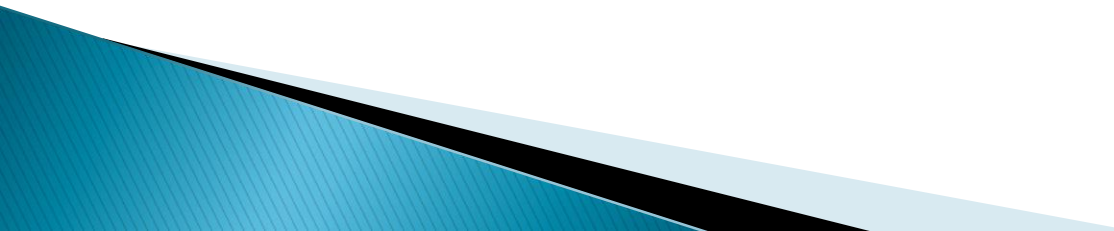


Effectiveness of an anti-doping intervention based on health and ethical information

Vassilis Barkoukis
Aristotle University of Thessaloniki



The 'menu'

- ▶ Overview of the anti-doping interventions
 - ▶ Findings from a school based intervention
 - ▶ Future directions in anti-doping prevention
- 

Asterix[®]

AT THE

OLYMPIC GAMES



7+

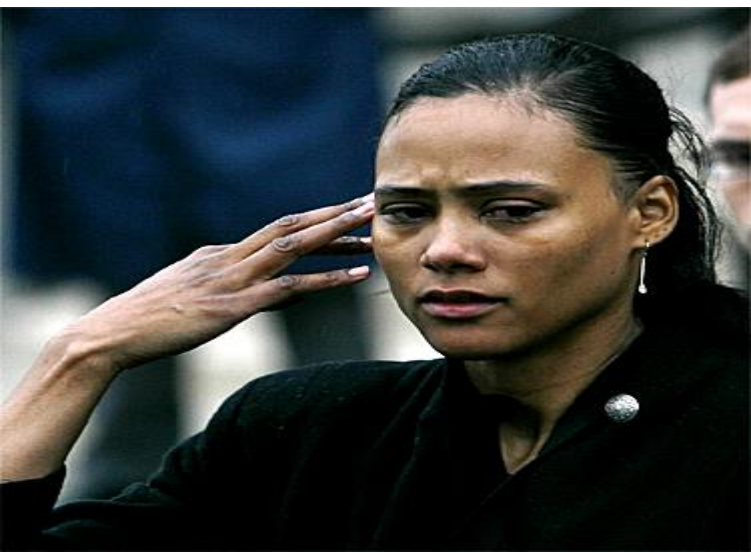


LICENSEE



**They were found
negative in numerous
