

Description and Impact Evaluation of Training Course on Doping Prevention with Guidelines

WORK PACKAGE 3

INTELLECTUAL OUTPUT 2

September 2022

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INTRODUCTION

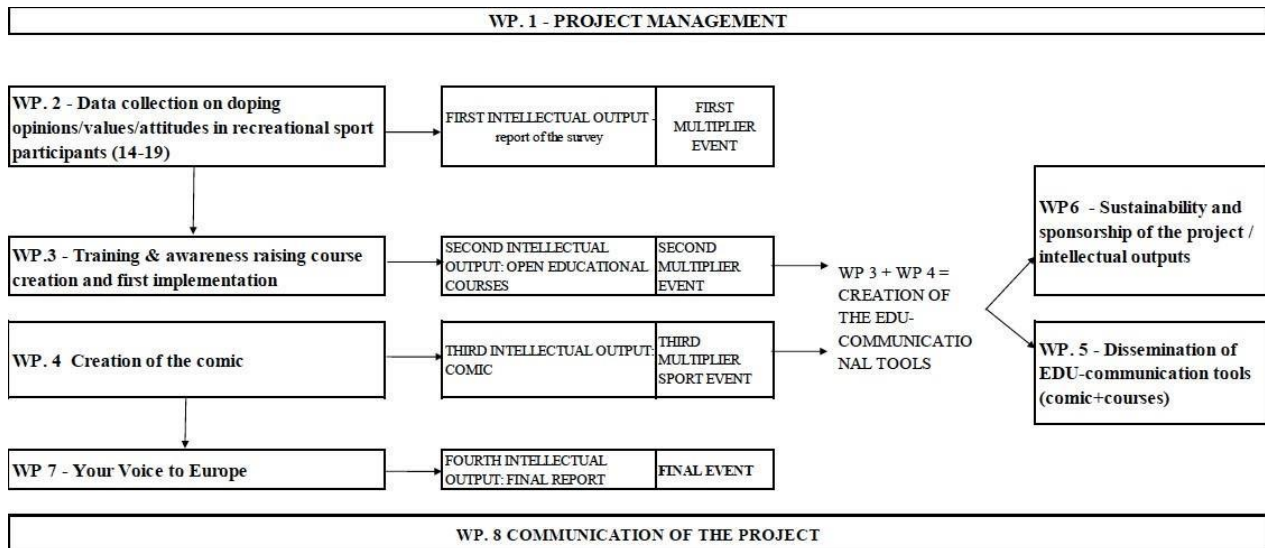
Despite existing policies and regulations, the use of controlled PAES/doping substances has become increasingly popular among non-athletes over the last decade, especially among younger (Pope et al., 2014; Lazaurs et al. 2017). The nonmedical use of controlled PAES has become more common among non-athletes and more used for recreational exercisers (Parkinson and Evans, 2006; Kanayama et al., 2010). Historically, doping control efforts have been focused on the detection and deterrence of illegal substances in elite competitive sport and implied essentially testing programmes and eventually assigning sporting sanctions.

Nowadays, next to the importance of doping control at elite level, there is a growing realization in the EU that such rules and programs need to be backed by wider efforts to prevent the establishment of a pro-doping culture mainly outside elite contexts, specifically in recreational environments, where youngsters are usually not aware of its consequences and dangers (Backhouse, 2014)

The DRAWS (Doping Raising AWAREness among youths in Sport recreational environments) project (Erasmus + Sport) significantly addresses the goal of combating doping in recreational environments (focusing on adolescents aged 14- 19) by proposing a set of activities and EDU-communicational tools that aim at preventing the creation of a pro-doping culture within this target group.

An innovative approach to this issue is adopted in DRAWS as compared to other projects on the same issue: a bottom-up approach directly involving the target group in the different project activities, allowing active and direct participation of young participants, their contributions, inputs, feelings and motivations being key to the development of tailored training materials and edu-communication tools, thus setting a change of paradigm in the anti-doping scenario. The key work packages of the project are shown in figure 1.

Figure 1 – DRAWS Work packages



The following report focuses on the main results achieved during the Work Package 3 (WP3). WP3 consisted in the implementation of a training course having the general scope to raising awareness and knowledge about doping among youths in recreational sport contexts.

More in detail, the training aimed at:

- Creation of an innovative training methodology to better engage the European youth participants in doping fight and prevention;
- The open education resources will effectively contribute to the training of young athletes given that they will produce a broader awareness on doping issues among the youngsters.

The report is divided in three main sections.

The *first section* provides an overview of the methodological and theoretical pillars basing the training course and describes the details of the training in order to facilitate its implementation to whatever organization interested in.

