MONITORING GROUP (T-DO)

ANTI-DOPING CONVENTION

Strasbourg, 10 May 2012 T-DO (2012) 06 FINAL

Anti-Doping Convention (T-DO)

Project on Compliance with Commitments

Respect by Norway of the Anti-Doping Convention

Follow up Report by Norway on the implementation of recommendations of the Evaluation visit on 27-29 November 2006

Final report

Discussed at the T-DO COMP meeting on 19 March 2012 and
Adopted at the 35th meeting of the Monitoring Group

IRIS
International Research Institute of Stavanger
www.iris.no

Svein Ingve Nødland

Anti-doping lectures

Evaluation of Anti-Doping Norway's lecture program

Report IRIS - 2011/234

Project number:	7252269
Project title:	Evaluation of Anti-Doping Norway's lecture program
Client(s):	Anti-Doping Norway
ISBN:	978-82-490-0749-3
Distribution restriction:	Open

Stavanger, 14.12.2011

(Svein Ingve Nødland,)	16.12.2011	(Brita, Gjerstad)	16.12.2011
Project Manager	Sign. date	Project Quality Assurance	Sign. date

16.12.2011

(Gottfried Heinzerling)
Sr. Vice President
(Social Science and Business Development)

Sign. date

Preface

This report is the result of an evaluation task that Anti-Doping Norway asked IRIS to do. The lecture program has been going since 2003. An evaluation was ordered to discover more about its implementation and effects regarding doping and anti-doping work.

The evaluation project started about a year ago. Our main data was collected in spring this year, a web based survey sent out to course participants during autumn 2010 and winter/spring 2011.

I wish to thank Anti-Doping Norway for an interesting evaluation, and in particular, Director Sports and Science Mads Drange for his unselfish cooperation.

Special thank to my colleagues at IRIS. Nils Asle Bergsgard, has been helping with interviews in the start phase, and has given advice in all phases of the evaluation project. Brita Gjerstad has read through a late draft and made valuable comments.

Stavanger, 16. December 2011

Svein Ingve Nødland
Project Manager

Table of Contents

Summary

Background, evaluation objectives and method

Anti-Doping Norway has since 2003 been running a lecture program where courses on doping and anti-doping work are offered to sport clubs, sports organisations and other sports related communities all over the country. IRIS has been given the task to evaluate the program.

The main objectives of the evaluation have been the following two questions:

1. Has the lecture program increased the attendant's knowledge about doping?

2. Has the lecture program affected the attendant's attitudes on doping issues?

Our main approach to look at this was to send a web based survey to participants at courses in Autumn 2010/Spring 2011. Initially, we performed explorative interviews with teachers, participants and organisers in three different courses in order to get an idea of the organisational framework and content of the courses, thus giving input to formulating survey questions. The survey had a response rate at 27% and appeared to be fairly representative compared to the total population of participants regarding sport type and region.

Participants

The lecture program has a diverse audience as to the totality of respondents participating:

- More than half of the course participants, (55%) are athletes. Also persons with other roles in the sports system attend the courses. They are mainly persons in the support system of competitive sport, sport managers, and volunteers.

- More men (56%) than women (44%) take part in the courses, mainly because there are more men than women in the training and support system and among sport managers.

- The age distribution of participants was varied. Teenagers, 16-19 years old, represent 38% of the participants, while 21% are people in the 20-ies, and 41 % are 30 years and above.

- Most (95%) of the participants below 20 are athletes, and a clear majority (77 %) of persons in the 20-iers are athletes, whereas only a few above 30 years (7%) are themselves active in competitive sport.

- As for the athletes, a majority (79%) were highly engaged in competitive sport and competing at an international (25%) or national (54%) level.

- The courses are directed at people from a large number of sports. Disciplines demanding physical strength like martial arts and weight-lifting where doping internationally are relatively frequent were overrepresented compared to the size of these sports in terms of club memberships.

- Also in other individual sports, in particular many perseverance sports in winter (skiing sports) as well as summer (athletics, cycling, swimming, triathlon) relatively many persons attended the courses.

- Of the respondents 6 % that had been offered doping, 10% of the men and 2% of the women. A larger percentage, 11%, knew persons in their sports community having doped themselves. In addition a slightly greater share believed so, but could not say for certain.

- The knowledge level among the participants before attending the course varies. The knowledge level was highest regarding health risks and procedures of doping testing to a certain degree.

- Not surprisingly, athletes competing at international or national level and support personnel knew more than the others. No one indicated they were totally ignorant before participating at the course.

Course frame, content and implementation

The courses treated many and different topics on doping and anti-doping work. A course is organised in cooperation between an organisation and Anti-Doping Norway. An organisation asks for a course, a course teacher sent by Anti-Doping Norway then comes and gives lectures, with a content adapted to what is demanded and the actual audience. It can be understood as courses given by demand. Characteristics of the courses are:

- Anti-doping work related to the competitive arena is given first priority. According to the participants, the main focus of the courses seems to have been on the regulatory framework and the doping control procedures.

- Effects of doping and health consequences is given lower priority than the former mentioned. Least weight, though, is given to ethical aspects as such.

- The course teachers were undoubtedly competent. Of the participants 87% agreed completely on that, 11% agreed partly, and only 2% disagreed.

- As to the way teaching is delivered, the participants' evaluation is overall good,. More than 3/4 of the participants totally agreed that the topics were communicated well, and the course teacher was enthusiastic. Slightly lower was the participants' point of view regarding the emphasis on dialog with participants.

- Altogether the participants were satisfied with the course. More than 90% expressed satisfaction, and of those 25% were very satisfied. A minority said

that they were neither satisfied, nor dissatisfied, and, in fact, nobody expressed any dissatisfaction.

Attitudes and course effects

The participants were asked questions about doping attitudes and knowledge increase and other effects of the course. Questions on attitudes were asked after the course had finished, and respondents' answers cannot be interpreted solely as effects of the course, however.

- Most participants have a restrictive attitude towards doping practices. A lion's share, 80 % or more, of the respondents viewed doping as unacceptable from any kind of argument.
- The argument that doping might make sense in sports where doping is rather frequent in order to get fair competition, gets a certain support.
- Certain groups are less negative on doping than others. Young people are less negative than older ones. Athletes, most being young, are less negative than support personnel, voluntary people and others.
- Almost all participants note that they have learnt from the course. About 40% express that they to a high degree have increased their knowledge, 57% have in some degree increased knowledge, while only 2% did not get more knowledge than they had before.
- The large part increased their knowledge about issues concerning anti-doping regulations, procedures and anti-doping work. These are issues that according to the participants had been highlighted in many courses. Issues that to a slightly smaller degree caused learning effects were health dangers and risks and ethical aspects.
- As to changes in attitudes because of the course, there is a significant number, 23%, who say they have become more critical after the course than before. No one has become less critical. More teenagers than other groups, over 30%, have become more critical.

Recommendations possible program improvements

The course program has impact on participants. It has significant effects on acquiring knowledge and to some degree on attitudes, by making some of the participants more critical on doping. A number of persons do not express totally negative attitudes towards doping in every situation. In particular, this is so for many of the younger athletes. It is thus important to strengthen program focus and intensity. In order to increase goal achievement, we would like to call attention to several possible approaches.

- Target group segmentation regarding course offerings, topics, communication message and methods. In particular it is important to distinguish between elite and young sports-people.

- More focus on ethical discussion and attitude influence to stimulate personal reflection and responsibility, and as a supplement to the main fact oriented focus of the courses so far.
- Follow up of the course by linkages and activities after the course, to develop and reinforce good attitudes. In particular this may be important for young athletes.

Oppsummering (Summary Norwegian)

Bakgrunn og formål

Antidoping Norge har et kursprogram med tilbud om foredrag til idrettslag, idrettsorganisasjoner og skoler. Dette programmet har pågått siden 2003 og er en del av organisasjonens forebyggende virksomhet.

Kursene kommer i stand gjennom et samarbeid mellom idrettsorganisasjon mv. og Antidoping Norge. Antidoping Norge sender en kursholder på forespørsel, og innholdet i kurset relateres til hva det blir bedt om og typen deltakere.

IRIS fikk i oppdrag å evaluere kursprogrammet. Hovedmålsettinger med evalueringen har vært å se om deltakerne i programmet har økt sin kunnskap om doping, og om programmet har påvirket deres holdninger til dette.

Metode

Hovedmetoden i evalueringsarbeidet har vært en nettbasert survey til kursdeltakere høsten 2010 og våren 2011. Svarprosenten i undersøkelsen var på 27 prosent, og de som svarte representerte et rimelig representativt utvalg sammenholdt med informasjon om totalpopulasjonen. Det ble også foretatt en del innledende intervjuer med kursarrangører, foredragsholdere og deltakere med sikte på å etablere en forståelse av kursvirksomheten. Dette ble gjort som grunnlag for å lage spørreskjema.

Deltakere

Mer enn halvparten, 55 prosent, av kursdeltakerne var aktive idrettsutøvere. Majoriteten av disse deltok i konkurranseidrett på internasjonalt og nasjonalt nivå. For øvrig deltok representanter fra trenersiden, medisinsk støtteapparat, idrettsledere, frivillige og skoler. Deltakerne kom fra mange forskjellige idretter, både individuelle og lagidretter. Relativt sett mange kom fra individuelle kamp- og styrkeidretter. Det var videre mange fra individuelle utholdenhetsidretter, både sommer- og vinteridretter.

Det var en betydelig aldersmessig spredning blant deltakerne. Tenåringer, 16-19 år, representerte 38 prosent, 21 prosent var 20-åringer og 41 prosent var over 30 år. Særlig blant idrettsutøverne var det mange unge. Det var mer menn, 56 prosent, enn kvinner, 44 prosent, som deltok på kursene. Det skyldes først og fremst at flere menn enn kvinner kom fra trener- og støtteapparat eller var idrettsledere og frivillige.

Kunnskapsnivået blant deltakerne før deltakelse på kurset varierte. Idrettsutøvere som konkurrerte på høyt nivå og personer fra støtteapparatet hadde mest kunnskaper.

Kurstilbud og kurstilfredshet

Innholdsmessig har kursene lagt hovedvekt på konkurranseidretten og dennes behov. Sentrale tema har vært lover og regelverk og dopingkontrollen. Effekter av doping og helsekonsekvenser er tillagt mindre vekt i kursene, og enda lavere har vekten på etikk vært.