anti-doping controls**





- ▶ In 2007 she admitted systematic doping use

- He admitted doping use in 7 Tours de France

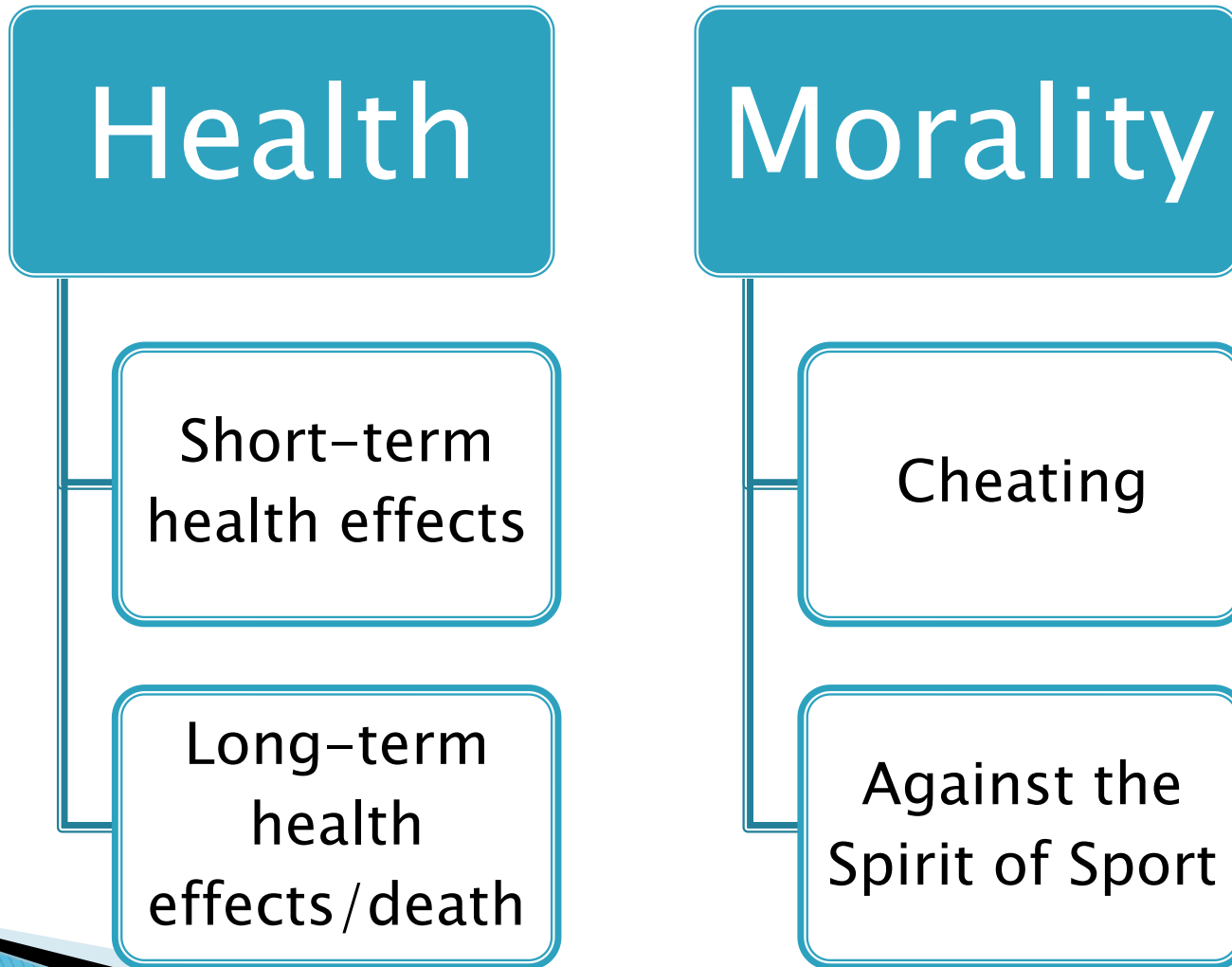


Anti-doping prevention interventions

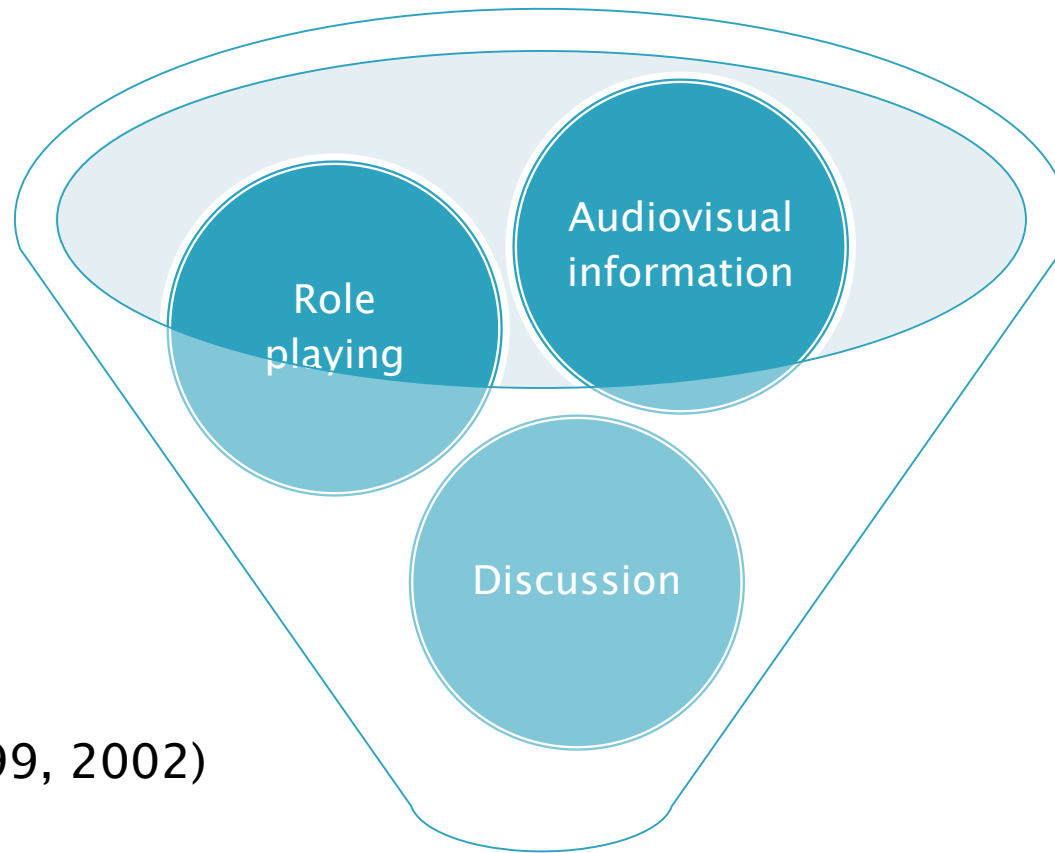
- ▶ **SATURN** (Student Athlete Testing Using Random Notification)
 - random drug testing of the athletes
 - reduced the use of illegal recreational and performance enhancement drugs
 - increased most psychological risk factors associated with drug use

