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The psychology of doping in sport and exercise settings: changing attitudes toward doping

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Moral dilemmas

- “If you trained athletes as coach, or as sport psychologist, with a chance of an Olympic medal only if they engaged in doping use, with no chance of detection, what would be your choice?”
- “If you supervised an athlete as sport psychologist, with a chance of an Olympic medal only if they engaged in doping use, with no chance of detection, what would be your choice?”

Ethics in sports and the role of the Olympic Movement against doping: changing attitudes toward doping

- It is no secret that **performance-enhancing drugs** have been used by world class athletes and Olympians.
- This presentation will focus on **social psychological theories** for changing attitudes and behaviors toward doping in sports.
- **Workshop:** Analyzing relevant ethical dilemmas. Preparing educational material, attitude change strategies, ideas, for the sensitization of students, athletes and society against doping.

- Ο Πιέτρο Μενέα πέθανε στις 21 Μαρτίου 2013 σε νοσοκομείο της Ρώμης, χτυπημένος από καρκίνο του παγκρέατος. Ο Μενέα είχε παραδεχθεί δημοσίως ότι κατά τη διάρκεια της αθλητικής διαδρομής του έκανε χρήση αυξητικών ορμονών, που τότε δεν είχαν απαγορευθεί από την Παγκόσμια Ομοσπονδία Στίβου (IAAF).
- <https://www.sansimera.gr/biographies/623>

Outline

- 1. Lets complete a questionnaire**
- 2. Doping, social psychological perspectives**
- 3. Ethical dilemmas on doping**
- 4. Intervention programs**
- 5. Topics for discussion**
- 6. Recommendations for sport, educational and governmental bodies**

Doping definition

- The use of any method or substance that might harm the athlete, in a quest to gain an unfair advantage, over his or her fellow competitors.
- **Training at altitude to increase the blood's ability to carry oxygen is allowed, but the use of drugs, to achieve the same result isn't.**
- Doping control testing, have shown the use of doping to be wide spread.
- However, doping isn't a new trend

Definitions

'**Doping**' refers to an athlete's use of prohibited drugs or methods to improve training and sporting results.

Steroids are the drugs that often come to mind when we talk about doping, but doping also includes an athlete's use of other **forbidden drugs** (such as stimulants, hormones, diuretics, narcotics and marijuana), **use of forbidden methods**(such as blood transfusions or gene doping).

Definitions

- Testing procedures have shown many notable athletes to be trying to "beat the system" by taking such drugs.
- Types of Doping.
- Doping can be split up into physical methods, such as blood doping and the use of performance enhancing drugs.
- Performance enhancing drugs can be categorized into the following types;
- 1, Stimulants, such as amphetamines,
- 2, anabolic steroids, such as nandrolone,
- 3, diuretics, to help lower body weight,
- 4, and blood doping chemistry.



Doping for body image

- This period also saw the rise of [anabolic steroids](#) used both in bodybuilding and many other sports.



Why athletes and exercisers take drugs

- To enhance performance
- To increase strength, endurance,
- Alertness, aggression,
- To decrease fatigue, and reaction time.
- Fast rehabilitation from injury
- To be more attractive to the opposite sex
- To improve their body image
- To change body image imbalance

Why athletes and exercisers take drugs

- To reduce weight quickly
- To psych up
- To increase energy
- To escape from unpleasant emotions
- To control stress and anxiety
- To increase self confidence
- Pressure from peers, coaches, friends
- Thrill seeking and desire to know
- The need to achieve success

Factors related to doping use of illegal performance-enhancing substances

- **Excessive media exposure,**
- **Economic rewards and the commercialization of sports.**
- **Attitudes and intentions regarding use of other substances,**
- **Low self-esteem, or lack of self-esteem,**
- **Ego-oriented achievement,**
- **Narcissism,**
- **Depression, stress, psychiatric effects**
- **Eating disorders,**
- **A dispositional risk-taking**

Factors related to doping

Situational Temptation and deception

- Athletes have to consider two main risks before using drugs: the risk of negative health effects and the risk of getting caught.
- “How much would you be tempted to use prohibited doping substances to enhance your performance this season?”
- “athletes succeed in sports **if they know how to cheat**”
- (Barkoukis, 2013; Lazuras et al., 2009),

Morality

- *It refers to* right and wrong decisions and actions according the ethics of a subject.
- Morality dilemmas:
- “I would feel guilty engaging in doping under these conditions”
- “Doping is against my principles”
- “I would feel morally wrong in doping under these conditions”.