Mer en 90 prosent av deltakerne ga uttrykk for tilfredshet med kurset, hvorav 25 prosent var svært tilfreds. Kursholderne ble vurdert som kompetente og deres undervisning ble gjennomgående beskrevet som god. Foredragsholderne kommuniserte bra. De viste entusiasme, men tilbakemeldinger tyder på at de kunne ha vært enda bedre når det gjaldt dialog med deltakerne.

Kunnskapseffekter og holdninger

De aller fleste deltakerne hadde lært av kurset. Om lag 40 prosent ga uttrykk for at de i høy grad hadde økt sin kunnskap gjennom deltakelsen, mens 57 prosent i noen grad hadde økt kunnskapene. Bare 2 prosent fikk ikke vite mer om doping enn det som de kunne før kurset. Særlig mange ga uttrykk for økt kunnskap knyttet til anti-doping arbeidet, dvs. regelverket og kontrollprosedyrene De unge i aldersgruppa 16-19 år ga i størst grad uttrykk for å ha økt sine kunnskaper gjennom kurset.

Det ble i undersøkelsen spurt om deltakernes holdninger til ulike sider ved doping. En klar majoritet av deltakerne var negative til dopingbruk i de ulike angitte situasjoner. Argumentet om at doping kunne være forsvarlig for å få mer rettferdig konkurranse i idretter hvor man vet at doping forekommer, fikk imidlertid noe støtte. Noen grupper var mindre negative til doping enn andre. Unge var mindre negative enn eldre. Aktive idrettsutøvere, særlig de unge, var mindre negative enn støttepersonell og frivillige mv.

Holdninger endres gjerne langsomt i den grad de endrer seg. Holdningsmønsteret kan til dels være uttrykk for holdninger som ble påvirket gjennom kursdeltakelse, dels det være uttrykk for holdninger som deltakerne hadde før kurset. En vesentlig andel, 23 prosent, ga imidlertid uttrykk for at de hadde blitt mer negative til doping som følge av kurset. Ingen hadde blitt mindre kritisk. Flere blant tenåringene enn i andre grupper, hadde blitt mer kritiske.

Samlet vurdering og mulige programforbedringer

Det er ikke uvanlig å benytte opplæring og påvirkningskampanjer for å fremme samfunnsmessig positive holdninger og atferd. Våre funn tyder på at Antidoping Norges kursprogram har innvirkning på deltakerne, både når det gjelder å gi kunnskap og ved til dels å endre holdninger. I særlig grad gjelder det mange blant de yngste idrettsutøverne.

Det er imidlertid også rom for å styrke anti-doping holdningene ytterligere, ikke minst blant yngre idrettsutøvere. Mulige tiltak for å forbedre kursprogrammet kan være:

- En tydeligere målgruppesegmentering når det gjelder utvikling av kursinnhold, kommunikasjon og metoder. Særlig er det viktig å skille mellom elite og unge idrettsutøvere
- Programelementer med økt vekt på etiske drøftinger og refleksjon.
- Vekt på oppfølgning i etterkant av kurset rettet mot den enkelte og aktører i omgivelsene (klubb, treningsmiljø mv.) og som kan forsterke positive holdninger.

1 Introduction

Anti-Doping Norway has an anti-doping lecture program where courses on doping and anti-doping work are offered to sport clubs, sports organisations, schools and other sports related communities all over the country.

In a national report on Norway by the Council of Europe (2008) it was recommended that education and information activities of Anti-Doping Norway should be evaluated. Anti-Doping Norway followed up by sending out a project outline/tender. After delivering a project proposal International Research Institute of Stavanger (IRIS) was invited to evaluate the lecture programme.

The stated objectives of the evaluation were the following two questions:

- Has the lecture program increased the attendant's knowledge about doping?
- Has the lecture program affected the attendant's set of values or decision making processes related to doping?

Moreover Anti-Doping Norway wanted us to develop a methodology as a model for evaluation of other types of programs and campaigns in the future.

Regarding the research questions, our main method was to carry out a survey sent by mail to course participants. As to the methodology question, our main concern was to outline a scheme as to which elements should be included in future evaluations and how they are linked.

The report is organised as follows: We start in chapter 2 with a short introduction to the lecture program and the ideas that it is based upon. In chapter 3 the evaluation method is presented. Characteristics of the course participants are described in chapter 4, followed in chapter 5 by a presentation of the course, its content and how the participants view its implementation. In chapter 6 the participants' attitudes regarding doping are described and analysed. In chapter 7 we look at how the course has impacted the participants in terms of increased knowledge and attitude changes. Finally, in chapter 8 our findings on the lecture program are summarised, we discuss possible implications for future development of the program, and sketch an approach on the general methodology regarding future evaluations.

2 The lecture program

The lecture program has been used since 2003. According to the tender document, about 500 lectures have been given in the last three years, and about 20 000 people have attended one or more lectures. The program is for athletes, support personnel, sports students and others.

The lecture program contains a number of different topics dealing with different aspects of doping. Topics vary from general issues on doping and anti-doping work to specific topics related to type of sport or particular types of doping or anti-doping methods. The impression is that the lecture program to a large extent is *on demand*. A lecturer is asked to come and gives presentations on issues demanded and/or related to characteristics of the audience. The program is thus relatively flexible in its structure and organisation.

The aim of this activity and other activities as well, is according to Anti-Doping Norway's article of association, paragraph 2c to: "*promote values, information and preventive work aimed at fighting doping. These activities include inter alia development of training and education programmes in order to prevent health damage and to promote fair sports competition*".

How can the lecture program have impact on the course participants? Before going into significant description and evaluation of the program, we will provide a brief discussion of how the lecture program can be understood. What is the logic of the program, and does it have limitations?

The lecture program can, from our perspective, be interpreted as a combination of education and persuasion strategies serving as a preventive tool against doping. People that risk exposure to difficult situations where doping is presented as an option, get through courses or other communication channels information and knowledge to sustain positive attitudes and behaviour.

Both education and persuasion may both be important in doping matters. Facts about prohibited performance enhancing drugs, possible risks and consequences, doping regulations and controls, presented together with ethical arguments, are important information for actual target groups.

To determine how information forms attitudes and behavioural change it is important to distinguish how three different elements are linked:

1. Knowledge about facts concerning doping and anti-doping work;
2. Attitudes and arguments regarding doping;
3. Doping related behaviour in terms of acceptance or non-acceptance.

The logic is that factual knowledge is fundamental in forming attitudes, and attitudes guide behaviour. Obviously, in the lecture program increased knowledge and attitude formation are given priority. The aim is also that individual behaviour is affected, but that is decided at other arenas than the course setting. It is difficult to link changes in doping behaviour direct to a single course. One may assume, however, that strengthened negative attitudes towards doping are, if not a proof, at least an indication of non-doping behaviour.

In general, education and persuasion strategies are popular approaches in public health and prevention work. Experiences from education programs and campaign work, such as alcohol consumption (Babor et al., 2010) demonstrate that it is not easily done to change attitudes and behaviour by using education and persuasion strategies. In general, many aspects of human behaviour, such as opinions, value formation and risky or unethical behaviour, may change slowly, if ever.

One reason for this is that individual attitudes and behavior cannot be understood from the individual perspective and people's lack of knowledge only. Doping is related to different levels and aspects, the individual, the peer level, the club level, the competition level, and the regulatory level. As such it is important to look at doping as an interaction process between the individual with his/her background, values and ambitions, and the different players at various levels in the environment.

This perspective is taken care of in the social marketing concept applied in preventive social communication work and using principles and methods from commercial marketing. One important principle in this perspective is to differ between downstream and upstream activities (Hastings, 2008). Downstream concerns activities and communication directed at the individual, and the lecture program can be understood as a tool for that. Upstream concerns activities directed at actors and institutions in the surrounding environment, which indirectly also has impact on the individual's values and behavior. The basic idea is that opinions and values in their environment therefore may be as important as individually directed communication.

Returning to the lecture program, a single course may not in itself be enough to change behaviour. It is therefore also important to relate individual communication to a wider context. To a certain degree this is done in the lecture program by targeting a wider audience than only athletes. The education program considers this as it includes athletes as well as other actors in the sport system. On the other hand, the lecture program is limited in the sense that courses are not linked to systematized follow up activities.

3 Evaluation method

In this chapter we will account for the evaluation method and its reliability in terms of survey response rate and representative sample. Moreover we review the organisation of the questionnaire.

3.1 Exploration methods

This evaluation work has been organised in two parts. First, we did some explorative interviews with people with different roles in the courses: (i) lecturer from Anti-Doping Norway, (ii) organiser of the course and (iii) course participants. Three different courses were covered, and nine persons were interviewed. The aim of these interviews was to get an idea of the organisational framework and content of the courses, and thus give input to the formulation of questions to the survey.

Secondly and as the main method, we carried out a survey directed at participants attending the courses. We determined a questionnaire, applied for and got permission to send it out from the Privacy Ombudsman for Research. The questionnaire was implemented using the interviews mentioned above and information from Anti-Doping Norway (power point presentations) on different doping issues taught during courses.

The survey was organised by sending out a web-based questionnaire to a large number of people attending courses during the autumn 2010 and winter/spring 2011. The sample was from persons registered as participants with e-mail addresses and attending courses during this period as registered by Anti-Doping Norway. We assume that the sample thus represented a large part of the total population attending courses in this period even though there may be courses and individuals that have not been registered with e-mail addresses.

In total we got 956 e-mail addresses. 151 were excluded, mostly because the distributed e-mails did not pass through to the given e-mail-address, and also because there were a few telling us they did not attend a course. The relatively large number of mails that did not pass, is probably due to the fact that many of these mail-addresses where of the type hotmail, Gmail and other general addresses, which easily may have been hindered by spam-filters or the respondent may have changed address. To avoid the spam barrier, we re-sent the e-mails that were returned one by one, and succeeded in delivering more.

We received 217 responses. That gave a response rate of 27%. Of these 15 were excluded from our analysis because the persons were less than 16 years old; the permission from the Privacy Ombudsman for Research was only to question persons at 16 and above. Assuming that the share of younger persons is the same among those who did not respond to the questionnaire, the response rate remains the same.

Overall, we find the response rate fairly acceptable. In particular for some people the course was held months before they received our questionnaire. We checked also how

representative the received responses were compared to the total sample of people with e-mail addresses. To do this we have used two kind of variables, type of sport and region.