Goldberg et al. 2003, 2007

Pillars of anti-doping campaigns



Education-based interventions



Laure & Lecerf (1999, 2002)

Weaker intentions

Higher resistance efficacy

More effective than awareness-raising

ATLAS and ATHENA

- ▶ Designed to prevent substance use of school athletes by targeting different psychological factors between male and female adolescents



Elliot et al., 2004, 2008;
Goldberg et al., 2000

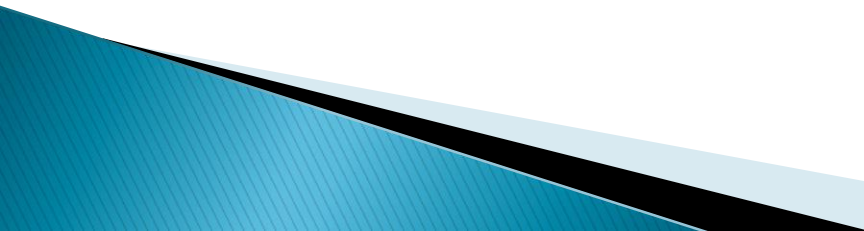


ATLAS and ATHENA

▶ **Mode of delivery**

- Peer-led and coach-facilitated
- 10 sessions for ATLAS and 8 for ATHENA
- Female and male athletes are differentially targeted

▶ **Content of the intervention**

- Side effects of doping use,
 - Risks involved in the excessive and careless use of nutritional supplements,
 - Alternative and legitimate performance enhancement methods
- 