Moral orientation

- Sportspersonship (moral) orientations were relevant to doping intentions
- Higher scores on the sportspersonship index reflected stronger sportspersonship orientations (e.g., more respect for rules, officials, endorsement of fair play)
- (Barkoukis, 2013)

The importance of normative influences on doping use

- **Use of legal supplements, perceived social norms, and positive attitudes towards doping, morality and self-efficacy to avoid doping were strong correlates of doping intentions.**
- Normative influences to engage in doping can range from peer pressure and perceived social acceptability of doping by teammates, to internal and external pressures associated with results and enhanced performance.
- Hence, **significant others (e.g. coach and teammates) and perceptions about the prevalence of doping use among other athletes seem to be important determinants of the decision to engage in doping.**
- Metaanalysis, Ntoumanis et al., 2014

Self efficacy beliefs

- **How much would you be tempted to use doping substances to enhance your performance?**
- “when your coach suggests so,”
- “when you believe that most colleagues of yours use doping substances,”
- “when you were told to enhance your performance,”
- “when you prepare for an important game/competition,”
- and “when feeling disadvantaged”.
- Lazouras et al., 2015

Other factors related to doping:

Extrinsic motivation

- Intrinsic motivation (IM) reflects the tendency to engage in a behavior for the pleasure and satisfaction derived from doing so. As such, intrinsically motivated people would voluntarily display behaviors without being concerned with external rewards.
- Extrinsic motivation (EM) regards behavior as being driven by external rewards.
- Amotivation refers to the absence of a contingency between one's actions and outcomes. Amotivated individuals do not seem to have specific purposes and goals, do not approach in a systematic and strategic manner, and lack the sense of intentionality.
- Athletes in **the Intrinsically Motivated** group reported significantly **lower scores** on past doping use and intentions to future use compared to other groups.
- **Achievement goals:**
- **Athletes Mastery Oriented reported lower intention** on doping use **Athletes performance oriented reported higher intention** on doping use

Attitudes and Intentions of Greek Athletes and Coaches Regarding Doping

The aim of this study was to examine athletes' and coaches' attitudes and intentions with regard to doping, using the theory of planned behavior (TPB) model. 143 athletes and 50 coaches participated in the study.

Doping dilemmas used in this study

- **Statement 1.** “If you were an athlete with a chance of an Olympic victory only with doping use, with no chance of detection, what would be your choice?”
- **Statement 2** “If you were an athlete with a chance of winning an Olympic medal only with doping use, with no chance of detection, what would be your choice?”
- **Statement 3** for coaches: “If you trained athletes with a chance of an Olympic victory only if they engaged in doping use, with no chance of detection, what would be your choice?”
- **Statement 4.** “If you trained athletes with a chance of an Olympic medal only if they engaged in doping use, with no chance of detection, what would be your choice?”
- It was assessed with two 11-point bipolar adjectives scales (*use doping-do not use doping*).

Attitudes and Intentions of Greek Athletes and Coaches Regarding Doping

Results.

- With regard to doping choices, 61.5% of the athletes were negative, 5.6% were undecided,
- **And 32.9% were positive, about doping use.**
- Similar the results for coaches
- Attitudes, subjective norms, perceived behavioral control, doping intentions, and morality were positively related to the athletes' selection of doping choice attitudes (62%), perceived behavioral control (3%), and morality (4%) were significant predictors of athletes' intentions to engage in doping choices but for coaches' only attitudes were the most important predictor of intentions to engage in doping choices (72%). **The most important predictors of doping choices were intentions (78% and 68%) and perceived behavioral control (1%) for athletes and intentions (84% and 79%) for coaches.**

