

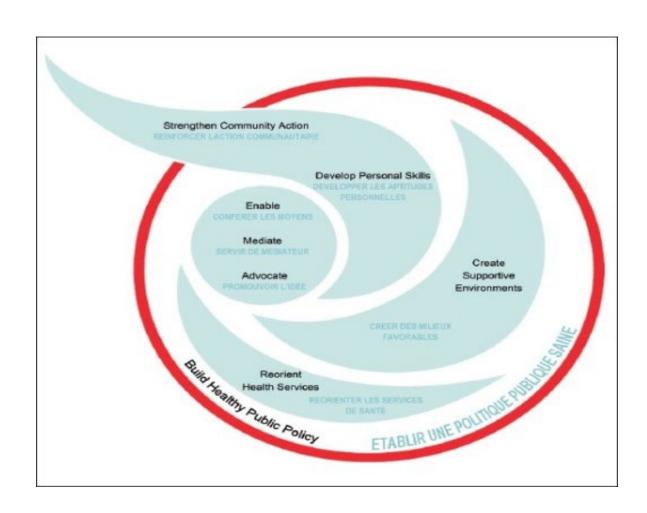
What can we learn from the Ottawa Charter for Health Promotion for alcohol and other drug prevention?

Prof. Dr. Christiane Stock

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The Ottawa Charter (WHO, 1986)





5 Action Areas:

- Build Healthy Public Policy
- Create Supportive Environments
- Strengthen Community Action
- Develop Personal Skills
- Reorient Health Services

Is the Charter still relevant? What was its impact in Europe? (193 health promotion practitioners and researchers)

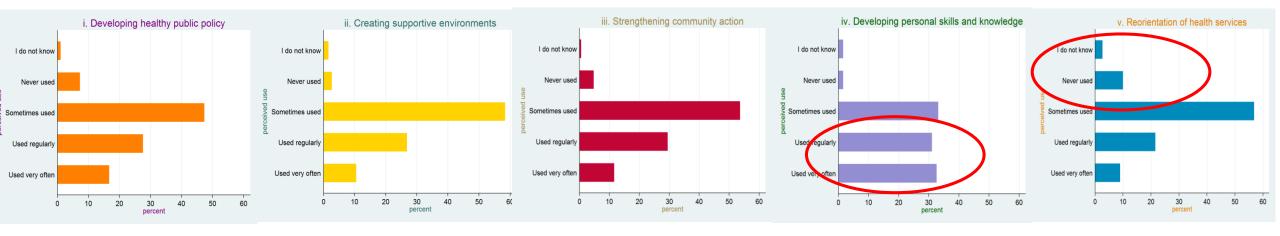


Questions:	Agree %	Disagree %	Unsure%
Since the development of the Ottawa Charter in 1986, the field of health promotion is well established in my country	43.7%	30.0%	26.3%
Overall knowledge about the topic of health promotion has progressed over the past years	80.0%	9.5%	10.5%

Perceived use of the Ottawa action areas



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Developing healthy public policy