Table 1 Survey representativeness – type of sports

	Received responses –%	**Total sample -%**
Soccer	26,2	30,9
Other team sports (cricket, handball, ice hockey, volleyball, etc).	9,9	13,3
Ski – perseverance (cross country, biathlon, Nordic combined)	20,3	12,7
Other ski sports - other (alpine, ski jumping, snow-board, freestyle skiing, telemark, etc).	4,5	5,1
Martial arts, weight lifting	12,4	7,7
Athletics, swimming, cycling, triathlon	10,9	7,8
Other individual sports (archery, pistol, badminton, motor cross, etc).	7,4	11,0
Not available	8,4	11,4
	100	100
N	202	956

The table above shows that courses are given to many of the important sports in Norway like soccer, ski and other team sports, athletics, swimming, cycling etc. Also many minor sports are included like archery, badminton etc. Ski perseverance sports and the group “athletics, swimming, cycling and triathlon” are overrepresented among those how have answered the questionnaire. That is also the case for martial arts and weight lifting. Soccer and other team sports are underrepresented. Probably sports where the doping issue is considered important are overrepresented. All in all we find that there is a reasonable correlation between the people responding and the total sample.

Table 2 Survey representativeness – region where the course take place

	Received responses –%	Total sample -%
Nordland, Troms, Finnmark	5,4	6,9
Trøndelag, Møre and Romsdal	29,2	32,5
Sogn and Fjordane and Hordaland	9,9	6,0
Rogaland and Agder	0,5	0,2
Vestfold, Telemark and Buskerud	2,0	6,1
Oslo	25,2	24,1
Østfold and Akershus	1,0	1,6
Hedmark and Oppland_	23,3	20,5
Not available	3,5	2,2
Total	100,0	100,0
N	202	956

Also when comparing the regional distribution we find a fairly close match between the total sample and the received responses.

Altogether, the survey seems to be fairly reliable, given a response rate of 27% of a sample close to the total population, and a reasonable similarity of the distributions of sports and regions when comparing received responses and the total sample.

3.2 Questionnaire structure

The questionnaire was structured in three main parts:

1. *Background information (questions 1 to 4).*

   This information regards age, sex, and sport activity. For sport activity we distinguish between athletes being active in sport and people engaged in sport support activities. As to athletes, they are classified into different competitive levels. We have not asked about type of sport, as that information was given in the register of e-mail addresses.

2. *Knowledge, attitudes and doping (questions 5 to 8).*

   Normally how a person approaches an area of knowledge and what is learned during a course depends on their initial knowledge and attitudes to the issues taught. Therefore we have asked questions regarding what is known about doping and anti-doping work, and if they have been close to doping practices. We also ask questions regarding attitudes to doping use. A problem is about the attitudes to use of doping and the possibility to distinguish between pre- and post-attitudes. It is difficult for informants to give precise information on how their attitudes may have changed, at least as long as they are questioned a long time after having followed a course.

3. *About the course, content, learning and other effects (questions 9 to 24).*

   The main part of the questionnaire is about the course itself. First about frames, program content and teaching, and second about effects in terms of the informant's course satisfaction and how he/she judges and evaluate his/her personal learning and other effects of course participation. Effects on attitudes are in this context important, but as indicated above it may be difficult to be very specific if there is a significant time lag. We have asked about changes in attitudes as a means to get around this problem. Ideally, one could also have asked about personal doping behavior, but knowing this is a sensitive area with difficulties of getting correct answers in a small organisational setting, we think it is reasonable to abstain from direct questions on that topic. And we have thus not been able to report on behavioral changes in doping practices.

4 Participants

4.1 Background

Courses are held all over the country in different organisational settings. Course participants have a varied background in sport, type of sport activity, age and gender.

Table 3 Participants role in sport activity

	Frequency	**%**
Atlethe	111	55
Trainer and support activity to competitive sport	28	14
Medical support	6	3
Sports mangager	13	6
Volunteer	30	15
Other (role combinations of athletes and other, etc)	14	7
	202	100

More than half of the participants, 55%, are athletes. Also persons with other roles in the sports system attend the courses. They are mainly in the support system of competitive sport, sport managers, and volunteers.

More men (56%) than women (44%) take part in the courses. The number of athletes are almost the same for the two sexes. The larger number of men is mainly caused by more men from the training and support system and sport managers being represented.

Age structure of the participants are varied. Teenagers, 16-19 years old, represent 38% of the participants, while 21% are people in the 20-ies, and 41% are 30 and above. The age distribution is a natural consequence of the mixed representation of people with different roles in the sport. Most (95%) of the participants below 20, and a clear majority (77%) of persons in the 20-ies are athletes, whereas only a few (7%) above 30 are themselves active in competitive sport. A major share of the female athletes, 75%, are teen-agers. Also among the male athletes teen-agers are in majority, but with a lesser share than for women, 54%.

Table 4 Athletes' competitive level

	Frequency	%
International competitions	28	25
National competitions	54	49
Regional and local competitions	18	16
Low competitive activity	11	10
N	111	100

As for the athletes, it is interesting to note that the major portion participating in these courses are people competing at an international or national level. The courses are thus mainly directed at people highly engaged in competitive sport. Relatively few compete regionally or locally at a sport for all or recreational level. A minor group coming from fitness activity where the doping issue may be a hot topic; that is only two persons among all the athletes saying that their main sport activity take place at fitness studios.

The courses are directed at people from a large number of sports, refer table 2. The table indicates that sports demanding physical strength like martial arts and weight-lifting are overrepresented compared to the size of these sports in terms of club memberships. Also in other individual sports, in particular many perseverance sports in winter (skiing sports) as well as summer (athletics, cycling, swimming, triathlon) relatively many persons attended the courses.

4.2 Information on doping practices

How are doping related practises in different sport communities? Barland og Tangen (2010) have carried out a survey on doping use among a large sample of young men and women (volunteers) being examined regarding liability for military service. This study revealed that 2,9% of the men and 1,0% of the women used or had been using doping. Mickelsson (2010) refers to studies from Sweden indicating a low percentage, about 1% of men and very few women, who used doping. An older study from health and fitness studios revealed that about 2% had tried doping, and that the doping frequency was much higher among those who did not compete, but only were engaged with body building for its own sake (Tangen and Bergsgard, 1994).

We chose not to ask participants directly if they had experience with doping, but approached the issue by asking questions regarding doping in their close environment. We asked two questions regarding this: Whether they believed that there were people using doping in their own sport community, and if they themselves had been offered doping. The table presented at the next page shows how many persons in different sports who know of doping use in their own sports community.

As to the knowledge of persons in their own sports environment using doping 11% were certain of that, whereas another 13% thought it probable, but could not say for certain. Thus, almost one fourth of the participants knew for certain or assumed that doping took place in their own sports- and training community. This is comparable with Tangen and

Bergsgard (1994) which in their study of doping in health/fitness studios found that about 20% knew about doping abuse at their local studio.

Regarding people being offered doping, 6% advised this had happened. The survey indicates a difference between men and women. Amongst the men 10% had been offered doping, whereas the percentage was only 2% among the women. This is comparable to general doping patterns. It should be stressed, however, that these percentages do not tell anything about whether these persons doped themselves or not.

Table 5 Persons with knowledge on doping practices in different sport communities

	Know persons in their sport/training community having doped themselves	**Believe that persons in their sport/training community have doped themselves,, but can say for sure**	**Have been offered doping**
Soccer	2	9	3
Other team sports (cricket, handball, ice hockey, volleyball, etc).	4	4	2
Ski – perseverance (cross country, biathlon, Nordic combined)	1	2	0
Other ski sports - other (alpine, ski jumping, snow-board, freestyle skiing, telemark, etc).	1	0	1
Martial arts, weight lifting	8	5	6
Athletics, swimming, cycling, triathlon	1	2	0
Other individual sports (archery, pistol, badminton, motor cross, etc).	0	2	0
Not available	5	3	1
	22	27	13
N	202	202	202

Doping exists in many different sports. Martial arts and weight lifting is the area where most people are aware of or think that doping is practised, and where most have been offered doping drugs or methods. These sports are well known to have had doping

cases. The table above indicates that doping also may take place in many other sports, in individual as well as in team sports.

4.3 Knowledge

What do sports people know about doping? We asked participants a number of questions regarding what they did know before attending the course on doping and anti-doping work.

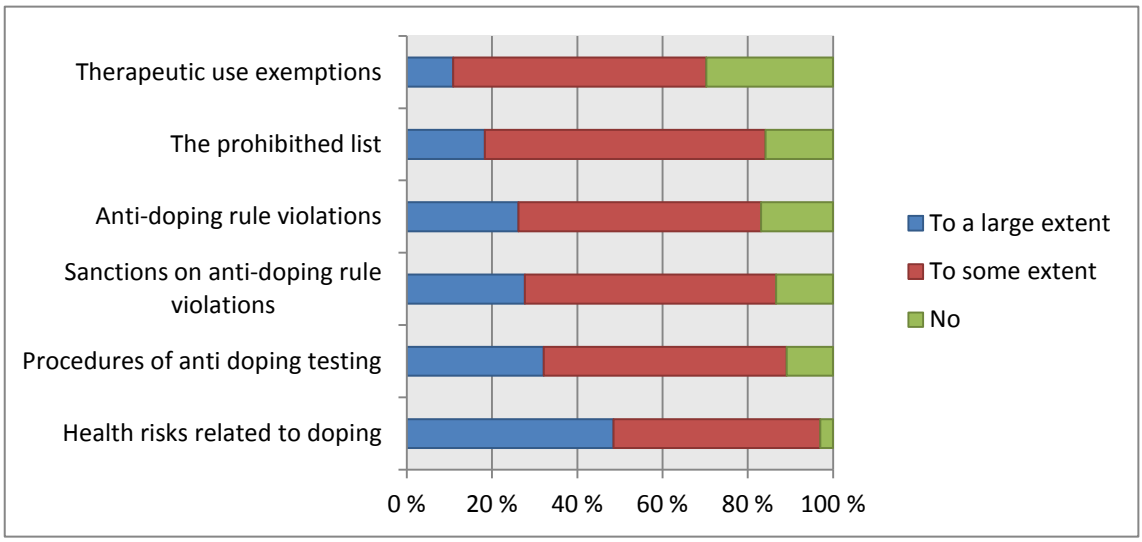

Figure 1 Knowledge on doping issues before attending the course (N= 202)

Most participants had some knowledge about doping before attending the course. About half had some knowledge about most issues, while a minor, but significant number had much knowledge. Health risks were the issue that most people had knowledge about, and about half, said that they had much knowledge about that. Characteristics of the anti doping system as procedures of anti doping testing, the prohibited list, and anti-doping rule violations were more or less known by a large share. Therapeutic use exemptions were the topic with the least beforehand knowledge among the participants.

