



Co-funded by the
Erasmus+ Programme
of the European Union



Evaluation Report of:

“DopOut: social network and peer education against doping”



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SUMMARY

| | |
|---|--|
| 1. INTRODUCTION | 3 |
| 2. DESCRIPTION OF THE EVALUATION PLAN | 4 |
| THE YOUNG PEOPLE INVOLVED | 5 |
| THE INSTRUMENTS OF THE EVALUATION | 5 |
| ATTITUDES TOWARDS DOPING | 5 |
| DOPING-SPECIFIC SELF-REGULATORY EFFICACY | 6 |
| DOPING MORAL DISENGAGEMENT | 6 |
| THE DATA COLLECTION | 6 |
| 3. THE RESULTS OF THE EVALUATION | 6 |
| CHANGES ASSOCIATED TO DOPOUT INTERVENTION | 7 |
| DID DOPOUT INCREASE THE NEGATIVE ATTITUDES TOWARD DOPING? | 7 |
| DID DOPOUT INCREASE THE DOPING-SPECIFIC SELF-REGULATORY EFFICACY? | 8 |
| DID DOPOUT DECREASE THE DOPING MORAL DISENGAGEMENT? | 8 |
| 4. CONCLUSION | ERRORE. IL SEGNALIBRO NON È DEFINITO. |
| 5. REFERENCES | 11 |

1. INTRODUCTION

Doping substance use is a transgressive and unhealthy behavior implemented within an intentional choice with the aim to reach a specific goal. Motives for using doping substances change depending on the level of sport practiced. Not surprisingly, studies on high-level athletes shown that for them, the main goal for using doping substances is to increase their performance. On the other hand, athletes at the youth and amateur level or those who exercise at the gyms, use doping substances for aesthetic reasons, with the attempt to bring their body image closer to an ideal image. Literature has shown which psychological factors and processes influence adolescents' decisions and actions to use these substances.

First of all, doping research highlighted the importance of belief systems, such as attitudes, concerning behavioral outcomes in affecting behavioral choices. Attitudes refer to the extent to which individuals have a favorable or unfavorable evaluation of that behavior. Attitude is a key factor in the theory of planned behavior, one of the most prominent social psychological theories (Ajzen, 1991), which has been applied to health-related behaviors. Attitudes toward doping refer to the positive or negative evaluation of doping use both for aesthetic reasons and to increase their performance. Lucidi et al., (2008) have shown that adolescents' positive attitudes towards doping use, contributed to stronger intentions to use doping substances.

In addition to attitudes, the perception of personal capability and self-regulatory capacities are associated with doping substances use. The social cognitive theory, which seeks to comprehend the role of human agency in behavioral phenomena, introduced self-efficacy as the perception of personal capability allowing one to pursue goals and control behavior. Research shown that people with high perceived self-efficacy were more able to refrain from adopting various unhealthy or antisocial behaviors (Albert Bandura, 1997). Importantly, the perceptions of self-efficacy refer to specific domains of functioning and conduct (Bandura, 1997). For example, in the domain of illegal substances abuse, a central role is attributed to social normative pressures such as the influence of significant others (Kindlundh, Isacson, Berglund, & Nyberg, 1999) In the domain of doping substances use then, central is the role of individuals' beliefs about their capability to resist these social influences. Therefore, doping-specific self-regulatory efficacy refers to the ability to avoid or to

overcome situations in which doping use would be more likely, and to resist to social pressure to use doping.

Doping use is also affected by moral thinking and a personal evaluation of the likelihood of external sanctions related to that behavior. This evaluation allows people to judge whether a behavior is conducted in line with the moral standards or not and this judgment influence behavior. However, internal moral standards within a person can be activated or inhibited, for example through mechanisms of self-justification. In this case people may not feel obliged in making decisions in line with their moral standards. Bandura has defined “moral disengagement” the mechanism through which people inhibits personal moral standards (A. Bandura, Caprara, Barbaranelli, Pastorelli, & Regalia, 2001; Albert Bandura, 1997). Moral disengagement related to doping refers to the moral justification for doping use when, for example, it is compared with more flagrant inhumanities or when substances use is not under the control of the individual, or for each circumstance in which it would not be completely condemned. Studies have demonstrated that moral disengagement influence the intention to use doping and doping substances use in adolescents (Lucidi et al., 2008).

