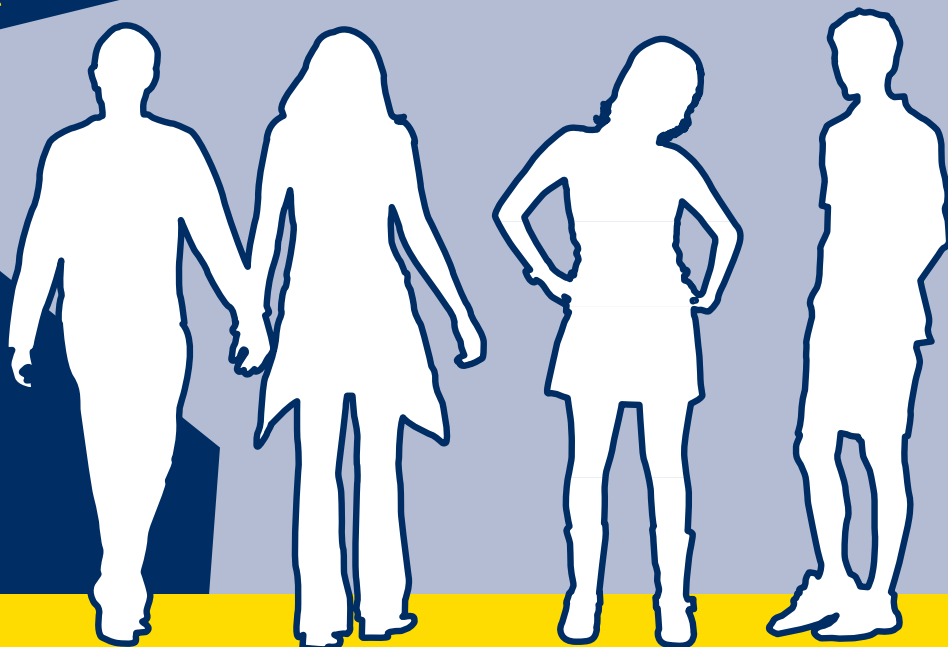


dark dance disco dose drugs
drive danger damage disability death

TEN BY NIGHT



P R O J E C T



P R O J E C T

This publication arises from Ten D by Night project, which has received funding from the European Commission – Executive Agency for Health and Consumers, in the framework of the Public Health Programme. Sole responsibility for contents lies with the partnership and the Executive Agency is not responsible for any use that may be made of the information contained here.

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Ten D by Night project

THE STRATEGIC AIM OF THE TEN D BY NIGHT PROJECT WAS TO DEFINE A EUROPEAN APPROACH IN ORDER TO CONTRIBUTE TO THE REDUCTION OF THE NUMBER AND SERIOUSNESS OF ROAD ACCIDENTS – IN PARTICULAR THOSE IN WHICH YOUNG PEOPLE ARE INVOLVED – THAT OCCUR DURING WEEKENDS AND CAN BE CORRELATED WITH THE CONSUMPTION OF ALCOHOL AND PSYCHOACTIVE SUBSTANCES.

In order to achieve the above, the following methodology was used: dissemination of information and awareness-raising material, installation of information points in venues frequented by young people, administration of an anonymous questionnaire, performance of anonymous alcohol/drug tests, measurement of reaction times in driving and comparison between the results of such measurement and data from both the questionnaire and alcohol/drug tests. Collected information will then be available to define intervention policies at both national and community level.

The intervention sought to contribute toward reducing road accidents among target groups in the territorial areas concerned, and their seriousness, both in terms of mortality rate and cases of permanent disability, working on prevention and information actions about alcohol and/or psychoactive substance consumption.

The Ten D by Night project provided as its main results:

- the testing of an innovative European approach targeted toward young people and aimed at preventing the use of alcohol/psychoactive substances while driving;
- the availability of scientific data on consumption by young people attending entertainment venues and on its relationship with road accidents.

The project was co-funded by the European Commission – Executive Agency for Health and Consumers.

Ten D by Night structure

To be more effective, Ten D by Night was structured in 7 WorkPackages, each one led by a project partner:

WORKPACKAGE (WP) No	WORKPACKAGE TITLE	LEAD PARTNER
WP1	Coordination of the project	Consepi, Italy
WP2	Dissemination of the results	S&T soc. coop., Italy
WP3	Evaluation of the project	Rīga Stradiņš University, Latvia
WP4	Study design	University of Turin, Italy
WP5	Pilot study	University of Valencia, Spain
WP6	Field intervention	Consepi, Italy
WP7	Processing of the results	University of Turin, Italy

Such a structure contributed to the success of the project and the commitment of the project partners.



The rationale

The impact of road accidents on the population's health represents a top priority problem for EU Member States, given the extent of this phenomenon, as well as its human and social aspects and costs.

The "Traffic Safety Basic facts 2006" report shows that about 73,500 young people (aged 16-24) were killed in road accidents in Europe between 1995 and 2004.¹ This number accounts for about 18.1% of all traffic accident fatalities over the same period. The report also shows that young people are almost twice as much at risk of being killed in a road accident compared to the average of the European population, and more than half of road accidents causing fatalities among young people occur during weekends. Of course there are multiple variables which complement each other, thus explaining the differences in the number of young people killed in road accidents between regions, and there are also variables to which a higher fatality rate during weekends can be attributed. The World Health Organization has identified traumas caused by road accidents as one of the major Public Health problems to be tackled by industrialized countries, and has set as an objective for 2020 to reduce by 50% the number of traumas due to road accidents. Based on the data available in the international literature, we can say that alcohol and psychoactive substances cause an inability to drive and a high percentage of road accidents. These substances can affect attention, concentration, and the response to external stimuli; in some cases they slow down reaction times, while in other cases they alter them by creating excessive self-confidence.^{2,3} The literature shows that it is necessary to take primary prevention actions based on "life skills", which propose counting on young people's sense of responsibility and awareness of psychoactive substance consumption.⁴⁻⁶

While data available in the literature show that psychoactive substances play a major role in causing road accidents, little is known about the numbers of people who take substances, either occasionally or regularly, before driving, or about the consequences of this behaviour. In this respect, little information and few studies are available on the relationship between the concentration of substances in body fluids and the extent of behaviour alteration. Furthermore, the frequent habit of combining several substances (perhaps to experience different effects during the same night) can have significant effects on driving skills.^{7,8} Therefore, today more than ever, it is necessary to prevent risky driving behaviour by detecting the presence of alcohol and psychoactive substances in the blood.

Unfortunately, this conviction still faces conceptual and practical difficulties at different levels, including the constraints imposed by a restrictive interpretation of privacy policies, by the limited feasibility of field tests, and by the kind of biological samples collected. Also because of the problems we have just mentioned, the effect of single substances on performance has not yet been sufficiently investigated, and therefore we cannot draw conclusions either on the relationship between the usage/dosage of substances and their effects on driving, or on the intensity

of such effects. It is evident that the more feasible tests are, the less invasive it will be to take biological samples from the subjects to be tested. In this respect, in the last few years saliva has become more and more important as a non-conventional medium for the detection of drugs and psychoactive substances.⁹⁻¹² This is the main reason why the Ten D by Night project used disposable saliva tests for immediate results.

Several studies have been conducted in order to evaluate the role played by psychoactive substances in motor vehicle crashes, above all on the younger age groups. The literature seems to show a strong role of these substances on mortality and disability from road accidents, but all the studies have been carried out on a retrospective basis, evaluating almost always the level of substances in biological samples on people admitted to hospital emergency departments after a crash.

Moreover, a lot of preventive interventions are currently being carried out in all European Community countries in order to prevent young people from careless conduct when driving (trying to prevent avoidable injury or mortality): many schools have introduced specific programs into their curricula. The 'educational' and sociological literature stresses the powerful role of 'experimentation' in modifying the behaviour of young people and the poor impact of messages received indirectly from society.

Most of the projects carried out only consider the effects of consumption of alcohol upon driving capacity but they do not consider altogether the other variables evaluated in the Ten D project: the consumption of psychoactive substances before driving and the correlation between the consumption of alcohol/psychoactive substances and driving reaction times. This is the original aspect and the added value of the project that has sought to evaluate the risk of accident after both alcohol and other psychoactive substances in terms of future prospects and to try out a preventive intervention to avoid crashes in recreational settings using the 'simulated' experiences of the risks in the model selected.





Communication strategy

Communication strategy has played a key role in Ten D by Night because the project was aimed toward taking a preventive action, had a complex operational structure and involved numerous, multidisciplinary partners. In particular, the dissemination activities provided the communication channel with the outside world, thus optimizing the impact of the intervention on the target group and allowing the widest possible audience to be reached.

Given the particular type of main target group, i.e. young people between 16 and 24, special attention was paid to the layout of the printed materials and website, as well as the language, which had to meet young people's communication standards.

Communication strategy was aimed at:

- increasing awareness about risk connected with the consumption of alcohol and psychoactive substances before driving;
- expanding knowledge about the effects of alcohol and psychoactive substances on driving abilities;
- increasing the efficiency of prevention programmes.

The Ten D by Night communication campaign also promoted the diffusion and wider application of the activity tried out by the partnership to other territorial contexts and other kinds of target groups, and favoured the publicising of the project aims, activities and results to the public at large.