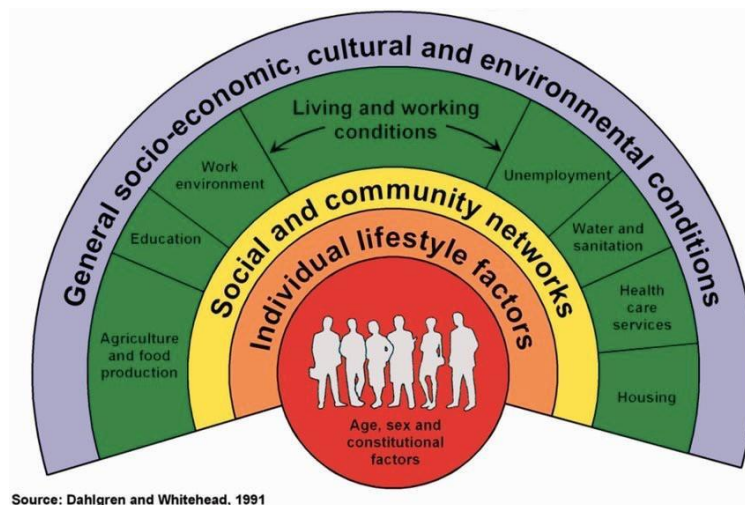
The *second section* of the document highlights the key results of the training course as reported by the trainers who conducted the trainings. The description of such outcomes provides evidences around the positive impact of the training and offers a scientific ground to export the training program in other European contexts.

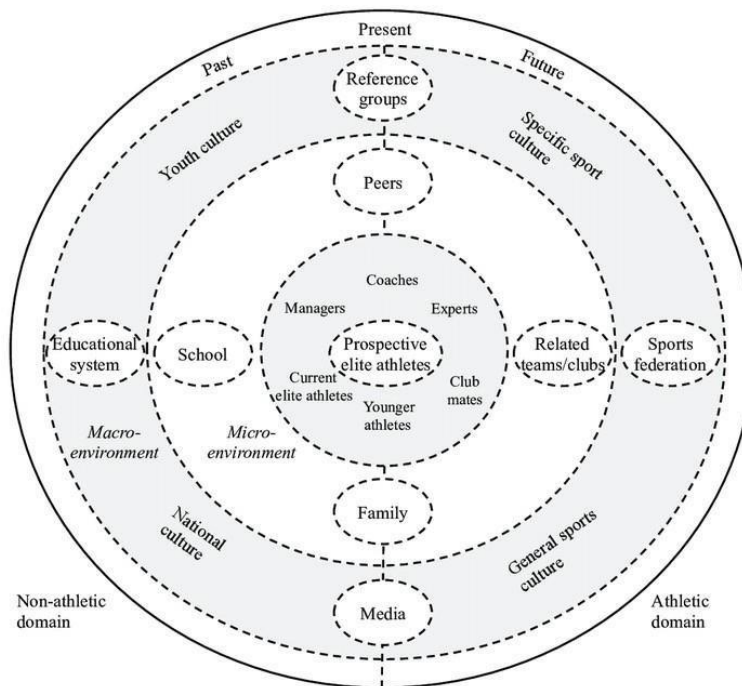
The *last section* describes the new learnings achieved during the training sessions and reports some useful suggestions for practitioners who are interested in replicating the experience of DRAWS.

SECTION 1 – DRAWS TRAINING COURSE

1. Theoretical assumptions of the training: the insights from IO1

The first phase of the DRAWS project aimed to provide a better understanding of European adolescents' attitudes and representations of the use of controlled and uncontrolled PAES in recreational sport settings. To answer this initial research question, it has been adopted a Holistic Ecological Approach (HEA) and Psychosocial approach, suitable to understand those psychological, social, contextual, and cultural factors that are related to adolescents' behaviours, and in our case, PAES use. This approach mixed the socio-ecological models of health behaviours (Sallis, Owen, & Fisher, 2008) and our previous application of HEA to the study of talent development environments (ATDE Model – Henriksen et al., 2010).





It has been conducted a study using both a qualitative in-depth and a quantitative extensive approach to achieve this aim. In particular, a sequential exploratory mixed methods design (Ivankova, Creswell, & Stick, 2006) was used whereby qualitative data is collected first to explore the issue before conducting an extensive survey. An innovative approach to this issue is adopted in DRAWS as compared to other funded projects on the same issue: as a matter of fact, a bottom-up approach directly involving the target group in the different project activities is the project characteristic allowing active and direct participation of young participants, their contributions, inputs, feelings and motivations being key to the development of tailored training materials and edu-communication tools, thus setting a change of paradigm in the anti-doping scenario. In particular, introducing issues about lifestyle, food and supplements was helpful to stimulate general discussion about PAES. Starting from more general reflection on the meaning of sport, as well as facilitating a broader reflection on nutritional habits, has made it possible to approach the topic gradually.

The research carried out in the WP1 gave us detailed theoretical insights that guided the structure of the training modules. More in detail, it channeled the following conclusions:

- Adolescents are not fully aware of the differences between legal and illegal substances.

- A significant minority of adolescents involved in the survey declared to make regular use of medicines when doing sport. Despite widespread recognition that misuse of OTC Medicines may have negative consequences, there is a lot of approval to their use.
- The prototype of adolescent doping user was seen different from oneself and characterised by negative traits, with unfairness towards others and disrespect of rule, irresponsibility and lack of health consciousness. For adolescent recreational athlete athletic performance enhancement may not represent a key goal of many doping users, though many others may use doping to improve their physical appearance and body shape instead.
- Participants also reported their experience of talking with significant others about this topic: with coaches, family members, peers.

