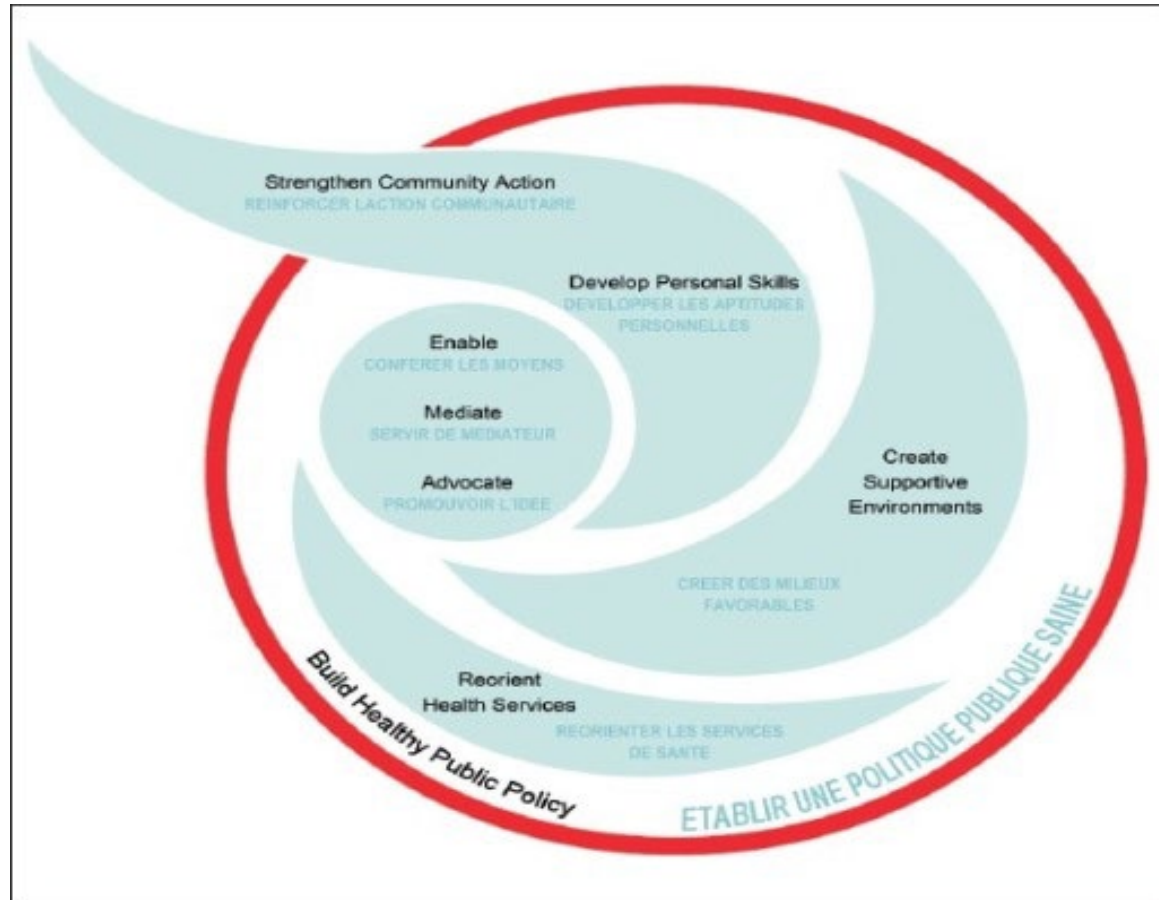


# What can we learn from the Ottawa Charter for Health Promotion for alcohol and other drug prevention?

Prof. Dr. Christiane Stock

Charité - Universitätsmedizin, Institute of Health and Nursing Science  
University of Southern Denmark, Unit for Health Promotion Research