In order to guarantee the effectiveness of the communication activities, a dissemination and publication plan was drawn up, and the following communication tools were developed:

- a **PROJECT LOGO**, to guarantee a high level of identification of all activities, both at local and transnational level;
- a **WEBSITE**, www.tendbynight.eu, to establish an instrument which is capable of maximising external communication as well as increasing effects on the target population, providing effective publicity about activities and results achieved, during and at the end of the project;



- a **PROJECT LEAFLET**, produced in all partner languages, to provide a useful means of publicising the objectives and strategy of the project activity and of involving potential participants;
- a **PROJECT POSTER**, to provide a useful way of advertising the planned activities and tests and to be used as publicity in strategic sites attended by young people (Universities, pubs, discos...);
- **INFORMATION SHEETS**, to give useful information in all partners' languages on risks connected with the consumption of alcohol and drugs and driving abilities;
- **GADGETS**, to be given to participants as a gesture of appreciation for their collaboration and for completing the activity programme at entertainment venues;
- **PRESS RELEASES** and **PRESS CONFERENCES**, to promote greater visibility of the project activities;
- a **FINAL CONFERENCE**, held in Turin (Italy) in February 2010, to present the results achieved, both in terms of the partnership's organisational model as well as the project outcome and scientific results;
- a **FINAL MANUAL**, to help to publicise the project results presented and guidelines for the implementation at European level of the intervention model used.

All these tools and the communication strategy contributed toward publicising the objectives of the Ten D by Night project, promoting the involvement and awareness of local authorities, supporting the potential for a wider application of the experience and increasing the possibility of producing long-term effects. Moreover, the production of **SCIENTIFIC PAPERS** and their **PRESENTATION IN SCIENTIFIC CONFERENCES** strongly contributed to the communication strategy of the project.



IF YOU WISH TO KNOW
WHERE AND WHEN
YOU CAN FIND US
PLEASE VISIT
WWW.TENDBYNIGHT.EU



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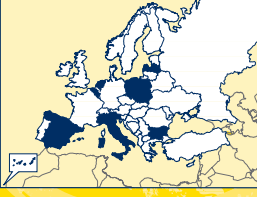


TEN D BY NIGHT

LEAFLET

dark
drive
danger
damage
disability
death
disco
dose
drugs

TEN D is a transnational project aimed to define a European approach to contribute to the reduction of car accidents often correlated to alcohol and drugs use and misuse. By installing information and testing points in recreational meeting places (party, nightclub, festival...), this project will allow young people interested in participating to experience several tests, **FULLY ANONYMOUSLY**. The strategic aim of TEN D project is to define a European approach in order to contribute to the reduction of the number and seriousness of road accidents, in particular the ones in which young people are involved, that occur during weekends and can be correlated with the consumption of alcohol and psychoactive substances.



More than 6000 European young people are participating.
LET'S JOIN THEM!

YOU CAN TRY OUR TESTS

ALCOHOL TEST Blow in the breathalyzer and check if you're still able to drive!
This test is used for determining the level of presence of alcohol in your blood. You will inflate the apparatus and it will give you the results in few seconds.

DRUG TEST Discover how it is possible to analyze your saliva for drug use detection!
You will insert the device in your mouth for collecting saliva to read the results on the device.

REACTION TIME CONSOLE Test your reaction skills for braking to avoid an obstacle while driving!
The console simulates a complete driving position with the use of panoramic screens connected to a vanguard graphic engine for a very realistic driving experience.

AND YOU WILL RECEIVE A SPECIAL GADGET!



BRIEF PROJECT DESCRIPTION

TEN D is a transnational project aimed to define a European approach to contribute to the reduction of car accidents often correlated to alcohol and drugs use and misuse.
More than 6000 European young people will participate.
LET'S JOIN THEM and EXPERIENCE our tests, FULLY ANONYMOUSLY.

IF YOU WISH TO KNOW
WHERE AND WHEN
YOU CAN FIND US
PLEASE VISIT
WWW.TENDBYNIGHT.EU

NEXT DATE

YOU CAN TRY OUR TESTS

ALCOHOL TEST Blow in the breathalyzer and check if you're still able to drive!

DRUG TEST Discover how it is possible to analyze your saliva for drug use detection!

REACTION TIME CONSOLE Test your reaction skills for braking to avoid an obstacle while driving!

AND YOU WILL RECEIVE A SPECIAL GADGET!

This material arises from Ten D By Night Project which has received funding from European Union, in the framework of the Public Health Programme.

On responsibility of MotorOasi Piemonte, with the support of Regione Piemonte and the European Union, in the framework of the Public Health Programme.






POSTER

FLYER

➤ Staying safe on drugs...

- Do it with someone you know and trust, preferably someone who's used it before.
- Make sure you are somewhere you feel safe and secure.
- Trips last a long time, make sure you've got somewhere to go after the club.
- Drugs aren't toys. It can affect you in ways which last for years! Never, ever, abuse it.
- Don't even think of driving!

The best way to deal with drugs and alcohol is of course for you to challenge the one behaviour's philosophy or even better never starting. PhD, it's never too late to be aware of what's dangerous for you and others.

Respect yourself. Be cool but responsible!



ACKNOWLEDGEMENT:

Production, possession, consumption and sales are subjected to prosecution and penalties according to each country's law and regulation.

More information about alcohol and drugs (prevention, alternatives, treatments and solutions) is easily obtainable on the Internet. Just start by surfing on our "TEN D By Night" webpage, you'll find out what we do and where we're going to:

www.tenDbynight.eu



We, European kids, live in a drug using world (from our morning coffee, to the medication we use or the glass of wine or beer we have in a party). But all drugs have the potential to harm if not used carefully. The most commonly used drug is still alcohol, but the risk of other psychoactive drugs and their increasing rate of consumption must be carefully considered by you and by your friends.



Therefore in collaboration with the European Commission, several European youth organizations and Universities assembled to find out what is really happening within nightlife and collecting precise statistics about alcohol and drugs use and misuse.

The project is called TEN D by Night and aim to define a European approach to contribute to the reduction of car accidents often correlated to this issue.

➤ Just for you to know... 10 relevant facts!



Worldwide observations show that a huge numbers of terrible accidents usually happen during weekends' nights in which young people are often involved. Thousands of young European drivers will risk injuries and even death to drive back home after drinking, using drugs or medicines misuses.

Source: CARS Institute - European Commission

- Experimental studies show that use of cannabis and medicines results in impaired driving ability varying according to dose, tolerance and delay after intake.
- Combining any of these drugs with alcohol significantly increases the risk of being involved in, or responsible for, a traffic accident.
- It seems that cocaine tends replacing amphetamines and ecstasy as the stimulant drug of choice.
- Despite maintaining ecstasy often occur unexpectedly among socially integrated young people.
- Suicide is identified as a cause of drug overdose deaths in some studies among drug users. Suicide constituted 30 % of all drug-related deaths reported in Scotland in 2005. Drugs misuse problems contribute to suicidal behaviour.
- Studies show that, after alcohol, cannabis is the most prevalent drug among Europe's driving population.
- A French study showed that 17 % of the drivers under 25 years old involved in a car accident between 2001 and 2003 had used cannabis.
- A survey carried out for Green Flag in United Kingdom, of drivers aged between 17 and 34 years, almost a third knew someone who takes illegal drugs and drives regularly. One-third also said they were likely to take illegal drugs over the festive period and more than half said someone they knew would take illegal drugs. Ninety-eight percent of those who had been a passenger in a car when they knew the driver had taken illicit drugs.
- Cannabis-using drivers are most likely to be young males.
- There are general legal changes to the prosecution of drug driving and the penalties for it have been already applied in several countries. illicit drugs such as cannabis are subjected to the new zero-tolerance law for drivers.

Source: EMCDDA



➤ 10 TIPS BY NIGHT (and drug related risks)

- 1. ALCOHOL**
 - 1001/07: Alters personality, mood, emotions. Reduces inhibitions.
 - 1002/07: Disarms, distorts, damages, poisoning (acute or death).
 - 1003/07: Don't mix drugs with alcohol.
- 2. CANNABIS**
 - 1004/07: Euphoria, relaxing mood, perception and attention.
 - 1005/07: Affects judgement, increases short-term memory & paranoia.
 - 1006/07: Duration: 2h, mild risk to be free to work, no driving, no family car.
 - 1007/07: Respect your own-driving relatives who want to see you drive.
- 3. ECSTASY**
 - 1008/07: Stimulating, euphoric, of great fun, energy, excitement.
 - 1009/07: Dehydration and hyperthermia, the combination can be fatal: dehydration, electrolyte imbalance, high temperature.
 - 1010/07: Regularly drink water. Stop when you feel dehydrated.
- 4. COCAINE**
 - 1011/07: Strong stimulant, more self-aware, euphoric, tension.
 - 1012/07: No tolerance: a high dose affects of become more difficult, nervous, enhancing stimulations. Heart: results high blood pressure.
 - 1013/07: Mixed with alcohol: it increases your risk of sudden death.
- 5. GHB**
 - 1014/07: Stimulating, exciting, losing self control + acute or alcohol.
 - 1015/07: Total loss of reflexes, memory, losing your own with alcohol.
 - 1016/07: Always have your glass on sight! It is used in date rape and other assaults because it is a sedative, colourless (colourlessly ingested).
- 6. SPEED, CRACK, or stimulants**
 - 1017/07: Strong stimulant, strong euphoria.
 - 1018/07: Severe depression (depression), heart: heart loss, hyperthermia, paranoia, aggression, very high dependence.
 - 1019/07: Use it responsibly! First don't mix it with other substances.
- 7. KETAMINE**
 - 1020/07: Hallucinogenic, anaesthetic, no acute pain sensation.
 - 1021/07: Sedation, psychological/physiological dependence, anoxia.
 - 1022/07: Watch out! Because you don't feel any pain while high on ketamine, you can seriously harm yourself without knowing it.
- 8. MARIJUANA, MARIJUANA**
 - 1023/07: Several modifications (vision, mood, behaviour).
 - 1024/07: Later withdrawal, mild to medium, with strong withdrawal.
 - 1025/07: If you have a bad time, never mix it with a drug effect, it will not fight it. Be. Find a quiet area, avoid bright lights and loud music.
- 9. LSD / ACID**
 - 1026/07: Hallucinogenic, delirious, individual self-awareness, apathy.
 - 1027/07: Affects perception, personality, feelings, pain, behaviour in during psychedelic experience: danger, from 10 to 12h.
 - 1028/07: Depends on your mood, be positive, if depressed it increases your problems. Rest, drink and eat properly.
- 10. HEROIN**
 - 1029/07: Rapid physical & chemical dependence, phase 1 withdrawal.
 - 1030/07: Withdrawing if already addicted: depression, muscle loss, death, disease, concentration, fatigue, add. Very high dependence.
 - 1031/07: Please, dangerous drug! Do not even test. Treatment available.



