

HEALTH

PROMOTION WITH SCHOOLS: IN SEARCH OF COMMON ELEMENTS



INTERVENTION GUIDE

October 2022



**2PASS
4HEALTH**

Promoting Physical Activity in
Secondary School for Health

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INTRODUCTION

What is this document?

This document is one of the products of the Erasmus + project: "Promotion of Physical Activity in Secondary School for Health (2PASS-4H)". It will provide details of interventions carried out in France and Spain aimed at promoting physical activity (PA) and healthy behaviors in order to create a health-promoting environment at schools. Using it as a guide, the reader will be able to find different key aspects to disseminate and implement the interventions collected here in another specific context, being able to identify the strengths and difficulties involved in the co-creation of an intervention with the different agents (stakeholders) that influence teenagers' health education.

Who is the target audience?

This guide is addressed to all those who intend to carry out an intervention aimed at the promotion of PA and healthy environments in secondary schools and/or in the community. It is a practical and accessible document for governmental and political institutions, organizations, associations and also for those involved in the most direct education with teenagers: educational directors, teachers and families.

Why can it be useful?

Currently, we can find specific examples of effective interventions aimed at promoting PA and healthy behaviors among teenagers. However, their application is often imposed by organizations or researchers and the needs and priorities of the application contexts where they are developed are not taken into account. Therefore, this guide gathers two interventions that are based on the needs of the different agents (stakeholders) as well as those of the students themselves in order to implement their programs. This process of interventions' co-creation has proven to be effective in achieving optimal results and can be sustained over time.

How can it be used?

This guide should be used as a reference frame for the implementation and dissemination of programs in the school environment; however, it should not be used as a closed document, but the structure and materials presented should be rather adapted to the specific context of the place where the intervention is to be applied.

1. THEORETICAL FOUNDATIONS OF INTERVENTION IN THE SCHOOL ENVIRONMENT

Educational centers are currently shown as one of the main contexts for the promotion of health-related behaviors in general and PA in particular (Watson et al., 2017; Kohl and Cook, 2013), since these are integrated educational environments where young people spend a large part of their day throughout their entire educational stage (Langford et al., 2015). Apart from the promotion that should be done directly using subjects such as Physical Education, it should be noted that the potential of the school as a whole for students to adopt a healthy lifestyle is much greater (Slingerland and Borghouts, 2011; Van Sluijs et al., 2021).

Numerous program implementation models have been used over the years (Tabak et al., 2012) in order to design interventions that generate behavioral change in school-aged individuals. One of the theoretical models most widely supported by the literature to establish a methodological basis for programs aimed at promoting behavioral changes in health and/or PA-related behaviors is the social-ecological model (e.g. Sallis et al., 2006). In this model, the behavior of the individual cannot be isolated, since different social factors converge on it, at different levels, involving all the agents in the environment (Tibbitts et al., 2021).

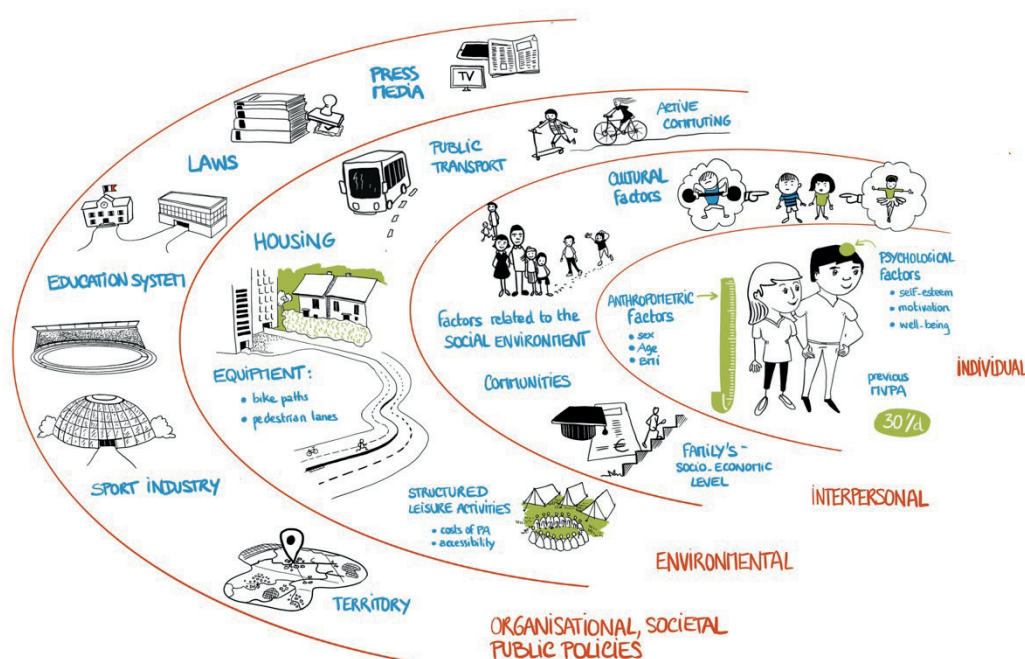


Figure 1. Socio-ecological model in educational environments

In the bibliography review by Murillo et al. (2013) five promising strategies for generating PA promotion projects in the school environment are identified. One of them is the multi-component feature that interventions promoting the empowerment of the different members of the school community should have. For this reason, the involvement of all the agents of the educational community (i.e. students, families, teachers and political agents) in intervention programs (multilevel programs) seems to be an appropriate strategy to obtain positive results (Bernal et al., 2020a; Soneson et al., 2020).