To get an idea of the aggregate knowledge level, we constructed an additive index where we calculated how many knowledge areas (number of questions) that the respondent said that he/she had much knowledge before the course took place.

Slightly above one third, 36%, meant that they did not have large knowledge beforehand on any of the issues. Nobody said they had no knowledge at all. That is at least they had some knowledge on one or more of the issues. An equal share of the respondents, 36%, said that they to a large extent had knowledge about one or two of the issues. While the rest, 28%, claimed that to a large extent had knowledge on three or

more of the issues. The conclusion thus may be that there are a varied level of knowledge about doping and anti-doping issues among those attending the courses.

To get an idea of variations between different groups of the sports community, we calculated the mean of how many of the six issues a person to a large extent had knowledge about. The numbers are presented in table 9 in annex 1.

The knowledge level among athletes and support personnel was approximately the same. Within the athlete group, not surprisingly, people competing at an international level knew much about the issues, and slightly less so for people competing at a national level. Other people than athletes or support personnel, attending the courses had in average a considerable lower level of knowledge. Concerning age groups, there was no substantial difference between teen-agers and people in their 20ies. People above 30 knew less though, probably because many of the voluntary people and other belonged to that group.

5 Course framework, content and satisfaction

Anti-Doping Norway has made a number of PowerPoint presentations presenting different aspects of doping. Based on received power point presentations used at courses, we have identified the following major topics:

- Doping history;
- Anti-Doping Norway;
- What is doping: The doping list, procedural violations, consequences;
- Food supplements: nutrition, health, risks of doping;
- Anti-doping tools: blood test, blood profiles, athlete information system (for top athletes), etc;
- Doping control procedures;
- Medical exemptions;
- Doping violations, consequences, athlete's rights and obligations;
- Doping, description of means and health consequences.

This information combined with case interviews from three courses, gives a picture on how courses are carried out. The case interviews demonstrate that target groups vary and courses may differ depending on whom they address. Sport classes at secondary education level, trainer education courses for a sport federation, and a course for young people in an athletics club, indicate a wide scope for the target group. The course and its content seem to a large extent to be on demand, and its content may differ depending on notified and assumed needs. Specific sports may for example, get specific information on relevant types of doping. For young athletes, description/demonstration and demystifying doping controls can be an important subject.

Moreover the case interviews tell that the courses mainly deal with challenges of competitive sport, even though an issue like body building was also discussed at one course. Rules and regulations and how anti-doping work is carried out are core issues. Consequences of doping on sport performance as well as risks of health consequences are also presented. The focus seems to be more on presentation of facts than on values or ethical judgements.

Courses are given at varied occasions and for different types of sport, sports environment and people involved in sport. Most of the course participation have been organised by sport clubs or other actors of the organised sport system. According to the survey approximately 2/3 of the participants have attended courses in sport clubs, sport councils, regional confederations or national sport federations. In addition, about 1/5 of the attendants say that the course has taken place at schools, probably among those who offer specific sport education. Finally, fitness studios are mentioned by a few.

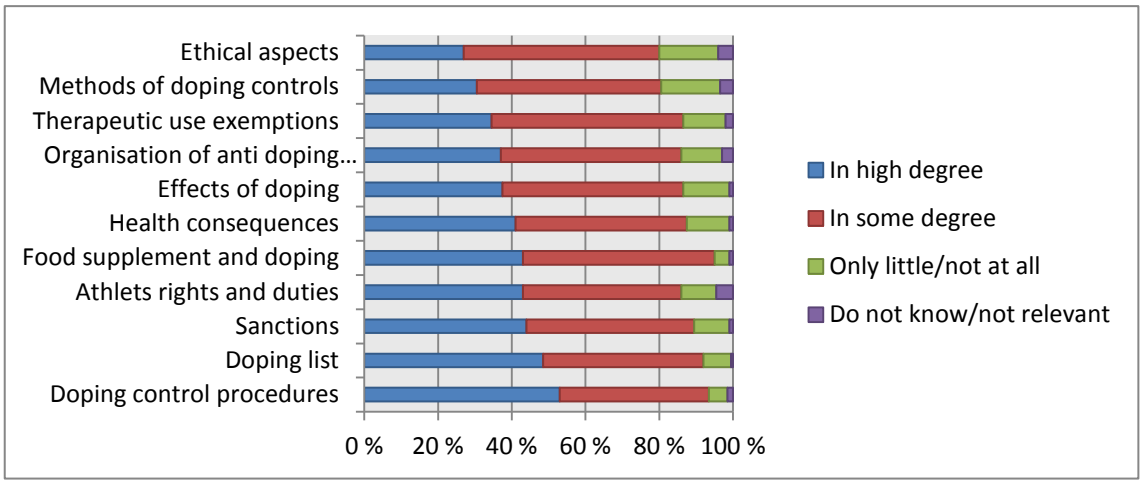

Figure 2 Topics taught in courses

The main focus of the courses seems to have been on the regulatory framework and the control procedures. It is anti doping work related to the competitive arena which is given first priority. Core issues are the prohibited list, how control procedures are effectuated, which rights and duties the athletes have, and which sanctions may arise if rules are breached. Effects and health consequences get less attention. On the other hand the health risks are the area where the participants claimed to know most beforehand. Medical exemptions and how anti-doping work generally is organised are also issues given lower priority. Most surprising though, is the low priority given to ethical aspects as such.

To a certain degree, using the participants' point of view is a subjective indicator on the content of the course. This partly tells us what has been taught, partly what the individual has emphasised and therefore remembered particularly well. Differences among groups may also simply be a consequence of content differences in courses directed at different groups.

Table 10 in annex 1 indicates that there are age differences on topics learnt about. For most issues, regarding the regulatory framework and control and the effects of performance enhancing drugs, indicates a larger share of the youngest ones than other age groups express this as an important part of the course. As to the more general questions regarding organisation of anti-doping work and ethical aspects, there is an opposite pattern. Only a minor share of the youngest have noticed these as issues of importance.

We did also ask the participants how they considered the organisation and implementation of the course. Most, 82%, thought that the length of the course was appropriate, while 14% meant that it was too short, and only 4% said that it was too long. A large majority agreed completely or partly that the course was organised in an adequate setting, and that the localities were suitable.

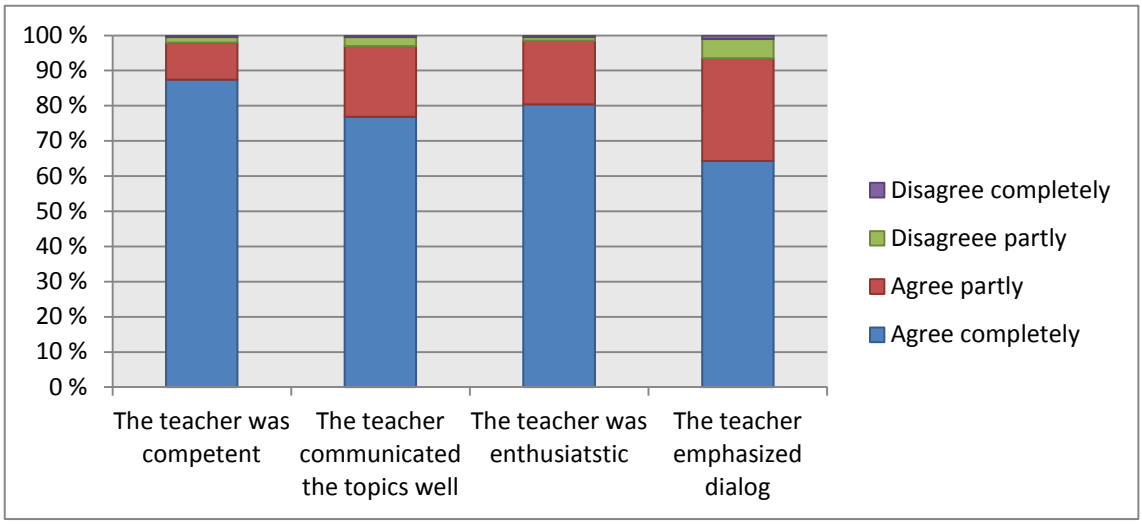

Figure 3 Evaluation of the course teachers (N = 199)

Regarding the course teachers, they undoubtedly were competent. Of the participants, 87% agreed completely on that, 11% agreed partly, and only 2% disagreed. In that regard, it is interesting to note that those with most pre knowledge on doping and anti-doping issues, most clearly emphasized that the teachers were competent.

As to the way teaching is performed, the participants' evaluation is good overall, although not as high on competence. More than 3/4 of the participants agreed completely that the topics were communicated well, and that the course teacher was enthusiastic. The aspect with lowest appreciation according to the participants, regarded the teachers' dialog with the participants. Only 63% agreed completely that dialog was emphasised, while there were 29% partly agreeing on that.

Table 6 Satisfaction with the course (N = 199)

Very satisfied	23,1
Satisfied	69,3
Neither satisfied, nor dissatisfied	7,6
	100

Most participants were satisfied with the course. More than 90% expressed satisfaction, and of those ¼ were very satisfied. A minor share said that they were neither satisfied, nor dissatisfied, and no one expressed direct dissatisfaction. This pattern indicates that the course has mattered for the participants. The level of satisfaction differed among age groups with younger people being less satisfied than the eldest. This is mainly related to less satisfaction among athletes than the other groups. Only 14 % of the athletes were

very satisfied, whereas 36 % of the support personnel and 32 % of the volunteers and others expressed much satisfaction.

6 Attitudes

We asked participants questions about their attitudes regarding doping. The pattern that is presented may in part be influenced by the course participation, in part an expression of their attitudes before attending the course.