The most significant and innovative findings of the preliminary study suggest that, in order to contrast the establishment of a pro-doping culture in recreational sport environments, it is crucial to educate youth on ethical behaviours and to work on their attitudes and motivational orientation toward sport, on their own body image representation, on the environment they are involved and on their knowledge about the use of the substances and food.

In the lights of all these considerations, we decided to develop our training in four main modules that are fully described at Table 1.

The modules are structured to develop discussion and sharing among the youths around:

1. The approach to the sport with particular attention to the motivation, competitive aspects and the idea of success (Module 1)
2. The sport environment where the youths are involved (Module 2)
3. The body image that is related to the body representation and ideal self (Module 3)
4. The nutrition and the PAES's use with a specific focus on the relationship of the youths with food, the use of supplements/legal drugs or illegal drugs (Module 4).

TRAINING CONTENTS

INTRODUCTION AND OPENING

MAIN OBJECTIVES

Explain the aim of the training and working on the representation of the doping and the different related aspects.

Presentation and knowledge of the participants

DEVELOPMENT OF THE MODULE

Tool – “What does doping mean to you?” Group words cloud and/or “a tweet” on the meaning of doping

During the training, participants are individually asked to answer the question “What does doping mean to you?” by choosing one or more words that reflect their representation of doping. The words cloud that emerges from the answers of all the participants and the related explanation of the choice are shared among the group with trainers guiding the discussion. It’s important to bring their attention on the most significant and peculiar words the wrote and ask them the reason why they chose those specific words.

For the online course

Send the link for the Words Cloud in the chat and ask participants to choose some words to define the doping.

MODULE 1: APPROACH TO SPORT

This module aims at helping young athletes in becoming more conscious with respect to what sport means to them. The module has the purpose to guide them in understanding of their latent representation of sport motivation, competitive aspects and their idea of success.

- Explore the motivation behind the sporting activity of the participants involved and activate a reflection on the theme.

- Think about competitive aspects, bringing out representations of the idea of healthy

Tool - "Tell me about your sports story"

The participants are asked to tell their own sports story to trigger a discussion on what playing sport means to them with particular attention to the themes of the motivation and the competitive aspects.

As for the sport motivation, the trainer can ask participants to reflect about these key questions: *Why do you play sports? What are the reasons that led you to play this sport? Do you dream to be a sportsman?*

Example of questions related to the competition are: *What is a healthy competition for you? What is a dysfunctional competition for you?*

Tool – “Video projection of the history of an athlete”

The trainer is called to show 2-3 videos of the history of one or different athletes. Participants are called upon to reflect on this key question: *What do you think*

and/or dysfunctional competition

- Discuss and reflect on the idea of success/unsuccess and the importance of the diverse value aspects behind the success.

about the experience of this athlete? What would you have done in his shoes?
The trainer guides the discussion and lead the group to reflect on the diverse representation of success emerging from the group.

MODULE 2: SPORT ENVIRONMENTS

The module aims to explore the environments in which athletes move and reflect on whether they are perceived as supportive or not.

Developing participants' awareness about the impact of good/bad relationships on their sporting practice

Tool – “My training camp”

Participants are invited to draw a graphical representation of their sport environment and to talk about the nature of their relationships with the people mentioned. This graphical-symbolic tool allows to activate a reflection on how the relationships (i.e., with parents, trainer, peers) influence the approach of the youths to the sport.

MODULE 3 – BODY IMAGE

This module focuses on the body image of the young athletes with particular attention to the themes of body representation and the ideal self.

- Working on the body representation of the participants trying to complexify and thematise, for example, the idea of beauty
- Developing a reflection about the distance between the representation of

Tool – “Presentation of pictures and/or comics”

Young athletes will be guided into reflecting on their own body representation and ideal self, starting from viewing some pictures or comics that focus on some specific aspects of the corporeality of the athletes. Examples of questions they can ask participants: *What is a beautiful body for you? What is your reference model in terms of beauty?*

This activity will permit to develop participants' awareness about the implicit representation of their body and guide them toward the construction of a more complex one.

one's real self and
the ideal self

MODULE 4 - NUTRITION AND PAES'S USE

The module aims to provide information about the implication of the use of legal/illegal drugs and to reflect about dietary regime of the young athletes. The debate developed within this module aims to promote a greater awareness about the diet and the use of the substances in the field of sport.

- Reflecting about healthy/unhealthy diets and highlight the benefits of the positive effects of a healthy diet on one's health and on sports performance

- Thinking about the use of PAES and raise awareness of health risks associated with the use of supplements and drugs

- Raising awareness of the risks of using illegal drugs for one's own health and highlight the aspects related to the integrity of one's own representations as athlete/professional

Tool – “Quiz”

The quiz consists in 10/15 questions (with true/false answers) on the theme of doping and PAES and has the aim of dispelling myths and providing clearer and more reliable information about the use of legal and illegal substances among youths. The trainer is expected to trigger a discussion on the participants' answers with the aim of making them reflect on their relationship with food and their attitude towards the use of legal and illegal substances.

