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# Reducing Harmful Use of Alcohol with Behavioural Interventions

*A workshop report*

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**Abstract**

Excessive alcohol consumption is a widespread problem in many European countries. Being the third-leading risk-factor for disease and mortality in Europe, reducing harmful use of alcohol is considered one of the priority public health areas by WHO. In collaboration with DG SANTE, the Behavioural Economics Team of the Joint Research Centre organised a workshop designed to strengthen and disseminate the knowledge base on effective behavioural interventions, drawing from emerging disciplines such as behavioural economics and e-health.



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# Table of contents

<i>Executive summary</i>	5
The workshop	6
<b>Day 1</b>	7
Active ingredients in behaviour change interventions	7
Interventions via smart phone applications	8
Introduction of participants	10
Enforcing age limits	12
Tackling causes of youth drinking	13
<b>Day 2</b>	15
How to test the effectiveness of an intervention?	15
Optimizing reach and use of behavioural interventions	17
Exploring collaboration	19
Conclusions	19
References	21
<i>Annex</i>	24
List of participants	24
Programme	26
Participant feedback	27



## *Executive summary*

Excessive alcohol consumption is a widespread problem in many European countries. Being the third-leading risk factor for disease and mortality in Europe, reducing harmful use of alcohol is considered one of the priority public health areas by WHO. In collaboration with DG SANTE, the Behavioural Economics Team of the Joint Research Centre organised a workshop designed to strengthen and disseminate the knowledge base on effective behavioural interventions, drawing from emerging disciplines such as behavioural economics and e-health.

Researchers in several European countries are active in developing and evaluating behavioural interventions to reduce the harmful use of alcohol. Lifestyle interventions are more and more frequently delivered using the internet and new mobile technology, allowing for a potentially high level of reach at relatively low costs.

This workshop provided a platform for mutual learning among academics and national authorities. The content of the plenary sessions and the discussions that followed are summarised in this document. Academics presented their latest results on the development, testing, and dissemination of behaviour change interventions. They also presented new ideas that could be tested in collaboration with national authorities, with a particular focus on youth drinking and binge drinking. Participating Member States' representatives reported on their previous initiatives and experiences in reducing alcohol related harm in order to give the participating scientists the opportunity to learn about the challenges faced by national authorities.

The workshop lasted for 1.5 days, and took place at the Joint Research Centre in Ispra, Italy, on the 9<sup>th</sup> and 10<sup>th</sup> of December 2014.

## The workshop

The workshop agenda and a list of participants can be found in the *Annex* of this report. The workshop consisted of two types of sessions: plenary sessions were organised around two main topics:

1. behavioural interventions targeting harmful use of alcohol that are delivered using new communication technology,
2. suggestions to tackle the problem of youth drinking and heavy episodic drinking from the behavioural economics perspective;

brainstorming sessions allowed participants to extend the discussion in smaller groups, and to explore areas for future collaboration.

Below, the plenary sessions and the discussions that evolved around these topics are summarised. References to relevant literature are given in order to put the discussions into context.

# Day 1

## Active ingredients in behaviour change interventions

In his talk, Paul Norman outlined that when aiming to change health behaviour, a good understanding of the drivers of the behaviour in question is crucial. In particular, it can help to decide which variables to target in interventions, and to understand how a change in these variables brings about a change in behaviour. In line with this, meta analyses of behaviour change interventions have found that theory-based interventions are more effective than those without theoretical foundation. One of the most established models is the Theory of Planned Behaviour (Ajzen, 1991), which postulates that attitudes, subjective norm, and perceived behavioural control are key drivers of intention, which in turn – to a certain extent – drives behaviour. Paul then explained how he developed an intervention targeting binge drinking in university students on the basis of this theory and extensive formative research engaging actual university students (Epton *et al.*, 2014). Among the factors that were found to be most relevant in predicting binge drinking intentions and future binge drinking behaviour were the beliefs that binge drinking was fun, that friends would want one to engage in binge drinking, and that friends engaging in binge drinking would make own binge drinking more likely. Thus, there appears to be strong perceived social pressure to binge drink, and it is perceived to be fun. On the other hand, the belief that binge drinking would have a negative impact on the studies made binge drinking less likely. These insights were then used to generate health messages to target those beliefs, again involving actual university students in the development. On the basis of experience with a previous, fairly complex online intervention targeting multiple health behaviours at once (Epton *et al.*, 2013), ongoing research focuses on a shorter intervention that is delivered once and does not require repeated engagement with the intervention. Preliminary results suggest that the intervention is effective in changing attitudes, normative beliefs and also binge drinking intentions in the desired direction. In

the last part of his talk, Paul addressed the intention-behaviour gap. Although intentions determine behaviour to some degree, this relationship is far from perfect. Therefore, behaviour change interventions need to go beyond changing attitudes and intentions, and seek to overcome this gap. One way to do so effectively is to facilitate so-called implementation intentions, that is, to allow users of an intervention to form concrete behavioural plans to act on their intentions (Gollwitzer & Sheeran, 2006).