Regarding the design of an active school project, in the scientific literature there are several strategies that can be used in school hours such as: active recess (Tercedor et al., 2019), the use of “active” furniture or “standing desks” (Sherry et al., 2016), active classes (Norris et al., 2019) and active breaks (Carlson et al., 2015). These strategies alone have little impact on students' lifestyles, but by designing a plan that uses them in a combined and coherent manner, within a logical respect for the necessary school ecology, they can constitute very appropriate strategies for the design of a PA promotion project in an educational center. This type of strategy already appears in Spain in several educational intervention programs. All of them have been investigated and proven to be effective in their PA promotion objective (e.g. EFYPAF, 2022). In this key idea, the coordination that exists between the school context and the extracurricular activities that students carry out in the same sports facilities may also be relevant (De Bourdeaudhuij et al., 2011).

Following the principles previously established for the development of these programs, the intervention program “Sigue la huella” (Follow the Footprint) was developed in the city of Huesca, Spain (Murillo et al., 2018). This was implemented during three school years in different cohorts of teenagers, through different strategies from both curricular and non-curricular channels: (a) tutorial action, (b) quality PE, (c) dissemination of information, and (d) participation in institutional programs and anniversaries. The multicomponent program “Sigue la huella” (Follow the footprint) was effective in both increasing PA levels and decreasing sedentary time (Murillo et al., 2014).

In France, the program “Mouv' à l'école” (Bernal et al., 2020b) was developed in primary schools in disadvantaged neighborhoods of the city of Tarbes during a school year using a multi-component and multi-level strategy: (a) training of students, (b) information to parents, (c) training of teachers, (d) introduction by teachers of active classes, sedentary breaks and active recesses, (e) material and organizational changes in the school, (f) involvement of the relevant departments of the municipality. This led to an improvement in PA practice and a decrease in sedentary time during school hours (Bernal et al., 2021).

It seems appropriate to take the programs that have proven to be effective as a reference and systematize their dissemination to other contexts in order to assess their transferability and adaptability. To this end, Kilbourne et al. (2007) have developed a protocol for effective program replication (REP) consisting of 4 phases. Previous conditions (e.g., identification of the need, reference groups to work with and adapt the intervention), pre-implementation (e.g. identify collaborating agents and prioritize actions for intervention), implementation (e.g. program dissemination, intervention support), and maintenance and evolution (e.g., preparation of the intervention for sustainability). This is the structure we will use in the following document.

2. INTERVENTION PROGRAMS

The educational contexts in which the intervention programs have been applied are somewhat different, so the following table shows the equivalence of the different educational systems. In France it was applied in the Première course (16 and 17 years old) and in Spain it was applied in the 2nd year of ESO (13 and 14 years old).

EQUIVALENCE OF THE DIFFERENT EDUCATIONAL SYSTEMS	
SPAIN	FRANCE
Primary 6th grade	Sixième (6ème)
1st of ESO	Cinquième (5ème)
2nd of ESO	Quatrième (4ème)
3rd of ESO	Troisième (3rd)
4th of ESO	Second (2nde)
1st year of Bachillerato	Première (1st)
2nd year of Bachillerato	Terminale

■ 2.1. France

In France, an adaptation of the “Mouv’ à l’école” program (Bernal et al., 2020) was carried out in a public secondary school in the city of Tarbes: the Marie Curie General and Technological High School (1,122 students). The intervention was focused on students in the 1st STSS class (94 participants, aged 16-17) and the 1st EPPCS class (35 participants, aged 16-17). The intervention “Mouv’ au lycée” was co-constructed with the different actors of the school (teachers, management, students).

WHERE AND HOW HAS ACTION BEEN TAKEN?

2.1.1. Regarding the multilevel model.

Representation of the different fields of action generated in the “Mouv’ au lycée” intervention carried out in France (Marie Curie Institute) at different levels of the socio-ecological model.



Figure 2a: Multilevel approach to intervention in France

2.1.2. Regarding the multicomponent approach.

Representation of the different fields of action of the “Mouv’ au lycée” intervention carried out in France (Marie Curie Institute).