# The Ottawa Charter (WHO, 1986)



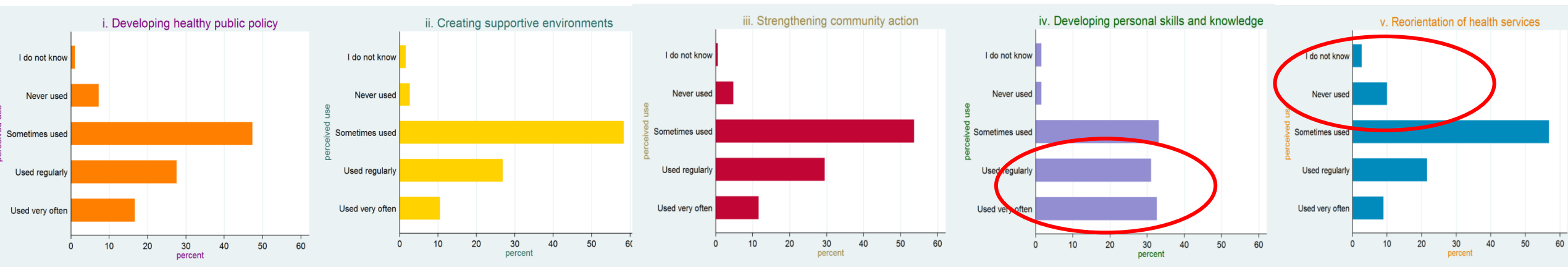
## 5 Action Areas:

- 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



Developing healthy public  
policy

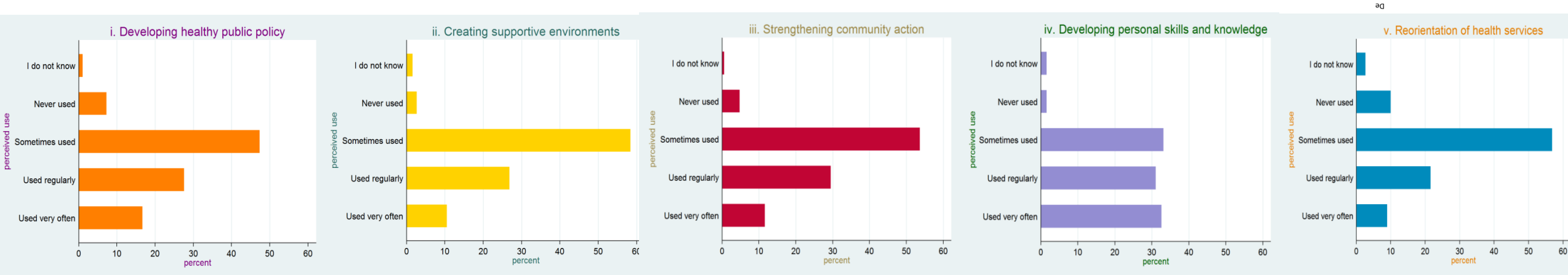
Creating supportive  
environments

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

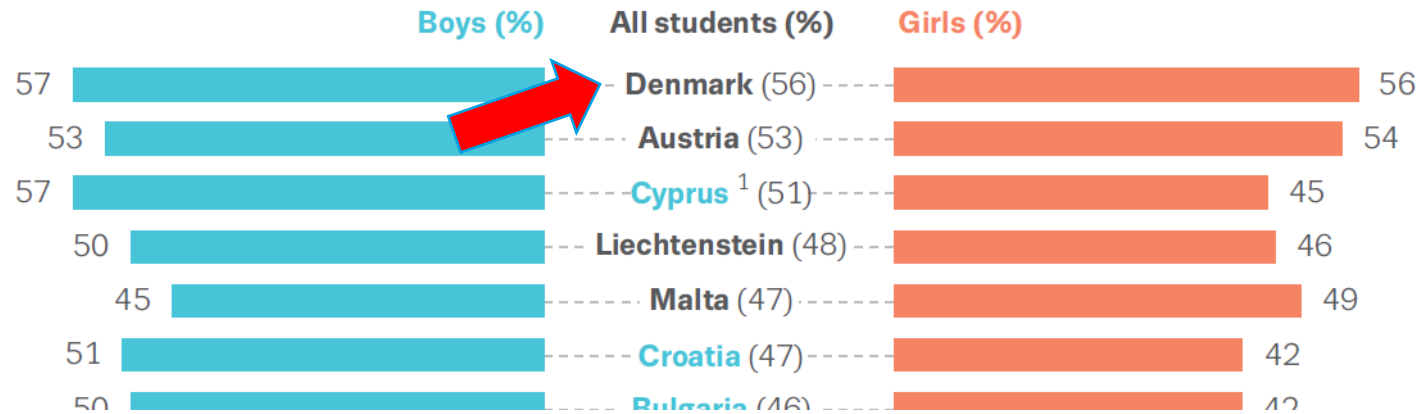
Reorienting health services



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)