Effectiveness of ATLAS and ATHENA

strengths

weaknesses

Improved
knowledge

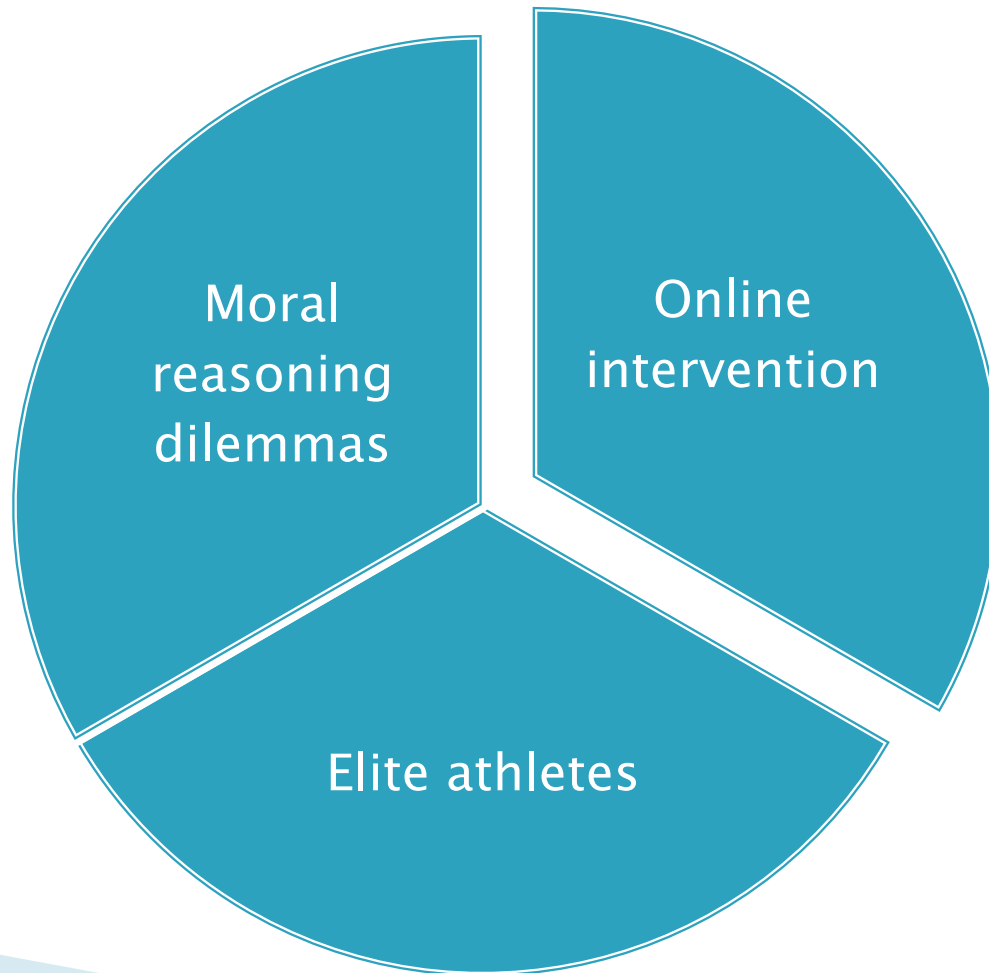
Negative
beliefs

Difficult to
implement

Not focused
on doping

Only modestly
effective

Ethical decision making intervention



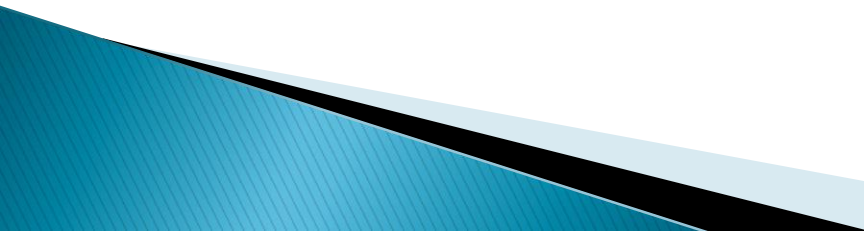
Social norms and doping behavior

- ▶ Behaviour is guided by perceptions of social norms, such as the perceived popularity or prevalence of a given behaviour

Lapinski & Rimal, 2005

- ▶ Social norms directly influence both intentions and actual doping use in athletes and non-athlete populations

Lazuras et al., 2010; Lucidi et al., 2008

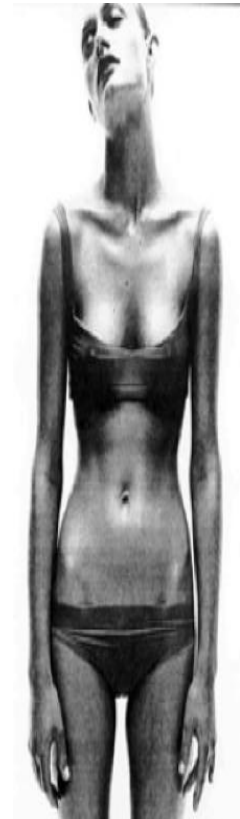


Normative influence



Figure details and colors are subject to change.

Normative influence



This is a modern day
fashion model ...



This is a Holocaust
victim.

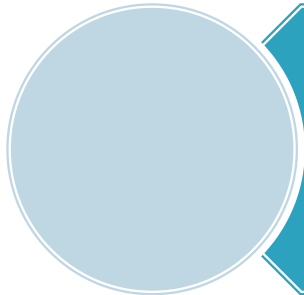


What about doping?

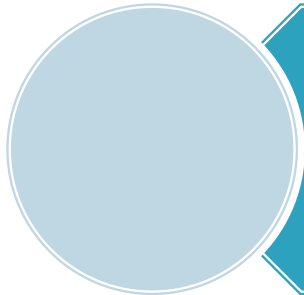
- ▶ *"I didn't invent the culture and I didn't try to stop the culture ... and the sport is now paying the price of that and I'm sorry for that. I didn't have access to anything else that nobody else did."*



Why a school-based intervention?



Adolescents represent a high-risk group for both legal PES and doping use



We can more easily change attitudes and form beliefs in adolescents



Develop an anti-doping culture in adolescence

Aim of the study

- ▶ The study was designed to test the effectiveness of an intervention aiming to influence adolescents' beliefs about the use of legal PES and doping use in sports.
- ▶ The intervention focused on influencing:
 - values about sports
 - social norms, and
 - attitudes towards PES use and doping use

Method

▶ Sample

- 218 high school students (Mage = 15.95, SD = 1.31, 107 males and 110 females, one student did not report gender)

▶ Measures

- *Attitudes towards legal PES and doping use*
- *Descriptive norms*
- *Doping norms salience*
- *Values of Sport*
- *Threats of sports integrity*