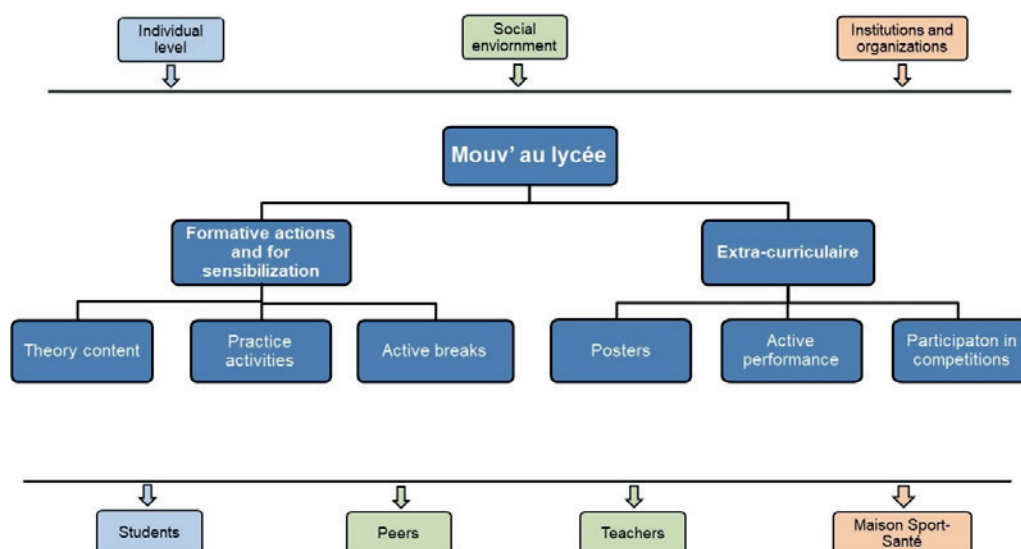


Figure 3a: Multicomponent approach to intervention in France

2.1.3. Intervention phases

Tasks	Actions	WHO
JUNE 2021	A. Pre-conditions	
A.1 Identify the school's needs	A.1.1. First contact with the school	INV
	A.1.2. Meetings with the school to identify their needs	INV
A.2. Presentation of the topics	A.2.1. Presentation and explanation of the main topics and logics of the program	INV
A.3 Establishment of a school-level working group (SWG)	A.3.1. Selection of school agents to participate in the project (teachers, management)	EC + INV
A.4 Propose a general intervention plan (in an understandable form) according to the needs.	A.4.1. Determination of relevant intervention pathways	INV + EWG
	A.4.2. Creation of a global calendar and an informative document adapted to the school	INV
June - September 2021	B. Pre-implementation	
B.1 Identify implementation barriers and facilitators	B.1.1. Discussion groups with stakeholders who can influence the project (students, families, teachers, politicians).	ALL
	B.1.2. Working meetings with the EWG	EWG + INV

B.2 List and prioritize context-specific actions that can be developed during the execution phase.	B.2.1. List of actions by actor	INV + EWG
	B.2.2. Meeting with SWG to prioritize actions to be developed	INV + EWG
	B.2.3. Temporal organization of the priority actions that will make up the project's implementation	INV
	B.2.4. Materials' supply and training for teachers participating in the project	INV
C.1 Behavioral assessment	C.1.1. Diagnostic evaluation of PA by means of accelerometry and questionnaire.	INV
	C.1.2. Evaluation of care by mode of transport and number of FAs	INV
C.2 Program implementation	C.2.2. Awareness and training of students (theoretical content and workshops)	PE + INV
	C.2.3. Application of the program in other areas (interdisciplinary)	CE + INV
	C.2.4. Implementation of the program in the school	EC + INV
C.3 Deployment of actions at the school level	C.3.1. Preparation of dissemination actions by students and teachers	EWG + INV
	C.3.2. Follow-up of actions taken by students at the school level	AYTO + INV
C.4 Evaluation of behavioral change	C.4.1 Assessment of PA by accelerometry and questionnaire	INV
	C.4.2. Assessment of students' retained knowledge on specific topics	CE + INV
June - September 2022 D. Maintenance and evolution		
D.1 Evaluate project and stakeholder satisfaction.	D.1.1. Communication of results to the school	INV
	D.1.2. Discussion groups and interviews to evaluate the achievement of objectives and satisfaction with the project.	ALL
D.2 Assessment of project sustainability	D.2.2. Discussion groups and questionnaire to assess project sustainability	ALL
	D.2.3. Sustainability Report	INV
	D.2.4. Meeting with the management team to present and discuss the sustainability report	ALL
	D.2.5. Document that collects the actions carried out during the program.	INV
	D.2.6. Training of school agents who will continue to implement the program.	INV + EC

Table 1a. Actions of the “Mouv’ au lycée” project based on the REP model (Kilbourne et al., 2007) adapted from the “Mouv’ à l’école” program (Bernal et al., 2020).

■ 2.2. Spain

In Spain, dissemination was carried out (dissemination understood as the adaptation of an effective intervention program: “Sigue la huella” [Murillo et al., 2014] to a different context). It was performed relying on different agents from the educational center environment for the co-creation of the program itself. The social context of reference was the city of Jaca (13,344 inhabitants) and the project was developed in a public secondary school, IES Domingo Miral, with students in the 2nd year of Compulsory Secondary Education (57 participants, 13-14 years of age). Within this co-creation process, it was the students themselves who decided the name of the program: “JACTIVA” Project.

WHERE AND HOW HAS ACTION BEEN TAKEN?

2.2.1. Regarding the multilevel model

Organizations involved in the intervention carried out in Jaca (Spain) from a socio-ecological perspective.