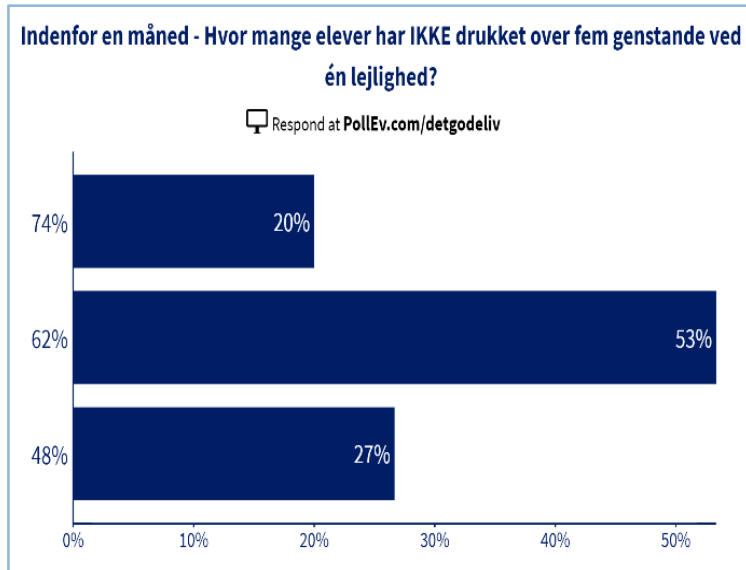
Average 35%

# 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



Det GODE Liv

**74%** did NOT drink  
more  
than 5 drinks  
on one occasion

SDU



# Intervention component 2: Posters

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

**94% af**  
**8. klasses elever på**  
**Næsby Skole**  
**har SLET IKKE**  
**været fulde,**  
**indenfor en måned**



Det GODE Liv



**af eleverne i**  
**8. klasse har**  
**SLET IKKE**  
**drukket alkohol,**  
**indenfor en måned**

Det GODE Liv

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



Det GODE Liv

**7 ud af 10 elever**  
**i 9. klasse på**  
**Næsby Skole**  
**har ALDRIG**  
**været fulde**



Det GODE Liv

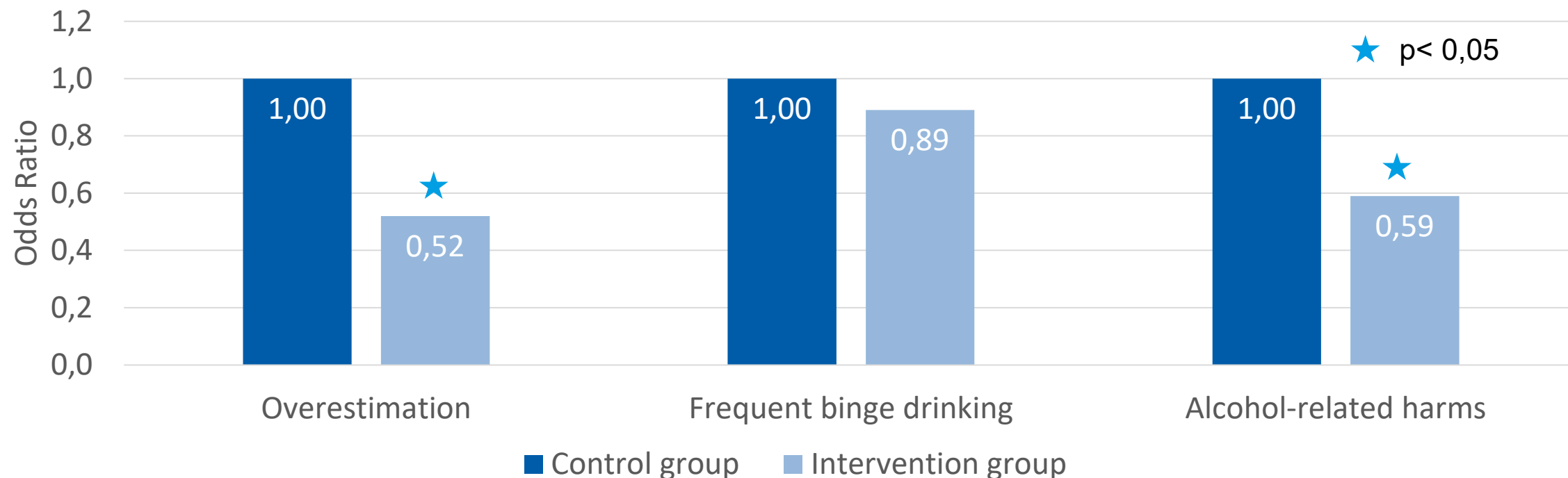
# Intervention component 3: Web application



# Intervention Effect at 3 Months Follow-up

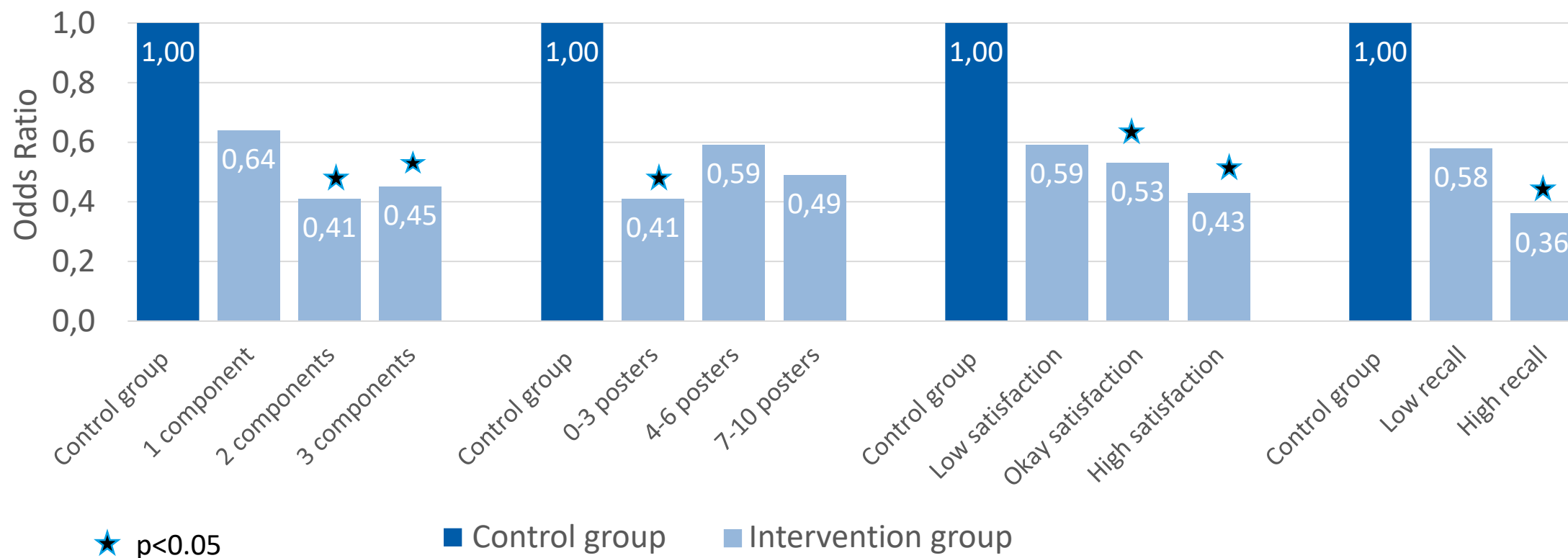
## Odds ratios from adjusted multilevel logistic regression models