WWW



GADGET

COMMUNICATION STRATEGY

15



The study protocol

The Ten D by Night project sought to achieve the following objectives.

General objectives

To develop a prevention programme for:

- increasing young people's awareness of the influence of alcohol and psychoactive substances upon their driving capacity (reduction of their attention level, slowness of reaction...);
- publicising correct and effective information on the effects of both alcohol and psychoactive substances;
- defining a European approach to the prevention of road accidents caused by the consumption/abuse of alcohol and psychoactive substances;
- contributing toward improving knowledge about young people's alcohol and psychoactive substance consumption in their regular meeting places.

Specific objectives

- Estimating alcohol and psychoactive substance consumption in young people's regular meeting places in the territorial areas involved;
- estimating effects of alcohol and psychoactive substance consumption on driving ability and on road accident risks;
- increasing, in the places involved, young people's awareness of the influence of alcohol and psychoactive substance consumption on driving ability, through the publicising of correct and effective information and the use of innovative tools (such as equipment for measuring reaction times);
- contributing toward increasing the effectiveness of European prevention programmes in the field of drink and drugs abuse by carrying out field assessments on the implementation of an innovative integrated approach;
- contributing toward the reduction of the number and seriousness of weekend road accidents in places involved in the project, particularly those in which young people are involved.

The study protocol was defined and formalized in a document agreed by all partners before the implementation of pilot studies, in order to guarantee the use of joint methods and tools, and subsequently the possibility of comparing data for the places involved. Some modifications were proposed and tested during the pilot phase. In the end the study protocol to be used in field interventions was defined as described below.

Study design

Cross-sectional study.

Study population

The study population was represented by 5,000 young driving licence holders (16-24 years old)¹³ who attended recreational venues during weekend nights: 1,000 people were recruited in each country, i.e. Belgium/The Netherlands, Bulgaria, Italy, Poland and Spain.

Several recreational venues in each territory concerned were selected for field interventions, on the basis of the highest presence of the target population, geographical distribution (in order to collect samples which were as representative as possible of the whole of each territorial context) and the willingness of owners and managers of recreational venues to cooperate.

Field intervention

During weekend nights, in each selected recreational venue a survey team installed an information point where the intervention was implemented: this stand was arranged next to the club entrance/exit in order to intercept all people entering and leaving the club.¹⁴

The intervention included several stages at the entrance and the exit of the club.

When people entered the club the scheduled activities were: voluntary recruitment of participants according to the eligibility criteria, explanation of the project, ascertaining whether they consent, assignment of an anonymous personal code, entrance questionnaire, alcohol test administration and driving reaction time measurement.

Upon leaving the club the activities included: administration of a drug test, compiling an exit questionnaire, measurement of driving reaction time, alcohol test, handing over the data sheet with exit test results if requested (along with their explanation and appropriate advice by the operator), information sheet and project gadget (an iPod pocket with the Ten D by Night logo).

Survey team

This was a multidisciplinary team, consisting of researchers trained *ad hoc* to efficiently interact with young people. The training also aimed at achieving a standardized approach to participants in all countries involved

in the project. Every survey team consisted of at least 5 researchers including: a team leader responsible for supervising all field activities, assigning identification codes to participants, supplying the interviewers with the survey materials (informed consent, questionnaires, alcohol and drug tests, forms with test results) and giving participants information sheets and gadgets; 1 technician for evaluating reaction time; 2 interviewers responsible for selecting participants, administering questionnaires and tests, and drawing up results forms; 1 operator for approaching young people.

Survey teams were free to manage the above-mentioned activities in different ways (for example a researcher could lead a participant through all stages of the intervention procedure) depending on the situations.

Informed consent

The informed consent sheet has been written in a language which is as plain as possible, in order to be understandable to young people, and has been translated into all partner languages.¹⁵ It consists of information about the purpose of the study, a description of procedures, information about risks and benefits, about anonymity and worries about participation, and a consent form to be signed by both the interviewer and the participant.

There ought to be no exception in asking for written agreement in all countries involved in the Ten D by Night project field actions, unless it was explicitly forbidden by local laws about privacy (as happened in Belgium and The Netherlands).¹⁶

Anonymous coding system

This study required an anonymous coding system that guaranteed:

- complete anonymity in recording the link between data collected from the same subjects on arriving and leaving the club;
- anonymity of the researchers in collecting data (in order not to be compelled to supply data in case of legal problem, e.g. a car accident involving a driver taking part in the study);
- prevention of anyone except the person involved and the researcher having access to the previously collected data.

The method proposed and approved by the project's ethics committee involved disposable, non-transferable bracelets, with guaranteed adhesive closure, waterproof and pre-printed with progressive identification numbers.^{14,17}

The operator provided the participant with one of these bracelets at the entrance and asked the participant not to remove it while inside the club. The bracelet was put on the wrist or, to make it less conspicuous, on a belt loop or any other place from which it was impossible to transfer it to another person. People who did not agree

to wear the bracelet were excluded from the study. The identification number was noted down on the entrance questionnaire and the test results form.

On leaving, by looking at the printed code on the bracelet it was possible to assure that the participant was the one who took part in the tests at the beginning (if anyone tries to remove the bracelet it falls apart and is no longer usable and cannot therefore be stolen by anybody in order to collect another person's results) and it was possible to link the records without knowing anything about the participant and without having to ask him/her any information that he/she could not be able to give reliably under the effects of drugs and alcohol (e.g. a self generated code).¹⁸

The unique identification number was then recorded on the exit questionnaire and matched with the test results form, where the researcher noted down the exit data. Before leaving the club the participant's bracelet was cut off by the researcher so that the person could no longer be linked to answers and test results.

Questionnaires

After a detailed review of the literature, including papers published from 2002, the entrance and exit questionnaires have been created in order to gather the following information on the subjects recruited by the study: socio demographical variables, very general anamnestic information, use of alcohol and psychoactive drugs (both normally and in relation to the event during which the questionnaire is administered), driving record, opinions on the usefulness of the project and customer satisfaction. Due to the recreational setting in which the questionnaires have to be administered, the length of the questionnaires has been restricted as much as possible.

In order to define the demographic and social profile, the entrance questionnaire, as well as asking about gender, year of birth, schooling and job status, asks about whom the participant usually lives with and his/her father's school background, in order to indicate cultural and educational background.¹⁹ It also asks for the participant's country of birth as well as that of his/her mother.²⁰

Very general anamnestic information is obtained by asking participants about their consumption of medication over the last 7 days.

With regard to driving record, questions are included about experience (age at which they obtained their license, frequency of driving in the last month), driving style (numbers of speeding tickets, license suspensions, number of crashes), how subjects organized their movement during the evening (if they drove there and if they were going to drive when they left).^{17, 21, 22}

Regarding alcohol and drugs, it seemed interesting to investigate both normal consumption, as well as the specific consumption that night. Normal alcohol consumption is investigated referring to the previous month, as it is easily recalled by participants and reveals enough of their normal habits, while for drug consumption the questions relate to the last year, in order to include also sporadic use.²³⁻²⁶ Detailed questions are also asked about the consumption of psychoactive substances before arriving at the recreational centre, both for alcohol

and drugs. The subject's intentions with regard to drinking alcohol or consumption of drugs during the evening are also investigated.¹⁴

The last part of the entrance questionnaire collects information about whether the participant has driven under the effect of alcohol or drugs during the last month, whether s/he has been a passenger in a vehicle driven by a person under the effects of alcohol or drugs during the last month, the number of crashes under the effect of drugs or alcohol or otherwise. The last question of this section asks participants to indicate how much, in their opinion, driving under the effect of a given list of substances is dangerous: it is aimed at obtaining a framework of risk perception relating to various specific substances.^{19,21,26-30}

The exit questionnaire begins with questions related to how long they have spent in the recreational venue, the amount of alcohol and drugs consumed during the night and the time that has passed since their last drink.^{14,17}

Then there is a question aimed at assessing the possible immediate effect of the project upon the decision of the participant whether or not to drive in the light of the subject's perception of his/her own state and/or tests results. The last section is aimed at detecting the degree of perceived utility of the intervention, an opinion about its feasibility and about whether participants think there should be more initiatives of this kind.

The questionnaires are followed by two forms for collecting test results: the first form collects both entrance and exit test results for final analysis; the second form collects only exit data and is given to participants, if requested.

Alcohol test

The breathalyzer Dräger Alcotest 6510 was used to detect the blood alcohol concentration (BAC) of participants by analyzing the breath they exhale.³¹ It is suitable for field interventions because it is user-friendly, compact and analyzes the breath very quickly.