Creating supportive environments

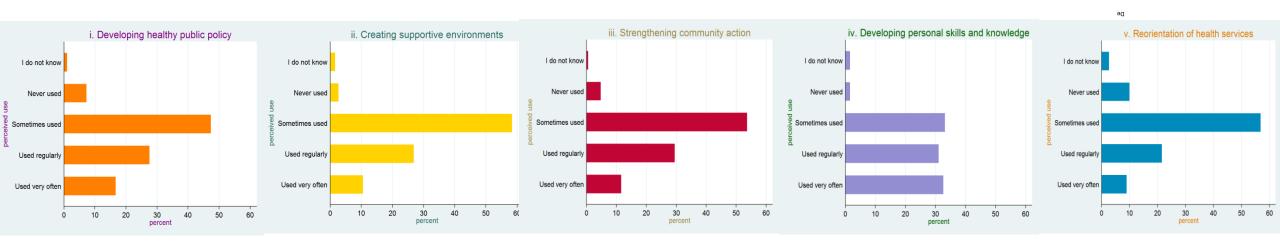
Strengthening community action

Developing personal skills

Reorienting health services

Perceived use of the Ottawa action areas





Developing healthy public policy



Legislation Taxation Regulation Creating supportive environments



Social Norms Approach AOD free environments

Strengthening community action



Setting-based approach

Developing personal skills



AOD Education
Life Skills Training

Reorienting health services

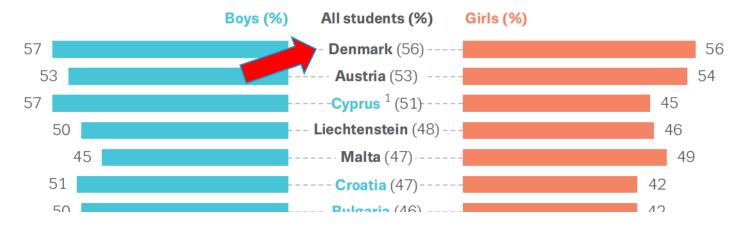


GP Brief Interventions Access to treatment

Binge drinking among Danish adolescents



Prevalence of five or more drinks at least once in the last 30 days by gender; one drink contains approximately 2 centilitres of ethanol (percentage)



Average 35%

The GOOD Life: Intervention design

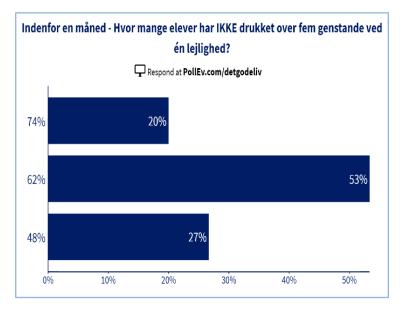


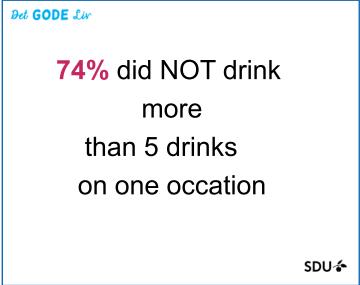
Social norms messages

- Based on self-reported data on alcohol use and other drugs
- Highlighting the discrepancies between perceived norms and the actual reported norms
- Focus on positive and factual behaviour among peers
- Messages tailored for each grade and school
- One session in the classroom plus posters and web app (duration 4-6 weeks)

Intervention component 1: Interactive feedback session







Intervention component 2: Posters



8 out of 10 pupils in 8th grade at [school name] have NEVER been drunk





88% af eleverne i 9. klasse på Næsby Skole mener, at det IKKE er i orden at drikke alkohol hvis det påvirker skolen