In the context of Paul's talk it was discussed that online interventions are generally transferrable across contexts at relatively low cost, but cultural differences need to be considered and adjustments to the content may be necessary. Therefore, formative research with the respective target group is recommended. However, it was also highlighted that social pressure is likely to play a role in many contexts. Furthermore, it was discussed that a systematic evaluation of an online intervention in the form of a randomized controlled trial in a new context can sometimes be easily implemented. For example, if students are invited via email to participate in a questionnaire on alcohol consumption and a brief intervention, some of the students could be randomly assigned to a control group receiving no intervention and others could be assigned to the intervention group—a function which is readily available in some software packages. The effect of the intervention could then be established by asking participants to report their alcohol consumption again after a certain amount of time.

### Interventions via smart phone applications

Next, Anne Berman presented her work on digital alcohol interventions via smartphone applications. Smartphone applications have great appeal to users and the availability of applications targeting health behaviours is increasing. Studies evaluating the effectiveness of these interventions are scarce, however. In the context of alcohol, Anne presented smartphone applications as one part of a *digital stepped care* approach, where the first level consists of an online screening tool and brief personalised feedback. Based on the results of screening, hazardous and harmful drinkers could be offered a more complex intervention that can be delivered either via a website or via a smartphone application. A third step, which is currently under development, could be a platform for specialist-guided internet-based self-help.

For step one, Anne presented the results of a randomised controlled trial that compared an assessment-only group with a web-based screening and a web-based self-help programme. Compared to baseline, all groups decreased their drinking, but no differences emerged between the treatments (Sinadinovic, Wennberg, Johansson & Berman, 2014). For step two, Anne presented the results of a recent randomised-controlled trial evaluating the effectiveness of two different smart-phone applications in reducing alcohol consumption in university students. Such interventions are potentially very suitable for university students, since availability of smart phones in this target group is very high. A prominent feature of both of the apps was the possibility to track drinks in real time and to retrieve an estimated blood alcohol concentration. However, this first evaluation of the two smart-phone applications found no beneficial effects of the applications, and even an increase in drinking occasions (but not quantity of alcohol consumed) of male drinkers for one of the applications (Gajecki, Berman, Sinadinovic, Rosendahl & Andersson, 2014).

Lastly, Anne summarised her experience with smart phone applications into recommendations for policy makers that wish to offer a smart phone application. She highlighted among others the need for research-based development and pilot testing. Also, as administrators of an intervention, it is desirable to have direct access to making changes in the application via a user-interface. And lastly, expertise in both data protection and data base management are needed.

Following Anne's talk it was highlighted that research-based development can be challenging for policy makers in particular because of strict legal requirements of public procurement. In the discussion on online and smart phone interventions, participants assessed the practical feasibility of transferring interventions to another country, saving the cost and time of developing an intervention starting from zero. It was concluded that it is generally feasible to use existing software resources and fill them with content in a different language. Depending on the complexity of the software underlying the online intervention, this might require IT specialist services, but simpler programmes could be administered with basic IT skills.

## Introduction of participants

Next, the participants briefly introduced themselves, as well as the main challenges and initiatives regarding alcohol-related harm in their respective countries. Most participants emphasised that alcohol consumption was a major public health issue in their country. Perceived challenges were a lack of resources of public health bodies, in particular in comparison to budgets available to industry for marketing and lobbying. Industry influence on policy was then also named as a challenge from the public health perspective by several participants. Several participants also described a lack of continuity in their work due to a frequently changing political situation. Also challenges in the coordination of prevention activities were described, for example due to federal division of responsibilities, or due to a large number of non-governmental organizations. Some participants raised the issue of insufficient enforcement of laws on restrictions of alcohol consumption in their country.

It became apparent that there is considerable heterogeneity across countries with respect to the target groups most in need of intervention: while some countries described a fall in alcohol consumption among young people, and a rise in consumption among older age groups, other countries described that young people were drinking more and earlier than ever before. Thus, in some countries the target groups for interventions seem to be changing, and while young people have long been the focus of prevention and monitoring activities, there seems to be a lack of programmes targeting older age groups.

Various ongoing initiatives were described. Some participating countries have or are currently developing e-health interventions (see for example Tensil, Jonas & Strüber, 2013). Other initiatives target parents (see for example <http://www.xn--tnkom-gra.nu/>, or Koutakis, Stattin & Kerr, 2008), school staff, and healthcare units at universities. While some of the presented programmes were evaluated for their effectiveness, others were not, often for lack of resources.

Regarding the transfer of scientific insights into practical prevention work, it was highlighted that the standard outlet for research results, the international peer-reviewed article is often ill-suited for practitioners, both because of language barriers,

and because of the focus on technicalities. Hosting regular face-to-face meetings between scientists and prevention workers, *e.g.* on the national level, was advocated as a useful routine to overcome this problem. It was also raised that existing efforts at designing interventions target primarily conscious processes around drinking, while automatic processes might play a significant role in determining drinking behaviour.

After the introduction of the participating Member States, Paola D'Acapito from the European Commission's Consumer Health and Food Executive Agency presented the work of the Agency, and relevant projects. Under the EU health programme, the Agency manages various projects related to harmful use of alcohol and e-health. For example, the project 'Let it hAPYN' aims to provide an overview of evidence-based alcohol intervention programmes for youth organizations (see [http://www.eurocare.org/eu\\_projects/let\\_it\\_hapyn/background](http://www.eurocare.org/eu_projects/let_it_hapyn/background)), the project 'Club Health' provides a wide range of resources for implementing a safer nightlife (see <http://club-health.eu/>), and the TEN-D by night project aimed at reducing road accidents associated with consumption of alcohol and other psychoactive substances (see Siliquini *et al.*, 2011).