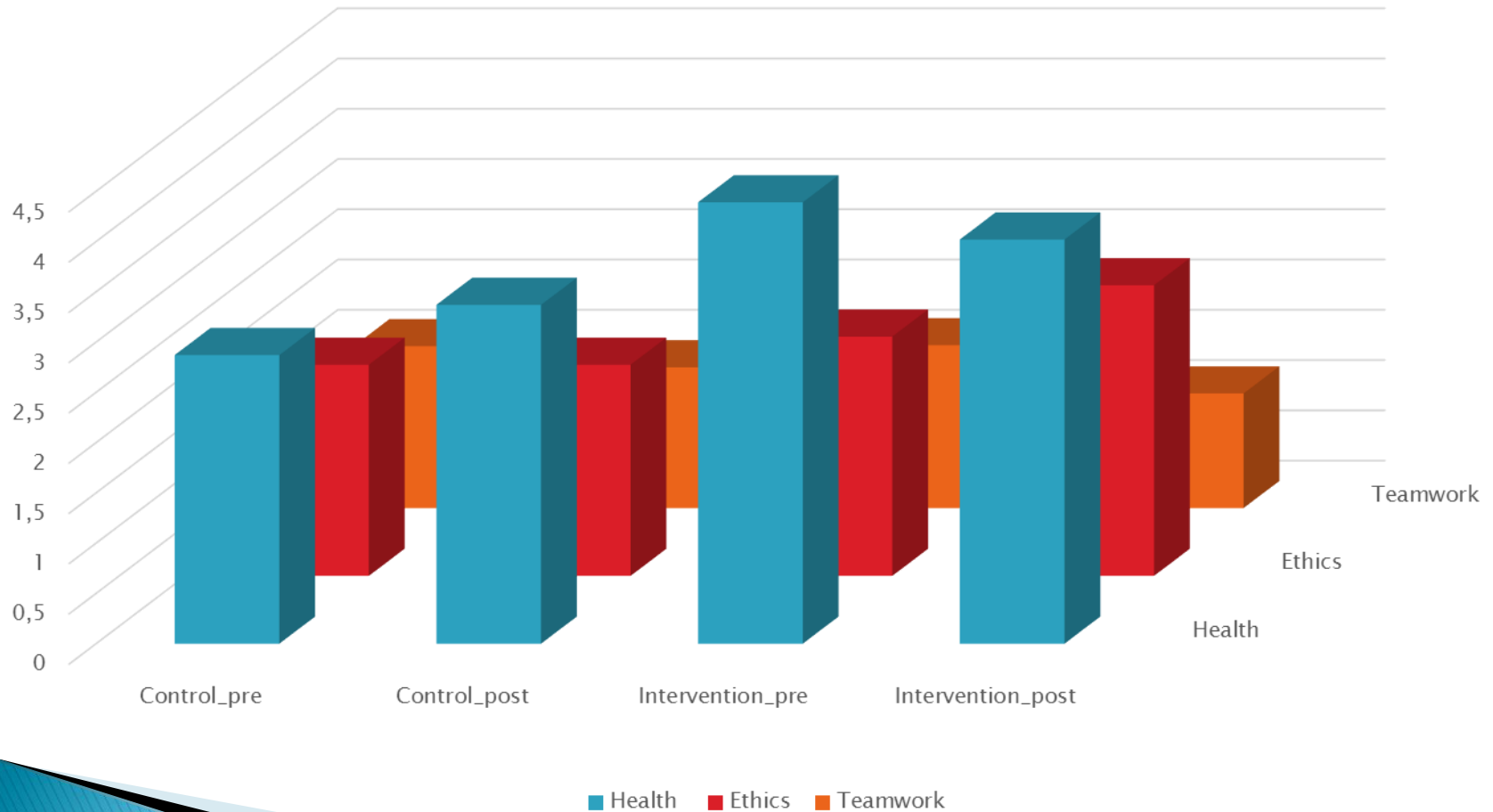
Experimental design

- ▶ Health Education program in Greek secondary schools
 - project-based learning approach
 - 12 X 2hours/week
- ▶ Experimental group
 - five classes consisted of 109 students; 42 males and 67 females, $M = 16.09$ years, $SD = 1.71$
- ▶ Control group
 - five classes consisted of 109 students; 65 males and 43 females, one student did not report gender, $M = 15.8$ years, $SD = .69$