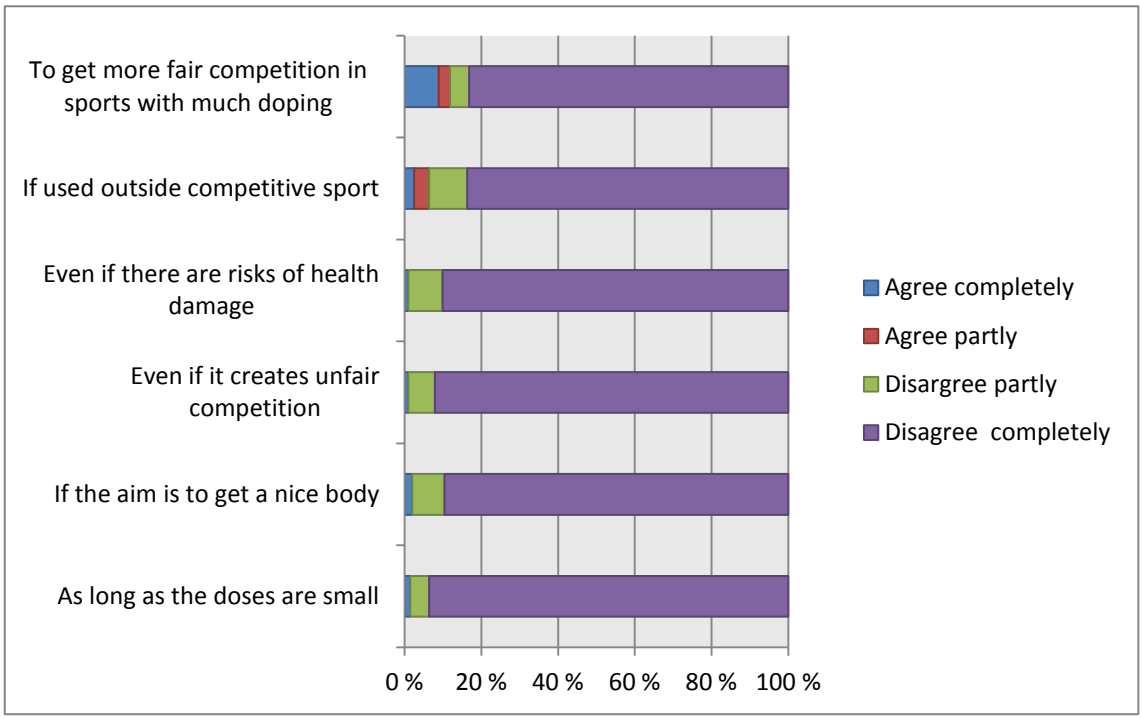

Figure 4 Possible acceptance of doping (N = 202)

The attitude towards doping amongst participants were overwhelmingly negative. The majority of the respondents view doping as unacceptable from any kind of position. The reasoning that allowing doping might make sense in sports where doping is rather frequent in order to get fair competition, gets small support though.

In order to find out what characterises those who to some extent support the idea of doping we have constructed a variable which distinguishes between the following three groups:

- The “immovable” do not for whatever reason support the idea of doping. These are the persons that to every question say that they are not at all in favour of doping.
- The “balanced” do not support doping, but for one or more of the questions on attitudes they do only partly, not totally, express a restrictive opinion.

- The “doubters” do in certain aspects judge the idea of doping as not improper, and express this by part or complete agreement in favour of possible doping use.

The “immovable” were 61% of the respondents and the largest group, whereas 19% belonged to the “balanced”, and 20% were “doubters”. In other words three fifths of the persons would not for whatever reason support doping practices. One fifth might support certain arguments in favour of it, and as shown above in particular to obtain fairer competition or to use outside sport.

How are these attitudes distributed among different groups of course participants? The data indicate that there are some differences within the sports community.

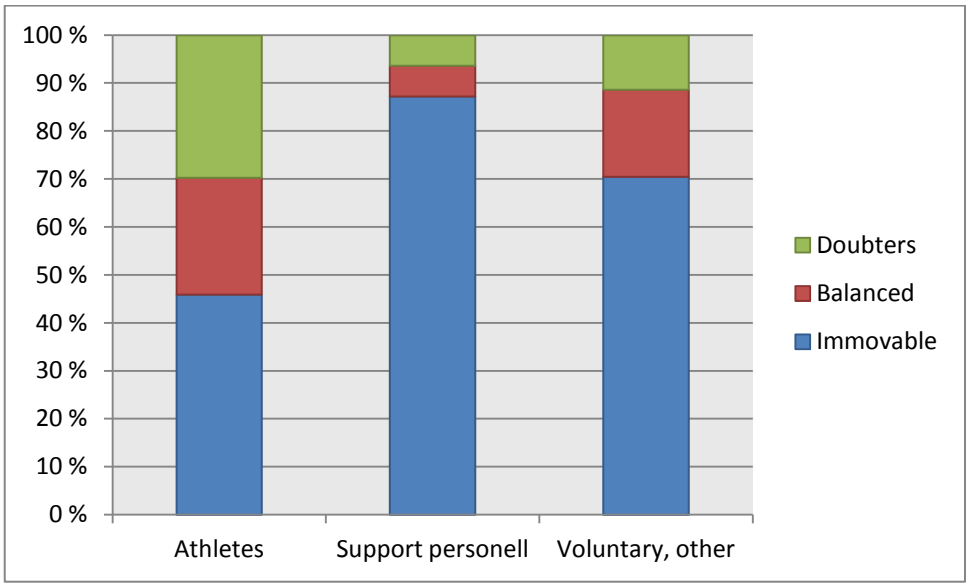

Figure 5 Attitudes on doping in different parts of the sport community (N = 202)

Athletes are less negative towards doping than the other groups. Less than half, 46%, express totally restrictive attitudes, while 30% express in some sense a possibly positive attitude. Not surprisingly the support personnel, trainers, physicians etc, are the most immovable. Most of them are totally against doping. Most of the other participants, voluntary and other, are also against doping practises for whatever reason, but to a less degree though than the group of support personnel.

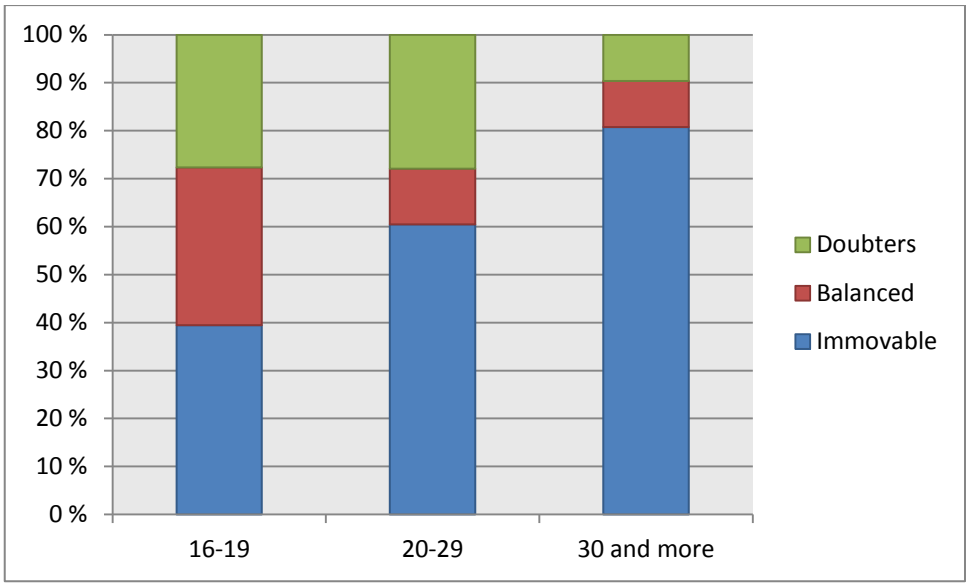

Figure 6 Attitudes on doping in different age groups (N = 202)

Different age groups differ in their points of view. Young people do have less restrictive opinions than elder ones. Both for teenagers and for people in their 20's there are about 30%, that have somehow a possibly positive attitude regarding doping. Among those with age over 30 years most have adopted a restrictive attitude. To a large extent this pattern reflects the fact that most athletes are young. But if one looks at the responses from the athletes only, there are certain differences among age groups, as there are more strictly restrictive among those having passed their teens.

There are also gender differences. Among the women there are more, 28%, that can be described as doubters, compared to 14% among the men. And correspondingly 51% of the women and 69% of the men were totally restrictive. The main reason for this difference is that there were more youth among the female than the male athletes.

Finally, and not surprisingly, among those that have been offered doping, a larger share, 46% or 6 of 13, are "doubters", whereas only 5 of 13 have adopted a totally restrictive point of view. These are people that have been closer to doping practices, and possibly been influenced by these kind of communities. On the other hand, there are no differences in attitudes among those who state or at least believe that people use doping in their sports and training community and those who do not think that is the case. This may be an indication that "bad" doping attitudes are not widespread in the sport communities.

7 Effects

In this chapter we will have a closer look at how the course has impacted the participants. First, we will present major findings for all who replied on the questionnaire. Secondly, we will determine if there are substantial differences among different groups.

7.1 Main patterns

How and to what extent does the Anti-Doping Norway lecture programme effect participants? Does it increase knowledge on doping and anti doping work? Has it increased the sport community's awareness of negative consequences of doping for sport? And most importantly, does it impact people's attitudes? We shall have a closer look on what they have learnt, and if attitudes have been changed.

Table 7 Has the course given more knowledge on doping (N = 202)

In high degree	40,6
In some degree	57,4
No	2,0
	100

As to the impact on people's knowledge about doping and anti-doping work, almost all participants disclose that they have benefited from the course. About 40% express that they in high degree have increased their knowledge, 57% have in some degree gotten increased knowledge, while only 2% did not receive more knowledge than they had before.

The answers on more detailed questions concerning what they had learnt, revealed that there was a good learning effect on all issues, yet with some variations. The large part got increased knowledge about issues concerning anti-doping regulations, procedures and anti-doping work. These are issues that according to the participants had been highlighted in many courses. Issues that to a slightly smaller degree caused learning effects were health dangers and risks and ethical aspects. As to knowledge on health dangers, this may in part be explained by the fact that the knowledge level was fairly high at the outset. As to the ethical side, the slightly lower learning effects can probably be linked to the fact that this was given less attention in the courses.