Finally, Attila Balogh from DG SANTE gave an overview on the current initiatives regarding alcohol policy at EU level and put the workshop in perspective with respect to the EU Alcohol Strategy. He referred among others to the ongoing Joint Action on Reducing Alcohol Related Harm co-funded by the Health Programme, to the Action Plan on Youth Drinking and on Heavy Episodic Drinking endorsed by the Committee on National Alcohol Policy and Action in September 2014 and the Scoping Paper of the Committee on National Alcohol Policy and Action calling the European Commission for a new and comprehensive strategy to tackle harmful use of alcohol and alcohol related harm. He emphasised that the Commission is currently considering how to take forward the work on reducing alcohol-related harm. One of the options is to include alcohol-related harm in a more holistic approach aiming to support sustainable and resilient health systems and reduce the burden of chronic diseases.

## Enforcing age limits

After the lunch break, Christian Traxler proposed a strategy for a mailing campaign to improve the compliance with legal age limits for alcohol purchases. This was motivated by the fact that, although an effective policy tool, age limits are incompletely enforced and evidence from both surveys and mystery shopping studies suggest that minors succeed at buying alcohol in the majority of cases. Since traditional enforcement strategies such as inspections, compliance checks and sanctions are costly and limited in effectiveness, Christian proposed to complement them with a behavioural enforcement strategy. He suggested a mailing campaign, where a postcard is mailed to alcohol outlets in order to increase the chance that cashiers ask young customers for identification. The postcard would be designed to raise attention about the problem, create awareness that owners and cashiers have the responsibility to protect minors, and to increase the salience of legal consequences. The effectiveness of such a mailing campaign could be established in a pilot study with a selected number of regions. Outcome variables such as awareness of purchase age and alcohol shopping success could be measured using surveys and mystery shopping in all pilot regions. Then, in some of the selected regions (*e.g.* different cities or provinces), a mailing campaign would be conducted, whereas the remaining pilot regions would receive no intervention and would serve as control regions for comparison. Awareness of and compliance with purchase age limits would then be assessed again several months after the mailing campaign. Such a setup would allow for a direct comparison of the regions that received the mailing campaign and those that did not, and thus would allow quantifying the effect that can be achieved with such a campaign. For an example of such a mailing campaign as an enforcement strategy and a systematic evaluation thereof, see Fellner, Sausgruber & Traxler (2013).

In the discussion on Christian's proposal, participants from various countries reported their initiatives regarding enforcement of legal purchase age laws. For instance, cash registers in supermarkets automatically remind the cashier to check the age of the customer when alcohol is purchased. In some cases, these also require to enter the birth year of the customer in order to proceed. This has the advantage that the cashier is forced to actively respond to the reminder, and does not need to calculate the age of the customer from the birth year. Participants from

several countries felt that additional interventions, such as the proposed mailing campaign, could be valuable for outlets where such automated support for age checks was not in place.

### Tackling causes of youth drinking

Michele Belot suggested interventions that target alcohol consumption of young people indirectly, by targeting potential causes of unhealthy behaviour and excessive alcohol consumption. She identified two important factors: first of all, letting go of inhibitions and coping with stress play an important role in excessive drinking. Second, alcohol plays an important role in socializing and making friends.

Based on these ideas, Michele identified a set of potential targets for interventions, many of which can be subsumed under the term 'executive function'. The term 'executive function' refers to a set of control functions needed for complex thinking, long-term planning, and impulse control. With respect to excessive alcohol consumption, stress management and coping mechanisms, as well as self-confidence in peer relations appeared most relevant.

To target the identified factors, Michele proposed a set of interventions that can be offered in the school or university context. In her selection, she drew from recent scientific evidence suggesting that practices such as martial arts, yoga, and mindfulness are indeed effective at improving executive functions (see for example Diamond & Lee, 2011). She suggested motivating students for a brief period of time (1-3 months) to try one of these practices, and to measure whether this affects both executive functions, as well as a wide range of health-related behaviours. Michele emphasised that measuring a wide range of health behaviours (*i.e.* not only alcohol consumption) was necessary in order to ascertain that positive changes in one health domain (*e.g.* decreased alcohol consumption) are not 'compensated' by negative changes in a different health domain (*e.g.* decrease in physical activity).

To make such an intervention feasible at low cost, Michele suggested to make use of existing resources such as free online classes, as well as collaborations with local organizations. Michele explained that offering martial arts, yoga, or mindfulness classes to teenagers or young adults, would not only improve stress management

and coping mechanisms, but likely provide an alcohol-free alternative for socializing and experimenting with social hierarchy. Offering such an intervention early in life should facilitate the formation of healthy habits.

As a second intervention, Michele suggested to make use of the fact that groups of people, which are for example naturally formed by schools, are strongly motivated by competing against other groups. This could be used in a constructive way by awarding a prize to the group with the highest overall well-being and the strongest engagement in health-promoting activities. Additional, very objective, outcome variables could be school absenteeism and academic performance.