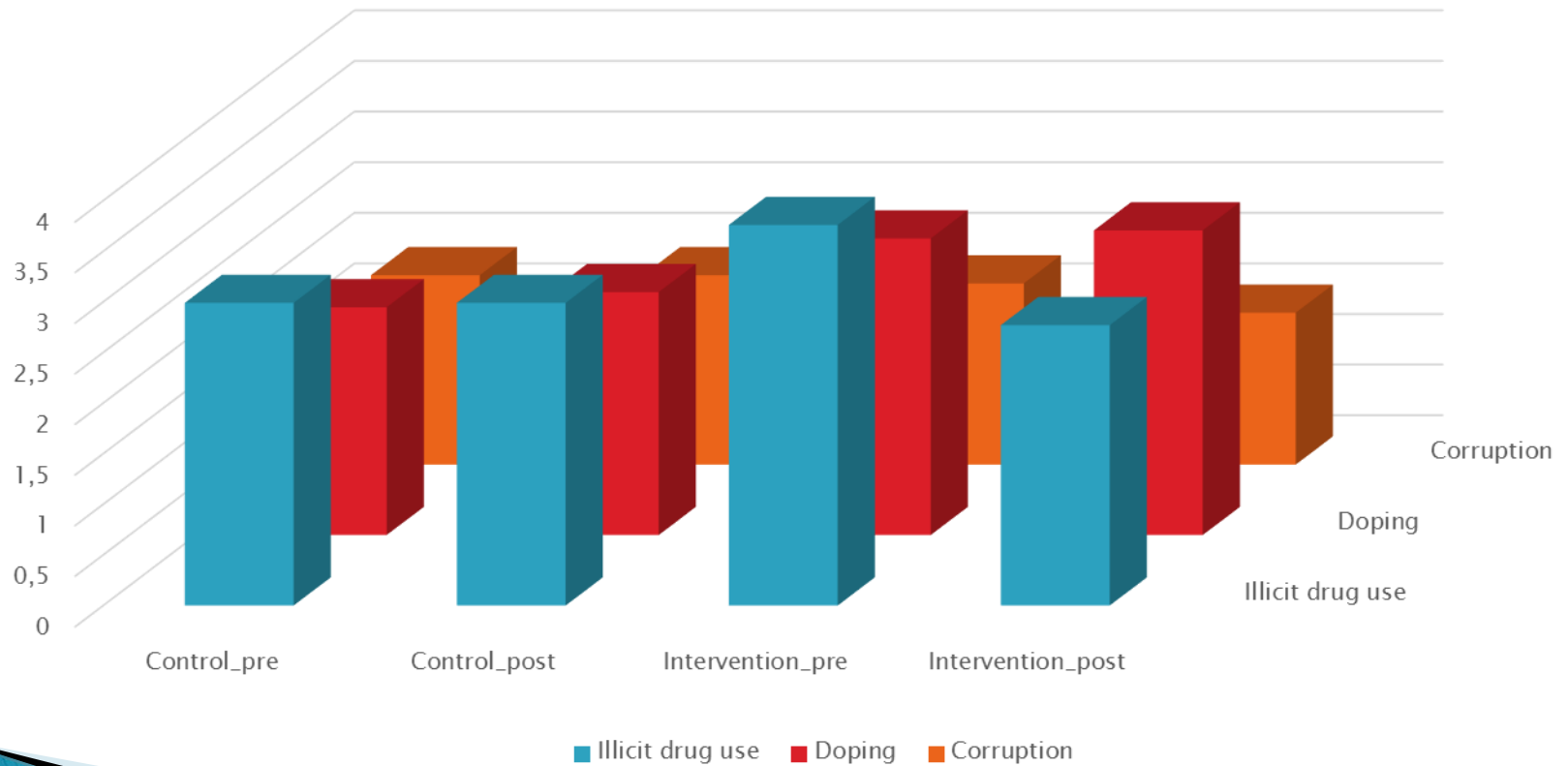
Intervention program

- ▶ 1. Introduction
- ▶ 2. Knowledge about nutritional supplements
- ▶ 3. Knowledge about prohibited substances
- ▶ 4. Side effects of doping use
- ▶ 5. Nutrition as an alternative to doping use
- ▶ 6. History of doping use
- ▶ 7. The modern culture of sport
- ▶ 8. Moral hazards of doping use
- ▶ 9. Psychological determinants of doping use
- ▶ 10 and 11. Development of end-product
- ▶ 12. Presentation of the end-product