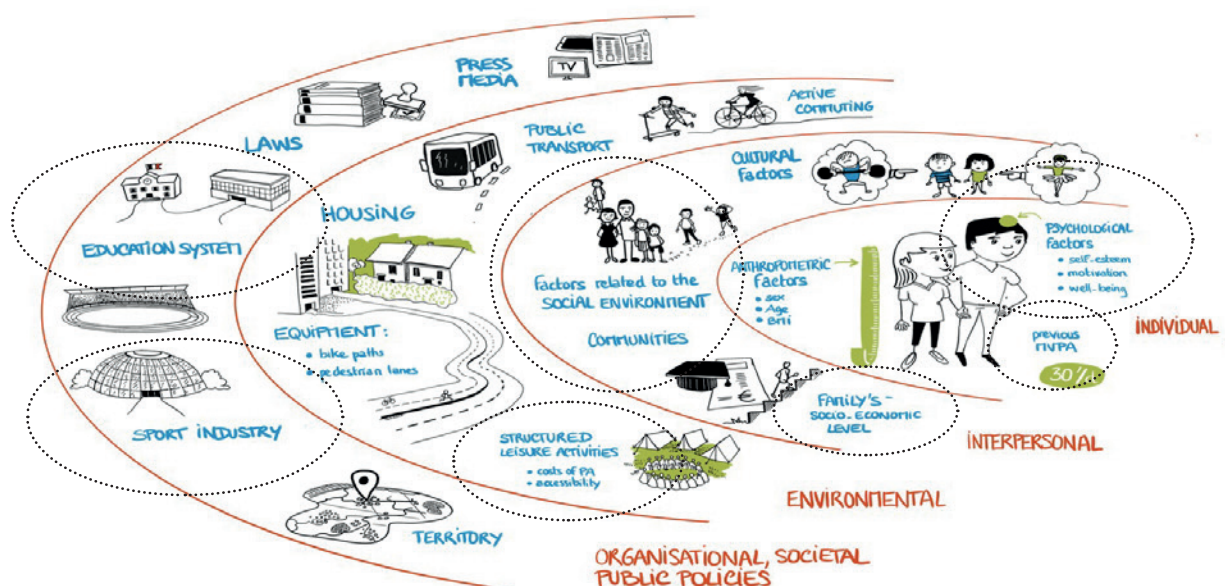


Figure 2b. Multilevel approach to intervention in Spain

2.2.2. Regarding the multicomponent approach.

Action areas of the intervention carried out in Jaca adapted from the “Sigue la huella” program (Murillo et al., 2014), “Jactiva” program.

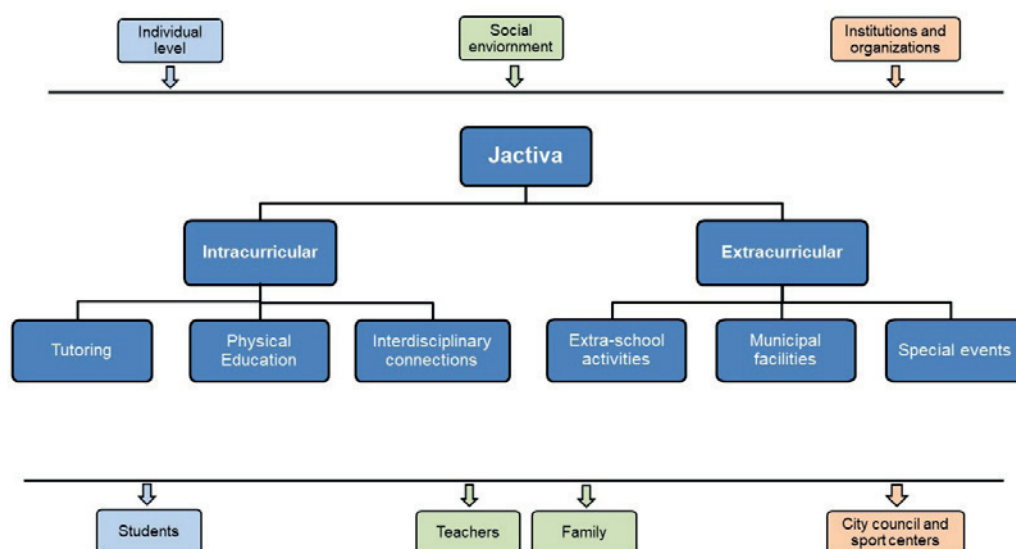


Figure 3b. Multi-component approach of the intervention in Spain

2.2.3. Intervention phases

Tasks	Actions	WHO
JUNE - SEPTEMBER 2021 / A. Pre-conditions		
A.1. Identify the center's needs for the new intervention.	A.1.1. First contact with the educational center.	INV
	A.1.2. Meetings with the center to identify their needs and generate healthy environments.	INV
A.2. Identify effective interventions that fit in the context.	A.2.1. Collection and explanation of the "Sigue la huella" program	INV
A.3. Create a working group in the educational center (EWG).	A.3.1. Selection of the agents who will be in charge of leading the project from the educational center.	EC + INV
A.4. Adapt the effective intervention to the context (in an understandable way) according to their needs.	A.4.1. Adaptation of the "Sigue la huella" program to the new context.	INV + EWG
	A.4.2. Provision of an information document adapted for the educational center.	INV
October 2021 - January 2022 B. Pre-implementation		
B.1. Identify collaborating agents in the community.	B.1.1. First contact with families.	INV
	B.1.2. First contact with the city council.	INV
B.2. Identify barriers and facilitators to implementation.	B.2.1. Focus groups with the agents that can influence the project (students, families, teachers, politicians).	ALL
	B.2.2. Working meetings with the EWG.	EWG + INV
	B.2.3. Working meetings with the city council	AYTO + INV