In summary, attitudes – from theory of planned behavior – self-efficacy and moral disengagement - from social-cognitive theory - can affect the intention to use and the proper use of doping substances. Therefore, changes in these constructs have been analyzed in order to evaluate “DopOut” intervention effects. In order to be effective, we expected DopOut to:

- a) increase participants negative attitudes toward doping substances use;
- b) increase participants doping-specific self-regulatory efficacy;
- c) decrease moral disengagement toward doping use.

2. DESCRIPTION OF THE EVALUATION PLAN

The evaluation of effectiveness of “DopOut” intervention was based on a longitudinal design with the outcomes measured in two points in time (pre and post intervention) and with the inclusion of a “control group” who was formed basing on similarities with the experimental group on the main characteristics. To all participants, the research and assessment were presented as focusing on “sport practice, lifestyle and beliefs about doping substance use” and self-report questionnaire data were

collected online during school hours in two separate sessions over the course of about 10 months. For the intervention group, the intervention was carried out between the first and second assessment.

The young people involved

The evaluation plan involved 179 adolescents students aged between 13 and 19 years (who participated to the school-based intervention (i.e., “intervention group”) and 113 adolescents students aged between 14 and 19 year who were treated as the “control group.” Each country participating to the study contributed with at least one intervention group and one control group of students. Initially, 193 students were enrolled in the “intervention group” whereas, 122 students were enrolled in the “control group”. All these students provided first wave questionnaire data collected during school hours. After the intervention sessions, students provided second wave questionnaire data, and 179 and 113 adolescent students provided completed questionnaire data across the two waves for the intervention and control groups, respectively (i.e., over 90% of the students in both conditions provided completed data). Unfortunately, the low number of students who took part in the evaluation did not allow between country comparisons

The instruments of the evaluation

Attitudes towards doping

Participants’ attitudes towards doping were measured by six items, with responses provided on five-point semantic differential scales with the bipolar adjectives: “useless/ useful”, “foolish/wise”, “undesirable/desirable”, “negative/ positive”, “harmful/beneficial”, and “advantageous/ disadvantageous” asking participants to express the extent to which the “use of illegal substances to improve sport performance or physical appearance would be for you . . .” on a five-point Likert-type scale. Item scores were aggregated into a single score and higher scores represented more positive attitudes toward doping.

Doping-specific self-regulatory efficacy

Participants self-regulatory efficacy toward doping was measured by 10 items which refer to the extent to which participants felt confident in avoiding or overcoming situations or circumstances in which doping use would be more likely, on a 5-point Likert-type scale ranging from 1 (“not at all capable”) to 5 (“completely capable”). Item scores were aggregated into a single score and higher values indicated stronger beliefs about one’s capacity to resist doping substance use.

Doping moral disengagement

Participants moral disengagement was measured by 6 items, which listed situations in which the use of doping substances would or would not be completely condemned. For each item, adolescents rated their agreement on a 5-point Likert scale ranging from 1 (“I do not agree at all”) to 5 (“I completely agree”). Items scores were then aggregated into a single score and higher scores correspond to higher moral disengagement.

The data collection

For each time point, the questionnaire was completed online by students through a professional survey tool (Surveygizmo) during school hours. Before starting the survey, students provided informed consent to participate in the evaluation study. Questionnaires were completed anonymously to preserve confidentiality, the completion took about 20 minutes, and data collected in the first wave were matched with the ones in the second wave by using a code.