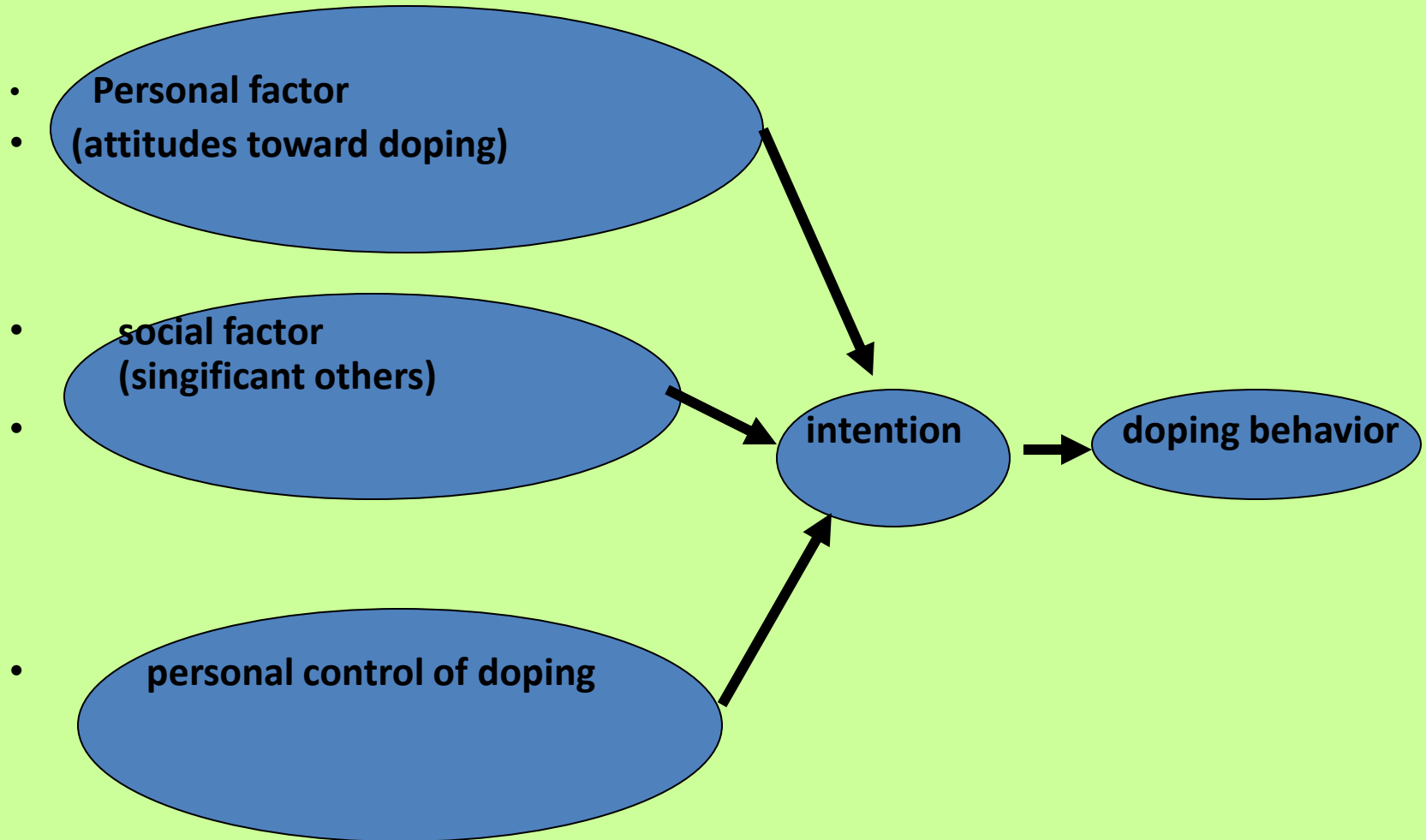
The men athlete were more positive to doping than women.

Topics for discussion

- After reading the previous slide, think about the following
- Relationships between doping and health
- Reasons for athletes and coaches to use or not to use doping
- Reasons for body builders to use or not to use steroids

Doping

- The theory suggests that intentions, together with perceived behavioral control, predict the likelihood that a person will actually perform this behavior.
- Intentions to use doping substances, in turn, are determined by attitudes towards doping, by perceived social pressure to do so (subjective norm), and by perceptions of control over this behavior.



Attitude towards doping

- is determined by beliefs about the consequences of doping, each belief weighted by the subjective value of the outcome in question.
- The perceived behavioral expectations of important referent individuals or groups such as the person's family, friends, co-workers, and health professionals.
- Control beliefs have to do with the perceived presence of factors that can facilitate or impede the doping behavior.

- **On changing attitudes toward doping –**

The importance of attitudes toward doping

Studies showed that:

The most important factor for predicting doping intentions was attitude. Attitudes also influenced coaches' intentions with regard to doping choices. Coaches should have accurate knowledge about doping, drug use, and doping methods, especially adverse reactions to doping use.