CONCLUSION

Think about the outcome of the training course and on the change of the words clouds produced by participants with the aim to highlight the different representation between pre and post training

Connect the various antecedents and highlight why these aspects are important in preventing a "pro-doping culture"

Group words cloud and/or "a tweet"

The group creates a final "cloud", result of the whole training process, it will be used to produce visual material with the cartoonist (in the experimental phase)

2. Methodological assumptions of DRAWS training course

Three key words guided the development of DRAWS training course are: *predisposing factors*, *personal experience*, and *group*.

1) Working on the predisposing factors

A first methodological assumption basing the DRAWS training course is that the training course is not intended to convey content but, as preliminary research has shown, to work on the predisposing factors that lead young athletes to approach substance use. The hypothesis is that since the doping use is constantly increasing, particularly in sports practiced in recreational environments (i.e., gym, or non-structured sport activities), according to the Barkoukis and colleagues' studies, "there is a need to fight doping at grassroots levels, and to implement anti-doping interventions involving wider social groups (e.g., amateur athletes)" (Barkoukis et al., 2016, p. 2). This is mainly because doping tends to be more used in non-athletes and adolescents target groups, thus making these populations more susceptible to drug and substances abuse, and contributing to the establishment of a "pro-doping culture" that needs to be contrasted. The results are consistent with the socio-ecological approach, which considers multiple levels of influence on specific health habits and interactions of risk and protective factors across these different levels (Sallis et al., 2008). In particular, we found that a pro-doping culture in recreational sport environments is strongly related to four predisposing factors: approach to sport, body image, environment and the use of the substances and nutrition. The training course has a strong theoretical basis because it was entirely constructed on the basis of these indicators that emerged directly from the empiric research.

2) Learning from the bottom: reflection on the personal experiences a key leverage to acquire knowledge

Participatory training proposes a clear break from the traditional theoretical and methodological criteria of content and self-referentiality, restoring centrality to the people who have needs and skills with which to carry out a process of emancipation. The trainer's objective is to become a "facilitator" of the learning process and to be able to promote awareness in change processes and practices. The focus is thus placed on the processes of self-learning and collaborative/cooperative learning between trainees/teachers, enhancing co-responsibility in the design - implementation - evaluation of training activities (Bodicchio and Viaggiano, 2012). The co-

production and sharing of meanings and practices produces learning in a circular and reflexive process and giving awareness in a logic of empowerment. From a methodological point of view, it is a matter of defining coherent, correct and transparent criteria and models for co-designing and co-assessing such training interventions. For this reason, in each module, participants are invited to discuss their own knowledge and experience with the aim to deconstruct representations and create new and more complex ones. This way of implementing the training course allows to activate serious reflections around certain consolidated attitudes and behaviours and sustains the promotion of a greater awareness.

3) The group as a source of learning

Each module of the training was structured with the intention to develop a debate among the youths who have been constantly asked to discuss specific topics under the supervision of the trainer. Through this approach, knowledge is not mechanically transmitted by the trainer rather it is co-built with the participation of the group. The new learnings are thus achieved from the sharing and reflection between the diverse participants. This pedagogical approach sustains the development of social knowledge (Gibbons et al., 1994). The presence of the group, thus, becomes a source to develop new learnings.

3. Participants involved in the training

The training was conceived to involve small groups of 20-25 non-elite young sport practitioners. Specifically, the training course is aimed at young people between the ages of 14 and 19 who participate in sports within recreational environments..

4. Organizational aspects of the trainings

Part of the DRAWS project was carried out during the COVID-19 pandemic crisis.

In order to ensure the implementation of the pilot trainings envisaged by WP3, two parallel training models were proposed:

- an in-person training model
- an online training model.

Although initially the training was to be exclusively in-presence it was decided to pay special methodological attention to the structuring of the online training because of the peculiar characteristics that trainings delivered through web platforms have.

During the “Training to trainers” meeting, trainers had the opportunity to learn both methodologies and were free to choose which of the two to adopt depending on the restrictions in force in the different countries at the time of delivery even if the in-person mode was recommended.

In both cases, trainers were asked to use a web-platform where they could find a training tool-kit supporting the working sessions. Within the platform, the trainers had access to the track of the modules in detail (objectives, tools, methodological suggestions) and the material (videos, pictures, comics, interviews) supporting the training as well as some suggestion related to how best use these materials. From the point of view of organizing the modules, there were different formulas – both for the online and in-person course – that trainers could choose to adopt depending on the availability provided by the contexts involved (e.g., schools, sports clubs, associations) . The figure 2 summarizes the different structures.

