen use improved or worsened in the same direction as other health-related behaviours such as going out, smoking, and drinking. The increasing access to information and communication technology (ICT) in our society is having a great impact, with researchers discovering different problematic psychosocial outcomes related to the misuse of the Internet bearing similarities with substance use, impulse control disorders, and obsessive-compulsive disorder (Salgado et al., 2014). By contrast, reading and playing sports or performing physical activities were not found to cluster with screen use and consumption behaviours, in line with other studies that find that healthy habits (e.g. healthy diet and physical activity) do not always come together (Cuenca-García et al., 2013).

As to our second aim, the type of activities performed during the 'Building My Future' 'programme and the level of competences achieved, jointly contributed to these lifestyle change profiles. Following the programme's guidelines, the promotion of adolescent competences takes place in a rich activity environment full of *opportunities* to relate to the community in a way that is positive for their development; *skills* are taught to be able to take advantage of those opportunities; and participants receive *recognition* for their efforts so that they feel motivated to continue and own their skills (Hawkins et al., 1992; Ince et al., 2014). However, not all activities have the same potential to change lifestyles, and it is those activities that create more opportunities to exchange with others (sports, learning activities, games, and shared meals), as compared to others that could be performed alone (creative/artistic, volunteering, excursions, and cultural activities), that most contributed to a lifestyle change. Among these activities that promote lifestyle changes, we should not take literally which one is better or worse, since this result is also modulated by sociodemographic variables.

The type of competences achieved after the programme, which are related to the activities performed, also contributes to the likelihood of changing lifestyle behaviours which is clear evidence supporting the positive youth development view (Benson et al., 2004; Lerner et al., 2013). Moreover, a higher level of empathy and community integration predicted a healthier lifestyle profile, whereas achieving a higher level of task-oriented strategy was found to predict an unhealthier lifestyle profile of increased screen time, going out at night, smoking and drinking. These results suggest that an exclusive reliance on task performance in which participants make efforts to approach, prepare, and finish tasks is not the

point when trying to influence positive lifestyles. Lifestyles are associated with peer behaviours, and feeling integrated with a group of peers that perform positive bonding activities such as learning on proposed topics, games, and shared meals is a key factor in predicting a healthy lifestyle. In contrast, a higher task-oriented strategy could be related to focusing on the performance of specific tasks, probably linked to better cognitive achievements, but may involve less positive peer interaction in constructive leisure time explaining why higher task-orientation has been found to predict an unhealthier lifestyle change. Accordingly, the key competences to be promoted for a healthier lifestyle are those involved in the socio-emotional domain, including knowledge and skills needed to understand and manage emotions, set and achieve joint goals, feel and show empathy and compassion for others, as well as establish and keep positive relationships (Weissberg et al., 2015). The Community integration construct measured in our study refers to what McMillan and Chavis (1986) name as *Membership* or sense of belonging, which especially during adolescence can be related to the feeling of being accepted in a group of peers. Feelings of acceptance can also be related with feelings of empathy towards others, as one relates to others while performing activities that are carried out and enjoyed by the whole group (Gleason et al., 2009; Wölfer et al., 2012). As found in this study, when these competences are promoted during prosocial and positive group-orientated activities, healthier lifestyle choices flourish, and healthier lifestyle choices can also contribute to psychological and social well-being (Prilleltensky et al., 2001). In contrast, adolescents' increasing reliance on risk-taking or unhealthy behaviours to gain social acceptance in the presence of peers is of special concern (Gardner & Steinberg, 2005). In a previous study with the participant's pre-test data, high levels of community integration were associated to both healthy and unhealthy lifestyle profiles (García-Poole et al., 2018a). After the 'Building My Future' programme, those that felt less integrated in their groups were those who adopted unhealthier habits, therefore increasing the sense of belonging to a group of peers that take on positive social activities is crucial, and should be taken into consideration when intervening and developing prevention and promotion policies for adopting healthy lifestyle choices (Brennan & Barnett, 2009).