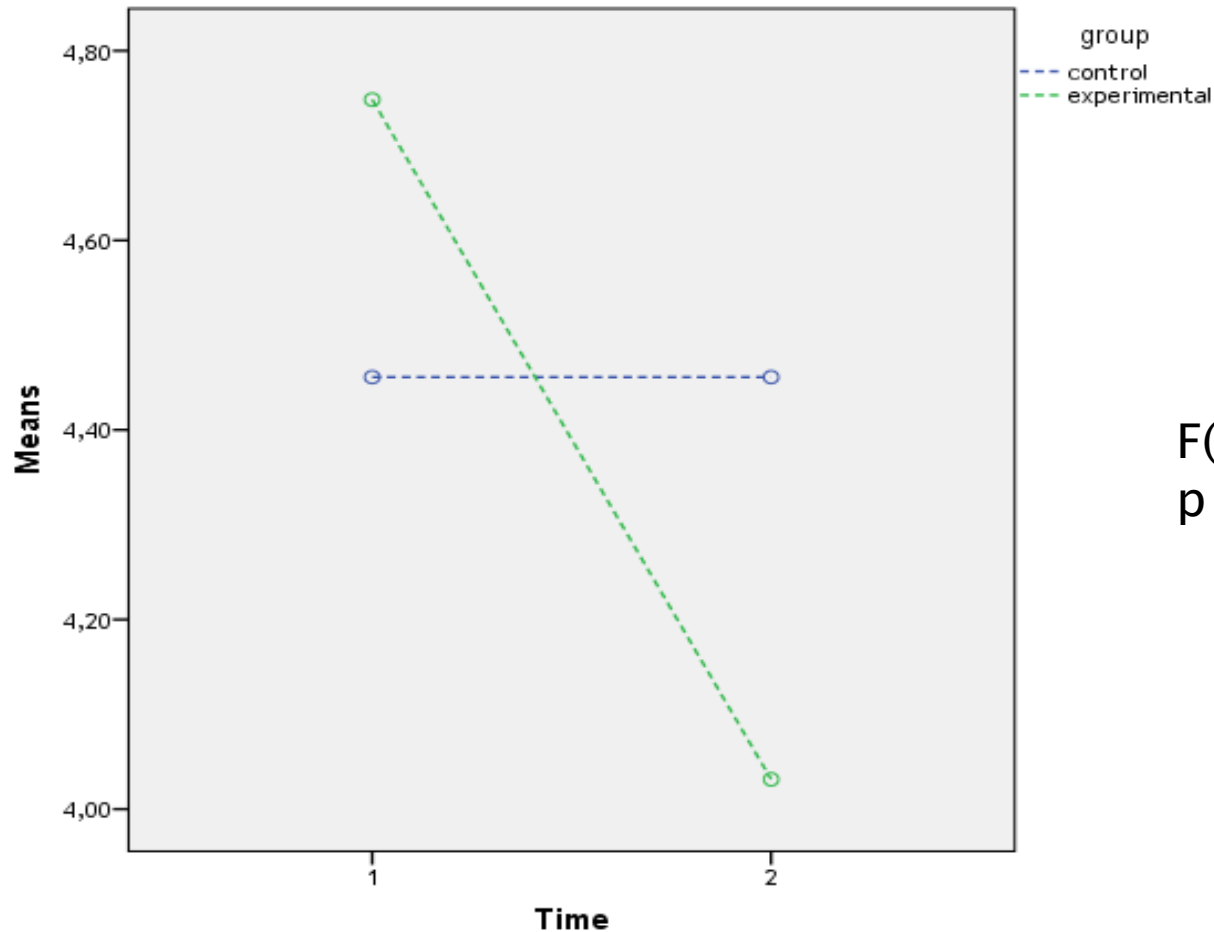
Values of sport



Threats of sport

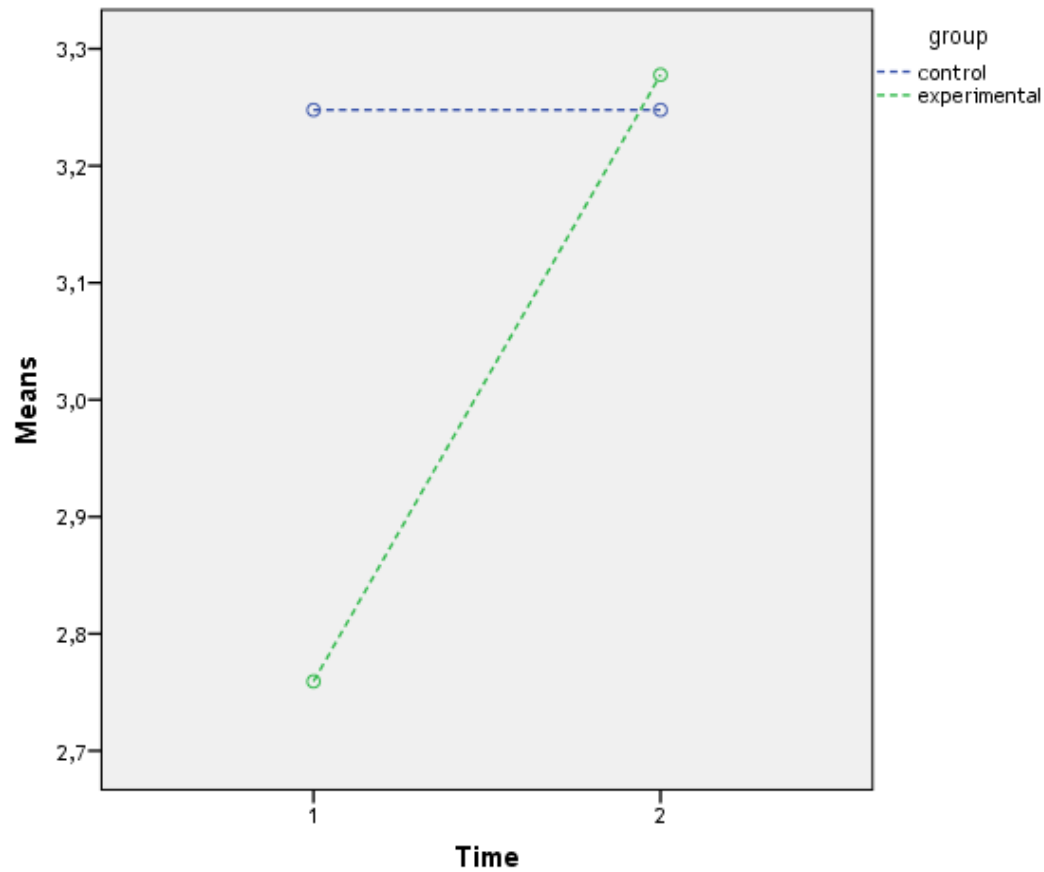


Effect of the intervention on attitudes towards NS



$F(1,213) = 10.76,$
 $p < .001, \eta^2 = .05$

Effect of the intervention on norm salience



$F(1,213) = 9.77,$
 $p = .002, \eta^2 = .04$

Future directions in anti-doping

- ▶ Athlete Learning Program about Health and Anti-Doping (ALPHA)
 - Evidence-based
 - Focus on attitudes
 - Solutions to stay clean
 - Increase resistance to temptations
 - Online tool