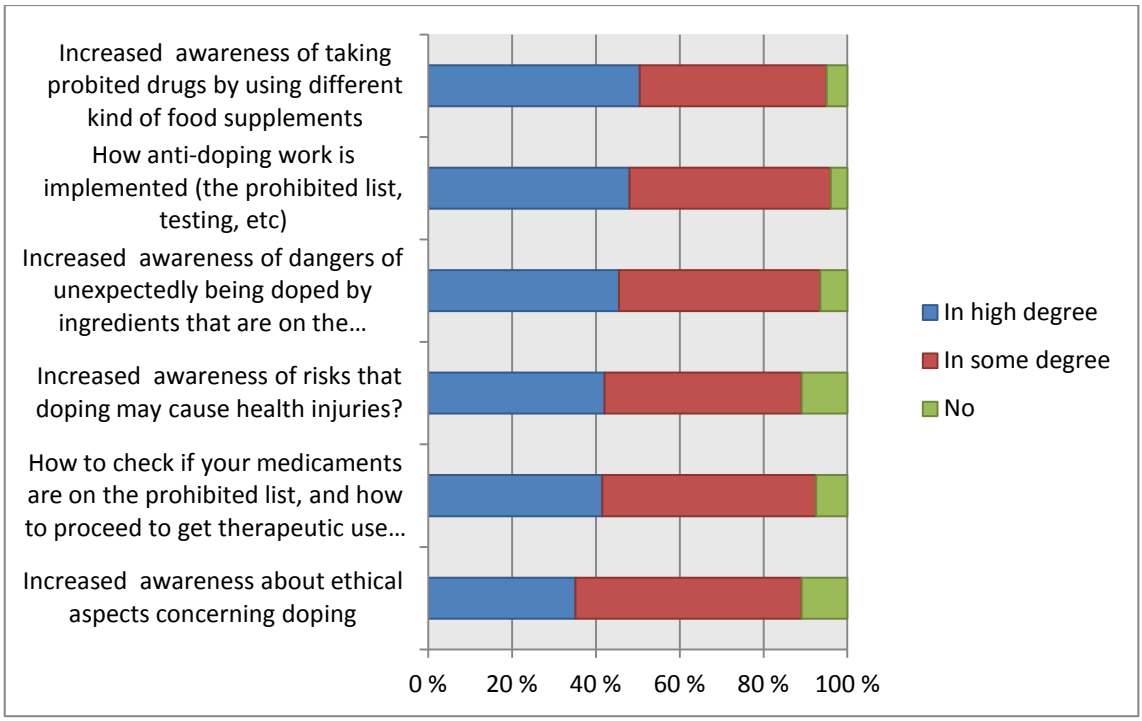

Figure 7 Increasing knowledge as to different aspects of doping (N = 202)

It could possibly be thought that those with less knowledge before the course have learned more than those with more knowledge. The data supports this assumption to a lesser degree. Regarding the general question regarding increased knowledge, fewer among they who initially had much knowledge, said that had learnt much more. But regarding the more detailed questions there were no systematic differences between groups with different knowledge at the outset. This might indicate that courses may vary in their content according to the target group, and thus give lessons to most participants.

Table 8 Changed views on doping as a consequence of your participation at this course? (N= 199)

No, my viewpoints are the same as before	76,9
Yes, I have become more critical to doping	23,1
	100

The final aim of an activity like the lecture program, can be said to support restrictive attitudes, and to move attitudes in a more restrictive direction for those that are not totally convinced of the undesirability of doping in all situations. Declared changes in attitude are probably the most important effect variable. According to the survey 23% has become more critical to doping, and, not surprisingly, nobody says that they had become less critical.

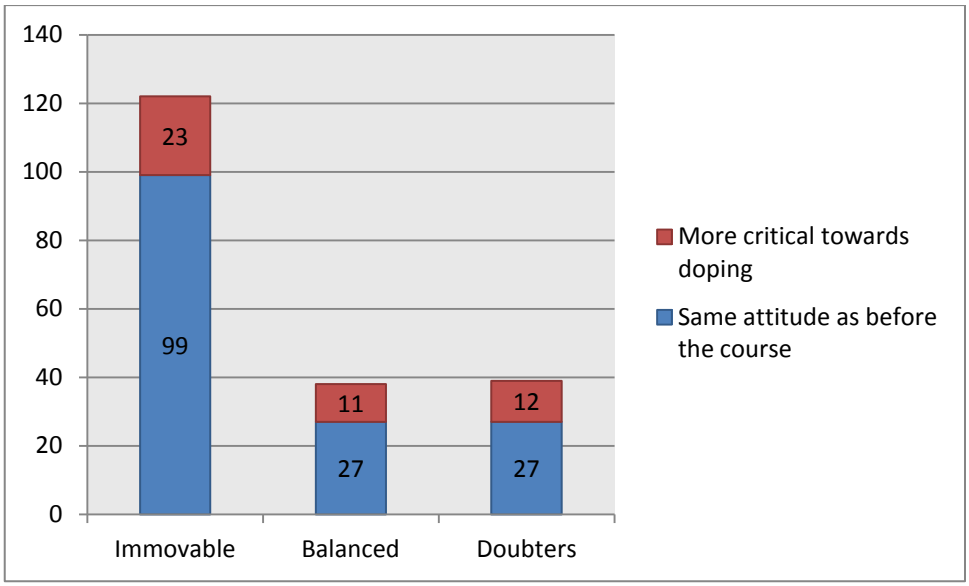

Figure 8 Attitude patterns – present attitude structures and changes in attitude, number of respondents (N = 199)

This does not imply however, that all those that have become more critical now have become totally restrictive. In fact a significant share, about 30% still not having a totally restrictive attitude, say that they have become more critical. This is not surprising. Attitudes normally change gradually/slowly, if at all. It can generally not be expected that a course on some hours or a day, in itself may change every attitude. The point is that the courses seem to strengthen anti-doping attitudes for people with different basic attitudes towards doping.

In keeping with the fact that attitude change is a long term process, it is also interesting to see if there is some kind of follow up after the course. To some extent there is. About 32 % report that the sport club, school or organisation being in charge of the course, did follow up with information or other measures after the course. About half, 51%, of the support personnel said there had been organised follow up, while lesser shares were reported for the other groups: 27% of the athletes and 23% of the others.

Moreover informal follow up in terms of people talking about doping with training or sport friends after the course also to some extent took place. That is, 12% did to a large extent talk about doping issues with friends in their sports community, and 58% did to some extent do that. And again it is to a largest degree among support personnel that this is the case. In this group, 19 % did to a large extent talk about doping with their friends after the course, 68 % did to some extent follow up with informal chat, and only 13 % did not at all do that. Conversely only 11 % of the athletes did to a large extent talk with their training and sport friends about doping issues after the course, 52 % of the athletes did so to some extent, and as much as 37 % did not discuss this later on at all. There is some, but not extensive follow up. In particular, it seems not to be focus on following up the athletes.

7.2 Effects on different groups within the sports community

Do the effects of courses differ between participating groups? Table 11 in annex 1 shows knowledge effects for groups measured by calculated means. Lower means indicate a higher degree of learning in a group.

The main message from this table is that the learning effects seem to be largest among younger athletes under 20 years. This is so for most issues except more specific and partly technical ones regarding therapeutic use exemption and food supplements. Regarding most topics, teenagers have learnt more compared to athletes over 20 and upwards, and also compared to support personnel and others.

In particular the teenagers claim to have learned much about anti doping work procedures. Their learning score is for all groups lowest regarding ethical questions. This pattern probably reflects course content priorities.

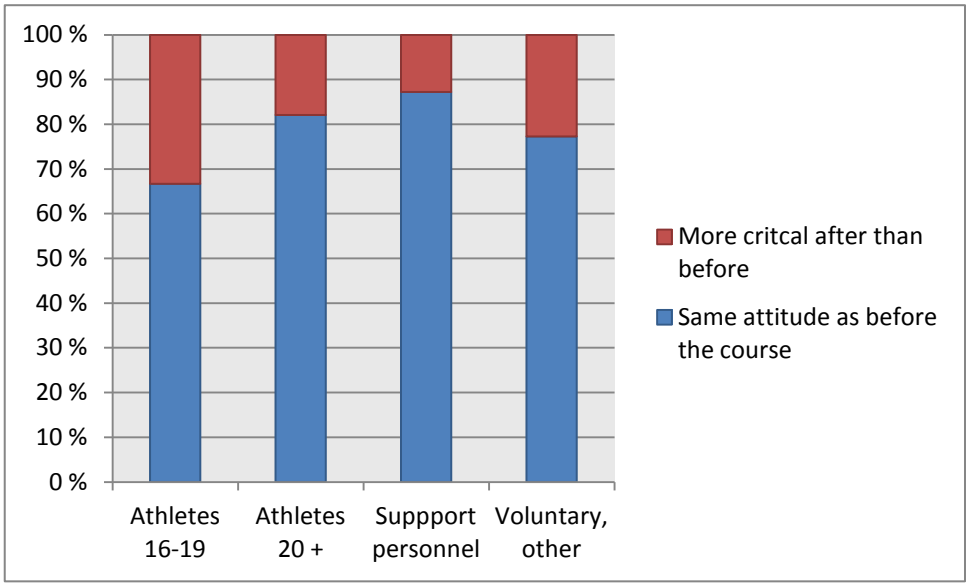

Figure 9 Changes in attitude after the course (N=199)

Moreover, it is interesting to note that teen-agers more than the other groups have become more critical to doping after participating in the course. There is probably a link between increased knowledge and changes in attitude, and not least for the youngest ones. That does not mean however, that all teen-agers being more critical now have a totally restrictive attitude. In fact, only one third of the more critical in the group 16-19 answering different questions on attitudes are totally restrictive.

8 Summary and discussion

This evaluation of Anti-Doping Norway's lecture program is carried out mainly by use of a web-based survey sent to people participating in courses, most held during the Autumn 2010 or Spring 2011. With 202 valid respondents, the response rate on the survey was 27%. The respondents were fairly representative with regard to region and type of sport compared to the population of course participants.

8.1 Findings

Course participants have varied backgrounds and come from different parts of the sports community. More than half, 55%, are athletes, but also persons with other roles in the sports system attend the courses. The latter are mainly persons in the support system of competitive sport (trainers, physicians, etc), sport managers and volunteers. More men (56%) than women take part, mainly because there are more men from the training and support system. Teenagers, 16-19 years old, represented 38%, while 21% were in the 20-ies, and 41% were 30 years and above. Most of the participants below 20 and a clear majority of the persons in the 20's are athletes, but only a few above 30 years.