B.3. List and prioritize actions adapted to the context that can be developed during the implementation phase.	B.3.1. List of actions by agent.	INV + EWG
	B.3.2. Meeting with the EWG to prioritize the actions to be developed.	INV + EWG
	B.3.3. Temporal organization of the priority actions that will make up the implementation.	INV
	B.3.4. Information to families and proposals for participation.	INV + FAM
	B.3.5. Provision of materials and training for Physical Education teachers.	INV + PE
	B.3.6. Provision of materials and training of tutors.	INV + TUT
February - May 2022		C. Implementation
C.1. Assess behaviors related to healthy environments.	C.1.1. Measurement of different health determinants.	INV
C.2. Implement the program.	C.2.1. Implementation of the program from the Orientation and Tutorial Action Plan.	TUT + INV
	C.2.2. Implementation of the program in Physical Education.	PE + INV
	C.2.3. Implementation with other areas (interdisciplinary).	EC + INV
	C.2.4. Implementation in the educational center.	EC + INV
	C.2.5. Implementation with the city council.	AYTO + INV
	C.2.6. Implementation with families.	FAM + INV
	C.2.7. Timetable with key implementation actions.	INV
C.3. Maintain the support of the agents involved.	C.3.1. Follow-up of the implementation with the educational center.	EWG + INV
	C.3.2. Follow-up of the implementation with the city council.	AYTO + INV
June - September 2022		D. Maintenance and evolution
D.1. Evaluate the project and the satisfaction of the agents involved.	D.1.1. Communication of the results obtained to the agents involved in the project (school, city council and families).	INV
	D.1.2. Focus groups and interviews to evaluate the achievement of objectives and satisfaction with the project.	ALL
D.2. Evaluate the sustainability of the project.	D.2.2. Focus groups and interviews to assess project sustainability.	ALL
	D.2.3. Sustainability report.	INV
	D.2.4. Meeting with the management team for the delivery and discussion of the sustainability report.	ALL
	D.2.5. Document compiling the actions carried out during the program.	INV
	D.2.6. Training the agents of the educational center that will develop the program.	INV + EC

Table 1b. Actions of the “JACTIVA” Project based on the REP Model (Kilbourne et al., 2007) for the adaptation of the “Sigue la huella” project (Murillo et al., 2014) to the specific context of Jaca.

CAPTION

INV (Investigators): Corresponds to the research group that carries out the intervention.

EC (Educational Center): Refers to the educational center in general, and it may mean the management team as a representative.

AYTO (City Council): Refers to the city council as an external agent to the educational center, and it may mean a specific person as a representative.

EWG (Educational Working Group): Refers to the working group selected to exercise leadership of the project from the educational center.

TUT (Tutors): Teachers in charge of tutoring the students targeted by the intervention.

PE (Physical Education Teachers): Teachers in charge of the Physical Education subject of the students to whom the intervention is addressed.

FAM (Families): Parents or legal guardians of the students targeted by the intervention.

ALL (All agents): Refers to the participation of all the above agents.

3. EXAMPLES OF INTERVENTION ACTIONS

■ 3.1. CONTACTING THE EDUCATIONAL CENTERS

3.1.1. In France

Strategy	Contact the educational center
Description	The first contact with the school is made by e-mail with the principal to explain the objectives and challenges of the project. This email must specify: 1. The problems 2. The objectives 3. A quick example of what has been done in other schools 4. A proposal for a meeting to go into more detail Following this contact, a proposal for a meeting is made to specify the objectives, the workload and the demand involved.
Temporal location	At the end of the previous year
Time spent	2/3 h

3.1.2. In Spain

Strategy	First contact with the educational center
Description	The first contact is made with the educational center via e-mail presenting a first idea of the project, with some objectives and general guidelines for action. The email would have the following structure: 1. Introduction 2. Lines of action 3. Previous projects (successful) 4. Intentions in the new context 5. Next steps After the first contact, a meeting should be held to explain the objectives of the project, the requirements for its fulfillment as well as a first structuring of what is to be done. In this meeting an open and empathetic attitude are needed in order to listen and try to address the concerns of the center itself.
Temporal location	The previous school year (6-7 months prior to implementation)
Time spent	3/4 h

■ 3.2. FOR THE CO-CREATION OF THE INTERVENTION PROGRAM

3.2.1. In France

Strategy	Determination and arrangement of program actions
Description	After having presented the principles and possible actions (based on examples of previous projects), the determination of the actions that will actually be carried out is done jointly with the different agents (researchers, management team, teachers and students), in different steps: 1. Determination of actions by researchers (teacher training, student training) and scheduling according to relevance, curriculum and time available 2. Determination of complementary actions, often multidisciplinary, carried out by teachers and/or school management 3. Determination with the students of the dissemination actions they wish to implement, the need for support and their timing.
Temporal location	Throughout the year
Time spent	Link to materials

3.2.2. In Spain

Strategy	Temporal organization of priority actions that will make up the implementation of the program.
Description	After listing and organizing the disseminated actions of the “Sigue la huella” program by each agent involved in the development of the project, they are scheduled by means of a calendar with the necessary participation of the educational center. Here the implementation is organized in a sequential manner, unifying the actions the center already carries out and can be aligned with the project’s objectives. On the other hand, those actions the center has decided based on the scientific evidence acquired from the “Sigue la huella” program are added. It is also specified how the agents will have to participate and collaborate in the actions. Likewise, for the students, an adapted calendar with the most relevant actions of the project is drawn and posted on the bulletin board of each class.
Temporal location	In the same school year (4 months prior to implementation)
Time spent	5 h. Link to materials 3.2.2