In sum, the connection found between the types of activities and competences performed during the programme, and the change in lifestyle behaviour patterns, indicates that using a person-oriented approach with a large

sample of adolescents can be promising and may have great impact in the field of community group-based promotion programmes. Moreover, these findings have practical implications regarding the design of the 'Building My Future' programme and its evaluation. First, the performance of youth-led activities in the peer-group, such as learning about proposed topics, games, and shared meals should be prioritized as an opportunity to acquire and practice socioemotional competences, that also contribute to the feeling of community integration and can promote healthy lifestyle habits. Opportunities for engagement and participation in constructive leisure and prosocial activities must be strengthened, for example, by including more sessions of shared activities between the different groups of the programme. Second, datasheets need to give a fuller account of group and implementation aspects to capture more of the heterogeneity between the groups.

We are aware of some limitations that this study presents related to the self-report nature of the measures applied to evaluate the lifestyles and the competence factors. In addition, further studies should be carried out that include other lifestyle behaviours, such as eating and sleeping habits or more specific types of Internet misuse, as well as a more extensive testing of competences and long-term impact of the programme. Furthermore, baseline scores were not considered in the clustering of lifestyle behaviours, and the initial assessment took place after an enrolment activity and two warm-up sessions which might bias the results. Finally, possible differences in the facilitator's quality of implementation and other implementation variables have not been analysed, and the present study did not include a control group or randomized design. However, this is a community multi-site programme evaluation and the strength of our design is being able to analyse different implementation factors, such as the activities performed, that are understudied as a major source of variability between the groups.

In conclusion, the findings in this study can enrich current evidence-based adolescent health and developmentally appropriate intervention programmes, informing practitioners and policy-makers. The programme results are promising and indicate that institutionalized efforts at a community level, that focus on the promotion of socioemotional competences during group-based activities can be an effective strategy to embrace healthier lifestyles in earlier adolescence, as well as promoting positive development.

Disclosure statement

Funding

ORCID

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References

Abel, T., Cockerham, W. C., & Niemann, S. (2000). A critical approach to lifestyle and health. In J. Watson & S. Platt (Eds.), *Researching health promotion* (pp. 54–77). Routledge.

Anderson-Butcher, D., & Cash, S. J. (2010). Participation in boys & girls clubs, vulnerability, and problem behaviors. *Children and Youth Services Review*, *32*(5), 672–678. https://doi.org/10.1016/j.childyouth.2010.01.002

Benson, P. L., Mannes, M., Pittman, K., & Ferber, T. (2004). Youth development, developmental assets and public policy. In R. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (2nd ed., pp. 781–814). John Wiley.

Benson, P. L., Scales, P. C., & Syvertsen, A. K. (2011). The contribution of the developmental assets framework to positive youth development theory and practice. In J. B. B. Richard & M. Lerner (Eds.), J. V. L., *Advances in child development and behavior* (41st ed., pp. 197–230). Academic Press.

Brennan, M. A., & Barnett, R. V. (2009). Bridging community and youth development: Exploring theory, research, and application. *Community Development*, *40*(4), 305–310. https://doi.org/10.1080/15575330903279515

Caldwell, L., & Faulk, M. (2013). Adolescent leisure from a developmental and prevention perspective. In T. Freire (Ed.), *Positive leisure science: From subjective experience to social contexts* (pp. 41–60). Springer.

Catalano, R. F., Hawkins, J. D., Berglund, M. L., Pollard, J. A., & Arthur, M. W. (2002). Prevention science and positive youth development: Competitive or cooperative frameworks? *Journal of Adolescent Health*, *31*(6), 230–239. https://doi.org/10.1016/S1054-139X(02)00496-2

Cicognani, E., Albanesi, C., & Zani, B. (2008). The impact of residential context on adolescents' Subjective Well being. *Journal of Community & Applied Social Psychology*, *18*(6), 558–575. https://doi.org/10.1002/casp.972

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Lawrence Erlbaum Associates. 2nd ed.