It is very important to use the breathalyzer at least 15 minutes after the last alcohol consumption in order to avoid an effect to the results of the BAC measurement caused by alcohol in the mouth. Results are given in g/l and are displayed after an average of 10 seconds.

The mouthpieces are hygienically, individually packaged, with a tamper-proof, non-obstructable air outlet, a mouthpiece ejector and a spacer between the mouth and instrument housing.

Drug test

After a market research among the most popular saliva drug tests used in Europe, the Oratect III Oral Fluid Drug Screen Device (Branan Medical Corporation) has been chosen.³² It is a one-step chromatographic immunoassay device for the qualitative simultaneous detection of multiple drugs that are detectable in oral fluid: cocaine, methamphetamine/MDMA, THC, amphetamine, opiates, benzodiazepines.³³

During testing, oral fluid is collected at the collection pad and migrates across the membrane; the flow of blue lines indicates that a sufficient amount of oral fluid has been collected. If no drug is present in the oral fluid, purple-red bands at specific test regions will appear. On the other hand, the absence of a purple-red band in the test region indicates a presumptive positive result for that particular drug. The test results positive at or above the following cut-off drug concentrations: 25 ng/ml for d-methamphetamine/MDMA, 40 ng/ml for delta-9-tetrahydrocannabinol, 20 ng/ml for cocaine, 25 ng/ml for d-amphetamine, 10 ng/ml for morphine, 5 ng/ml for diazepam. The presence of the control band in the control region indicates that the test has been performed properly, otherwise the test is invalid. Saliva collection lasts for not more than 5 minutes and results should be read in 5 minutes after removing the device from the mouth.^{32,34}

Driving simulator

In this study a special and innovative console was used for measuring reaction time: the SimuNomad3 Ecrans, provided with SCAM 03 software.³⁵ The reaction time console looks like a driving simulator videogame, so it can provide a good incentive for participation.

The test consists of a simple stimulus (obstacles suddenly appearing while the participant is driving along a straight road) that requires a specific response: lifting the right foot from the accelerator pedal, moving it onto the brake pedal and pressing it quickly. The time is recorded between the obstacles appearing and the brake pedal being operated.

When tested upon arrival, the technician invites the participant to accelerate and drive along the road (he/she can accelerate freely) and to brake when obstacles appear on the roadway, without steering the wheel. This is only a trial demonstration to enable the participant to understand what to do. Then the young driver is asked to repeat the test: this reaction time value is noted down. Upon leaving, the driver is invited simply to repeat the test only once: this is the exit reaction time. Now the technician can comment on the results and, for example, show the subject how many metres he/she has covered before the car comes to a complete halt.

Data collection on pre/post incident rates

Quantitative data about road accidents involving young people, with specific reference to those occurring during week-end nights in each area concerned, were collected after the intervention and compared with data relating to the same period of the previous year, in order to evaluate the effectiveness of the intervention in reducing the number of car accidents in the short term. The data sources were the official Police databases and statistics, even though it was not always possible to find comparable data for that geographical area or period of time.

Data analysis

Data were collected in a database using Microsoft Excel and analysed using STATA10.0 (Stata corp., College Station, TX, 2007).



The pilot study

Aims of the pilot study

With the implementation of the pilot study Ten D by Night partnership intended to test whether the study protocol could be fulfilled and if, at an empirical level, the investigation proposed could be carried out; to identify the weak spots of the study design in order to modify them and therefore guarantee the efficiency of the intervention on the field.

In addition, the pilot study also wanted to pay attention to those aspects that may have been unexpected and whose treatment may have been a key aspect in achieving the project aims.

Implementation of the pilot study

It was proposed to use a sample of 20-30 people for each area involved. With this rate it was intended to overcome any possible withdrawals from the subjects involved. The intention was to have a uniform sample of 20 people in all the countries in which the interventions took place.

TRAINING AND PREPARATION OF THE TEAM COORDINATORS

A team of at least 5 qualified people was organised in every participating country. Each team had a team coordinator who received specialised training in Turin (Italy) in December 2008. The training of the coordinators included:

- How to contact and communicate with young people. Emphasis was placed upon the effect that the age of the communicator could have on the question of persuasion in relation to the matters to be dealt with. Thus, it was important that the investigators were young or not of an advanced age, it being necessary also to have both men and women in the teams. Moreover, emphasis was placed on the aspects of non-verbal communication that have a direct influence and determine the level of persuasion on the target group of the intervention. It was advisable that investigators had a basic understanding of psychology (aspects that regulate and modulate human behaviour, detection of negative perceptions and attitudes, group dynamics...) and, bearing in mind the field of application, knowledge of Road Safety (epidemiologic aspects and importance of human factors

in contributing to accidents, active and passive safety of vehicles...). This would help in ensuring whether the training was adequate and in what aspects the partnership should continue it further.

- **The correct use of the anonymous coding system.** The project wanted to guarantee the correct use of the coding system that would allow a total anonymity of the results. The partnership wanted to make sure there would be no problems with the coding system once the research team were on the field, and that doubts were clarified during the training.

- **Administration of the questionnaire.** Organising a pilot study (to a limited level) during the training, was useful in order to check whether the questions produced problems, whether the questionnaires were feasible and whether it was necessary to include further data or questions in order to improve the obtaining of results.

- **Administration of alcohol and saliva tests.** The coordinators were trained with the assistance of people specialised in their use in order to guarantee the correct use of these instruments, with one or more practical exercises being carried out with them. This resulted in a better knowledge of the instruments, avoiding problems during the subsequent field intervention.

- **Use of the console for measuring driving reaction time.** In this case, due to the complexity or possible problems that may arise while using this instrument, it was recommended that there should be a collaboration with a trained technician specialised in the use of this type of equipment. If, during the pilot study, there were found to be no problems in having just the investigators, and no need for a technician, the partnership could then discuss the possibility of conducting the tests without the technician.

TRAINING AND PREPARATION OF THE RESEARCHERS

Each coordinator who was trained in Turin then trained a team of at least 5 researchers in their own country, who acted directly with the subject group of the intervention.

The researchers received from the coordinator the following training:

- **Knowledge and application of the different persuasion strategies** (both rational and emotional) in order to form or modify attitudes, ideas and behaviour. This training was given to those who would interact with the participants in order, as seen above, to make sure that they could deal with any doubt or problem and, if not, to provide further training in relation to the intervention.

- **Knowledge of the importance of non-verbal communication** in the proposed persuasion process.

- **Appropriate transmission** of the key role that anonymous people have in the investigations carried out to detect aspects that contribute toward improving society. Moreover, highlighting the unique and active role that each person has and which contributes, even though they are anonymous, toward a positive change in society. Moreover, the "privilege" of participating in an international investigation whose results will be used to design intervention strategies that will contribute toward decreasing road accidents. Using this as a means of persuading participants to take part in the investigation, stressing that the project is being carried out for a good cause, i.e. avoiding the numerous repercussions of too many road accidents.

- **Establishing parallel links** with other investigations that, using the same method of anonymity of their participants, have detected causes and procedures that have resulted in solutions being implemented which have reduced a great deal of human suffering. This would give a sounder basis to the aims described to the participants, and the partnership would be able to understand to what extent they were going to need this to “convince” those who were doubtful about taking part.

- **Being able to activate feelings** of emotional wellbeing as a result of contributing or having contributed toward improving the personal or psychological state of other people. Calling on the emotional side of the participants, letting them know that their acts were going to help in searching for solutions which will help other people by, in this case, avoiding road accidents related to alcohol or drugs.

- **Knowing the mechanisms and strategies** to activate and facilitate empathy in others in order to be more persuasive. This was associated with the previous two points, where it was sought to get people thinking about what they would like others to do for them and to what extent they are prepared to help others.

Indeed, the training also focused on the effects of drugs and alcohol (also on driving ability), how to use the equipment (alcohol and drug tests, reaction time console) and how to carry out all the activities forming part of the intervention.

ORGANISATION OF THE INTERVENTIONS

Contacting the owners or managers of recreational venues for young people, and organising the field activities in each area involved was a task set for every participant country who took part in the pilot study. The recreational venues were chosen on the basis of the criteria defined in the study protocol. This helped in order to detect problems where a venue was not prepared to take part, whether the intervention would be possible at any venue, how open people were to participating...

STORAGE OF COLLECTED DATA

The codification system for answers and the storage of data (computer system for uploading and elaborating data) for data processing were created and tested, so that, by the time the intervention took place, researchers would know how to load and save the data collected from each action, in order for it to be analysed afterwards.

INTERNATIONAL COORDINATION OF THE PILOT STUDY

Each country carried out the activities described above in their own area. The lead partner of each WorkPackage (WP) was in charge both of coordinating the individual activities of each partner as well as monitoring adaptation to the methodological protocol. The lead partner, by reason of its experience, was generally the point of reference in the event of any problem that other partners had in relation to the WP (by means of emails).

By doing this, Ten D by Night partners could solve any problems that might have arisen.

Conclusions of the pilot studies

All the countries taking part in the pilot study were pleased with the results and agreed that it was of help in future interventions.

With regard to the sample, it was shown that there could be a problem in having the sample of completed questionnaires which was originally intended. Many of the subjects failed to return for the second part of the tests and it was decided to consider both the finished and unfinished questionnaires, for both meant an interaction with the youth and therefore a communication of the purpose, which was initially one of the aims. It was also the first opportunity of noticing a different rate in male/female participation in the intervention and some difficulties in reaching only people belonging to the target group.