In the discussion on Michele's proposal it was highlighted that programmes to promote physical activity exist and are also perceived as a prevention strategy in the alcohol context. However, it was also highlighted that caution needs to be taken with new interventions that are to be implemented in schools, since in many countries schools are already expected to implement various programmes and there is a danger to overload schools.

# Day 2

## How to test the effectiveness of an intervention?

On the second day, Zarnie Khadjesari gave an overview on evaluation methodology for brief alcohol interventions, with a particular focus on randomised controlled trials. She emphasised that randomised controlled trials have less risk of systematic errors than any other type of evaluation, and that systematic reviews of randomised controlled trials are considered the highest level of evidence.

For brief alcohol intervention in primary healthcare, a recent systematic review including a large number of randomised controlled trials concluded that brief intervention was effective for addressing hazardous and harmful drinking in primary healthcare, particularly in middle-aged, male drinkers, while too little evidence is available regarding other target groups. Here, brief intervention is understood as a spectrum of interventions, ranging from minimal screening and feedback to a session of motivational interviewing and cognitive behavioural therapy.

For newly developed interventions, Zarnie presented a framework put forward by the medical research council in the UK. Using an online alcohol intervention developed by her research group as an example, she elaborated on the steps of development, piloting, evaluation and implementation. The online intervention *DownYourDrink* was developed based on a systematic literature review and focus groups (Linke, McCambridge, Khadjesari, Wallace & Murray, 2008). The systematic review concluded that brief interventions delivered via a computer were effective at reducing alcohol intake, but that evidence was still limited and that most of the available research was based on student populations (Khadjesari, Murray, Hewitt, Hartley & Godfrey, 2011). Therefore, the *DownYourDrink* intervention was developed to target the general population. Feasibility was established using a pilot randomised controlled trial (Linke, Brown & Wallace, 2004), and finally

the effectiveness was evaluated using randomised controlled trials and qualitative interviews. For a first study, help seekers on the internet were randomly directed to either the *DownYourDrink* website or a control website with a minimal intervention (Wallace *et al.*, 2011). In this trial, all groups reduced their drinking, but there was no difference between the intervention and the control groups. Therefore, more research is being conducted before the implementation of the intervention. Currently, studies are being conducted that compare the *DownYourDrink* brief intervention to brief intervention delivered in primary healthcare (see for example Struzzo *et al.*, 2013), and to counselling in a specialist alcohol service.

Finally, Zarnie highlighted some important methodological aspects of evaluation studies. In principle, trials can be conducted as efficacy trials or as effectiveness trials, where efficacy trials test an intervention under ideal, highly controlled circumstances, whereas a focus on effectiveness implies that a study attempts to quantify the benefits achieved with the intervention in typical real life settings. A second important issue is whether a study addresses help seekers or non-help seekers. Help-seekers are likely more motivated than non-help seekers, and they might access other resources besides the studied intervention. This can make a comparison between intervention and control group more difficult. It is also important to consider the intervention received by the comparison group. Even minimal interventions such as assessing people's alcohol consumption have been found to reduce alcohol consumption. Lastly, although self-reported alcohol consumption is considered a valid outcome measure of evaluation studies, no general consensus exists regarding the precise assessment method and time frame.

Following Zarnie's talk, the discussion focused on a recently published large effectiveness trial for brief interventions. This trial found no evidence that brief advice or lifestyle counselling resulted in lower AUDIT status than that of a control group that was exposed to screening, feedback and an information leaflet (Kaner *et al.*, 2013). In the discussion, it was highlighted that such results were frequently perceived as evidence that the interventions studied were no more effective than the control condition. It was discussed that this conclusion is fairly widespread and thus potentially hindering implementation of brief interventions in practice, but unwarranted for a variety of reasons. Most importantly, the results of randomised controlled trials vary naturally from study to study. Even if an intervention has

the desired effect, some studies that fail to demonstrate this effect are to be expected. As highlighted by Zarnie at the beginning of her talk, in order to judge the effectiveness of an intervention it is therefore necessary to consider a systematic review of several randomised controlled trials. Several such systematic reviews are available for the effectiveness of alcohol brief interventions, and they generally conclude that they are effective at reducing harmful alcohol use (O'Donnell *et al.*, 2014). A more detailed discussion on the interpretation of such null findings can be found in Heather (2014).

### Optimizing reach and use of behavioural interventions

In the last talk of the workshop, Francine Schneider presented her work on proactive dissemination of an internet-based healthy lifestyle intervention. Francine highlighted that, although online interventions have great potential for public health, their real impact will depend not only on efficacy, but also on their reach and use. She further divided use into three steps: adoption, implementation and maintenance. The idea that not only efficacy, but also reach and use are crucial is captured in the RE-AIM framework, a framework for evaluating the public health impact of an intervention (Glasgow, Vogt & Boles, 1999).

Francine then presented her work on the national health survey in the Netherlands. She used this large, nationally representative survey as a means to proactively disseminate an internet-based intervention, to assess actual levels of reach, and to study the factors that influence them. Health survey participants from two provinces of the Netherlands were offered to participate in a healthy lifestyle intervention which was completely delivered via the internet. The intervention provided a comparison of the participant's health behaviours, including alcohol consumption, to the Dutch public health guidelines. This feedback was followed by tailored assistance on how to change these behaviours in order to reduce health risks (Schneider *et al.*, 2011; Schulz *et al.*, 2011, 2014). Disseminating the intervention together with the health survey provided the opportunity to assess not only the number and characteristics of users, but also those of non-users.