Crespo-Ramos, S., Romero-Abrio, A., Martínez-Ferrer, B., & Musitu, G. (2017). Variables psicosociales y violencia escolar en la adolescencia. *Psychosocial Intervention*, *26*(2), 125–130. https://doi.org/10.1016/j.psi.2017.05.002

Cuenca-García, M., Huybrechts, I., Ruiz, J. R., Ortega, F. B., Ottevaere, C., González-Gross, M., Moreno, L. A., Vicente-Rodríguez, G., Molnár, D., Polito, A., Manios, Y., Plada, M., Vanhelst, J., Widhalm, K., Sjöström, M., Kersting, M., & Castillo, M. J. (2013). Clustering of multiple lifestyle behaviors and health-related fitness in European adolescents. *Journal of Nutrition Education and Behavior*, *45*(6), 549–557. https://doi.org/10.1016/j.jneb.2013.02.006

De Mendoza, R., Medina, R., & Hernández, P. (2005). Consistencia interna y estructura factorial de un cuestionario sobre autorrealización y crecimiento personal. *Psicothema*, *17*(1), 134–142. Retrieved from http://www.psicothema.com/pdf/3077.pdf

Eccles, J. S., & Gootman, J. A. (2002). *Community programs to promote youth development*. (J.S. Eccles & J. A. Gootman, Eds.). National Academies Press. https://doi.org/10.17226/10022.

Eichas, K., Albrecht, R. E., Garcia, A. J., Ritchie, R. A., Varela, A., Garcia, A., . . . Kurtines, W. M. (2010). Mediators of positive youth development intervention change: Promoting change in positive "and" problem outcomes? *Child & Youth Care Forum*, *39*(4), 211–237. https://doi.org/10.1007/s10566-010-9103-9

Eichas, K., Kurtines, W. M., Rinaldi, R. L., & Farr, A. C. (2018). Promoting positive youth development: A psychosocial intervention evaluation. *Psychosocial Intervention*, *27*(1), 22–34. https://doi.org/10.5093/pi2018a5

Flanagan, C. A., Kim, T., Collura, J., & Kopish, M. A. (2015). Community service and adolescents' social capital. *Journal of Research on Adolescence*, *25*(2), 295–309. https://doi.org/10.1111/jora.12137

García-Poole, C., Byrne, S., & Rodrigo, M. J. (2018a). Adolescent lifestyle profiles and personal and community competences. *European Journal of Developmental Psychology*, *15*(5), 531–547. https://doi.org/10.1080/17405629.2017.1316258

García-Poole, C., Byrne, S., & Rodrigo, M. J. (2018b). Youth-led activities associated with positive competence changes in a community-based program for adolescents. *Child & Family Social Work*, *23*(4), 599–608. https://doi.org/10.1111/cfs.12450

García-Poole, C., Byrne, S., & Rodrigo, M. J. (2019). How do communities intervene with adolescents at psychosocial risk? A systematic review of positive development programs. *Children and Youth Services Review*, *99*(1), 194–209. https://doi.org/10.1016/J.CHILDYOUTH.2019.01.038

Gardner, M., & Steinberg, L. (2005). Peer influence on risk taking, risk preference, and risky decision making i . . .: EBSCOhost. *Developmental Psychology*, *41*(4), 625–635. https://doi.org/10.1037/0012-1649.41.4.625

Garst, B., Scheider, I., & Baker, D. (2001). Outdoor adventure program participation impacts on adolescent self-perception. *The Journal of Experiential Education*, *24*(1), 41–49. https://doi.org/10.1177/105382590102400109

Gleason, K. A., Jensen-Campbell, L. A., & Ickes, W. (2009). The role of empathic accuracy in adolescents' peer relations and adjustment. *PSPB*, *35*(8), 997–1011. https://doi.org/10.1177/0146167209336605

Gracia, E., Herrero, J., & Musitu, G. (2002). *Evaluación de recursos y estresores psicosociales en la comunidad*. Síntesis.