Intervention component 3: Web application



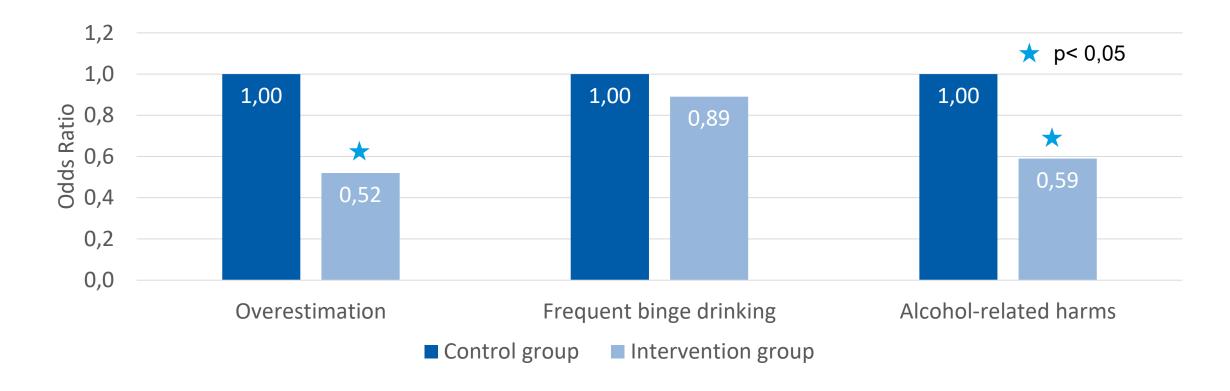


Intervention Effect at 3 Months Follow-up



Odds ratios from adjusted multilevel logistic regression models

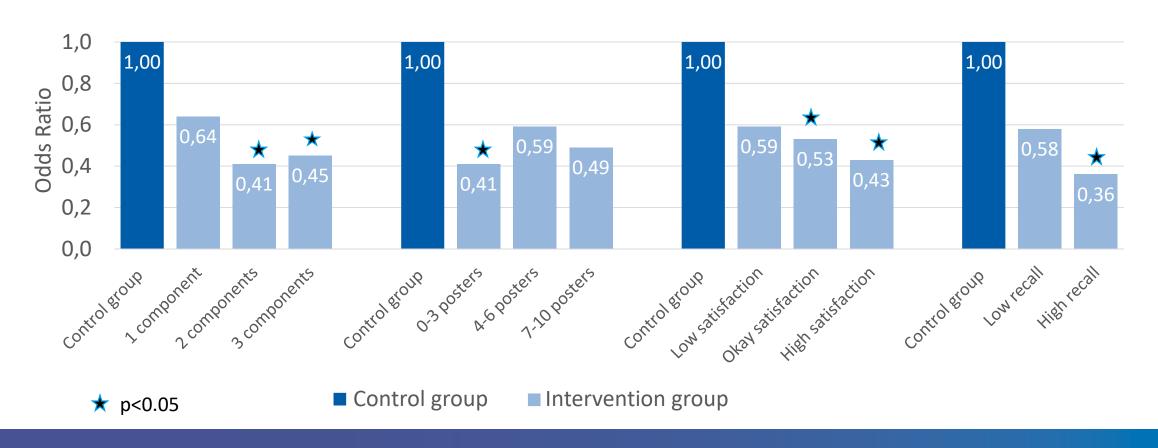
Cluster RCT in 38 Danish public schools, Students in 8th and 9th grade (n=1355)



Effect of implementation parameters on overestimation of peer lifetime binge drinking



Odds ratios with control schools as reference group



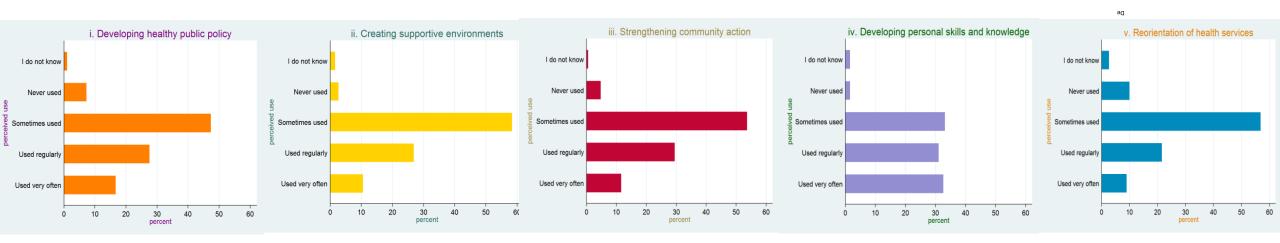
Conclusions from the Trial



- Receiving The GOOD Life intervention had a positive effect on norm perception and alcohol-related harms (Vallentin-Holbech et al., 2018)
- Participation was highest for the feedback session and lowest for the web-app. However, students had overall positive ratings regarding all three intervention components. (Stock et al., 2020)
- "High dose" of the intervention, high satisfaction with the intervention and high recall of social norms messages enhanced the effectiveness of The GOOD Life. (Vallentin-Holbech et al., 2019)

Perceived use of the Ottawa action areas





Developing healthy public policy



Legislation Taxation Regulation Creating supportive environments



Social Norms Approach AOD free environments

Strengthening community action



Setting-based approach

Developing personal skills



AOD Education
Life Skills Training

Reorienting health services



GP Brief Interventions Access to treatment

"Shaping the Social" for smoking prevention: Intervention design



Setting-based approach to foster and improve social wellbeing at vocational schools co-created with teachers and students:

Mandatory themes

- 1. Meeting before school start
- 2. Welcoming activities at first school day
- Clear timetable
- 4. Class meetings every morning for all students and their teachers
- Scheduled breaks
- 6. A pleasant non-smoking environment

Optional themes

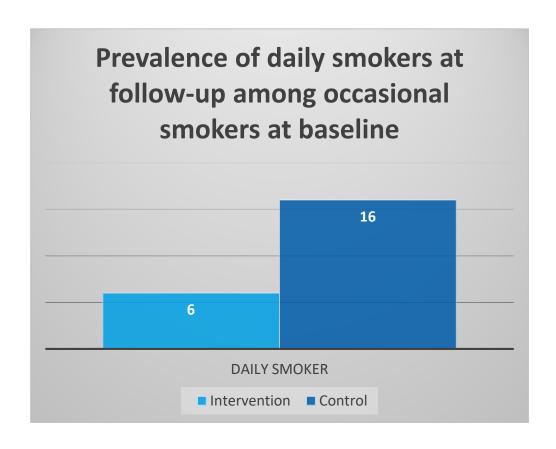
- Access to school facilities outside school hours
- Monthly events during school hours across sections

Effects of Shaping the Social



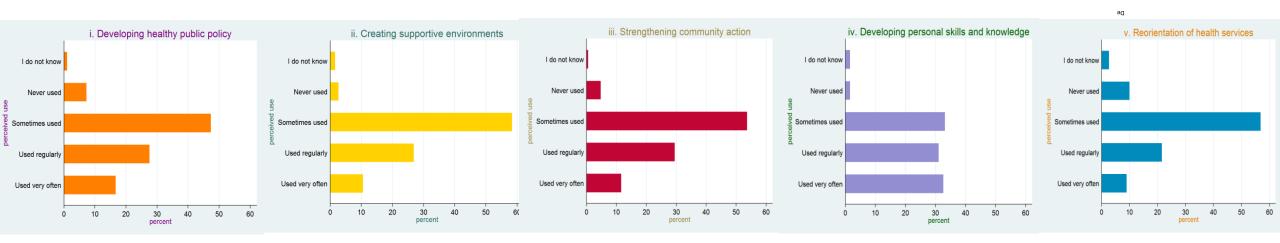
Controlled trial in 4 intervention and 6 control schools after 10 weeks with 5794 students:

- Significant between-group difference in school connectedness
- No effect on daily smoking
- Baseline occasional smokers in the intervention group had significantly reduced odds ratio (OR = 0.44) of becoming a daily smoker compared to baseline occasional smokers in the control group



Perceived use of the Ottawa action areas





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AOD Education
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GP Brief Interventions Access to treatment

How can Danish adolescents become more resilient to social pressures?



 Refusal-skills training: Teaching adolescents how to recognize social pressure from peers and to cope with high-pressure situations by developing social skills to refuse explicit alcohol offers





Project aims



- To develop a virtual reality (VR) based alcohol refusal skills training tool
- Co-production with adolescents and other stakeholders using an empowerment-based Living Lab approach
- Partners/Stakeholders:
 - Social Marketing@Griffith, Griffith University (Blurred Minds Project)
 - Technical facutly, University of Southern Denmark,
 - Drug prevention practice in Danish municipalities (SSP)
 - Folk high school for film and game production
 - Boarding school with theatre line