Overall, one out of three invited participants accessed the offered lifestyle interventions. This is a comparably high level of reach and suggests that the proac-

tive dissemination strategy in combination with the health survey was successful. However, relative to all participants that were offered the intervention, those that accessed the intervention were older in age, more likely to be male, had a higher level of education and a healthier lifestyle. Regarding actual use of the intervention, participants with less healthy lifestyle and lower income were more likely to start using the intervention, but they were less likely to complete a module of the intervention. These findings suggest that, although the dissemination strategy of the intervention was relatively successful, those who are more in need of changing their lifestyle make less use of the intervention (Schneider, Schulz, Pouwels, de Vries & van Osch, 2013; Schneider, van Osch, Schulz, Kremers & de Vries, 2012).

Francine further showed that without reminders, people rarely re-visited the intervention. Prompting people via email to re-visit the intervention increased prolonged use of the intervention, and it seems most effective to prompt participants relatively soon after their first visit, rather than after several weeks (Schneider, de Vries, Candel, van de Kar & van Osch, 2013).

In the discussion on intervention dissemination, participating Member States exchanged their dissemination strategies. These included traditional mass media and other awareness campaigns as well as online advertisement in search engines. Following up on the presentation of Francine Schneider, it was discussed that large health surveys like the one in the Netherlands exist also in other countries and that these could potentially be used for dissemination and research on reach and use in a similar fashion.

It was highlighted that if, as some evidence suggests, reach and use of online interventions are most pronounced among relatively healthier people, they bear the danger of increasing health inequalities. Therefore, reach and use need to be improved among specific target groups. One example for a targeted marketing strategy of an online health intervention is the collaboration of the European Commission and FC Barcelona in promoting the *EX-smokers* smoking cessation application (see [http://ec.europa.eu/health/tobacco/ex\\_smokers\\_are\\_unstoppable/index\\_en.htm](http://ec.europa.eu/health/tobacco/ex_smokers_are_unstoppable/index_en.htm) for information).

## Exploring collaboration

Throughout the workshop, participants explored the possibility for direct collaboration between academic researchers and policy makers. This could for example take the form of joint testing of a new idea for an intervention to increase compliance with minimum purchase age laws, or testing an online intervention that has been successfully applied elsewhere. Various participants engaged in discussions on such possible collaborations, and several new projects may result from this.

## Conclusions

For researchers and policy makers alike, it is important to establish the effectiveness of an intervention, be it a school-based prevention programme, an e-health intervention, or a campaign to increase shopkeepers' compliance with minimum drinking age laws. A theoretical framework on behaviour and behaviour change helps to guide development and testing. Even so, it is not guaranteed that a given intervention will be effective, and our understanding of the best way to implement e-health interventions to reduce harmful use of alcohol is still limited.

This was evident throughout the various presentations and discussions, and suggests that in the development of behavioural interventions it is crucial to engage in thorough empirical testing at all stages. It was highlighted by the participants that such research-based development is challenging from the policy perspective. Direct collaborations between academic researchers and policy makers are a potential way forward, if interests are well aligned.



## References

- AJZEN, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211. Retrieved from <http://www.sciencedirect.com/science/article/pii/074959789100020T>.
- DIAMOND, A. & LEE, K. (2011). Interventions shown to aid executive function development in children 4 to 12 years old. *Science*, 333(6045), 959-964. doi:10.1126/science.1204529.
- EPTON, T., NORMAN, P., HARRIS, P., WEBB, T., SNOWSILL, F.A. & SHEERAN, P. (2014). Development of theory-based health messages: three-phase programme of formative research. *Health Promotion International*. doi:10.1093/heapro/dau005.
- EPTON, T., NORMAN, P., SHEERAN, P., HARRIS, P.R., WEBB, T.L., CIRAVEGNA, F., ... KRUGER, J. (2013). *A theory-based online health behavior intervention for new university students: study protocol*, 1-11.
- FELLNER, G., SAUSGRUBER, R. & TRAXLER, C. (2013). Testing enforcement strategies in the field: Legal threat, moral appeal and social information. *Journal of the European Economic Association*, 11(3), 634-660. doi:10.1111/jeea.12013.
- GAJECKI, M., BERMAN, A.H., SINADINOVIC, K., ROSENDAHL, I. & ANDERSSON, C. (2014). Mobile phone brief intervention applications for risky alcohol use among university students: a randomized controlled study. *Addiction Science & Clinical Practice*, 9(1), 11. doi:10.1186/1940-0640-9-1.
- GLASGOW, R.E., VOGT, T.M. & BOLES, S.M. (1999). Evaluating the public health impact of health promotion interventions: the RE-AIM framework. *American Journal of Public Health*, 89(9), 1322-1377. Retrieved from <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1508772&tool=pmcentrez&render-type=abstract>.
- GOLLWITZER, P.M. & SHEERAN, P. (2006). Implementation Intentions and Goal Achievement: A Meta-analysis of Effects and Processes. *Advances in Experimental Social Psychology* (Vol. 38, pp. 69-119). Elsevier. doi:10.1016/S0065-2601(06)38002-1.
- HEATHER, N. (2014). Interpreting null findings from trials of alcohol brief interventions. *Frontiers in Psychiatry*, 5, 85. doi:10.3389/fpsy.2014.00085.
- KANER, E., BLAND, M., CASSIDY, P., COULTON, S., DALE, V., DELUCA, P., ... DRUMMOND, C. (2013). Effectiveness of screening and brief alcohol interven-