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Educational programs against doping

The physical education instructor plays an important role in shaping children's attitudes and behavior, as well as shaping the content of programs, and can influence students in a positive or negative way.

In school, physical education programs should aim to shape students' **beliefs about the negative health effects and unfair nature of doping use**. The implementation and evaluation of such interventions in schools could be very important in the doping prevention field.

Educational programs against doping.

Focus points

- Doping effects
- **Health (Severe problems, Sudden death)**
- **Ethics (fair play, cheating)**

Table 20.4

Major Categories of Performance-Enhancing Drugs in Sport

Drug category	Definition/use	Performance-enhancing effect	Side effects
Stimulants	Various types of drugs that increase alertness, reduce fatigue, and may increase competitiveness and hostility	Reduced fatigue, increased alertness, endurance, and aggression	Anxiety, insomnia, increased heart rate and blood pressure, dehydration, stroke, heart irregularities, psychological problems, death
Narcotic analgesics	Various types of drugs that kill pain through psychological stimulation	Reduced pain	Constricted pupil size, dry mouth, heaviness of limbs, skin itchiness, suppression of hunger, constipation, inability to concentrate, drowsiness, fear and anxiety, physical and psychological dependence
Anabolic steroids	Derivatives of the male hormone testosterone	Increased strength and endurance, improved mental attitude, faster training and recovery rates	Increased risk of liver disease and premature heart disease, increased aggression, loss of coordination, a variety of gender-related effects (e.g., infertility in males and development of male sex characteristics in females)
Beta-blockers	Drugs used to lower blood pressure, decrease heart rate, and block stimulatory responses	Steadied nerves in sports such as shooting	Excessively slowed heart rate, heart failure, low blood pressure, light-headedness, depression, insomnia, weakness, nausea, vomiting, cramps, diarrhea, bronchial spasm, tingling, numbness
Diuretics	Used to help eliminate fluids from the tissues (increase secretion of urine)	Temporary weight loss	Increased cholesterol levels, stomach distress, dizziness, blood disorders, muscle spasms, weakness, impaired cardiovascular functioning, decreased aerobic endurance
Peptide hormones and analogues (e.g., human growth hormone)	Chemically produced drugs designed to be chemically similar to or have similar effects as already existing drugs	Increased strength and endurance and muscle growth	Increased growth of organs, heart disease, thyroid disease, menstrual disorders, decreased sexual drive, shortened life span

Adapted from Bump, 1988.

Performance-enhancing drugs have clearly documented health risks

Preventing substance abuse

- Provide a supportive environment that addresses the reasons individuals take drugs
- Educate participants about the effects of drug use.
- Inform participants of legal sanctions (penalties) against drug use
- Set a good examples

Doping prevention programs

- In relevant program:
- (a) reading doping dilemma,
- (b) making a decision,
- (c) creating individual arguments,
- and (d) ordering them according to one's own liking.
- The sessions were programmed in such a way that athletes could proceed to the following task only if they had completed the prior one.

Doping prevention programs

The standard-knowledge-based educational training program, which also comprised six sessions, contained six different parts that were each split into two subsections:

- (a) introduction (famous doping cases and frequently asked questions about doping);
- (b) consequences of doping;
- (c) forbidden substances and methods;
- (d) the doping control system (introduction to the control system and doping control procedure);
- (e) law, duty, and punishment (law and punishment and personal rights and duties);
- (f) doping on the Internet (NADA online and other doping pages). The structure and content of this training were based on the German NADA's High-Five Program (NADA, 2010). To encourage reading and processing of the information, knowledge tests were conducted at the end of every subsection.

- Anne-Marie Elbe & Ralf Brand (2014): The Effect of an Ethical Decision-Making Training on Young Athletes' Attitudes Toward Doping, *Ethics & Behavior*, DOI:10.1080/10508422.2014.976864

Motivation and doping prevention

- Motivational and achievement goal profiles play a major role in doping abstinence; thus, suggesting that these two constructs should be targeted by future doping prevention interventions.
- Practically, this may involve educational practices that bolster specific types of achievement goals (e.g., mastery goals), and foster intrinsic motivation (e.g., satisfy the athletes' basic psychological needs, increase the valence of internal rewards while decreasing the valences for external rewards etc), during the very early stages of an athlete's engagement in sports.