3. THE RESULTS OF THE EVALUATION

The evaluation of DopOut looked at the changes in the attitudes and social cognitive variables – self-efficacy and moral disengagement - associated with the participation in the intervention. In particular, information provided by students about their own attitudes, self-efficacy beliefs and moral disengagement at the start of the intervention, were compared with attitudes, self-efficacy and moral disengagement at the end of the intervention. These changes were compared with changes collected on a control group, who did not participate in the intervention activities. This allowed us to

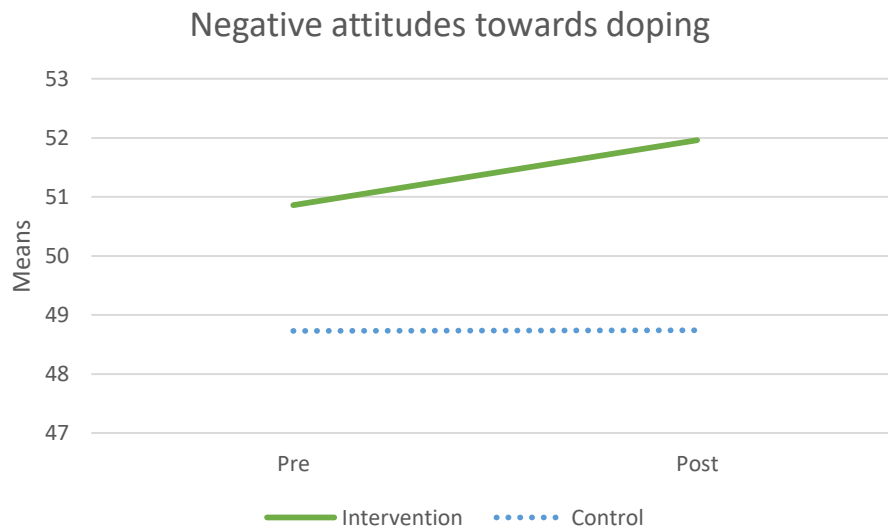
investigate the specificity of the changes associated with the participation in DopOut activities, compared to the normal trend that would have happened in the absence of the intervention. Changes were analyzed through three indices that are closely linked to the main objectives of DopOut. For each index, we compared both for the group that participated in the intervention (experimental group), and for the group that did not participate (control group), the means¹ related to the information collected at the start of the intervention with the means of the data collected at the end of the intervention. The results of these analyses are shown in the following paragraphs.

Changes associated to DopOut intervention

Did DopOut increase the negative attitudes toward doping?

As displayed in Figure 1, as expected, students who participated in DopOut seem to increase their negative attitudes toward doping, compared to the control group ($p < .05$).

Figure 1. Changes in negative attitudes toward doping

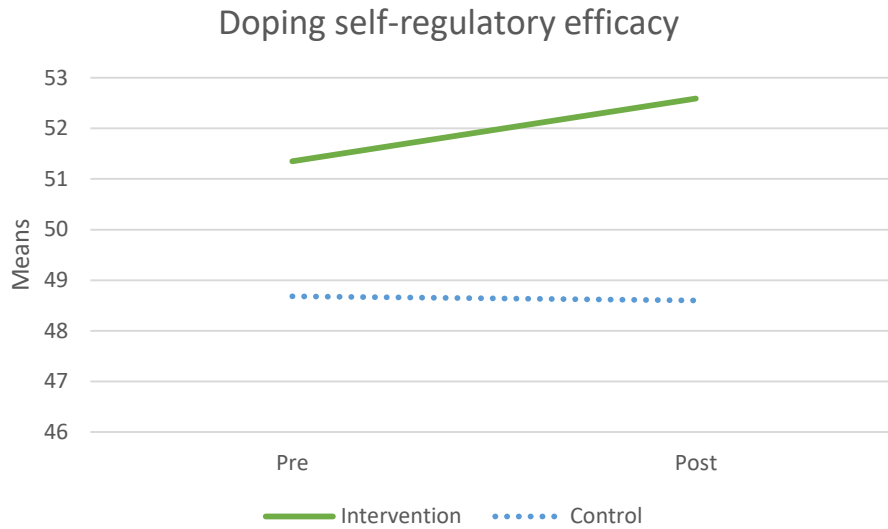


¹In particular, for each of the indices, we conducted an analysis of the variance, considering the time factor as a factor within the subjects and the group factor as a factor among the subjects. Two levels were considered for the time factor: 1) before the start of DopOut; 2) at the end of DopOut. Two levels were also considered for the group factor: experimental (students who participated in DopOut) and control (students who did not participate).

Did DopOut increase the doping-specific self-regulatory efficacy?