- tion in primary care (SIPS trial): pragmatic cluster randomised controlled trial. *BMJ*, 346, e8501. Retrieved from <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=3541471&tool=pmcentrez&rendertype=abstract>.
- KHADJESARI, Z., MURRAY, E., HEWITT, C., HARTLEY, S. & GODFREY, C. (2011). Can stand-alone computer-based interventions reduce alcohol consumption? A systematic review. *Addiction*, 106(2), 267-82. doi:10.1111/j.1360-0443.2010.03214.x.
- KOUTAKIS, N., STATIN, H. & KERR, M. (2008). Reducing youth alcohol drinking through a parent-targeted intervention: the Orebro Prevention Program. *Addiction*, 103(10), 1629-37. doi:10.1111/j.1360-0443.2008.02326.x.
- LINKE, S., BROWN, A. & WALLACE, P. (2004). Down your drink: A web-based intervention for people with excessive alcohol consumption. *Alcohol and Alcoholism*, 39, 29-32. doi:10.1093/alcalc/agh004.
- LINKE, S., MCCAMBRIDGE, J., KHADJESARI, Z., WALLACE, P. & MURRAY, E. (2008). Development of a psychologically enhanced interactive online intervention for hazardous drinking. *Alcohol and Alcoholism*, 43(6), 669-674. doi:10.1093/alcalc/agn066.
- O'DONNELL, A., ANDERSON, P., NEWBURY-BIRCH, D., SCHULTE, B., SCHMIDT, C., REIMER, J. & KANER, E. (2014). The impact of brief alcohol interventions in primary healthcare: a systematic review of reviews. *Alcohol and Alcoholism*, 49(1), 66-78. doi:10.1093/alcalc/agt170.
- SCHNEIDER, F., DE VRIES, H., CANDEL, M., VAN DE KAR, A. & VAN OSCH, L. (2013). Periodic email prompts to re-use an internet-delivered computer-tailored lifestyle program: influence of prompt content and timing. *Journal of Medical Internet Research*, 15(1), e23. doi:10.2196/jmir.2151.
- SCHNEIDER, F., SCHULZ, D.N., POWWELS, L.H.L., DE VRIES, H. & VAN OSCH, L.A.D.M. (2013). The use of a proactive dissemination strategy to optimize reach of an internet-delivered computer tailored lifestyle intervention. *BMC Public Health*, 13(1), 721. doi:10.1186/1471-2458-13-721.
- SCHNEIDER, F., VAN OSCH, L.A.D.M., KREMERS, S.P.J., SCHULZ, D.N., VAN ADRICHEM, M.J.G. & DE VRIES, H. (2011). Optimizing diffusion of an online computer tailored lifestyle program: a study protocol. *BMC Public Health*, 11, 480. doi:10.1186/1471-2458-11-480.
- SCHNEIDER, F., VAN OSCH, L., SCHULZ, D.N., KREMERS, S.P. & DE VRIES, H. (2012). The influence of user characteristics and a periodic email prompt on exposure to an internet-delivered computer-tailored lifestyle program. *Journal of Medical Internet Research*, 14(2), e40. doi:10.2196/jmir.1939.

- SCHULZ, D.N., KREMERS, S.P.J., VANDELANOTTE, C., VAN ADRICHEM, M.J.G., SCHNEIDER, F., CANDEL, M.J.J.M. & DE VRIES, H. (2014). Effects of a web-based tailored multiple-lifestyle intervention for adults: a two-year randomized controlled trial comparing sequential and simultaneous delivery modes. *Journal of Medical Internet Research*, 16(1), e26. doi:10.2196/jmir.3094.
- SCHULZ, D.N., KREMERS, S.P., VAN OSCH, L.A., SCHNEIDER, F., VAN ADRICHEM, M.J. & DE VRIES, H. (2011). Testing a Dutch web-based tailored lifestyle programme among adults: a study protocol. *BMC Public Health*, 11(1), 108. doi:10.1186/1471-2458-11-108.
- SILQUINI, R., BERT, F., ALONSO, F., BERCHIALLA, P., COLOMBO, A., DRUART, A., ... MANZOLI, L. (2011). Correlation between driving-related skill and alcohol use in young-adults from six European countries: the TEN-D by Night Project. *BMC Public Health*, 11, 526. doi:10.1186/1471-2458-11-526.
- SINADINOVIC, K., WENNERBERG, P., JOHANSSON, M. & BERMAN, A.H. (2014). Targeting individuals with problematic alcohol use via Web-based cognitive-behavioral self-help modules, personalized screening feedback or assessment only: a randomized controlled trial. *European Addiction Research*, 20(6), 305-18. doi:10.1159/000362406.
- STRUZZO, P., SCAFATO, E., MCGREGOR, R., DELLA VEDOVA, R., VERBANO, L., LYGIDAKIS, C., ... WALLACE, P. (2013). A randomised controlled non-inferiority trial of primary care-based facilitated access to an alcohol reduction website (EFAR-FVG): the study protocol. *BMJ Open*, 3(2), e002304. doi:10.1136/bmjopen-2012-002304.
- TENSIL, M.-D., JONAS, B. & STRÜBER, E. (2013). Two fully automated web-based interventions for risky alcohol use: randomized controlled trial. *Journal of Medical Internet Research*, 15(6), e110. doi:10.2196/jmir.2489.
- WALLACE, P., MURRAY, E., MCCAMBRIDGE, J., KHADJESARI, Z., WHITE, I.R., THOMPSON, S.G., ... LINKE, S. (2011). On-line randomized controlled trial of an internet based psychologically enhanced intervention for people with hazardous alcohol consumption. *PloS One*, 6(3), e14740. doi:10.1371/journal.pone.0014740.