The pilot study also provided a great opportunity for proving the effectiveness of the teams and whether more researchers would be necessary, as well as whether their training was appropriate or what aspects could be improved. For example, it was clear that in the majority of the countries a larger team was needed, reaching an average of 10 researchers in order to be able to handle the number of subjects taking the tests. Then, each team chose whether to have a researcher in charge of a specific part of the tests or whether to have one researcher per participant, i.e. accompanying him or her through the whole process. This was decided according to each country's personal experience, watching which of the options was more suitable in terms of being more effective and quicker.

Moreover, making contact with venues in order to carry out the pilot studies was a very difficult task for some partners, as most of the owners were reluctant to collaborate.

The University of Turin was the organisation in charge of collecting the questionnaires in order to process them and analyse the results. Most of the countries returned their questionnaires by mail, except for Spain, who carried out the Pilot Study the weekend before a project meeting in their country, so that they returned the questionnaires by hand to the representatives who attended the meeting.

Overall, the pilot studies were a success and of great help in the other interventions, for they accomplished their aims, to evaluate the procedures and resolve any problem before the actual interventions started, and before it was too late to start trying different procedures and improvements.



Intervention on the field

Training session

A good awareness action should of course be prepared in advance: to find the appropriate recreational settings, to get the necessary authorizations, to print leaflets, posters, questionnaires, to find the young researchers willing to participate in the project and, of course, to train the researchers. It is important to note that the number of researchers will have a result on the number of questionnaires filled in. The more researchers, the more questionnaires are completed. An average of 10 volunteers working on the field is usually necessary.

A week or so before the day of the action, all Ten D researchers must participate in a training programme, organized by the coordinator of the action. The various topics regarding the purpose of the action (such as consumption of alcohol and drugs, mitigation of effects and risks, driving under the influence, the action procedure) have to be fully detailed and clearly understood by all researchers in order to enable them to answer any questions and deal with all matters during the action on the field, when meeting the participants. The help of specialists in the relevant topics (such as drugs prevention, doctors, road safety advisors...) is highly recommended. Some practical exercises (role playing) are also recommended to help the researchers with the peer communication with other youngsters in order to ease discussions and break down remaining taboos on drugs.

The action step by step

In order to carefully follow all sequences of the action, an approximate time-schedule has been set up regarding the duration of the actions based on all participating partners in the European countries taking part. Actions taking place during events naturally depend upon a time schedule which is appropriate for this purpose. The timetable can also vary from one country to another due to different opening hours of recreational sites at European level.

8.00 pm

Meeting with the Ten D researchers (average of 10 researchers per action)

In order to ensure everyone's motivation toward the action, all researchers are asked to arrive punctually at the meeting point. It is necessary for the timing of this particular action to be agreed, in relation to coordination

and the various activities to be implemented at the entrance to the club, and therefore it is extremely important to be well prepared.

A final check on the necessary material must be done before leaving for the action and everything must be loaded into the cars.

8.30 pm

Departure to the nightclub / event / party

9.00 pm

Arrival to the nightclub / event / party

It is necessary to organize a meeting with the owner(s) of the venue where the event is held in order to make contact with him/her at the arrival of the Ten D team, during which the final arrangements are carried out, as well as the final preparations for setting up the Ten D material (Ten D awareness desk to welcome the visitors near to the entrance and the equipment for measuring braking-time). Information posters can also be placed around the venue. As the owners (or party organizers) are often very cooperative and willing to help towards the successful outcome of these awareness actions, it is therefore important to take into account their suggestions and advice, but also for the team to offer its practical experience and to involve the owner in helping to achieve the objectives of the action. For instance, it is often necessary to inform the doormen of the presence of the Ten D team and explain to them the purpose of the awareness action.

It is important to note that the disadvantage of organizing an action in a nightclub or an event too long in advance is that it is not always possible to know what will be the theme of the party, as the party-organizers might schedule their agenda only a month in advance. A party may consist mainly of teenagers under the average age of the target group, and too young to hold a driving license, hence compromising the action or, on the other hand, it may consist of people who are above the target age group.

9.45 pm

Final briefing with the researchers (training reminder)

In order to prepare the researchers by reminding them about the main guidelines of the Ten D project, training and action, it is highly important to read through the training manual one last time and to repeat all the steps to take during the action – e.g. a final demonstration with the breathalyzer, the drug tests and the equipment measuring reaction time; an explanation of the procedures and of each person's responsibilities.

Motivation: This brief training will also play a major role in the communication process and will motivate the researchers by increasing their self-confidence in relation to their purpose, knowledge and involvement in the team. It provides an opportunity for discussing with the group their first impressions about the site, how they

feel about the action and for answering any final questions.

Allocation of tasks: As timing is essential in the good running of the action, each researcher must perfectly understand what their tasks will be. In order to be most efficient, the tasks should be ideally allocated as follows:

- **2 researchers behind the "information stand"**: to welcome the visitors, to supervise the material (breathalyzers, drug tests) and gradually to organize the questionnaires according to the anonymous bracelet number entered on each form (empty, half-compiled and fully-compiled), thereby helping the researchers in their tasks, such as retrieving the correct questionnaire for each participant and providing new ones, as well as with new drug tests or reloaded breathalyzers, and also with the handing out of the presents, etc.

- **1 researcher in charge of the equipment measuring reaction time**: this equipment needs permanent supervision, considering its high cost and its interesting appearance. Indeed, some visitors might be tempted to use it unsupervised, thereby compromising the essence of the awareness message or damaging the equipment.

- **6 researchers**: as many researchers as possible are necessary to welcome the visitors, to fill in the questionnaires, to follow them in their awareness procedure (drug tests, breathalyzers, reaction time equipment) and to deal with new participants from the queue.

- **1 coordinator**: to supervise the action being carried out, to supervise the researchers and also to help with the various tasks.

During the action it goes without saying that the researchers may switch places in order to take part in each step of the project. This task model can easily be adapted to each country, to the number of researchers or to the length of the action.

11.00 pm

Welcoming the first participants

The researchers are usually quite excited and enthusiastic in meeting the first participants.

As soon as the first people arrive at the entrance of the club, the researchers welcome them by explaining the project and asking for those who are driving license holders.

The number of people willing to take part in the action will vary according to various factors (such as the venue, type of people, age, weather conditions), and because of its duration and the fact that they have to do the tests twice (once on their arrival, once on their departure). The promise of the gift as a reward for their participation at the end of the questionnaire is usually quite appealing for the visitors, as well as the opportunity of trying out the various pieces of Ten D equipment. The original nature of the action is also very appealing, as well as the participants having the possibility of proving to their friends that they can drive them back home safely. This is

where the volunteers are involved in persuading the visitors to participate. Peer communication (young people talking to other young people) is the major asset of the Ten D teams and must be effectively used in order to promote awareness among a maximum number of youngsters.

If the visitor agrees to participate, the researcher then starts the Ten D process by asking him or her to sign the anonymous agreement form, summarizing the purpose of the action and its procedure, in order to consent to the use of the data for scientific purposes.

It often happens that an entire group of youngsters wishes to participate together in the action. It is then appropriate for two researchers to work together in dealing with the participants and to call for extra help if necessary.

After the project has been explained (so that it is entirely clear to the participants), the researcher starts by filling in the first questions. The questions are often amusing and of interest to the participants. As the questions focus on youth topics, youngsters quickly become confident and at ease.

Please note that the attitude of the researchers is extremely important. Staying cool and young in spirit is a real motto. It is necessary to highlight the fact that the researchers have to be as sincere as possible, to make a clear differentiation between the Ten D team and the authorities. The researchers are not police officers.

It is also essential to emphasize the importance of the participants returning at the end to complete the exit questionnaire so that the project is able to achieve satisfactory results.

The anonymous nature of the questionnaire is also quite important as the information remains confidential between the researcher and the participant.

The researcher then invites the participant to carry out a breathalyzer test and carefully notes the results of the test. As soon as this first test is done, the researcher asks the participant to use the reaction time equipment in order to carry out the braking test. This exercise has to be done twice: once as a trial run and once for the actual results. When the participant comes back for the exit questionnaire, he or she will already know how the equipment works; this initial trial ensures that participants carry out the braking test on arrival and on leaving with the same state of knowledge about how to use the equipment.

After the braking test, the researcher continues, if necessary, with the questionnaire, then wishes the participant an enjoyable evening, emphasizing once again the importance of returning to fill in the exit questionnaire on leaving the event.

TIMING: 10 minutes per participant

The timing should not exceed 10 minutes per participant. If the activities are seen as an entertainment included in the event, 10 minutes should be enough. The opportunity for the visitors to try out the equipment and become the centre of attention is often an important factor.

2.00 am

Welcoming back the participants

This part of the action requires a lot of attention as it is the hardest part to manage.

As many participants often come out at the same time it is extremely unlikely that they will be able to fill in their exit questionnaires with the same researcher (they often do not want to wait any longer in order to deal with the same volunteer). The Ten D desk can rapidly get very crowded with all the participants, their friends and all the researchers. The materials must therefore be carefully watched to avoid any risk of theft.

In order to gain time, it is advisable to start the second phase of the questionnaire with the drug test, then the breathalyzer, then the questionnaire itself and to end with the reaction time equipment.

The drug tests are easier to use than is often thought. It only takes a few minutes to collect saliva. This is the moment to talk about drug consumption, effects, consequences; keeping in mind that it is also an efficient awareness tool to have an opportunity to talk about this topic with youngsters and to link it to health and road safety prevention.

The exit questionnaires are much shorter and simpler to complete, only taking two minutes, requiring brief answers from the participant. And finally, the researcher invites the participant to sit one last time in the reaction time console for the last test of the Ten D journey.

Once all activities have been completed, the researchers must carefully take note of all the results, thank the participants for taking part, and give them the promised gift, wishing them (and their friends) a safe and enjoyable journey home.