- Cluster RCT in 38 Danish public schools, Students in 8<sup>th</sup> and 9<sup>th</sup> grade (n=1355)



# Effect of implementation parameters on overestimation of peer lifetime binge drinking

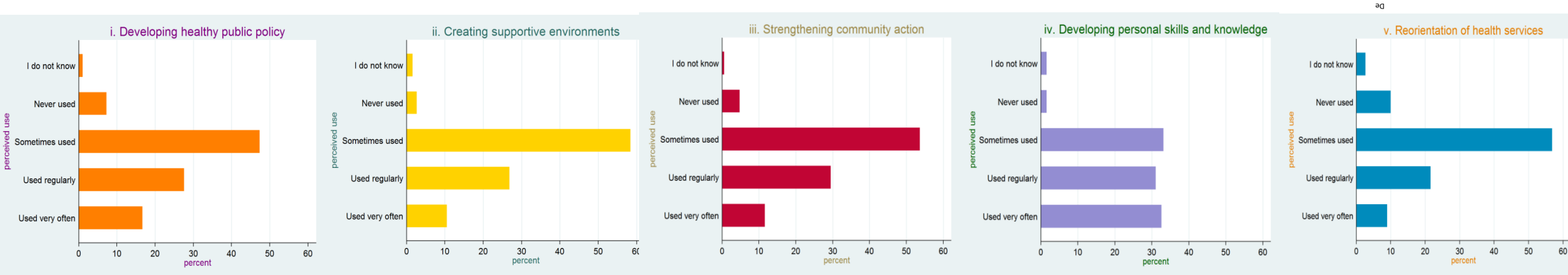
Odds ratios with control schools as reference group



# 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
3. Clear timetable
4. Class meetings every morning for all students and their teachers
5. Scheduled breaks
6. A pleasant non-smoking environment