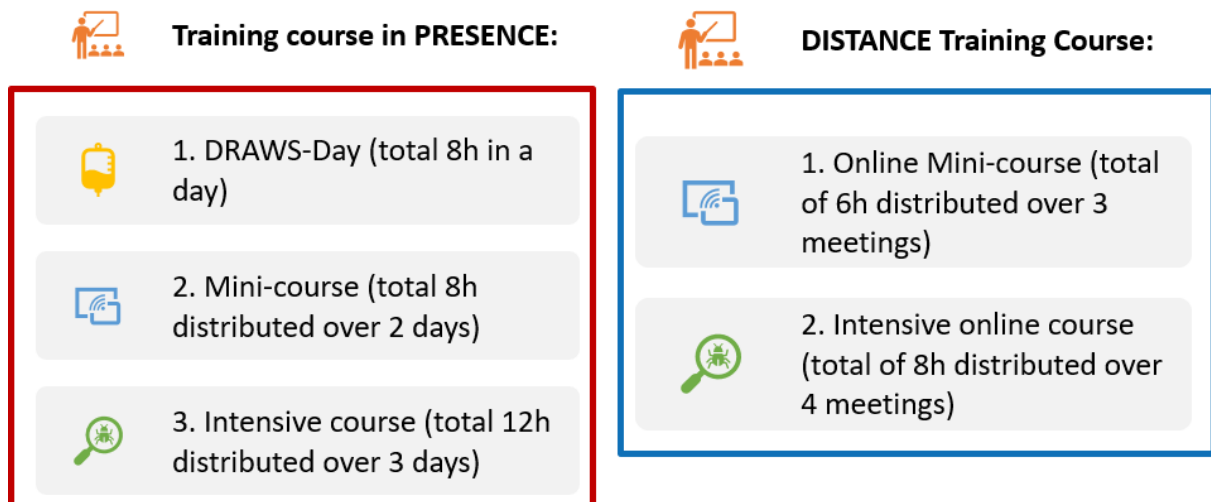


Figure 2. Training organization

SECTION 2 –THE IMPACT OF DRAWS TRAINING

1. The evaluation and monitoring sheet design

The project included the full monitoring of the training courses implementation. The whole duration of the training courses has been monitored by the trainers using a specific monitoring tool prepared and shared by the WP leader. This tool allowed to support the trainers in their pilot course implementation, letting ongoing difficulties and points of strengths emerged during the implementation of the training action and useful for the optimization of the training course model in the last phase of the project.

Description of the evaluation and monitoring sheet

The evaluation and monitoring sheet of the training course was shaped on the base of the training structure, which in turn was based on the four predisposing factors that emerged in the IO1. In particular, the aim of the tool is to monitor whether there is a change in the representations of the young athletes participating in the training starting from the work on the four antecedents. For this reason, it was decided to build a tool essentially divided into four areas (plus an introductory part to collect general data). As a matter of synthesis, a set of questions was included in the same document in order to collect information useful for the dissemination and communication of the project results within the framework of WP5.

In detail, we developed a longitudinal quantitative-qualitative tool consisting of a total of 26 questions, of which 19 narrative/open questions and 7 close questions/multiple choice questions; the trainers were asked to fill it in at the end of each of the four modules of the training course in order to collect their immediate impressions.

The core of the evaluation of DRAWS training course has been developed from the 4 main predicting factors on which the course was built. Indicators were developed to evaluate:

- (a) *what kind of approach young athletes have to sports with particular attention to motivational aspects, type of competition, and the idea of success;*
- (b) *environment understood as the kind of environment they experience in relational terms;*
- (c) *what kinds of body image they have;*
- (d) *the approach to nutrition and use of PAES.*

At the beginning of the training course (T1), an initial section of generic questions was proposed to the trainers in order to investigate:

- (i) the *knowledge* they think youths have about the use of the substances
- (ii) the level of *openness/resistance* of young athletes to talk about the topic
- (iii) how much participants consider the issue of doping *involved* in their life.

At the end of the training (T2), the same questions have been proposed. In addition, questions about the level of acquisition of information on the issue of the doping, the ability to think about the topic with greater complexity and the ability to dialogue and connect the different aspects of substance use were asked. At T2, trainers were further asked to highlight the strengths and weaknesses of the path. The table 2 shows the items for each indicator. For most of the indicators, since there are no validated scales that fit the purposes of our research, ad hoc questions were created.

Tab 2. Indicators of the training course

General questions	
Knowledge of the topic	What kind of knowledge do participants have of the doping?
Openness vs. Resistance	How open/disposed do you think the participants are to talking and sharing their experiences on the topic? Do they seem curious and/or interested in the topic?
Involvement	How close or distant do they perceive the issue of doping to be?
Information acquisition	Do you think participants acquired more information on the topic at the end of the training course? If yes, why? In what terms?
Complexity	Do you think that participants are able to think with more complexity about the topic?
Connecting the different predicting factors	Do you think that participants are able to dialogue and connect the different aspects of substance's use?
(a) APPROACH TO SPORT	
Motivation	What kind of motivation for sport emerges? Extrinsic/Intrinsic? Describe.
Competition	What representation emerges on the idea of competition?