As shown in Figure 2, students who participated in DopOut seem to increase their self-regulatory efficacy toward doping, compared to the control group, as expected ($p < .05$).

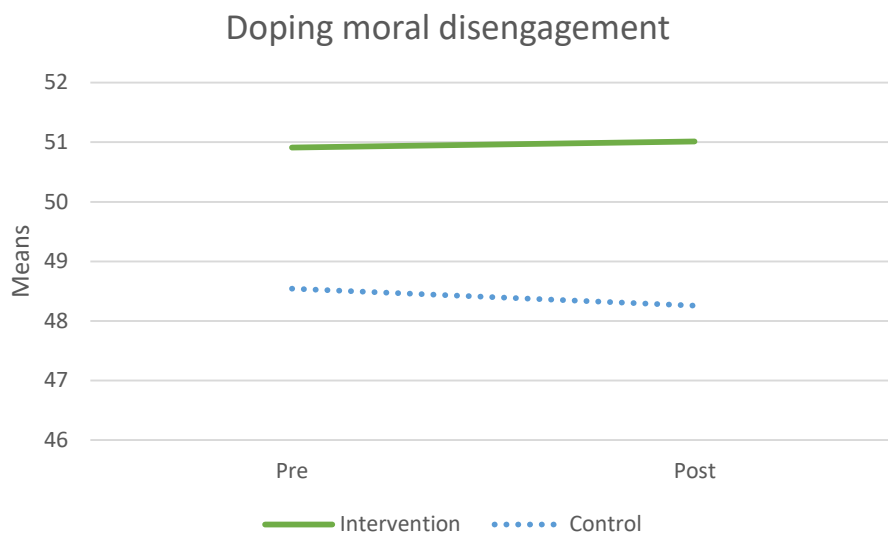
Figure 2. Changes in doping-specific self-regulatory efficacy



Did DopOut decrease the doping moral disengagement?

As shown in Figure 2, students who participated in DopOut did not change their moral disengagement toward doping use, compared to the control group.

Figure 3. Changes in moral disengagement toward doping



4. CONCLUSION

DopOut had the aim to increase awareness of young people on doping related issues and their knowledge on health protection focusing on damages caused by the use/abuse of additives and by doping. The project involved schools' students and adolescents and it was developed with their active participation, in line with a peer-education approach, with the aim to develop a communication campaign through social media and multimedia tools.

The program focused on helping adolescents to develop skills for recognizing and critically evaluating the potential damaging effects of sport images in the media, which tend to suggest and support unrealistic views about the body and to elicit positive or alternative ways to conceive or develop media messages concerning sport and doping use. In addition, in line with previous media literacy interventions (Lucidi et al., 2017), DopOut provided students with the opportunity to develop and produce media messages and sensitization campaigns against doping use targeting age peers. Hence, in DopOut intervention, participants actively play a leading part in the process of change of their attitudes and life skills. The success of the project therefore lies on acquisition of beliefs system that negatively evaluate doping use, and improvement in personal capability with respect to youth

sport, in particular the self-regulatory efficacy to overcome situations in which the use of doping would be very likely, to resist to social pressure which would encourage doping use, and to condemn this misconduct even when, due to particular circumstances, it could be morally justified.

In order to evaluate the outcomes of the intervention, a clinical trial design was adopted: modifications in students involved in the intervention were observed over time and compared with modifications in students who were not involved in the intervention. In other words, an evaluation with a longitudinal design and a control group was adopted.

The results shown the effects of the intervention on several components. First of all, young people who took part in DopOut, reported an increase in negative attitudes toward doping over time, while no changes emerged for students in the control group. In addition, students who participated in DopOut, displayed an increase in self-efficacy over the intervention, and this was not the case for students who did not participate in the intervention.

The present evaluation acknowledged that DopOut was effective in changing two critical factors contributing to doping intentions and the use of doping substances, namely, doping attitudes and self-efficacy. This effect is further confirmed by the fact that this change occurs only in young people who participated in the intervention, while it does not come up in the control group. Therefore, this report confirms a general conceptual coherence between the expectations on which the project is based and the results observed.

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