■ 3.3. PRIORITIZATION OF PARTICIPANT DATA

3.3.1. In France

Strategy	Training and raise of awareness in the students
Description	After presenting an overview of PA-related health problems, the researchers present school’s students’ accelerometry data that are representative of their PA and sedentary behaviors: 1. The general data allow us to situate the group in relation to national and international data and to determine the lines of action to be prioritized in the following phases (complementary and dissemination actions). 2. The students’ personal data are used in the 3ème intervention session so that each student can analyze his or her behaviors and set goals for improvement in PA, sedentary lifestyle, or both.
Temporal location	Diagnostic evaluation and third intervention session
Time spent	2 x 2 h / group + follow-up Link to materials

3.3.2. In Spain

Strategy	Intervention from the Guidance and Tutorial Action Plan (2nd)
Description	Several months beforehand, focus groups (discussions) are held to identify needs, barriers and facilitators for the implementation of the intervention program. Likewise, measurements of PA levels and health-related behaviors of second-year students are also carried out. With a previous analysis of the most relevant health determinants for the center (in this case, PA, sleep, time spent with screens), a series of explanatory graphs are proposed to be presented in one of the intervention sessions. In this session, the participants' data on the behaviors detected are shown so that the students can become aware of the topic and make a critical assessment of them.
Temporal location	At the beginning of the intervention
Time spent	2 h + 3 h (1x group). Link to materials 3.3.2

■ 3.4. FOR THE ANALYSIS OF HEALTHY BEHAVIORS

3.4.1. In France

Strategy	Training and raise of awareness in students and teachers
Description	General data on PA and sedentary lifestyle, as well as knowledge about the health benefits of PA during 2 awareness and training sessions (students and teachers) are presented. This knowledge is mobilized again through games, and through the creation by students of posters based on graphic facilitations (which will then be used for dissemination purposes). The session in which students analyze the accelerometer data also leads them to reflect on their behavior (healthy or not).
Temporal location	Intervention sessions 1-2 and 3
Time spent	2 x 2 h + personal work Link to materials. Card game, poster

3.4.2. In Spain

Strategy	Intervention from the Guidance and Tutorial Action Plan.
Description	About PA: Using a large poster with different strips referring to the different PA intensities, the students have to place a series of images related to different activities of daily life in each of them in order to make a final reflection on the decisions taken. On other health-related behaviors: Through a basic weekly schedule divided into representative time slots (morning, noon, afternoon and evening) during the week and on weekends, students have to show their behaviors in a typical week, dividing them, with a previous explanation and reflection, into those that are healthy and those that would be advisable to review.
Temporal location	In the middle of the intervention
Time spent	2 h + 3 h (1x group). Link to materials 3.4.2

■ 3.5. DISSEMINATING THE PROJECT IN THE CONTEXT

3.5.1. In France

Strategy	Dissemination actions within the school
Description	The dissemination of the project within the school has two main objectives: 1. Teachers who have not been directly involved in the project: they are invited to the briefing and offered training opportunities (e.g., for active breaks) (through PE teachers or individual students). 2. Classes that have not participated directly in the project through dissemination actions carried out by students (poster presentation, contests, organization of tournaments, flashmob, challenges...).
Temporal location	During and at the end of the intervention
Time spent	2 h / group to define dissemination actions + application Link to materials. Posters

3.5.2. In Spain

Strategy	Training and raise of awareness in students and teachers
Description	The dissemination of the project in the context is carried out from different areas, using the opportunity to involve different agents. 1. Leaflets with information about the project and ideas for messages to convey to the students. are distributed to all teachers within the school. 2. In collaboration with the high school, different publications are periodically launched on social networks and on the website in order to reach the city and families. Weekly contact is maintained with them through informative videos on what is being done each week. 3. An interdisciplinary connection is made in collaboration with the subject of Plastic and Visual Education. Here students, in a didactic unit, draw posters linked to different health-related behaviors and publish them on social networks.
Temporal location	During and at the end of the intervention
Time spent	2/3 h + 2/3 sessions. Link to materials 3.5.2

■ 3.6. CITY-SCHOOL CONNECTION

3.6.1. In France

Strategy	Coordination with the municipality
Description	From the beginning of the project a partnership with the city's Maison Sport-Santé (MSS) was established. The 4th session was carried out in that institution to measure the intensity of various physical activities of the students and, above all, to discover the actions of the MSS for the entire population. Finally, since the project highlights the need to develop active transportation, it is planned to work with the city in this direction.
Temporal location	4th intervention session and after the project
Time spent	2 h / group in MSS + reflection Link to materials

3.6.2. In Spain

Strategy	Coordination with the city council
Description	During the first weeks of the program, students and families had difficulty in accessing municipal facilities for economic reasons. A local measure is therefore coordinated with the city council so that all students who participate in the project can access for two months, with an external companion if they wish, to various municipal facilities free of charge. Students receive a card with the project logo and information about the facilities. This initiative is called SportPass. In addition, constant communication with the municipality is necessary to evaluate the project longitudinally during its development.
Temporal location	During the project
Time spent	6 h Link to materials 3.6.2

■ 3.7. ASSESSMENT OF THE SUSTAINABILITY OF THE INTERVENTION

In the application of the “Sigue la huella” program (Murillo, et al. 2015; Murillo, et al. 2019) it can be seen that the long-term effects are significant. It is therefore interesting to assess the possible sustainability of the project in a different context in order to highlight and enhance the strengths and work to minimize or address the possible weaknesses found.