Hale, D., Fitzgerald-Yau, N., & Viner, R. M. (2014). A systematic review of effective interventions for reducing multiple health risk behaviors in adolescence. *American Journal Of Public Health*, *104*(5), e19-e41. https://doi.org/10.2105/AJPH.2014.301874

Hardre, P. L., Sullivan, D. W., & Crowson, H. M. (2009). Student characteristics and motivation in rural high schools. *Journal of Research in Rural Education*, *24*(16), 1–19. Retrieved from https://pdfs.semanticscholar.org/9cc4/515ac5e76fe6141a32c792b6469f2da625a6.pdf

Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin*, *112*(1), 64–105. https://doi.org/10.1037/0033-2909.112.1.64

Hernando, Á., Oliva, A., & Ángel Pertegal, M. (2013). Diferencias de género en los estilos de vida de los adolescentes. *Psychosocial Intervention*, *22*(1), 15–23. https://doi.org/10.5093/in2013a3

Herrero, J., & Gracia, E. (2007). Measuring perceived community support: Factorial structure, longitudinal invariance and predictive validity of the PCSQ (Perceived Community Support Questionnaire). *Journal of Community Psychology*, *35*(2), 197–217. https://doi.org/10.1002/jcop.20143

Ince, D., Van Yperen, T., & Valkestijn, M. (2014). *Top ten positive youth development. Protective factors in parenting and growing up.* . Netherlands Youth Institute.

Iso-Ahola, S. E., & Crowley, E. D. (1991). Adolescent substance use and leisure boredom. *Journal of Leisure Research*, *23*(3), 260–271. https://doi.org/10.1080/00222216.1991.11969857

Justo, C. F., de la Fuente Arias, M., & Granados, M. S. (2011). Impacto de un programa de entrenamiento en conciencia plena (mindfulness) en las medidas del crecimiento y la autorrealización personal. *Psicothema, 23*(1), 58 - 65. Retrieved from http://www.psicothema.com/pdf/3850.pdf

Kleiber, D. A., & Kirshnit, C. E. (1991). Sports involvement and identity formation. In L. Diamant (Ed.), *Mind-body maturity: Psychological approaches to sports, exercise, and fitness* (pp. 193–211). Hemisphere.

Lerner, J. V., Bowers, E. P., Minor, K., Boyd, M. J., Mueller, M. K., Schmid, K. L., ... Lerner, R. M. (2013). Positive youth development: Processes, philosophies, and programs. In R. M. Lerner, M. A. Easterbrooks, J. Mistry, & I. B. Weiner (Eds.), *Handbook of psychology, Vol. 6: Developmental psychology* (2nd ed., pp. 365–392). John Wiley & Sons Inc.

Martínez, B., Amador, L., Moreno, D., & Musitu, G. (2011). Implicación y participación comunitarias y ajuste psicosocial en adolescentes. *Psicología y Salud*, *21*(2), 205–214. https://www.uv.es/lisis/belen/12-psicologiasalud.pdf

Masten, A. S., & Curtis, W. J. (2000). Integrating competence and psychopathology: Pathways toward a comprehensive science of adaptation in development. *Development and Psychopathology*, *12*(3), 529–550. https://doi.org/10.1017/S095457940000314X

McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, *14*(1), 6–23. https://doi.org/10.1002/1520-6629 (198601)14:1<6::AID-JCOP2290140103>3.0.CO;2-I

Mendoza, R., Sagrera, M. R., & Batista-Foguet, J. M. (1994). *Conductas de los escolares españoles relacionadas con la salud (1986-1990) (CSIC)*. Madrid.