As for the athletes, a major part (74%) were people competing at an international or national level, indicating that the courses focus on competitive sport. A large number of sports are represented. A certain priority though seems to be given to individual perseverance sports and sports like martial arts and weight lifting. These patterns indicate that elite sports where cleanness is considered particular important and misuse may be critical, are emphasised.

Also regarding knowledge level on doping and anti-doping issues before attending the course, the participants represent variety. All participants said that they had some knowledge, but there were significant variations as to the level of initial knowledge. Not surprisingly, athletes competing at an international or national level and support personnel, knew more than the other. The knowledge was highest regarding health risks, to a certain degree also high regarding procedures of anti doping testing, and less concerning more specific issues on the anti doping regulatory system.

We did not ask whether respondents had used doping themselves, but other questions regarding misuse in their sports community. There was 6% that had been offered doping, 10% of the men and 2% of the women. A larger percentage, 11% knew persons in their sports community having doped themselves, and an additional and slightly greater share believed so, but could not say for sure.

Many different issues were taught at the courses. Their main focus seems to be on the regulatory framework and the anti doping control procedures. Anti doping related to the competitive arena is the main priority. Effects and health consequences of doping get less attention, and lowest priority is given to ethical aspects as such.

What are the effects of the course activity? Three kinds of effects have been stressed: effects on knowledge, effects on attitudes, and follow up after the course. The large majority of the participants report that their knowledge on doping and anti doping issues

have increased. A substantial part, about 40%, tell that that their knowledge have increased in high degree, and 50-60% that it has increased in some degree. Most people participating thus have learnt something. The teenagers, the youngest, have learnt more than others, in particular regarding anti doping work and health risks, but to a lesser degree regarding ethical aspects.

The attitudes among the participants are against doping. A clear majority of the participants are negative towards doping practices and view doping as unacceptable from any kind of argument. The areas where there is a somewhat nuanced, and not a totally negative point of view, are to get more fair competition in sports with much doping and if used outside sport.

As to changes in attitudes, there is a significant share, 23%, saying they have become more critical after the course than before. Nobody has become less critical. More teenagers, over 30%, than other groups have become more critical. To be more critical does not implicate that one has adopted a totally negative attitude towards doping. In fact, a significant share of the athletes have for one or more arguments suggested a more or less open attitude towards doping use. That may be conceived as a general opinion, though. We can not draw any conclusions regarding personal use.

Follow up took place after the course, both at organisational and personal levels. Athletes follow up was limited.

8.2 Possible program improvements

The course program has impact on the participants. It has significant effects on their knowledge acquirement and to some degree on attitudes, making some of the participants more critical to doping. For some it may have limited impact on their attitudes. A substantial number of persons do not express total dislike towards doping in every circumstance. In particular, this is so for many of the younger athletes. It can thus be important to strengthen program focus. In order to increase goal achievement, we would like to bring attention to several possible approaches.

Target group segmentation

The lecture program is flexible content wise with broad target groups. The program as it works today is directed at a wide and varied audience, covering many types of sport, different levels of performance and competitiveness, different age groups and persons with different roles in sport: athletes, support personnel and others. A course is composed in different ways, depending on demand and the actual audience. This makes the program flexible and probably easy to manage. On the other hand, it may be that such a framework can be too loose if the aim is to reach different groups with a relevant and clear message.

The lecture program comprises both education and persuasion work. For both, understanding and communication with the target group are very important. A defined target group segmentation could make the program more goal-oriented. At least it

would make sense to distinguish between elite sport athletes on one hand and younger athletes on the other. Evidently these two categories have different needs.

In line with this, the course content and communication approach should be different. They obviously are to a certain extent, as courses are delivered on demand. With well defined targeting, it would be possible to strengthen the program. First, by developing modular and systematized course packages differing on topics, theoretical content, advanced level, practical demonstration, etc, and second, by developing adapted communication practices. The latter is important to emphasise for young athletes.

Ethical discussion and attitude influence

The lecture program's main emphasis is on presentation of facts on different aspects of doping and anti-doping work. Also ethical aspects are in the program, but to a lesser extent, probably most regarding laws, regulations and procedures, and athletes' rights and duties as to anti doping rules and procedures. Facts and down-to-earth information are prioritised before active persuasion. In particular younger participants have not experienced much concern about ethical aspects at the courses. As far as the communication form is concerned, it may not be too moralistic when talking with young people, as expressed by a course teacher. And it is well understandable that one tries to avoid that.

On the other hand, focus on rules alone or on sanctions for breaking rules, may in some situations and for some create a too weak base for conviction. The ethical aspect can be given more weight, and not only law and formal rules. Even if, the large majority of participants have a restrictive attitude towards doping practices, there are also people that have more nuanced point of views, and are more open towards doping practices. If the goal is to promote positive attitudes and to prevent negative behavior, it is therefore important to strengthen people's reflection on ethics and attitudes. After all, people's opinions and behavior are governed by more than facts alone. They are also influenced by how these facts are processed by the individual, by feelings, possible consequences, arguments, etc. By challenging and promoting discussion on issues thought to be important for the audience, processes will develop at different levels: concerning individual cognitive processes, communication with peers, and regarding decisions regarding follow-up at sport community level.

In that respect it is important to differ between target groups. For elite athletes, the ethical challenges are not least linked to which methods and behavior can be considered as doping. The dividing lines and doping rules are, according to Møller (2010), not always based on a clear logic and reason. He claims: "Strictly speaking, they are simply a result of an arbritary taste – or rather distaste – for certain performance enhancing practices, and for that reason the anti-doping campaign has at best to be understood as being based upon an intuitive sense that there are 'wrong' ways to improve an athlete's sporting performance". His opinion can certainly be disputed. The point is that proper behavior is not always evident and it is therefore important to stimulate athletes' reflection and discussions.

As for the young, their questions and possible temptations may be different than for elite athletes. The elite can be thought of as working hard to enhance their performance, many of whom have developed a focus on competitiveness and sport as a kind of life project. Young people, however, may not only be challenged by the option to perform better, but also with factors like body obsession and external demands and expectations regarding their body (Barland og Tangen, 2009). To communicate also on such issues with a young audience, demands other approaches than to talk about performance with the grown-up elite. It is probably more important to initiate discussion on values to young people, not having frozen norms and well-established goal structures.

Strengthened follow up

A course during several hours or a day, may not, as the survey indicates be sufficient to change attitudes, and in particular not to create firm and rooted convictions against all kind of doping practices. It may therefore be wise to suggest some kind of follow up to increase knowledge and to reinforce positive attitudes. In particular that may be important at the athlete level, and for the youngest.

Regarding the elite, the survey shows that they on average had the most knowledge beforehand. For most, in particular those who compete internationally, it can be assumed that doping questions are assumed by Anti-Doping Norway in cooperation with the sport federations.

As to the younger ones and other with less pre-course knowledge, it can be important to follow up at other points in time and at other arenas. As to persuasion work, principles of mass communication and marketing are relevant. The importance of message repetition, knowledge enhancement, and of meeting information at different arenas, should not be underestimated.

Regarding the lecture program, it could be reinforced by linking up with the sport community, club, school, etc, and agreeing on follow up activities.

8.3 Method for future evaluations

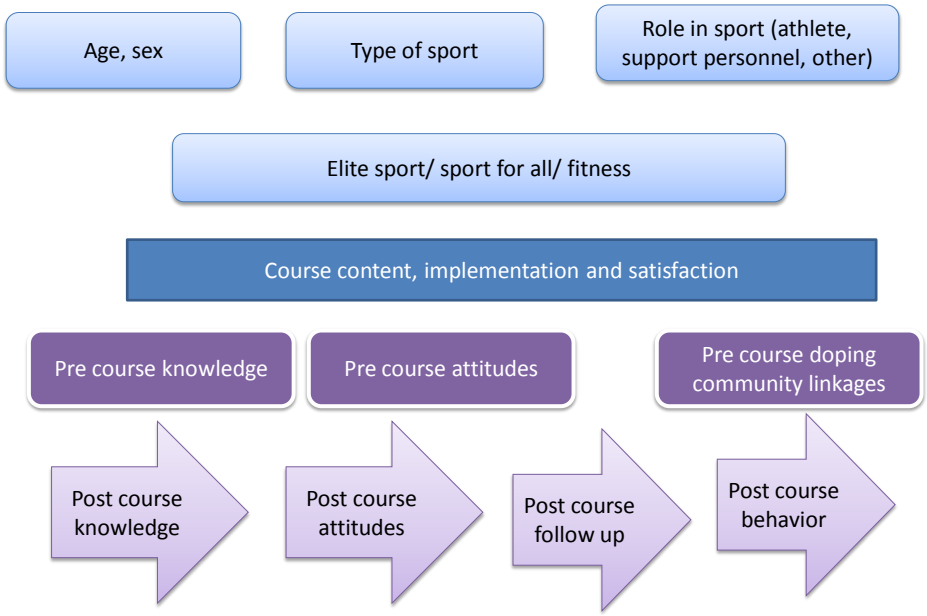

Figure 10 Model of evaluation elements

A proposed structure of future evaluations is shown above. We have followed this structure in this evaluation with some limitations. We have stressed four levels, each of which deals with different aspects of how the course participant is related to doping and anti doping issues.

First level: Personal characteristics and sport engagement

At this level we have registered different characteristics of the participant that may have significance on how he/she relates to the doping issue and anti doping regulations. Age and gender are obvious personal characteristics that may be included. Age is particularly important, being related to different levels of experience and knowledge. Moreover we focused on the participant's sport engagement. Type of sport and role in sport typically differ with regard to how the doping question is considered relevant. Doping is for instance more common and has more effect on performance in some sports than in others, and the athletes tend to be more exposed to the issue than the others.

Finally, it is important to distinguish between different levels of engagement of competitive sport. As to motivation, attitudes and need of knowledge, belonging to the elite sport community differs from sport for all activity, while being engaged in fitness activity may be totally different as to motivation and consequences with regard to doping, than participation in competitive sport.

The lecture program evaluated in this report, has had a variety of participants: mixed age and gender structure, and type of sport, and according to our findings with relatively many elite sport athletes and with few being active in fitness activity. If in a future evaluation, the target group is narrower in age, competition, type of sport or other, it can make sense to ask more specific questions for instance regarding training activity. But as long as the population is varied, it seems sensible to use broad categories.