Success	What kind of representation do the participants have of success?
Reference models	What role models emerge? (e.g. type of professionals, coaches, parents...)
(b) ENVIRONMENTS	
Significant figures	Which significant figures emerges as a reference (positive and negative) to address the issue of doping?
(c) BODY IMAGE	
Body image	What kind of body's representation emerges?
Ideal self	What kind of ideal self emerges?
(d) NUTRITION AND USE OF PAES	
Nutrition	What kind of relationship do participants have with food? (e.g. strict diet, flexible diet, no diet...)
Knowledge	What kind of knowledge do participants have about the use of substances such as supplements, legal substances, illegal substances?
Evaluation of the training	
Strengths	What do you think were the main resource elements during the training course?
Weaknesses	What do you think were the main elements of fatigue during the training course?

The results of the evaluation will be presented following these indicators.

2. Description of the sample

A total of 25 training courses, involving 944 youths, have been carried out in the eight country involved in the project. We asked each project partner to implement at least two pilot sessions with the aim of gathering the peculiar experiences of different countries.

Youths attended the training session were recruited by the partners of the project through a direct approach, or through their coaches or physical education teachers, with parental consent required for all participants under the age of 18. The age were between 14 and 19 years and one of the inclusion criteria was practicing sport at a recreational level at least once a week.

Table 3 shows the material collected for each country involved in the project.

	Evaluation sheet	Participants
Lega Pro	1	50
CONI	2	101
FISAF	2	189
LEVSKY	3	176
LSFP Latvia	8	185
IOTC	3	122
LSFS Lithuania	2	31
HASK MLADOST	4	90
Tot.	25	944

Tab. 3 – Evaluation data sheets collected for each country

3. Results

Most of the data collected by the evaluation tool are qualitative data and thus based on the trainers' assessment of the impact of the training course conducted. The quantitative data collected will support the outcomes of the analysis of the qualitative material that represent most of the materials collected. As we described in the previous section, the evaluation focused on two levels of analysis: on one hand the acquisition of content by the participants and on the other it focuses on the training process and evaluation of the tool's impact.

In this section we will first present the results concerning the acquisition of knowledge by the participants related to the four modules on which the course is based; secondly, the results concerning the ongoing change process will be presented and finally the impact evaluation of the tool will be reported.

1. Evaluation of contents

(a) Approach to sport

According to the trainers, most of the training participants showed an intrinsic motivation mostly related to self-development, the improvement of well-being and performance in sport. Sport is perceived more as a leisure, even if some have big goals and want to be professionals and develop

themselves physically. For the latter, in some cases, although to a lesser extent, a motivation related to extrinsic factors such as the need of achievement (performance, success), need of belonging (affiliation) and the need of power (authority, domination) emerged.

“Youngsters describe their motivation to do physical activities and sports with such words: Win, friendship, physical necessity – health, for fun, challenge yourself, you only live once, achieve new life goals, family traditions”

“Motivations for practicing sport revolve around enjoyment, coping with stress from school, socialization”

The topic of motivation is closely linked to that of competition. According with youths participated in the training the competition spirit is “the key” but it can have both positive and negative aspects. Competition is seen as a push factor because it *“makes things move forward and doesn't stop you on reaching new goals”*. The possibility of success at competitions provides further energy and motivates to do more, competitions are also a chance to prove their physical state and talent. In general, competition is perceived as an opportunity to challenge themselves and be better even if sometimes can have also a dark side.

“In terms of competition, everyone recognizes that they want to compete fairly and equally. One boy said he would love to compete in a stronger competition, in which he could challenge himself and see that it would be a great experience for him and to push everything from himself”

In the training there was also a chance to discuss with the youths the definition of success and talk through about their achievements and motivation in life. Alongside a more stereotypical view of success (“Be the best”), a more complex one has emerged that includes success as proof of social recognition, a tool for personal growth and as the achievement of a goal.

“Definition of success means to do something that makes you happy and you like to do. It often also means to avoid shortcuts in life, but open yourselves to new challenges that help you grow and development mentally, spiritually and professionally”

“Success seems to be represented as improvement, individual gratification and commitment to sports”

“They believe success goes beyond the game. Indeed, they spoke about integrity and doing good in society thanks to the successful people’s position”

(b) Environment

Youngsters were asked which roles models inspire them in terms of advocating also against doping and among the most important reference models appeared coaches and family but also schoolteachers. Interestingly, personalities from the sport sector, who acted as role models, were also nominated. This shows how important it is both to have figures from everyday life with whom one can directly deal with the topic, but also more ideal figures to be inspired by.

“Mainly the parents and the coaches. They would be the two people most of the players turned to with questions on doping”

(c) Body image

The most of them acknowledged that a sporadically athletic, slim, slightly musculature-visible body was what they liked. In addition, it was found that those who practice exercise at gyms are mostly of an aesthetic nature or linked to the attempt to bring their body image closer to an ideal image, socially built, on social media. This body representation is very often forced upon us from journals and social media, as also certain body images associated with specific sports. Some trainers highlights that the theme was touched by the girls that seems to be certainly primary especially in the age of social media where *“it is important to appear good”*.

“The view of beautiful and slim bodies prevails, of course, but with examples of the first delusional assumptions, we encourage young people to look at the body more broadly, love, appreciate and take care of what they have”

The body representation is closely linked to the ideal self, which reflects the same ideals that the guys mentioned above. So again, even if the most of them shyly talked about the ideal of their own body, a slim and beautiful representation of the body emerged as the key to success.