Moreno, C., Ramos, P., Rivera, F., Jiménez-Iglesias, A., García-Moya, I., Sánchez-Queija, I., … Morgan, A. (2016). *Los adolescentes españoles: Estilos de vida, salud, ajuste psicológico y relaciones en sus contextos de desarrollo. Resultados del Estudio HBSC-2014 en España*. Ministerio de Sanidad, Servicios Sociales e Igualdad. Madrid. https://doi.org/org/NIPO:680-16-090-4

Moreno, C., Ramos, P., Rivera, F., Sánchez-Queija, I., Jiménez-Iglesias, A., García-Moya, I., & Fuchs, N. (2013). *El estudio health behaviour in school-aged children (HBSC) 2002-2006-2010*. Ministerio de Sanidad, Servicios Sociales e Igualdad. *Madrid*. Retrieved from www.msssi.gob.es.

Pettigrew, J., Miller-Day, M., Krieger, J., & Hecht, M. L. (2012). The rural context of illicit substance offers. *Journal of Adolescent Research*, *27*(4), 523–550. https://doi.org/10.1177/0743558411432639

Prilleltensky, I., Geoffrey, N., & Peirson, L. (2001). The role of power and control in children's lives: AnEcological analysis of pathways towardwellness, resilience and problems. *Journal of Community & Applied Social Psychology*, *11*(2), 143–158. https://doi.org/10.1002/casp.616

Rodrigo, M. J., Máiquez, M. L., García, M., Medina, A., Martínez, M. A., & Martín, J. C. (2006). La influencia de las características personales y contextuales en los estilos de vida en la adolescencia: Aplicaciones para la intervención en contextos de riesgo. *Anuario de Psicología*, *37*(3), 259–276. http://www.raco.cat/index.php/AnuarioPsicologia/article/viewArticle/61841/0

Rogoff, B., Baker-Sennett, J., Lacasa, P., & Goldsmith, D. (1995). Development through participation in sociocultural activity. *New Directions for Child and Adolescent Development*, *(1995*(67), 45–65. https://doi.org/10.1002/cd.23219956707

Salgado, P. G., Boubeta, A. R., Tobío, T. B., Mallou, J. V., & Couto, C. B. (2014). Evaluación y detección precoz del uso problemático de Internet entre adolescentes. *Psicothema*, *26*(1), 21–26. https://doi.org/10.7334/psicothema2013.109

Sánchez Pardo, L. (2002). Consumo de alcohol en la población juvenil. *Adicciones*, *14* (Suplemento1), 99–113. https://medes.com/publication/6157

Shaw, S., Kleiber, D., & Caldwell, L. (1995). Leisure and identity formation in male and female adolescents: A preliminary examination. *Journal of Leisure Research*, *27*(3), 245–263. https://doi.org/10.1080/00222216.1995.11949747

Smith, E. P., Faulk, M., & Sizer, M. A. (2016). Exploring the Meso-System. *Youth & Society*, *48*(3), 318–343. https://doi.org/10.1177/0044118X13491581

Soriano, E., Franco, C., & Sleeter, C. (2011). The impact of a values education programme for adolescent Romanies in Spain on their feelings of self-realisation. *Journal of Moral Education*, *40*(2), 217–235. https://doi.org/10.1080/03057240.2011.568104

Ward, J. H. (1963). Hierarchical grouping to optimize an objective function. *Journal of the American Statistical Association*, *58*(301), 236–244. https://doi.org/10.1080/01621459.1963.10500845

Waters, E., & Sroufe, L. A. (1983). Social competence as a developmental construct. *Developmental Review*, *3*(1), 79–97. https://doi.org/10.1016/0273-2297(83)90010-2

Weissberg, R. P., Durlak, J. A., Domitrovich, C. E., & Gullotta, T. P. (2015). Social and emotional learning: Past, present, and future. In J. A. Durlak, C. E. Domitrovich, R. P. Weissberg, & T. P. Gullotta (Eds.), *Handbook of social and emotional learning: Research and practice* (pp. 3–19). Guilford.

Wölfer, R., Cortina, K. S., & Baumert, J. (2012). Embeddedness and empathy: How the social network shapes adolescents' social understanding. *Journal of Adolescence*, *35* (5), 1295–1305. https://doi.org/10.1016/J.ADOLESCENCE.2012.04.015