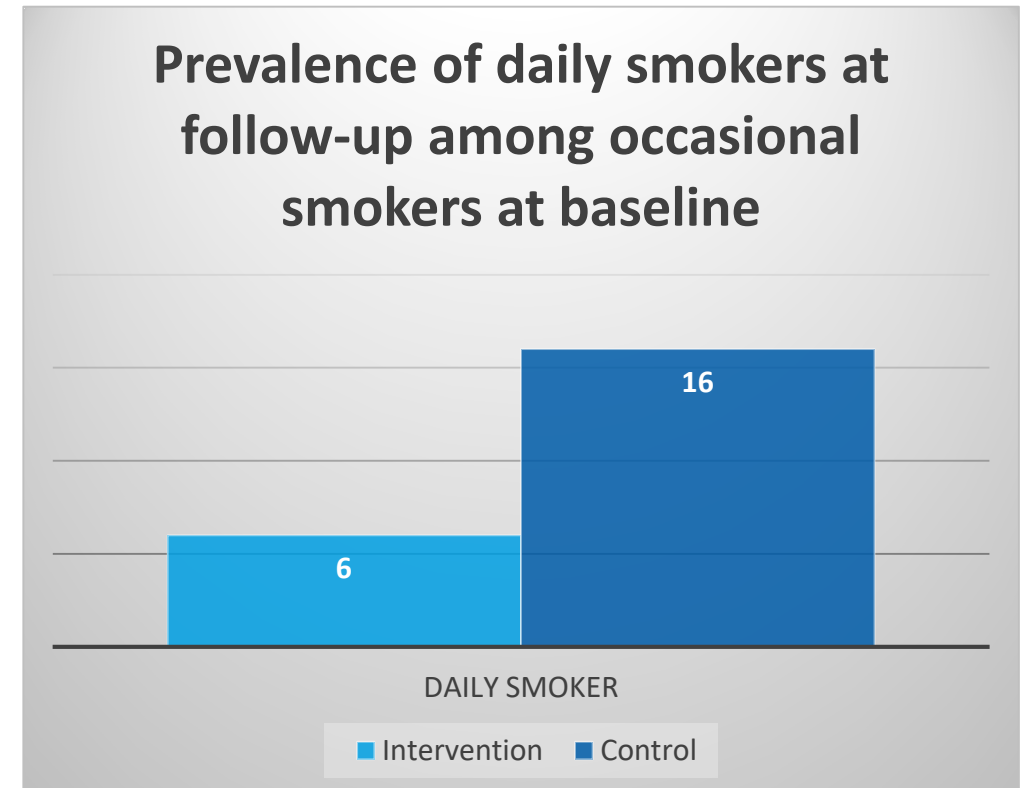
## Optional themes

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

# Effects of Shaping the Social

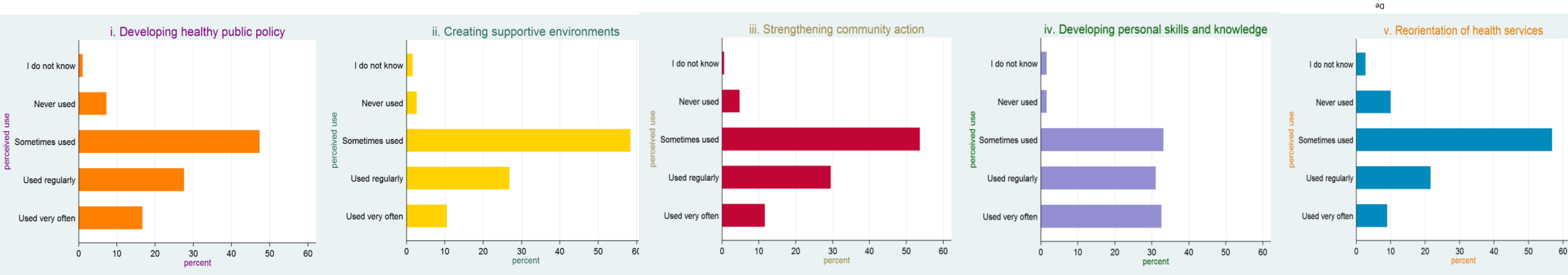
Controlled trial in 4 intervention and 6 control schools after 10 weeks with 5794 students:

- 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



Developing healthy public policy



Legislation  
Taxation  
Regulation

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AOD Education  
Life Skills Training