“Shy of talking about their ideals. Some of the guys who visit the gym do it to be more appealing, stronger and more muscular”

(d) Nutrition and use of PAES

According to the trainers, youths in general are very well informed about the importance of a balanced diet, food pyramid, water intake and physical activities. Many opinions raised that a specific diet is not always the best answers. Someone pointed to food supplements that are used to maintain their physical form, they knew exactly what foods needed to be used for that sport. The athletes expressed that they take a lot of care of their nutrition, but no strict diet, in contraposition to the participants that don't practice sport that referred to not follow a diet. In addition, it was found that the girls had a more sensitive attitude toward nutrition although it was reported that in some cases the girls followed a more restrictive diet than the boys who were more flexible.

“That nutrition is balanced, correct and they are informed about the food pyramid, including the practical task with the “food of success” is met to 100%”

“They understand the impact that a healthy diet can have on their sport performance. Most of them follow a diet on the day of the game and know what food helps what”

About the use of legal and illegal substances, it emerged that first it is not always clear the distinction between legal substances and illegal substances. They have a generally superficial and stereotypical knowledge of illegal substances, whereas they seem to be less aware of the effects of using legal substances such as supplements. In addition, some trainers report that in some cases there was some

resistance to talking about illegal substances; this leads to the thought that there is no current/ongoing question in their age.

“They have a common culture of the benefits and harms of PAES, but they lack the knowledge that excessive use of even vitamins can be harmful”

“None of the people present indicate that they are taking any of the food supplements. It's probably a little taboo topic. They know that there are steroids and meldonium and drugs banned”

2. Evaluation of the process

i) Knowledge around the use of PAES's

Regarding the knowledge young athletes have about the use of the substances, at T1, it is reported a mean score of 4,05 (DS = 2,29). At T2, the mean score (M= 6,63; DS =1,53) shows a general increase. These results are supported also by the qualitative data. Trainers reported in fact that at the beginning of the training in general youths had a superficial, limited and partial knowledge of the topic while for only one reality they were well informed. At the end of the training, they showed a greater awareness of the topic generated in particular by an increased interest in the topic.

“Their awareness of the phenomenon has certainly increased. most likely they did not realize that the doping issue does not only concern elite athletes but also the base of practitioners”

“Asking participants after each topic to name 5 elements that have stayed in mind some questions rose about the topic, therefore it was clear that they had developed some knowledge and awareness about the topics”

(ii) Level of openness/resistance of young athletes to talk about the topic

Data from the questionnaire collected shows a little increase at T2, the average in fact only rising from 6.15 to 6.33. This result is partially confirmed also by the qualitative. Trainers reported that at the beginning of the training the pupils were quite closed, but then they showed a fair amount of attention towards the topic. In general, there was no great change in the participants' disposition to talk about the topic between T1 and T2, this probably because already in T1 (M=6.15) the youths showed an openness to talk about the topic.

“At the beginning it was more difficult to capture their attention; but after they understood the importance of the topic, they were more open to listening and sharing their points of view”

“In general, at the beginning of the lecture, the young people were more closed than open, but as time passed, the resistance was reduced, and they were set to move on and engage in a lecture”

In addition, the trainers pointed out that the participants who showed the greatest interest in the topic were the elite-athletes, probably because they feel the topic closer.

“Participants who are athletes were very curious, they showed big interest. The rest of the students participate in the discussion and showed interest but limited compared to the athletes”

“Part of youths seemed to be interested, those who are closer to the sport and engaged in it as professionals”

In a few cases there was a very low score in T2 with respect to the openness of the participants to discuss the topic in question, the qualitative data tells us that this may have been caused by the fact that there was little interest on the part of the non-athlete participants in the topics, while in some cases contingencies external to the training (such as a break that distracted the young people) contributed to lower scores in T2.

“Not sure – especially about the students that are not athletes. They weren't engaged so much during the training; they didn't seem to be so much interested”

“After the break, it was difficult for young people to switch back to listening and discussions for a moment. The last activity itself - drawing, bringing them together, opening them up for discussion, the drawings themselves showed that they had captured the seriousness of doping, how does victory/life look like with and without doping”

(iii) Perception of doping involvement in one’s own life

In the opening questionnaire, the trainers were asked to rate how involved the young people believed doping was in their lives in order to assess how close or distant they felt the issue was. The average response to this question was 5.94 on a scale of 1 to 8. The qualitative data showed that in general it is an issue that they feel quite distant from themselves. Only older kids and those who participate in professional sports perceive it to be closer to them. For those who have been or were involved in sport, it was understood that doping control existed, but their possible relationship with the process as such was purely theoretical. However, it is likely that these young people have developed a greater sensitivity to the issue precisely because of their participation in professional contexts that usually put in place procedures to counteract the use of substances by athletes.