TIMING: 10 minutes per participant

Despite the shortness of the exit questionnaire, the participants must also undergo the drug tests which require some extra time (maximum 5 minutes to obtain the results), during which the breathalyzer test and time reaction control can be done. It is also the opportunity for an awareness discussion with the participants and, where necessary, to dissuade them from driving if they are not in a fit state to do so.

5.00 – 6.00 am

Packing up

As the intervention comes to an end, the team pack up the materials and count the number of completed questionnaires. The team also ends the action with a short debriefing, taking notes on everyone's feelings about it.

The action ends and the researchers drive home safely.

Possible difficulties

Each of the Ten D by Night partners certainly made efforts to prepare their team and the necessary infrastructure in order to carry out the interventions as well as possible. But various factors or obstacles also became apparent. Different problems arose, most of which were common to all Ten D partners.

Sociological problems

For each intervention, it was essential to find the right target group. When the intervention on the field took place in venues frequented by young people, there was an almost 100% certainty that the right group of participants would be reached. But the situation became more complex in large, crowded discos. Many of the participants were over 30 years old and were therefore over the target age limit. The selection of the right venues was the key to achieving a successful intervention in collecting data from the right target group.

Another problem to deal with was a lack of trust in the questionnaires and their anonymity. Some of the participants were afraid to sign anything that dealt with the question of drug taking, also because of the fact that there were many personal questions that had to be answered at the end of study. It was necessary to explain the purpose of the studies and how exactly the mechanism worked.

Technical problems

The most reliable device was the Reaction Time Console. As long as it was operated indoors, no malfunctions appeared. However some of interventions took place outdoors in colder temperatures and sometimes it was necessary to restart the system.

The breathalyzer was also a reliable device. Problems arose when large numbers of young people began to leave the club at the same time. People were not usually prepared to wait for the test and left without completing the procedure. One extra breathalyzer would be very advisable.

The largest number of problems was recorded with saliva tests. Many of them did not work properly, some of the results were ambiguous. The time required for the saliva test examination was also considerable. For many people it was too long and caused them to decide to abandon the test. The reasons why the tests did not function properly are not clear but this is certainly why some participants refused to complete the examination. In many cases, therefore, questionnaires remained uncompleted.

A good organization and sufficient number of researchers was also very important: a sufficient number of researchers was especially important at the end of the event, when large numbers of people began to leave the venue. The larger the number, the more questionnaires were completed, and the better the results.

The conclusion is that there are some simple and obvious rules which are basics for efficient leading of Ten D by Night interventions.

Advantages of the action

There are three main types of advantage of the Ten D by Night actions on the field, which were pointed out by the participants themselves:

1. Many participants were favourably surprised by the Ten D action. Very often it was their first contact with the problem of the effect of alcohol and drugs on driving ability. In many cases it was also a good opportunity to extend their knowledge about the variety of drugs and their harm.
2. Interventions also offered a great opportunity for participants to check their own reactions when they were under the influence of alcohol or drugs, in conditions which were anonymous and confidential. The time reaction test showed all participants how reactions change and how dangerous it really is to drive after drinking alcohol or under the influence of drugs. Ten D actions alerted many youngsters very effectively.
3. Ten D actions were a very valuable source of scientific information on the behaviour of young people in our society. All of us live in a world in which alcohol and drugs are used but unfortunately the problem still seems to be a taboo. A very enthusiastic feedback by most of the participants provides proof about how necessary and relevant the Ten D by Night project has been. It shows that there is a real interest in society to expand this type of action throughout Europe.



Scientific results

All the results presented in the following Tables should be considered as preliminary, descriptive and not adjusted for confounders.

Table 1. Demographic data and socio-economic status by Country

	N	Belgium- The Netherlands	Bulgaria	Italy	Poland	Spain	Overall
		N=851	N=1044	N=954	N=1006	N=1002	N=4857
Gender	4849						
male		66% (560)	76% (788)	83% (789)	61% (617)	56% (562)	68% (3316)
female		34% (289)	24% (253)	17% (162)	39% (389)	44% (440)	32% (1533)
Age	4837	20 23 27	19 20 24	21 25 30	21 23 26	20 22 24	20 22 26
Living	4836						
alone		21% (179)	17% (174)	20% (193)	23% (227)	7% (72)	17% (845)
with parents		52% (443)	59% (605)	65% (620)	46% (457)	78% (778)	60% (2903)
with friends/colleagues		5% (41)	8% (80)	2% (23)	13% (127)	5% (46)	7% (317)
with partner		20% (172)	13% (139)	11% (100)	15% (153)	8% (78)	13% (642)
other		2% (13)	3% (35)	2% (15)	4% (39)	3% (27)	3% (129)
Education	4838						
none		22% (184)	0% (3)	1% (6)	0% (3)	1% (14)	4% (210)
middle school		31% (263)	7% (72)	20% (188)	3% (35)	13% (129)	14% (687)
high school		24% (203)	74% (767)	59% (565)	57% (571)	36% (365)	51% (2471)
academic		22% (187)	19% (198)	20% (194)	39% (397)	49% (494)	30% (1470)
Father's highest level of education	3969						
none		-	0% (4)	2% (22)	1% (13)	5% (46)	2% (85)
middle school		-	3% (26)	51% (483)	4% (38)	39% (389)	24% (936)
high school		-	64% (659)	33% (311)	50% (499)	27% (270)	44% (1739)
academic		-	33% (334)	14% (131)	45% (452)	29% (292)	30% (1209)
Employment status	4704						
student		37% (312)	51% (462)	28% (265)	60% (599)	50% (501)	45% (2139)
employed		58% (488)	38% (345)	67% (633)	35% (351)	39% (393)	47% (2210)
looking for employment		5% (44)	12% (107)	6% (53)	5% (45)	11% (106)	8% (355)

a b c represent the lower quartile a, the median b, and the upper quartile c for continuous variables. N is the number of non-missing values. Numbers after percentages are frequencies.

Overall, 68% of the participants were males: a male prevalence is anyway shown for each country. Median age was 22 years; some differences can be detected among countries. The majority of participants stated that they lived with parents (60%). Education level is generally high in all countries. Most of the subjects are employed (47%) and students (45%) with some differences between countries. Data relating to father's level of education are not available for Belgium and Netherlands due to the local law on privacy.

Table 2. Driving habits by Country

	N	Belgium- The Netherlands	Bulgaria	Italy	Poland	Spain	Overall
		N=851	N=1044	N=954	N=1006	N=1002	N=4857
Age for motorbike licence	1562	16 16 18	18 20 23	16 18 21	12 14 15	14 16 17	14 16 18
Age for car licence	4191	18 18 19	18 18 19	18 18 18	18 18 19	18 18 19	18 18 19
Driving frequency (last month)	4784						
<i>never</i>		9% (72)	24% (252)	2% (20)	20% (197)	10% (99)	13% (640)
<i>less than once a week</i>		3% (29)	16% (163)	4% (40)	10% (103)	8% (79)	9% (414)
<i>several times a week</i>		14% (117)	15% (159)	14% (137)	19% (192)	16% (151)	16% (756)
<i>on a daily basis</i>		74% (625)	45% (463)	79% (750)	50% (498)	66% (638)	62% (2974)
Speeding tickets (lifetime)	4786						
<i>none</i>		52% (436)	77% (801)	68% (642)	68% (672)	78% (761)	69% (3312)
<i>less than five</i>		33% (277)	18% (186)	28% (259)	22% (222)	19% (184)	24% (1128)
<i>more than five</i>		15% (127)	5% (54)	4% (40)	10% (99)	3% (26)	7% (346)
Licence suspensions (lifetime)	4788						
<i>none</i>		92% (776)	91% (949)	89% (847)	96% (949)	90% (872)	92% (4393)
<i>once</i>		6% (48)	7% (77)	9% (88)	4% (35)	9% (85)	7% (333)
<i>more than once</i>		2% (16)	1% (12)	1% (12)	1% (9)	1% (13)	1% (62)
Crashes as driver (lifetime)	4797						
<i>none</i>		67% (560)	80% (837)	52% (489)	69% (686)	68% (662)	67% (3234)
<i>once</i>		22% (188)	13% (138)	25% (241)	20% (203)	21% (203)	20% (973)
<i>more than once</i>		11% (94)	6% (65)	23% (218)	11% (106)	11% (107)	12% (590)

^a ^b ^c represent the lower quartile a, the median b, and the upper quartile c for continuous variables. N is the number of non–missing values. Numbers after percentages are frequencies.

Most participants had a car licence, only 1562 had a motorbike licence. Overall 62% of the participants stated that they drove on a daily basis: Italy and Belgium/The Netherlands showed the highest rates, 79% and 74% respectively. 31% reported having received at least one speeding ticket and 8% experienced at least one licence suspension. There were no considerable differences between countries. 32% of subjects declared they were involved in road crashes as a driver during their lifetime, with a particularly high percentage in Italy (48%).