Schell et al. (2013) maintain that much attention has been paid to the effectiveness of the programs, but little to what happens once they are implemented. The sustainability framework they present suggests that there are a number of factors that may be related to the ability to sustain a program or project and its benefits over time.

Luke et al. (2014), propose a tool called “Program Sustainability Assessment Tool (PSAT)” to assess the sustainability of programs in the field of Public Health. Subsequently, Hall et al. (2021), carried out an adaptation of the tool and its validation in the field of educational programs, mainly for the promotion of PA, in the Anglo-Saxon context. The slow and critical reading of the instrument associated with the school environment leads to a specific adaptation of the instrument to provide useful information to researchers and schools.

The PSAT adapted to the educational framework has 41 elements in eight dimensions: commitment (6), participation of the educational community, other agents and institutions (4), stability of resources (5), organizational capacity (5), evaluation plan (5), adaptability (5), communication (6) and strategic planning (5). In order to evaluate each item, those involved make an assessment from 0 to 10 (10 being the highest value with respect to the sustainability of the project). It is possible to obtain an average value of the items of each dimension and the evaluation of that dimension as a whole. The important thing is that after obtaining these values, sustainability indexes, a qualitative assessment of the strengths and weaknesses of the program can be made to serve as training feedback.

3.7.1. In France

Strategy	Satisfaction evaluation and prospects for sustainability
Description	At the end of the project, school stakeholders are invited to a project review meeting and focus groups (discussion). The following issues are addressed: 1. Satisfaction with the project: strengths, areas for improvement and shortcomings 2. Sustainability: the sustainability of these actions with and without the support of the research team is questioned to determine follow-up. In addition to the focus groups (discussion), the French version of the PSAT is used to assess project sustainability at different points and identify areas for improvement.
Temporal location	At the end of the project
Time spent	3 h. Link to materials 3.7.1

3.7.2. In Spain

Strategy	Satisfaction rating and prospects for sustainability
Description	At the end of the intervention, the different agents of the educational center and external agents (city council) are invited to focus groups (discussion). These groups are used to evaluate in depth the satisfaction with the project and its possibilities of sustainability. The different agents that have participated (students, teachers, families and politicians) are incorporated into these groups just as at the beginning Similarly, at the end of the school year, the members of the school who have participated in the project are invited to a training and shared evaluation that generates a report with strengths and challenges to be taken into account in order to maintain the project next year and in future years, without the exhaustive participation of the research team.
Temporal location	At the end of the project (and of the school year)
Time spent	3 h. Link to materials 3.7.2

4. KEYS AND RECOMMENDATIONS FOR INTERVENTION IN THE EDUCATIONAL CONTEXT

KEY 1. PLANNING IN EDUCATIONAL CENTERS

Limitations encountered:

Planning teaching in a secondary school requires departments to follow a reflective procedure of adjusting to existing regulations (Ureña, 2010). Likewise, it is mandatory for teachers to adapt their classroom and tutoring programs to the contexts and the people they will be in charge of, thus trying to promote greater motivation for learning. In the current situation, as we all know, it is evident that integrating a project in an educational center is a complex task, as it requires an increased workload due to the need for reflective and organizational efforts of both teaching teams and teachers.

The planning of teaching in the secondary stage is based on very interesting ideological foundations that defend the development of competencies in contexts that favor motivation and learning through active methodologies, among which projects stand out. Likewise, it is defended that these contexts should not be limited to formal education, but should also incorporate situations close to non-formal and informal contexts. However, the reality of secondary schools is not very flexible because there is a very targeted regulatory base. There are programs full of objectives, content and evaluation criteria, as well as cross-cutting themes, which need to be incorporated into the teaching hours of each subject. There is therefore little time and space left for the integration of new projects, in which the necessary time for reflection, foresight and organization required by the teaching staff and the center to engage in this type of intervention is valued.

Some recommendations:

1. Initiate contact with the center at the beginning of the third quarter of the previous year, presenting the project to be carried out so that it can be explained in detail and approved by the school board and the teaching staff board.
2. Find a reference person to act as a facilitator in the center, either principal, tutor or Physical Education specialist, who will lead the project in the center itself.
3. Set out in a chronogram the days and times when each of the possible actions of the project will be carried out so that they can be included in the programs and complementary activities of the educational center in the following school year. After this, a provisional timeline is built with the required actions and dedications and the center and teachers suggest specific actions and dates.
4. The aforementioned actions shall include a description and the estimated time of dedication of each one of those involved in the implementation of the action (Physical Education teachers, teachers of other areas, tutors and other agents such as parents, city councils, etc.).

KEY 2. PROGRAM CO-CREATION PROCESS

Limitations encountered:

The concept of co-creation is being addressed from various theoretical fields (Galvagno and Dalli, 2014; Saarijarvi et al., 2013). In all of them, its relevance to society is valued, since it focuses on the needs and interests of citizens. It also seems that their use achieves beneficial effects in interventions in both health promotion and educational environments (Leask et al., 2019). However, according to De Koning et al. (2016), there are certain requirements in the design of the process, such as the establishment of five key steps: invite, share, combine, select and continue.