Future directions in anti-doping

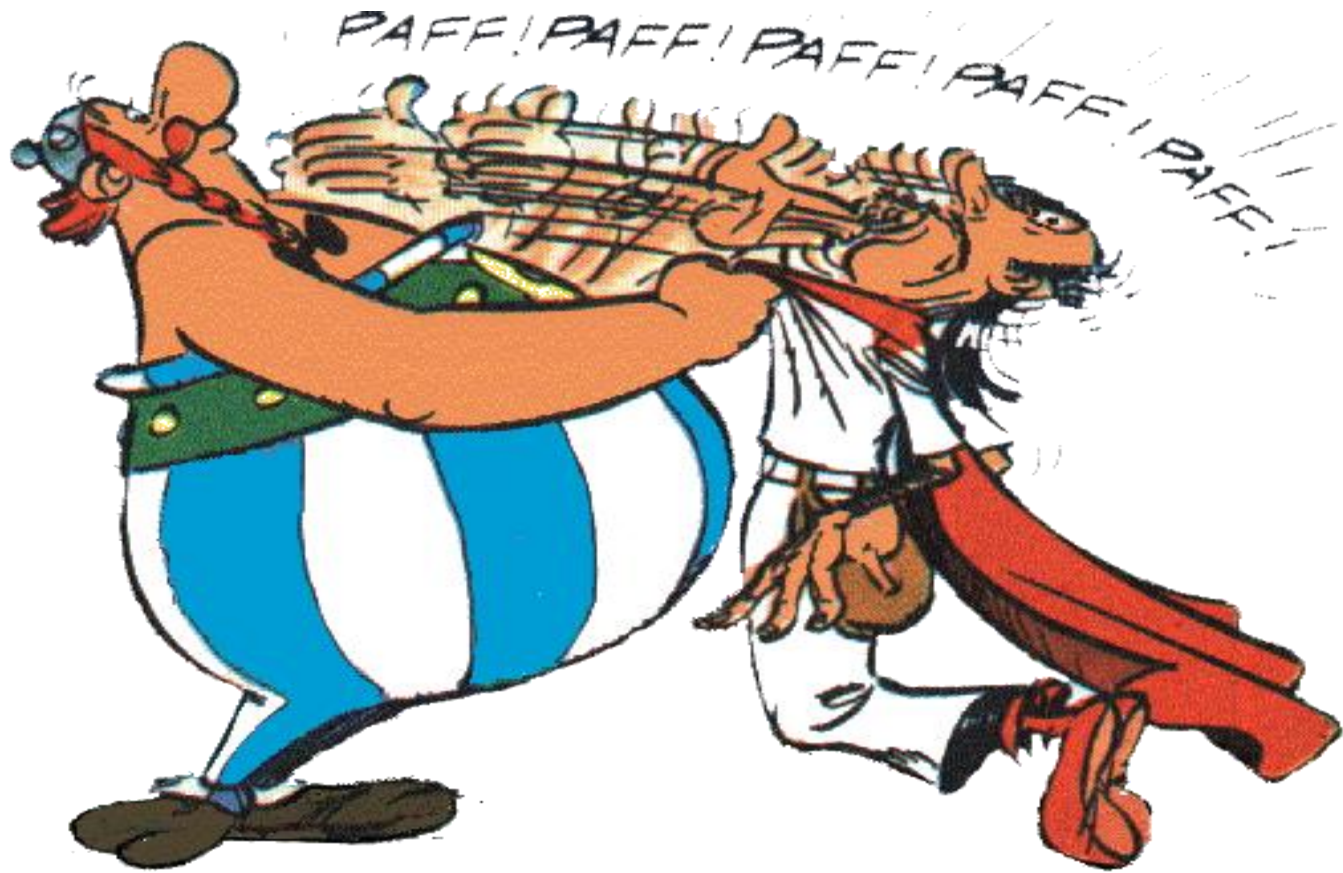
- ▶ **SAFEYOU**
 - Evidence-based
 - Co-creation with athletes
 - Collaboration with stakeholders
 - Involving amateur athletes – developing an anti-doping culture in sport settings



Future directions in anti-doping

- ▶ Mode of delivery of the anti-doping message
 - Self-affirmation theory (Barkoukis et al., 2014)
 - Likelihood elaboration model (Horcajo & De la Vega, 2014)
- ▶ Content of the message
 - Fear appeals
 - Social proof theory

Thank you



for your attention