Reorienting health services



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

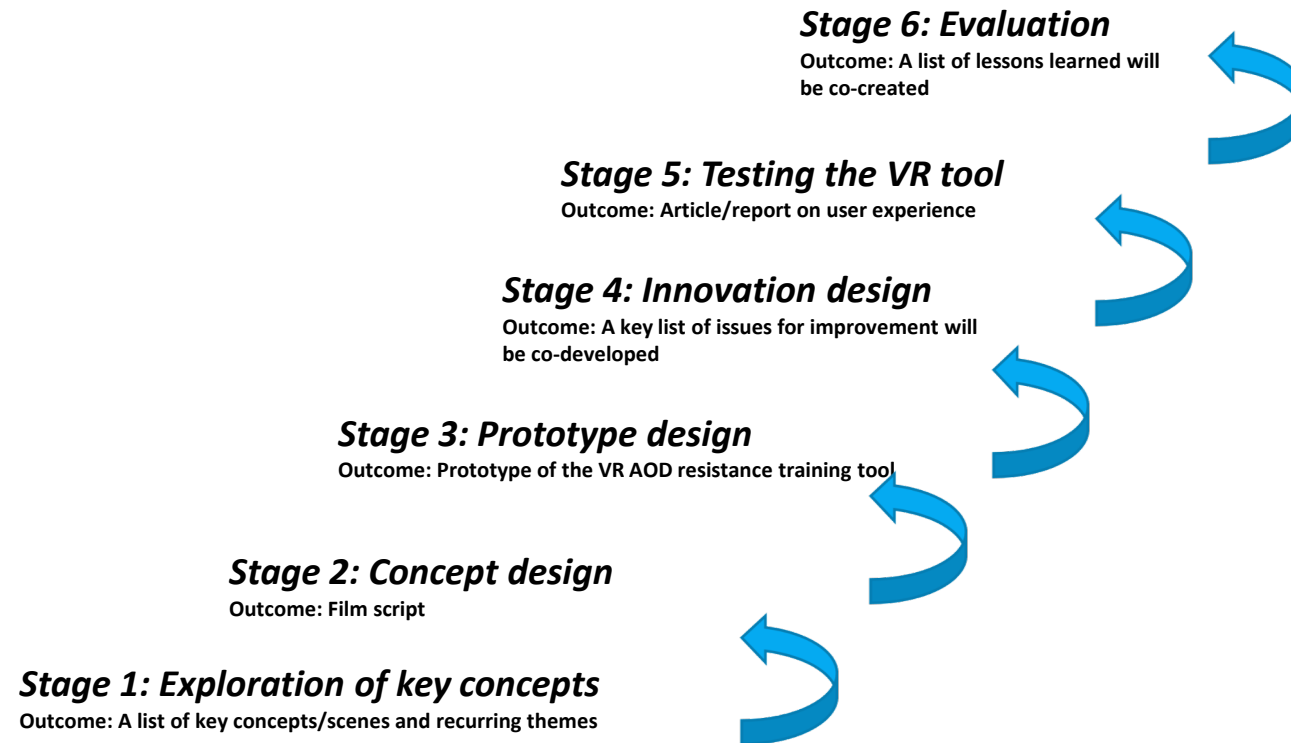


# Project aims

- 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 faculty, 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



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



### Development group

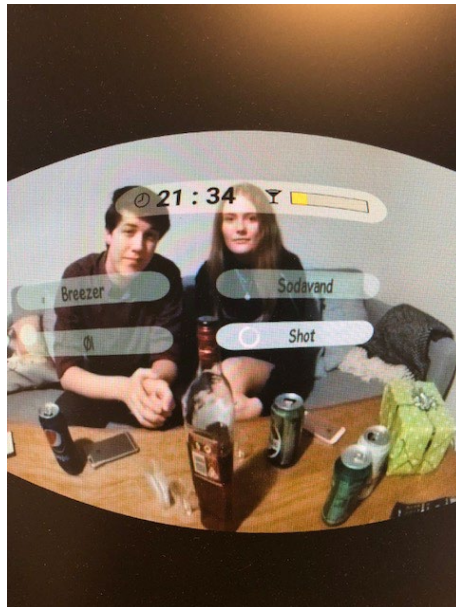
- Young people
- Researchers
- Game/VR developers
- Video producers
- Health educators