It is undoubtedly necessary to connect with the agents of the educational center itself (to get to know and empathize) in order to set up this project, and it takes time to evolve. We consider it essential to invite to two preparatory meetings prior to a large meeting where all the information is shared. It is not easy, but it is necessary in order to achieve sustainability in the project.

This is followed by the step of combining and selecting actions. In the course of co-creation, we find a process of divergence (the ideas of all the agents are many and disperse) towards a process of convergence (where the opinions of each agent involved are filtered to converge in one), thus giving a rhomboidal scheme with the sequencing of both processes (Figure 4). This procedure is necessary to filter the information and adapt the project to the context. In the Spanish project, the university and the secondary school reach an agreement to continue, always prioritizing the interests of the school. In the French project, university, high school teachers and students come to an agreement to move forward.

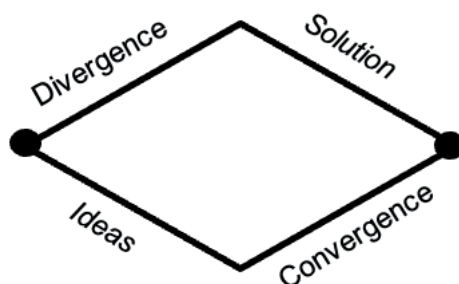


Figure 4. Diamond process for co-creation of intervention

The co-creation process is proposed at the beginning of the school year. At this time, the management team, teaching staff board and tutors have a heavy workload and are concerned about the start of the school year. The greatest difficulty for co-creation is the introduction of too much information from the research team that prevents imagining the practical and organizational detail of the project. The teachers feel comfortable once they are involved in the process, but in the first moments they feel a certain uneasiness because they do not have enough time to reflect and propose.

Some recommendations

1. Start the co-creation process in the third quarter of the previous academic year, even though there may be a certain temporariness.
2. Give the management team and group of teachers involved a list with the specific proposal of possible actions to be developed in the project. It is recommended that the actions have been previously implemented in other educational centers and their effectiveness in teenagers has been proven.

3. Keep this list open to suggestions from the management team, teachers and students so that they can add actions to the project. These could be activities already existing in the center itself or new ones that may be created. In any case, they should be aligned with the purposes of the project. In this way, the necessary balance between program fidelity-adaptation would be covered.
4. Choose the actions to be carried out during the school year, having previously reflected together, assessing conditioning factors or criteria that have sustainability as a reference.

KEY 3. COMMUNITY ENGAGEMENT IN SUSTAINABILITY

Limitations encountered:

Sustainability is understood as an adequate management of the environment and its resources, so that the elements and processes are recognized, understood and allowed to be respected and reproduced (Gonzalvo, 2018). Projects based on educational interventions must focus on sustainability to ensure that their positive effects are sustained over time. Thus, intervention strategies generate sustainable projects and, therefore, sustainable effects (Swerissen and Cribbs, 2004).

When the research team is integrated in the educational center to accompany the teaching staff in the development of the project, a good climate of collaboration is generated in the institution, both for the design and the execution of the actions. As the project progresses and the positive effects of the involvement of external agents and the participation of the students are noticed, a positive climate of motivation is observed in all of them. Finally, when presenting the results and evaluating the project, the center's question is whether the university returns the following year.

Moving from bi-lateral management of a project (University + High School) to uni-lateral management (High School) raises concerns about its sustainability. There are actions which require the presence of university resources (e.g. accelerometry or questionnaires) but others are to be assumed autonomously by the center (e.g. intervention sessions) and may use the work of the university on an ad hoc basis.

Another key to sustainability is the lasting connection of external agents with the development of the project within the educational center. It is essential to align the messages given in all contexts so that they have a greater impact and sustainability on students. In the case of younger students (13-14 years old), the essence of families lies in knowing what is being done at the center and how to reinforce these same messages at home. With older students (17-18 years old), the involvement of other agents of the city or their own referents is necessary for the consolidation of these messages.

Some recommendations

1. Meet and evaluate the effectiveness of the actions carried out, making decisions on the actions to be implemented in the following school year. Depending on the context, after the presentation of results, hold a meeting to determine the actions to be taken and present them to the school board for approval.
2. Adapt the actions to the possibilities and resources of the center without the presence of the research team or taking into account an occasional collaboration for the execution of actions that require their presence.
3. Incorporate a pedagogical suitcase with didactic resources on the actions of the project or design session cards of the actions decided to be included in the corresponding programs (Physical Education, Mathematics, Plastic Arts, Tutorial Action, Extracurricular Plan).

4. Contact external agents (city council) to corroborate the maintenance of the actions offered for the next school year. If there were actions to be performed with external organizations, it would be necessary to have them planned the previous year.
5. Communicate and inform families by transmitting the messages of the project so that they can align this information in their homes because this ensures important changes in the behavior of teenagers.
6. Try to have a reference person who leads the project from the center itself and who has a stable contract with the center so that the project can be more sustainable.
7. Implement a training evaluation model for the project. This translates into establishing a dialogue between teachers and the center's management team in which the strengths and weaknesses of what happened are expressed in a qualitative manner and possible solutions to the problems detected are shared. After this, appropriate solutions are selected to improve the limitations observed and action strategies as well as future commitments are requested from the agents involved.

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