Living Lab Methodology



Stage 6: Evaluation

Outcome: A list of lessons learned will be co-created

Stage 5: Testing the VR tool

Outcome: Article/report on user experience

Stage 4: Innovation design

Outcome: A key list of issues for improvement will be co-developed

Stage 3: Prototype design

Outcome: Prototype of the VR AOD resistance training tool

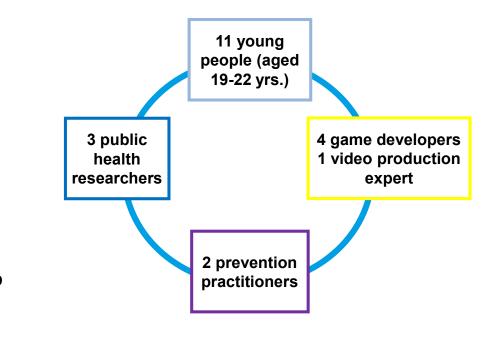
Stage 2: Concept design

Outcome: Film script

Stage 1: Exploration of key concepts

Outcome: A list of key concepts/scenes and recurring themes

VR alcohol refusal skills tool (VR FestLab) – development group

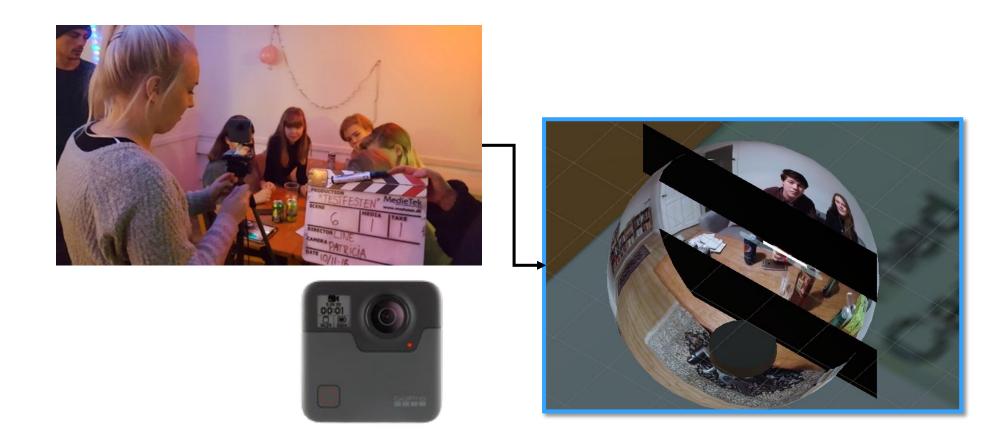


Development group

- Young people
- Researchers
- Game/VR developers
- Video producers
- Health educators

Prototype development: Co-creating film script, filming, editing and creating interactivity (Game Engine Unity)





VR FestLab – Smartphone App



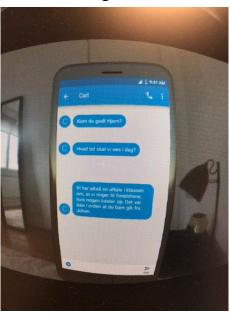
Pre-Party



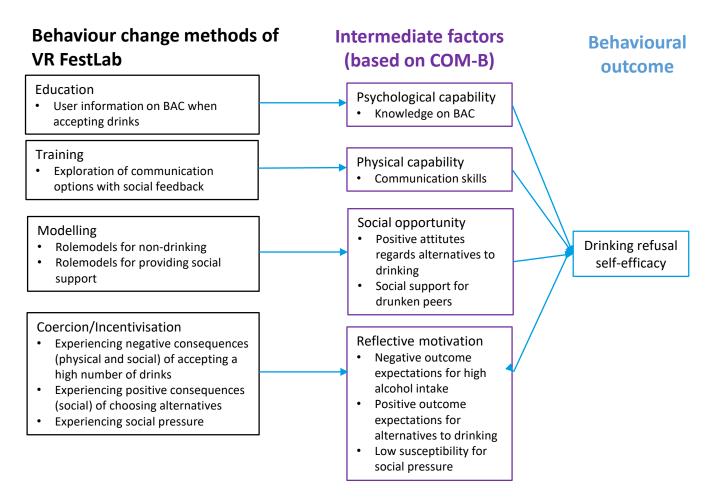
Party experiences/choices



Next morning







^{*}Mitchie S, van Straalen MM, West R. The behaviour change wheel: A new method for characterising and designing behaviour change interventions. Impl Sci 2011; 6:42

Pilot testing and user experience







Article

User Experiences with a Virtual Alcohol Prevention Simulation for Danish Adolescents