“They perceive it more as a problem at professional level. Not yet involving their concern”

“There was a feeling that doping was more relevant to professional sports and that doping was not there, but at the same time it was necessary to take care of the use of various food supplements”

“Quite distant the younger boys. Much closer (and in some cases even soft drug users) are the bigger ones”

Although at first the topic was perceived as distant, at the end of the training several trainers pointed out that youths developed a greater sensitivity and realized how the topic could also affect their own contexts (the recreational environment).

“At the beginning the matter seemed quite distant to them, in the end they certainly understood more how it can be important even at their sport level”

“They have acquired a lot of information they previously did not know and have received material and bibliographic references for further study”

(iv) Information acquisition

At the end of training, trainers reported that youths acquired specific information they previously did not have as for example the type of PAES, the effect on the health and the restrictions for usage. They were particularly interested in the health side of things and at the possibility of alternative compensation.

“They have acquired a lot of information they previously did not know and have received material and bibliographic references for further study”

In addition, they really appreciated that the training was presented in an interesting and engaging way with a movie called “Doping affected”, which made them think about food supplement and doping consequences a very different approach from that of schools.

“Yes, definitely. First, the information that was provided was completely different than the one told in schools and secondly, the training was presented in an interesting and engaging way with a movie called “Doping affected”, which made them think about food supplement and doping consequences”

(v) Ability to think about the issue with more complexity

The training certainly contributed to the development of an ability to deal with the topic in a more complex way and to connect the different aspects related to substance use.

“They discovered issues they did not considered before. Talking about body image, having the change to think about their own experience, the relationship they have with the teammates and so on was new and welcomed”

(vi) Ability to connect the different aspects of substance’s use

According to the trainers, by the end of the training course, with different degrees, the youngsters developed an ability to connect the different aspects of substance's use. They understood that doping was not far away from them, and that substance use is linked to different aspects of an athlete's (or non-elite sportsperson's) life such as nutrition, body image and approach to sport; this awareness developed especially following the viewing of the film 'Those affected by doping', which triggered a deep reflection on the topic.

“With different degrees but certainly to a greater extent than before”

“One of the most important tasks were to give the chance to think whether food supplements are even necessary and that a good balanced diet can give you more than food supplements – as their use has not been proven to be more affective than a good balanced diet”

“Yes, after the movie “those affected by doping” youngster will take closer look and will think more about nutrition and what they are using”

3. Evaluation of the tool

Weaknesses of the training

In the last part of the questionnaire, the trainers were asked to report the strengths and weaknesses of their experience with the implementation of this new training model. Regarding weaknesses, there is a general fatigue deriving from the COVID-19 pandemic which made the organization of the courses complicated, in some cases the courses were delivered online as it was not possible to enter schools and recreational contexts, which certainly made the trainers' task more difficult. It was reported that it was difficult to keep the students' attention as they used their mobile phones or were distracted by doing other things especially at the end of the lessons; often the lessons were held at the end of training or after school and this did not help. Others reported that more teaching material would have helped.

“As previously mentioned, too much contact hours, fatigue from school and some of the youngsters returned from the races the previous day. Need more rest and tea breaks”

Strengths of the training

In general, it seems that the trainers appreciated the structure of the training course in terms of organization, content and materials. According to them, the main strengths of the training concerned good coordination teachers, the materials and the people attended the class. Almost all of the trainers claim that the use of certain materials such as games, watching films, mentioning famous athletes and their hobbies in the lesson and drawing exercises was particularly effective in involving participants pointing out the effectiveness of tools that foster participatory training. Furthermore, in cases where it was possible to involve them, the presence of a sports champion who is very good at engaging the participants. They also appreciated the use of modern technologies such as the menti.com site.

“Most effective youth engagement was through games, drawing and watching the movie”

SECTION 3 – DRAWS TRAINING COURSE: THE LESSONS LEARNT

The impact evaluation of the training suggests some key lessons to contrast the use of PAES's among youths in recreational environments and prevent a pro-doping culture within this target group.

First, the methodology proposed has a high-level quality and feasibility degree since it is based on a very solid data collection on doping attitudes, knowledge, motivational orientations and opinions of youth participants into recreational sport environments, for creating a consistent and targeted training activities.

Participatory approaches applied to training, therefore, seem to better support processes of engagement and motivation. This finding suggests that a participatory pedagogical approach is desirable in training paths for youths and that it could be more widely promoted within national and international anti-doping trainings programs. The use of a participative methodology during the training actions - that consist in promoting an active participation of the target group - allows to attract youngster's attention supporting their capability of analysing and reflecting on the doping topic and in avoid a scholar and top-down approach. The active participation during training sessions stimulates concentration, attention and it facilitates the assimilation of fair play and the raising of young' awareness about doping in recreational environments.

At the same time, an ecological model – which emphasize the environmental and policy contexts of behaviour - constituted a plus for a better understanding of European adolescents' attitudes and representations of the use of controlled and uncontrolled PAES in recreational sport settings. Accordingly, multi-level interventions that attempt to tackle factors at different levels should be most effective in behaviour change. This means that interventions should not only address factors related to the individual, but that aspects related to social relationships with key figures in adolescents' life, including parents and coaches, and factors related to contexts where individuals live and practice sport (e.g., sport club cultures) are important to consider.