(Barkoukis et al., 2010)

A school based intervention program

- A study investigated the effectiveness of a school-based intervention in promoting an anti-doping culture in adolescents. The intervention consisted of 10 teaching units focusing on the health, moral, social and psychological aspects of nutritional supplement and doping use.
- The results showed that intervention group participants reported significantly weaker attitudes towards doping use, and increased norm salience. Health was ranked as the most important value of sport in both intervention and control groups, and doping use was ranked as the most important threat to the integrity of sport in the intervention group. The findings are discussed with respect to policy making and the role of school-based interventions in promoting an anti-doping culture in young people.

The intervention program

- A project based learning approach is used to deliver health education programs. This approach requires students to participate in the design, problem-solving, decision making, or investigative activities. Students usually work in cooperation with other students autonomously over extended periods of time with little teacher supervision or interference.
- The outcome of the project is usually a classroom presentation demonstrating the understanding of, and critical reflection on the topic by the students.
- Barkoukis et al., 2016

Table 1

Aspects of the intervention.

Unit	Components
1. Knowledge about nutritional supplements	(a) Proteins and amino acids (b) Vitamins, minerals, lipotropics and other herbal supplements (c) Natural testosterone boosters (d) Creatine and related supplements
2. Knowledge about prohibited substances	(a) Anabolic steroids (b) Growth hormone (c) Erythropoietin and blood doping, and (d) All other prohibited substances (e.g., beta-blockers, diuretics)
3. Side effects of doping use	(a) Most commonly used prohibited substances (b) Contaminated nutritional supplements (c) Prolonged use of prohibited substances (d) Psychological side effects
4. Nutrition as an alternative to doping use	(a) Intake of proteins (b) Intake of carbohydrates and fat (c) Intake of vitamins and minerals (d) Safe use of herbal nutritional supplements
5. History of doping use	(a) Doping use from antiquity to modern times (b) Historical aspects of doping use (c) Examples of deviant approaches of performance enhancement in ancient Olympic Games (d) Examples of doping use in modern Olympic Games
6. The modern culture of sport	(a) Commercialization of sport (b) Professional sports (c) Emphasis on records and winning (d) Sports and mass media
7. Moral hazards of doping use	(a) Fair play, Spirit of Sport, threats to integrity of sports and Olympic ideals (b) Morality of doping use (c) Morality of nutritional supplement use (d) Morality of doping controls
8. Psychological determinants of doping use	(a) Attitudes towards nutritional supplements and doping use (b) Motives for using nutritional supplements and prohibited substances (c) Self-efficacy to refrain from use (d) Strategies to resist temptations for using
9. and 10. Development of end-product	Website Online forum Oral presentations Short movies



Model for Core Programs

Information/Education Guidelines to Prevent Doping in Sport

Doping dilemmas

Think of yourself as coach of high level athlete who has lots of chances to participate in the next Olympic games. Some months before the Olympic games the athlete suffering of a serious injury, and your doctor suggesting the use of some forbidden steroids (doping substances) as the only way for fast recovery and to secure a winning result. The doctor tries to persuade you that would not be detected by an anti-doping control and the athlete would not have any health problems.

Think of yourself as high level athletes who has lots of chances to participate in the next Olympic games and your coach suggesting the use of doping substances as the only way to secure a winning result. The coach and the doctor try to persuade you that would not be detected by an anti-doping control and would not have any health problems. Emphasis was also given on the benefits (money, glory) that would derive from an Olympic win

The measurement of attitudes toward doping

“Using doping substances before the next Olympic games, under the condition described is...”. :

good: -----:-----:-----:-----:-----:-----:-----: bad
extremely quite slightly neither slightly quite extremely

clever :-----:-----:-----:-----:-----:-----:-----: silly
extremely quite slightly neither slightly quite extremely

healthy: :-----:-----:-----:-----:-----:-----:-----: unhealthy
extremely quite slightly neither slightly quite extremely

ethical: :-----:-----:-----:-----:-----:-----:-----: unethical
extremely quite slightly neither slightly quite extremely

useful:-----:-----:-----:-----:-----:-----:-----: unuseful
extremely quite slightly neither slightly quite extremely

unpleasant:-----:-----:-----:-----:-----:-----:-----: pleasant
extremely quite slightly neither slightly quite extremely

The measurement of intention to use doping substances

I intent to use doping substances before the next Olympic games, under the condition described above

likely:-----:-----:-----:-----:-----:-----:-----: unlikely
extremely quite slightly neither slightly quite extremely

The measurement of perceived behavioral control

For me to use doping substances before the next Olympic games, under the condition described above, is..