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Abstract: This pilot study explores 31 Danish adolescent user experiences for the newly developed virtual party simulation app—Virtual Reality (NR) Feetlab. The main objective of this study was to investigate usability for VR Feetlab, which aims to improve alcohol resistance skills for Danish adolescents. A secondary objective was to understand gameplay experiences. The study is a mixed method study that draws on questionnaire data (n = 31) and focus group interviews (n = 10) of boarding school students participating in the pilot study. Descriptive statistics were used to examine quantitative data, and qualitative data were analyzed thematically. Quantitative findings indicated that gameplay experiences of the VR simulation were positive, and all User Experience Questionnaire (UEQ) items were answered positive)s. The focus group interviews showed that adolescents found the simulation to be realistic. Feedback indicated that the group pressure experienced in the simulation was regarded to be less than in real life. Adolescents had varying approaches to playing the VR simulation, they thought the quality of the simulation was good, and only a few users experienced technical difficulties. These initial study findings indicate that VR FestLab is a promising tool for the prevention of alcohol tuse among adolescents.

Keywords: students; pupils; user experiences; virtual reality; alcohol prevention; drug resistance skills; school

1. Introduction

Adolescent alcohol consumption is a major public health concern because of its short- and long-term psychological, social, and physical health consequences [1,2]. Heavy alcohol drinking during adolescence has been associated with cognitive deficits in learning, attention, and communication skills, disruptions in memory, increased susceptibility for arxicisy, and increased risks of substance use disorders later in life [3]. Further, alcohol substance use has been found to be associated with delinquency, unwanted pregnancy, and school failure [4]. Temporal trends indicate a decrease in alcohol use among European adolescents from 1995 to 2018 [5–7]. However, it is worrying that

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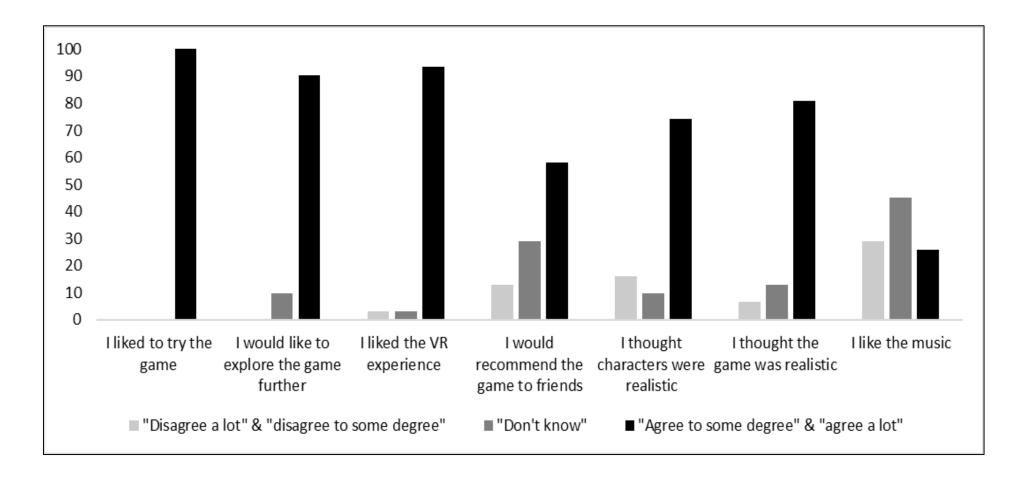
www.mdpt.com/journal/tjerph

31 adolescents Askov Efterskole testing VR FestLab

- Questionnaire (n = 31)
- Structured focus group interviews (n = 10, 31 participants)