## Annex

### List of participants

Last Name	First Name	Organisation
BALOGH	Attila	<i>European Commission</i>
BELOT	Michele	<i>University of Edinburgh</i>
BERMAN	Anne H.	<i>Karolinska Institutet, Sweden</i>
BUDDE	Axel	<i>Federal Centre for Health Education (BZgA), Germany</i>
BULL	Bernt	<i>Royal Ministry of Health and Care Services, Norway</i>
CARDOSO	Manuel	<i>SICAD – General-Directorate for Intervention on Ad</i>
COGORDAN	Chloé	<i>INPES, France</i>
D’ACAPITO	Paola	<i>European Commission</i>
FURTUNESCU	Florentina Ligia	<i>University of Medicine and Pharmacy Carol Davila, Romania</i>
GEIRNAERT	Maryse	<i>VAD, Belgium</i>
HERNÁNDEZ-FERNÁNDEZ	Tomás	<i>Ministry of Health, Social Services and Equality, Spain</i>
HERRMANN	Benedikt	<i>Joint Research Centre, European Commission</i>
HOEGBERG	Pi	<i>Public Health Agency of Sweden</i>
KALBITZ	Andreas	<i>Federal Centre for Health Education (BZgA), Germany</i>
KHADJESARI	Zarnie	<i>University College London</i>
KLUBA	Esther	<i>WHO</i>
KRUMINA	Alise	<i>Ministry of Health, Latvia</i>
NORMAN	Paul	<i>University of Sheffield</i>

## List of participants (cont.)

Last Name	First Name	Organisation
PEJNOVIC FRANELIC	Iva	<i>National Institute for Public Health, Croatia</i>
RADOS KRNEL	Sandra	<i>National Institute of Public Health, Slovenia</i>
SCAFATO	Emanuele	<i>Istituto Superiore di Sanità, Italy</i>
SCHNEIDER	Francine	<i>Maastricht University</i>
TAEL	Mariliis	<i>National Institute for Health Development, Estonia</i>
TAHT	Triinu	<i>Ministry of Social Affairs, Estonia</i>
TRAXLER	Christian	<i>Hertie School of Governance</i>
WEINSEISS	Andreas	<i>Federal Ministry of Health, Austria</i>
WILKINSON	Lindsay	<i>Department of Health, United Kingdom</i>
WOELBERT	Eva	<i>Joint Research Centre, European Commission</i>
ZORKO	Maja	<i>National Institute For Public Health, Slovenia</i>

## Programme

### Day 1 – 09.12.2014

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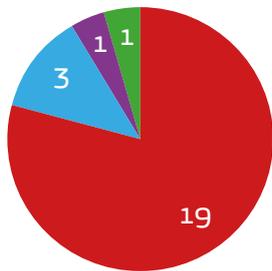
08:30	Departure from hotel, transport to the JRC site by bus, passing the security check	Consumers, Health and Food Executive Agency: Brief introduction & relevant projects
09:30	Welcoming by the management of the IHCP, DG SANTE, and Behavioural Economics Team	12:30 Lunch
10:00	‘Active ingredients in behaviour change interventions – theory and evidence’ Prof. Paul NORMAN <i>University of Sheffield</i>	14:00 ‘New ideas from behavioural economics – Part 1’ Prof. Christian TRAXLER, <i>Hertie School of Governance</i>
10:30	Break	14:30 ‘New ideas from behavioural economics – Part 2’ Prof. Michèle Belot, <i>University of Edinburgh</i>
11:00	‘Interventions via smart phone applications’ Dr. Anne BERMAN <i>Karolinska Institute</i>	15:00 Break
11:30	Short presentation by participants (2-3 minutes each)	15:30 Working groups & brainstorming 1 17:30 Summary and closing of the first day 17:45 Transfer back to the hotels 19:45 Social Dinner at Hotel Conca Azzurra in Ranco

### Day 2 – 10.12.2014

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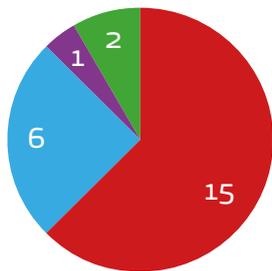
08:30	Departure from hotel, transport to the JRC site by bus, passing the security check	behavioural interventions’ Dr. Francine SCHNEIDER, <i>Maastricht University</i>
09:30	‘How to test the effectiveness of an intervention? – Field trial methodology’ Dr. Zarnie KHADJESARI, <i>University College London</i>	10:30 Break
10:00	‘Optimizing reach and use of	11:00 Working groups & brainstorming 2 12:30 Summary and closing of the workshop 12:45 Lunch 14:00 Transfer to airports