Second level: Course framework, content and implementation

At this level we asked questions on the organisational setting of the course, topics that have been taught, and how the teaching has been carried out. Covering a variety of target groups and organisational contexts, the content of the courses seems to have been broad and varied. Therefore it was natural to ask relatively broad questions concerning the course and how it was evaluated. In future evaluations if focus, issues and target groups are narrower, it may be sensible not only to ask in broad terms, but also to go more into depth in focal areas.

Third level: Pre course knowledge, attitudes and information on doping practice

At this level our intention has been to know how prepared the participants were before the course. That is, what they knew about doping and anti-doping work, if they had personal information on doping practices, and what kind of attitudes they had regarding doping. The idea is that what is known beforehand and how participants think about doping before the course, is essential to explore, in order to get an idea of how the course have affected the participants.

There are practical problems linked to this. Ideally, a pre-situation should be mapped before the course takes place. Normally in practice, one must wait till the course starts, and wait until the end of the course when it may be appropriate to ask for evaluations. Questions may then be simultaneously asked about pre-course situations and post-course effects. As to knowledge and information on doping practices, it will probably not be difficult to map the situation.

However regarding attitudes, it may be difficult for many respondents to draw a sharp distinction between before and after. In the present evaluation of the lecture program, we have not tried to make a clear distinction, but have simply tried to map the true attitudes of the participants. As for some of the respondents, months have elapsed since the course, it would not have worked otherwise. If course participants are asked to give their evaluation by the end of the course or shortly after, it may work to get more detailed and fairly valid data by asking several questions regarding changes in knowledge and attitudes as a consequence of the course participation.

Forth level: Post course situation – effects of the course

Ideally there are four kinds of effects: knowledge, attitudes, behavior, and organised follow-up. In practice some effects are easier to measure than others. In particular, it may be easy to know whether participants increase their knowledge by attending a course. In this evaluation we have asked a number of questions on knowledge. It is also possible to register if there at an individual or organised level has been some kind of follow up. If so, this is an indicator of a kind of medium effect regarding sense-making. As mentioned above, it may be difficult to draw sharp conclusions regarding attitudes. This is not only an implementation challenge about when to ask questions, but also a deeper methodological problem as to how and when attitudes change. A similar kind of reasoning applies to questions regarding change in behavior. It is difficult to identify behavior change, because it may be sensitive to admit having used doping at all.

References

Babor, T. et. Al. (2010): *Alcohol No Ordinary Commodity*. Research and public policy. Second Edition, Pan American Health Organisation, Regional Office of the World Health Organisation, Oxford University Press

Barland,B. and J.O.Tangen (2010): *Kroppspresentasjon og andre prestasjoner* - en omfangsundersøkelse om bruk av doping, Poliithøgskolen, PHS Forskning 2009:3

Council of Europe (2008): *Anti-Doping Convention (T-DO). Project on Compliance with Commitments Respect by Norway of the Anti-Doping convention*.

Hastings, G. (2007): *Social Marketing: Why should the Devil have all the best tunes?,* Amsterdam, Elsevier

Mickelsson, K. (2010): *Dopningen i Sver*ige – en inventering av utbredning, konsekvenser och åtgärder, Statens Folkhälsoinstitut, Østersund 2010

Tangen, J.O. and N.A. Bergsgard (1994): *To dope or not to dope*. En kartlegging av dopingmisbruk i et treningsstudopmiljø, rapport nr. 80, Telemarksforskning

Annex 1 - Tables

Table 9 Average number of anti doping issues with high degree of knowledge before course participation (N = 202)

All	1,68
Athletes	1,80
- Competing at international level	2,10
- Competing at national level	1,96
- Other	1.21
Support personnel	1,77
Voluntary and other	1.09

Table 10 Topics to a large extent taught in courses as perceived by age groups, percentage of group (N = 200)

	16-19	**20-29**	**30 og over**	**Alle**
Doping control procedures	68	44	45	53
Doping list	60	51	37	48
Sanctions	46	42	43	44
Athletes rights and duties	50	35	42	43
Food supplement and doping	45	51	37	43
Health consequences	42	33	45	41
Effects of doping	46	35	35	37
Organisation of anti doping work	28	30	49	37
Medical exemptions	43	26	31	34
Methods of doping controls	37	14	35	31
Ethical aspects	19	28	35	27

*Table 11 Knowledge effects different groups expressed by means**

	Athletes		Support pers.	Other	All
	16-19 years	20 + years			
Learned more about how anti-doping work is implemented (the prohibited list, testing, etc)	1,42	1,72	1,66	1,55	1,56
Increased awareness of risks that doping may cause health injuries	1,54	1,97	1,62	1,75	1,69
Increased awareness about ethical aspects concerning doping	1,68	2,00	1,79	1,64	1,76
Danger of unexpectedly being doped by ingredients that are on the prohibited list	1,50	1,69	1.64	1,75	1,61
To check if your medicaments are on the prohibited list, and how to proceed to get therapeutic use exemption	1,61	1,51	1,66	1,86	1,66
Awareness of taking prohibited drugs by using different kind of food supplements	1,53	1,49	1,47	1,70	1,54
N	72	39	47	44	202

* The means are calculated from answers indicate degrees of learning: high degree= 1, some degree=2 and no effect=3

Annex 2: Questionnaire

1. In what kind of sport related activity do you participate?

Athlete	☐
Trainer or other support activity to competitive sport	☐
Medical support (doctor, physiotherapist, chiropractor, etc)	☐
Sports manager	☐
Volunteer	☐
Other: _____	☐

2. Sport activity?

Participate in international competitions	☐
Participate in national competitions	☐
Participate in competitions, mainly locally or regionally	☐
Exercise regularly, but do not compete much	☐
Exercise mainly at fitness studios	☐
Exercise now and then	☐
Only to a minor degree active as athlete	☐

3. Sex

Female	☐
Male	☐

4. Age

_____

5. Did you have knowledge about following aspects of doping before participating at the course?

	To a large extent	*To some extent*	*No*
The prohibited list	☐	☐	☐
Therapeutic use exemptions	☐	☐	☐
Procedures of anti doping testing	☐	☐	☐
Health risks related to doping	☐	☐	☐
Anti-doping rule violations	☐	☐	☐
Sanctions on anti-doping rule violations	☐	☐	☐

6. Do you know persons in your sports community that have used doping?

Yes, certainly	☐
I believe so, but are not sure	☐
No	☐

7. Have you yourself sometime been offered doping?

Yes	☐
No	☐

8. Consider the following statements concerning doping, and give your personal point of view

	Agree completely	*Agree partly*	*Disagree completely*	*Disagree partly*
Doping is a problem because it creates unfair competitions	☐	☐	☐	☐
Doping is no problem as long as it takes place outside competitive arenas	☐	☐	☐	☐
Doping is a problem because of possible health injuries	☐	☐	☐	☐
Doping should be legalized to create more fair competitions in sports where it is frequently used	☐	☐	☐	☐
Doping is no problem if the aim is to get a nice body	☐	☐	☐	☐
Doping is no problem as long as the doses are small	☐	☐	☐	☐

9. The course was organised in the following setting?

Sport club	☐
Local sport council	☐
School	☐
Sport district	☐
Sport federation – regionally or nationally	☐
Fitness studio or similar	☐
Other, describe_____ _____	☐

10. Has the course given you more knowledge about doping?

Yes, in high degree	☐
Yes, in some degree	☐
No	☐

11. Have you during the course learned more about how anti-doping work is implemented (the prohibited list, testing, etc)?

Yes, in high degree	☐
Yes, in some degree	☐
No	☐

12. Has the course increased your awareness of risks that doping may cause health injuries?

Yes, in high degree	☐
Yes, in some degree	☐

No	☐

13. Has the course increased your awareness of dangers of unexpectedly being doped by ingredients that are on the prohibited list?

Yes, in high degree	☐
Yes, in some degree	☐
No	☐

14. If in doubt concerning medicaments, have you at the course got lessons on how to check if your medicaments are on the prohibited list, and how to proceed to get therapeutic use exemption?

Yes, in high degree	☐
Yes, in some degree	☐
No	☐

15. Has the course increased your awareness of taking prohibited drugs by using different kind of food supplements?

Yes, in high degree	☐
Yes, in some degree	☐
No	☐

16. Has the course increased your awareness about ethical aspects concerning doping?

Yes, in high degree	☐
Yes, in some degree	☐
No	☐

17. Has the organisation responsible for the course (sport club, school etc) followed up with information or other initiatives after the course?

Yes	☐
No	☐

18. Have you after the course talked about doping related issues with your sports- and training-friends?

Yes, in high degree	☐
Yes, in some degree	☐
No	☐

19. The following topics were taught and discussed during the course:

	In high degree	*In some degree*	*Only little/not at all*	*Do not know/ not relevant*
Procedures of anti doping testing	☐	☐	☐	☐
The prohibited list	☐	☐	☐	☐
Food supplement and doping	☐	☐	☐	☐
Rules of therapeutic use exemptions	☐	☐	☐	☐
Effects of doping: on achievements and /or body building	☐	☐	☐	☐
Sanctions on anti-doping rule violations	☐	☐	☐	☐
Health injuries caused by doping	☐	☐	☐	☐
How anti doping work is organised	☐	☐	☐	☐
Tools in anti doping work	☐	☐	☐	☐
The athlete's rights and duties in relation to doping and doping testing	☐	☐	☐	☐
Ethical aspects regarding doping	☐	☐	☐	☐

20. Give your assessments about the course teacher from Anti-Doping Norway /and the course

	Agree completely	*Agree partly*	*Disagree completely*	*Disagree partly*
The course teacher was competent	☐	☐	☐	☐
The course teacher communicated the topics well	☐	☐	☐	☐
The course teacher was enthusiastic	☐	☐	☐	☐
The course teacher emphasised dialog with the participants	☐	☐	☐	☐
The localities were all right	☐	☐	☐	☐
The course was organised at an adequate setting	☐	☐	☐	☐

21. How was the time frame of the course?

Appropriate	☐
Too long	☐
Too short	☐

22. Have you changed your views on doping as a consequence of your participation at this course?

No, my viewpoints are the same as before	☐
Yes, I have become more critical to doping	☐
Yes, I have become less critical to doping	☐

23. Summing up, how satisfied or dissatisfied were you with the course?

Very satisfied	☐
Satisfied	☐
Neither satisfied, nor dissatisfied	☐
Dissatisfied	☐
Very dissatisfied	☐

24. Did you miss something, or were there issues that were inadequately handled in the course?

_____