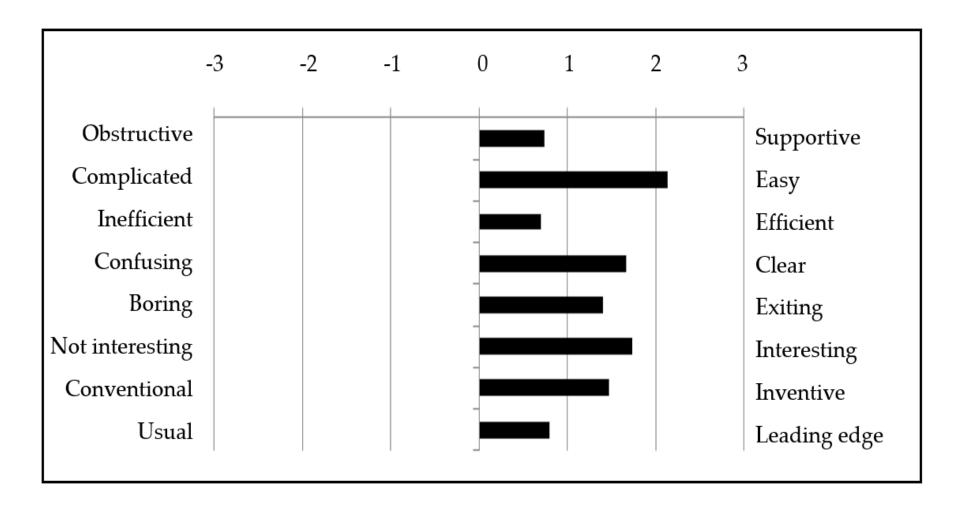
User feedback (n = 31)





User Experience with Short UEQ-8 (n=31)





Results from focus groups



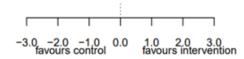
- Realistic game play experience
- Peer pressure higher in reality
- Various ways to play the simulation (Risk orientation)
- Overall good quality (not too many errors)

Intervention effects for drinking refusal self-efficacy (social pressure subscale of DRSEQ-RA) based on linear mixed model adjusted for baseline and all other variables



group	group intervention (95%CI)		contro	ol (95%CI)		p-value	effect, 95%CI
resist soc press drink (ful	ll sample) 21.1	(20.2 21.9)	20.4	(19.5 21.4)	—	0.301	0.6 [-0.7, 1.9]
girls	21.4	(20.3 22.4)	20.4	(19.4 21.5)	•	0.192	0.9 [-0.5, 2.4]
boys	20.7	(19.8 21.7)	20.5	(19.4 21.5)	•	0.670	0.3 [-1.1, 1.7]
age <16y	21.4	(20.3 22.5)	20.4	(19.3 21.5)	•	0.195	1.0 [-0.6, 2.5]
age 16y+	20.7	(19.7 21.7)	20.5	(19.2 21.8)	•	0.756	0.2 [-1.4, 1.9]

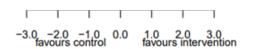
- 372 Students recruited from 8th and 9th grade at 13 schools
- Intervention: 15 min VR FestLab plus classroom reflection
- Active control: 15 min play of commercial VR game (Oculus First Steps) classroom reflection



Intervention effects for drinking refusal self-efficacy (social pressure subscale of DRSEQ-RA) based on linear mixed model adjusted for baseline and all other variables



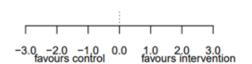
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Intervention effects for drinking refusal self-efficacy (social pressure subscale of DRSEQ-RA) based on linear mixed model adjusted for baseline and all other variables



	group	interv	ention (95%CI)	control	(95%CI)		p-value	effect, 95%CI
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Results of the evaluation of VR FestLab



- Adolescents like the VR experience and immersion in the simulation game
- No significant effects on drinking refusal self-efficacy (or secondary outcomes)
- Trends show into a preventive direction and no unintended effects
- Sub-group analyses indicate a higher effectiveness among girls and among younger adolescents (<16), without reaching significance
- VR FestLab could be a door opener for other intervention components

Conclusions



- Evidence-based interventions exist for adressing all action areas of the Ottawa Charter to prevent alcohol and other drug use among youth
- Implementation and use of aproaches adressing supportive environments and community action are still sparse and should be promoted
- New digital tools offer new opportunities for engaging adolescents in prevention programmes
- A combination of approaches is more effective than isolated programmes



Thank you for your attention!

Prof. Dr. Christiane Stock

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