## Participant feedback



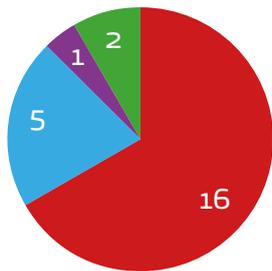
Overall evaluation of the workshop

- Below expectations
- Met expectations
- Above expectations
- N/A or no answer



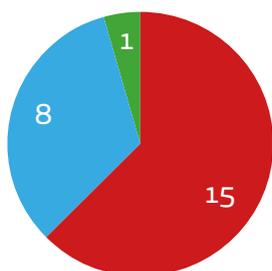
Programme of the workshop

- Below expectations
- Met expectations
- Above expectations
- N/A or no answer



Selection of speakers

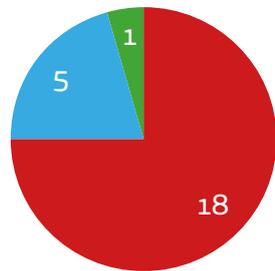
- Below expectations
- Met expectations
- Above expectations
- N/A or no answer



Content and quality of presentations

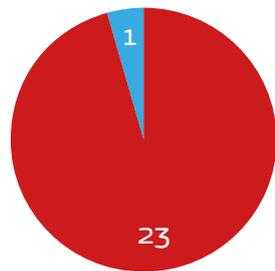
- Below expectations
- Met expectations
- Above expectations
- N/A or no answer

## Participant feedback (cont.)



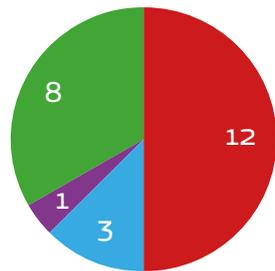
### Discussion time

- Below expectations
- Met expectations
- Above expectations
- N/A or no answer



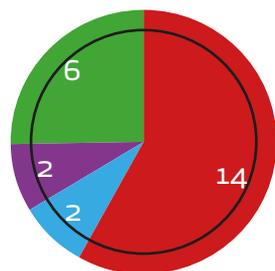
### Balance between sessions

- Below expectations
- Met expectations
- Above expectations
- N/A or no answer



### Objectives of the workshop

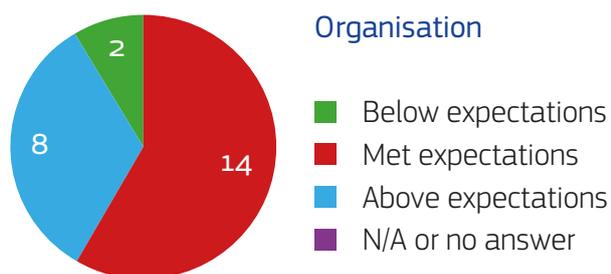
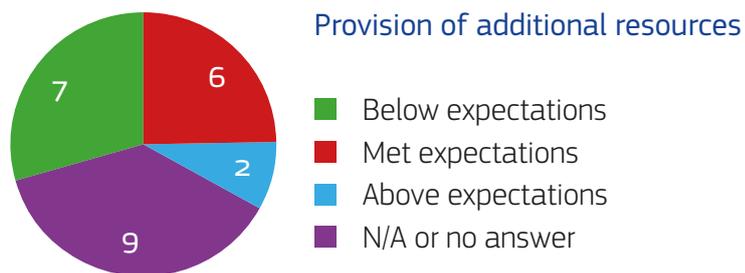
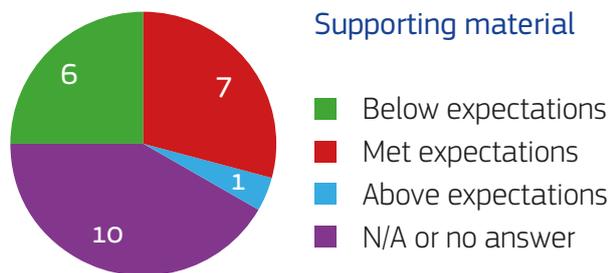
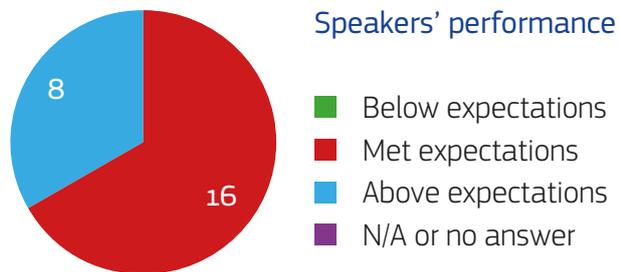
- Below expectations
- Met expectations
- Above expectations
- N/A or no answer



### Workshop sub-sessions

- Below expectations
- Met expectations
- Above expectations
- N/A or no answer

## Participant feedback (cont.)





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European Commission

**EUR 27378 EN – Joint Research Centre – Institute for Health and Consumer Protection**

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Stimulating innovation  
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