Table 3. Alcohol and psychoactive substances use by Country (consumption declared)

	N	Belgium- The Netherlands	Bulgaria	Italy	Poland	Spain	Overall
		N=851	N=1044	N=954	N=1006	N=1002	N=4857
Alcohol consumption (last month)	4835						
never		10% (83)	11% (116)	6% (56)	6% (64)	7% (74)	8% (393)
once or twice a month		21% (177)	22% (231)	16% (155)	25% (247)	26% (256)	22% (1066)
once a week		34% (290)	29% (300)	44% (419)	37% (367)	47% (470)	38% (1846)
3 or 4 days per week		23% (191)	24% (246)	23% (219)	26% (261)	15% (153)	22% (1070)
every day		13% (107)	14% (151)	10% (97)	6% (60)	5% (45)	10% (460)
Binge drinking (last month)	4783						
yes		33% (274)	54% (553)	41% (383)	58% (563)	72% (711)	52% (2484)
no		67% (569)	46% (478)	59% (560)	42% (412)	28% (280)	48% (2299)
Any psychoactive substance consumption (last year)	4833						
yes		31% (259)	18% (185)	25% (235)	37% (364)	56% (558)	33% (1601)
no		69% (586)	82% (854)	75% (716)	63% (633)	44% (443)	67% (3232)
Beer consumption before the night	4513						
yes		33% (269)	31% (270)	21% (193)	31% (289)	30% (294)	29% (1315)
no		67% (558)	69% (592)	79% (714)	69% (645)	70% (689)	71% (3198)
Wine consumption before the night	4311						
yes		11% (89)	6% (43)	27% (254)	6% (57)	16% (157)	14% (600)
no		89% (713)	94% (674)	73% (671)	94% (834)	84% (819)	86% (3711)
Distilled spirits consumption before the night	4500						
yes		15% (123)	25% (217)	24% (218)	23% (215)	26% (255)	23% (1028)
no		85% (682)	75% (656)	76% (704)	77% (713)	74% (717)	77% (3472)
Cocktail consumption before the night	4279						
yes		8% (61)	2% (13)	21% (191)	2% (21)	9% (84)	9% (370)
no		92% (739)	98% (683)	79% (730)	98% (868)	91% (889)	91% (3909)

	N	Belgium- The Netherlands	Bulgaria	Italy	Poland	Spain	Overall
Alcopops consumption before the night	4298						
yes		3% (27)	0% (3)	1% (7)	7% (68)	64% (635)	17% (740)
no		97% (767)	100% (686)	99% (895)	93% (848)	36% (362)	83% (3558)
Psycho-active substance consumption before the night	4826						
yes		6% (52)	2% (16)	4% (35)	4% (37)	22% (222)	8% (362)
no		94% (794)	98% (1022)	96% (909)	96% (963)	78% (776)	92% (4464)
Planning to drink alcohol during the night	4827						
yes		59% (503)	63% (652)	74% (698)	76% (759)	67% (665)	68% (3277)
maybe		10% (85)	12% (120)	10% (94)	6% (59)	6% (58)	9% (416)
no		30% (258)	26% (266)	17% (157)	18% (181)	27% (272)	23% (1134)
Planning to take psycho-active substance during the night	4805						
yes		3% (29)	1% (11)	1% (14)	2% (21)	16% (156)	5% (231)
maybe		2% (15)	3% (29)	2% (21)	5% (47)	7% (73)	4% (185)
no		95% (801)	96% (989)	96% (910)	93% (928)	77% (761)	91% (4389)

N is the number of non-missing values. Numbers after percentages are frequencies.

Overall 52% of the participants had engaged in binge drinking in the past month, whereas the majority declared they did not drink any alcohol before arriving at the club. 8% declared they had used psychoactive drugs entering the club with a remarkably high value in Spain. 77% stated that they intended to use alcohol during the night with no relevant differences among countries, and 9% intended to use psychoactive substances.

Table 4. Driving and alcohol/psychoactive substances use by Country

	N	Belgium- The Netherlands	Bulgaria	Italy	Poland	Spain	Overall
		N=851	N=1044	N=954	N=1006	N=1002	N=4857
Driving under influence of alcohol (last month)	4788						
yes		27% (226)	14% (150)	24% (225)	6% (56)	31% (297)	20% (954)
no		73% (617)	86% (888)	76% (723)	94% (940)	69% (666)	80% (3834)
Driving under influence of drugs (last month)	4731						
yes		5% (43)	2% (18)	5% (49)	3% (29)	17% (161)	6% (300)
no		95% (784)	98% (1013)	95% (887)	97% (948)	83% (799)	94% (4431)
Arrested for driving under influence of alcohol/drugs (last year)	4757						
yes		5% (38)	1% (13)	1% (10)	1% (8)	5% (49)	2% (118)
no		95% (801)	99% (1010)	99% (936)	99% (980)	95% (912)	98% (4639)
Crash driving under influence of alcohol/drugs (lifetime)	4788						
yes		5% (41)	3% (30)	6% (53)	2% (15)	7% (71)	4% (210)
no		95% (798)	97% (1004)	94% (895)	98% (983)	93% (898)	96% (4578)

^a ^b ^c represent the lower quartile ^a, the median ^b, and the upper quartile ^c for continuous variables. N is the number of non–missing values. Numbers after percentages are frequencies.

Overall 20% of participants declared they had driven under the influence of alcohol in the last month with a maximum in Spain (31%) and the lowest rate in Poland. 2% of subjects were arrested for driving under the influence of alcohol/drugs, with a higher value in Belgium/Netherlands and Spain (5%). A total of 4% of subjects had crashed under the influence of these substances.

Table 5. Alcohol and psychoactive substance consumption declared at the event by Country

	N	Belgium- The Netherlands	Bulgaria	Italy	Poland	Spain	Overall
		N=851	N=1044	N=954	N=1006	N=1002	N=4857
Nr of alcoholic drinks during the night	3243						
1		10% (62)	16% (169)	32% (192)	14% (108)	12% (24)	17% (555)
2		10% (66)	23% (236)	26% (156)	17% (130)	16% (32)	19% (620)
3		8% (48)	20% (211)	14% (84)	18% (140)	15% (30)	16% (513)
4		5% (33)	8% (86)	8% (48)	13% (97)	11% (21)	9% (285)
5 or more		32% (205)	5% (49)	9% (56)	18% (139)	25% (48)	15% (497)
none		35% (223)	27% (281)	12% (73)	20% (157)	20% (39)	24% (773)
Drug consumption at the event	3219						
yes		7% (47)	2% (18)	1% (7)	5% (37)	25% (48)	5% (157)
no		93% (586)	98% (998)	99% (603)	95% (731)	75% (144)	95% (3062)
Marijuana		5% (33)	1% (13)	1% (4)	3% (26)	21% (40)	4% (116)
Methamphetamines		2% (12)	0% (3)	0% (0)	0% (2)	1% (1)	1% (18)
Cocaine		1% (8)	0% (5)	0% (0)	1% (5)	0% (0)	1% (18)
Hallucinogens		0% (1)	0% (2)	0% (0)	0% (2)	2% (3)	0% (8)
Amphetamines		1% (8)	0% (5)	0% (0)	1% (5)	0% (0)	1% (18)
Benzodiazepines		0% (1)	0% (2)	0% (1)	0% (1)	0% (0)	0% (5)
Opiates		0% (0)	0% (1)	0% (0)	0% (1)	0% (0)	0% (2)

N is the number of non–missing values. Numbers after percentages are frequencies.

Overall, 76% of participants declared they consumed at least one alcoholic drink at the club and 5% declared the consumption of one type of drug. Among drug consumers, the majority of them used marijuana in every country involved. Other drugs did not present relevant values.

Table 6. Blood alcohol concentration and reaction time at the entrance and exit of the clubs by Country

Country	Alcohol test				Reaction time test			
	N	First Alcohol Test	N	Second Alcohol Test	N	First RT Test	N	Second RT Test
Belgium-The Netherlands	829	0.29 (0.26;0.32)	643	0.42 (0.38;0.47)	705	1.03 (1;1.06)	550	0.98 (0.95;1)
Bulgaria	1044	0.18 (0.16;0.2)	1036	0.45 (0.43;0.48)	1040	0.71 (0.69;0.73)	1031	0.69 (0.68;0.71)
Italy	942	0.22 (0.19;0.24)	604	0.36 (0.33;0.39)	935	0.65 (0.63;0.67)	596	0.66 (0.64;0.68)
Poland	1000	0.44 (0.41;0.47)	776	0.72 (0.68;0.76)	999	0.60 (0.57;0.65)	776	0.62 (0.61;0.65)
Spain	993	0.45 (0.42;0.47)	167	0.53 (0.47;0.6)	927	0.75 (0.72;0.78)	147	0.69 (0.66;0.73)
Overall	4808	0.32 (0.3;0.33)	3226	0.5 (0.48;0.52)	4606	0.73 (0.72;0.74)	3100	0.72 (0.71;0.73)

Mean and 95% confidence intervals computed using bootstrap re-sampling procedure are reported.

The mean blood-alcohol concentration was higher at the exit in comparison with entry in each country involved. In each country exit values were significantly higher than entrance values. Regarding the reaction time, there was no appreciable difference between entry and exit tests.

Table 7. Intention to drive expressed by participants with second Alcohol test > 0.5 g/l by Country

	N	Belgium-The Netherlands	Bulgaria	Italy	Poland	Spain	Overall
		N=208	N=418	N=171	N=455	N=81	N=1333
Are you going to drive this night?	1289						
no		80% (162)	94% (387)	69% (116)	99% (435)	63% (42)	89% (1142)
yes, later		6% (13)	5% (19)	11% (19)	0% (2)	25% (17)	5% (70)
yes, now		13% (27)	1% (5)	20% (33)	1% (4)	12% (8)	6% (77)

N is the number of non–missing values. Numbers after percentages are frequencies.

Overall, a presence of an exit alcohol test higher than 0.5 g/l related to a high percentage of participants declaring an intention not to drive, except for Italy and Spain.