Easy:-----:-----:-----:-----:-----:-----: Difficult
extremely quite slightly neither slightly quite extremely

The measurement of subjective norms

If I use doping substances before the next Olympic games, under the condition described above, most people who are important to me

Would
approve:-----:-----:-----:-----:-----:-----: disapprove
extremely quite slightly neither slightly quite extremely
Would

Doping choices

- “If you were an athlete with a chance of an Olympic victory only with doping use, with no chance of detection, what would be your choice?” :
- **No use doping 1 2 3 4 5 6 7 8 9 10 11 Use doping**
- “If you were an athlete with a chance of winning an Olympic medal only with doping use, with no chance of detection, what would be your choice?”
- **No use doping 1 2 3 4 5 6 7 8 9 10 11 Use doping**
- “If you trained athletes with a chance of an Olympic victory only if they engaged in doping use, with no chance of detection, what would be your choice?”
- **No use doping 1 2 3 4 5 6 7 8 9 10 11 Use doping**
- “If you trained athletes with a chance of an Olympic medal only if they engaged in doping use, with no chance of detection, what would be your choice?”
- **No use doping 1 2 3 4 5 6 7 8 9 10 11 Use doping**

- **Preparing educational material, attitude change strategies, ideas, for the sensitization of students, athletes and society against doping**

Institute of Sport, Physical Activity and Leisure (ISPAL)



Doping prevention for young athletes: What initiatives can lead to success?

Prof Susan Backhouse

Pro Safe Sport for Young Athletes, 1-2 Sept 2014, Berlin



Workshop in groups

The process of attitudes change toward doping

find the most salient beliefs

- 1. What do you see as the advantages to use doping substances before the next Olympic games, under the condition described above**
- 2. What do you see as the disadvantages to use doping substances before the next Olympic games,**
- 3. Please list the individuals or groups who would approve the use doping substances before the next Olympic games,**
- 4. Please list the individuals or groups who would disapprove the use doping substances before the next Olympic games,**
- 5. Please list any factors or circumstances that would make it easy or enable you the use doping substances before the next Olympic games,**
- 6. Please list any factors or circumstances that would make it difficult or prevent you from using doping substances before the next Olympic games,**

Personal beliefs

Some beliefs related to doping *for the athletes*

- “Personally, I believe that **for the athletes**, doping...
- Increase their performance,
- Protect their health,
- Are completely useless,
- Are harmful,
- Are unethical
- Are mere commercial products without any value,
- Are meant to help them avoid injuries,
- Are meant to help them hydrate,
- Are useful for their mental health,

Lets make a list with the most salient doping beliefs

Doping positive and negative thinking

Negative thinking:

«doping use can help me to increase my strength and to win the gold medal during the next Olympic games»

Positive thinking:

This is an illusion. There are many other ways to increase your strength and ...
...to win the Olympic medal is depending from many other factors

Work in groups

Changing attitudes toward doping. Try to write a short article for athletes against doping, by using the following construct

Affective	
Cognitive	
Significant others	
Perceived control	
Others' behavior	

workshop

- Describe two strategies that should increase awareness about doping in athletes and their parents.
- Describe some strategies that should increase awareness about doping in schools and young athletes
- Think about some strategies in order to inform the general population about the problems of using doping substances in fitness clubs, in recreational sport, in body building etc.

workshop

- You have been asked by your National Olympic Committee or IOC to design a program to help athletes struggling with substance use issues. This program needs to have resources for those experiencing both relatively minor and more severe problems. Design the content of this program and describe how it will be implemented, including the professionals that will provide the services

Work In groups

- **An affective message: about doping and health/
doping and morality/ doping and cheating/**
- **A cognitive message:**
- **A funny message:**
- **A message for 10 years old**
- **A message for college students**
- **A message for parents**
- **A message for professionals**
- **A message for other athletes**

Review questions

- Strategies against doping
- Recommended types of strategies on changing attitudes toward doping

Reference

- Anne-Marie Elbe & Ralf Brand (2014): The Effect of an Ethical Decision-Making Training on Young Athletes' Attitudes Toward Doping, Ethics & Behavior, DOI:10.1080/10508422.2014.976864
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