Table 8. Comparison between declared and tested consumption of psychoactive substances by Country

	Belgium - The Netherlands			Bulgaria			Italy		
	Declared	Tested	p-value	Declared	Tested	p-value	Declared	Tested	p-value
Marijuana	5% (33)	3% (21)	0.134	1% (13)	0% (2)	0.008	1% (4)	3% (17)	0.002
Methamphetamines	2% (12)	2% (11)	0.92	0% (3)	0% (4)	0.601	0% (0)	0% (0)	
Cocaine	1% (8)	3% (16)	0.078	0% (5)	0% (2)	0.32	0% (0)	1% (3)	0.065
Amphetamines	1% (8)	1% (7)	0.864	0% (5)	1% (5)	0.865	0% (0)	0% (0)	
Benzodiazepines	0% (1)	1% (8)	0.016	0% (2)	0% (0)	0.18	0% (1)	1% (3)	0.065
Opiates	0% (0)	0% (3)	0.076	0% (1)	0% (4)	0.143	0% (0)	0% (1)	0.287
	Poland			Spain			Overall		
	Declared	Tested	p-value	Declared	Tested	p-value	Declared	Tested	p-value
Marijuana	3% (26)	5% (36)	0.156	21% (40)	32% (45)	0.024	4% (116)	4% (121)	0.3
Methamphetamines	0% (2)	0% (3)	0.631	0% (1)	1% (2)	0.385	1% (18)	1% (20)	0.545
Cocaine	1% (5)	1% (10)	0.176	0% (0)	9% (13)	<0.001	1% (18)	2% (44)	<0.001
Amphetamines	1% (5)	1% (5)	0.961	0% (0)	0% (0)		1% (18)	1% (17)	0.916
Benzodiazepines	0% (1)	0% (1)	0.983	0% (0)	1% (2)	0.091	0% (5)	0% (14)	0.01
Opiates	0% (1)	0% (2)	0.546	0% (0)	1% (1)	0.231	0% (2)	0% (11)	0.008

N is the number of non–missing values. Numbers after percentages are frequencies.

Overall, there are significant differences in relation to cocaine, benzodiazepine and opiate consumption between the declared and tested values. The difference for marijuana consumption is significant in Bulgaria, Italy and Spain.

Table 9. Opinion about the intervention by Country

	N	Belgium- The Netherlands	Bulgaria	Italy	Poland	Spain	Overall
		N=851	N=1044	N=954	N=1006	N=1002	N=4857
Perception of the usefulness of the intervention (ordinal)	3225						
1		3% (17)	2% (18)	5% (31)	1% (8)	3% (6)	2% (80)
2		6% (40)	4% (43)	10% (62)	3% (26)	6% (11)	6% (182)
3		26% (165)	15% (154)	33% (203)	12% (94)	28% (53)	21% (669)
4		65% (409)	79% (811)	52% (316)	83% (639)	63% (119)	71% (2294)
Desire of more initiatives	3218						
yes		93% (586)	98% (1005)	96% (584)	97% (741)	99% (188)	96% (3104)

N is the number of non–missing values. Numbers after percentages are frequencies.

The majority of participants (92%) considered that this intervention was useful, with the least enthusiasm in Italy. Almost all the participants (96%) would appreciate more initiatives like this in the future.



Guidelines for implementation

This section describes the main steps, investment, equipment and human resources necessary to carry out a project using the methodology of the Ten D by Night project. This section also describes the positive and negative aspects of the Ten D by Night project that should be taken into account by each individual researcher or action provider in planning and implementing a project such as this, which can be implemented at national, regional or municipal level, and as a long-term as well as a short-term programme.

Phases for implementation of the project

Analysis of the situation at the place where the project will be implemented:

1. To establish the project working group.
2. To identify and review existing information regarding alcohol and drug use among young people, in traffic accidents and in a number of clubs/discos.
3. To audit a legal basis for data collection and intervention.
4. To develop a profile of the problem and data needed for follow-up.
5. To plan the intervention, the data collection process and evaluation of the intervention.

ITEMS TO TAKE INTO CONSIDERATION:

- **The project working group** will oversee the development and maintenance of data, support the achievement of the goals and objectives of the project (a questionnaire for participants, process and outcome evaluation tools). The group will establish dissemination mechanisms and ensure dissemination of the results.
- **Quality and completeness of data:** limitations and potential bias in the data. The nature of data, factors influencing it (data source, level of generalization).
- **Collaboration with** institutions and stakeholders dealing with alcohol, drugs control and traffic safety can increase an understanding of the existing situation.

Adoption of methodology

Based on evidence produced during situational analyses, the priorities of the intervention programme can be redefined where necessary, new objectives set and the implementation process modified, in order to fulfil the needs of stakeholders.

ITEMS TO TAKE INTO CONSIDERATION:

- **Existing policies and legal bases** in places which support new approaches for prevention in cases of driving under the influence of alcohol and/or drugs.
- **Financial feasibility** of the project.
- **Time and human resources** working for the project.
- To choose the most convenient and **appropriate setting** for the intervention.

Preparation for the work

1. Training of project workers/volunteers.
2. Purchasing the equipment - alcohol tests, drug tests, console for measurement of the reaction time.
3. Developing and printing project tools - questionnaires, leaflets, information/consent forms, posters advertising the project and action in particular places and times.
4. Looking for recreational venues.
5. Advertising the project and increasing awareness among the local population.

ITEMS TO TAKE INTO CONSIDERATION:

- **The size of project staff** must be commensurate with the number of young people wishing to take part during the course of the intervention, bearing in mind that sometimes interest in the project can be very high and there are many participants at the same time to deal with.
- **During the training** attention should be paid not only to the correct test interpretation and application but also to development of communication skills.
- **Tests** should be selected according to their sensitivity, validity, reliability and also time taken, appropriateness and simplicity.

- **Questionnaire** should be as short as possible, according to the information which it is necessary to collect. A good working knowledge of the instrument by researchers certainly makes it quicker and easier to use.
- **Leaflets and posters** should advertise the main project idea and help to increase awareness and the recruitment of participants.
- **Number of intervention places** - clubs, discos - should be selected taking into account a 10% to 75% rejection rate, especially if there has not been a previous collaboration at these places.

Field work

1. Recruitment of participants and flow management.
2. Every intervention consists of two phases with several steps.
3. The first phase at the entrance - voluntary self-selected participants fill in the first part of the questionnaire, carry out the first alcohol test and the first measurement of reaction time using driving simulation equipment, a console.
4. The second phase of intervention – when people leave the venue, the same participants fill in the second part of the questionnaire, carry out a second alcohol test, a drug test and second measurement of reaction time using driving simulation equipment, a console.
5. To explain the results and to inform participants about risk of driving under the effect of alcohol and/or drugs.
6. To provide participants with a leaflet informing them about alcohol/drug related problems.

ITEMS TO TAKE INTO CONSIDERATION:

- Participation in the project should be **voluntary**; to ensure this, each participant has to sign a consent form.
- Participation in the project should be **anonymous; to ensure the identification of participants** when they arrive and when they leave the club, a system of identification numbers printed, for example, on disposable, non-transferable bracelets should be used.
- There is a **dropout** rate among the participants who take part in the first phase but refuse to participate in the second phase
- **Premises** where the project activities take place have to be large enough to avoid crowds of participants, delays in dealing with people, accidental damage to equipment or loss of equipment.

- **If an activity is taking place outdoors** weather conditions have to be taken into consideration.
- **The average time** needed for completing all tasks during the first and second phases of the intervention should not exceed 20 minutes.
- **To test the changes in the reaction speed** it is advisable for participants to have a trial before the first test.
- **To increase the trust level** each participant can receive his/her test results; in addition, materials regarding the impact of drug use and suggestions on what to do after use of drugs should be given to each participant together with his/her test results.
- **To attract participants and to promote the project** small gadgets with the project logo can be presented to each participant, e.g. TEN D by Night – iPod holder.

Project data analyses, dissemination of the results and sustainability

Data from the intervention study can be used for research purposes, for monitoring situations in the long term and for evaluation of the project.

They could be used as basic information for different intervention activities and health promotion projects. They could also be included in secondary school programmes, as well as being used for training of new drivers in driving schools to demonstrate to young people how alcohol and drugs affect reaction speed. Data can be used to improve the policy of reducing the number of car accidents.

ITEMS TO TAKE INTO CONSIDERATION:

- **Publishing of the results** will increase publicity of the intervention, increase awareness among the population and possibly attract investment and interested stakeholders.
- **Placing the intervention project with NGOs** will increase the sustainability of the project.

Positive and negative aspects of the Ten D by Night project

POSITIVE ASPECTS

- A positive assessment from project managers, team and volunteers.
- A positive attitude toward project activities from club or disco owners/employees where these activities took place and also a positive attitude among project participants.
- The conviction that project actions attract the attention of potential clients and improve the reputation of clubs.

- Using intervention tools – a questionnaire and direct measurement of the alcohol and drug presence – makes it possible to combine self reporting with the results of direct measurement and to reduce reporting bias.
- The inclusion of reaction time measurement as an objective indicator of the performance of drivers can be used as a very powerful argument with regard to the change in reaction speed.
- Interventions contribute toward positive changes in the beliefs of young people and increase awareness of the potential relationship between the use of alcohol, psychoactive substances and users' driving capacity.
- Awareness of the relevance of the drink driving problem can increase through the planned activities and dissemination of accurate information.

NEGATIVE ASPECTS

- The voluntary recruitment of participants and the selection of the intervention places on the basis of their willingness to participate can diminish the representative level and limit the general effect of the collected results.
- The measurement of alcohol allows an exact determination of the quantity of alcohol in the body, while the measurement of drugs only points to the presence or absence of drugs.
- Intervention tools: the questionnaire is sometimes considered too long by people interviewed and the drug test takes too much time for collecting saliva and obtaining results.





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