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

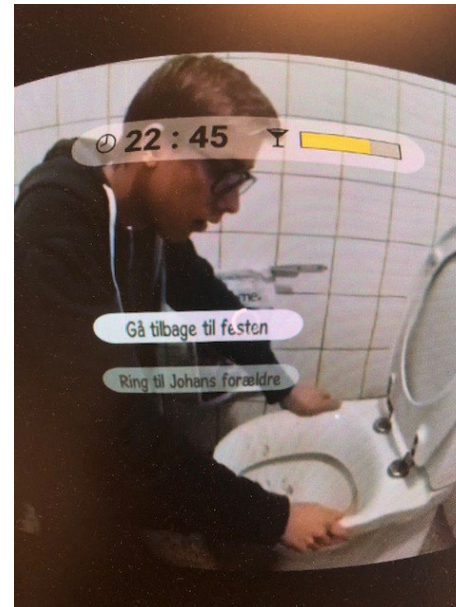


## VR FestLab – Smartphone App

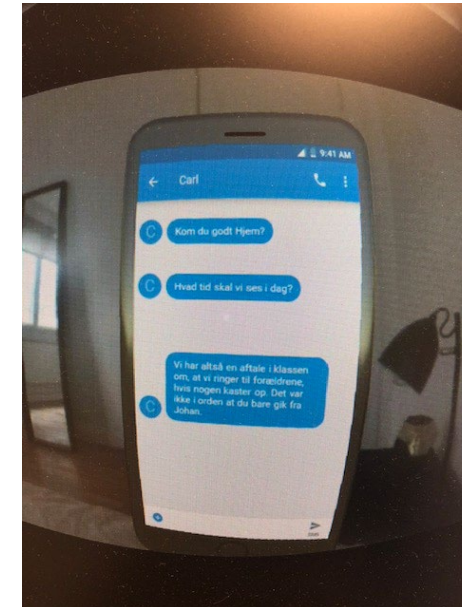
Pre-Party



Party experiences/choices

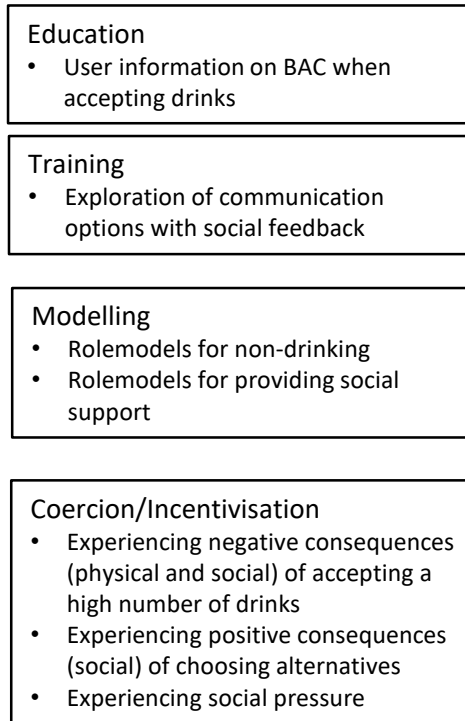


Next morning

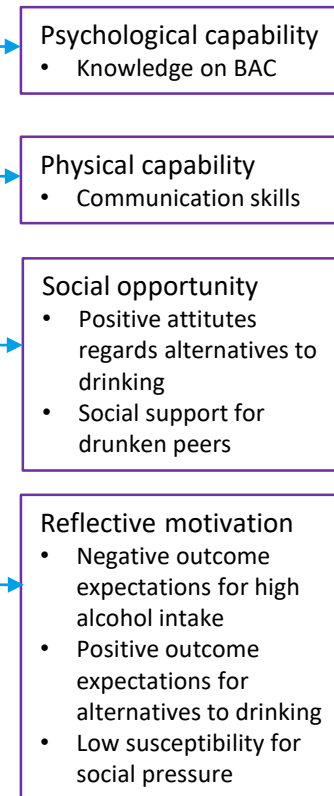




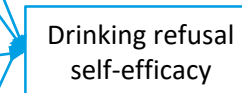
## Behaviour change methods of VR FestLab



## Intermediate factors (based on COM-B)



## Behavioural outcome



\*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

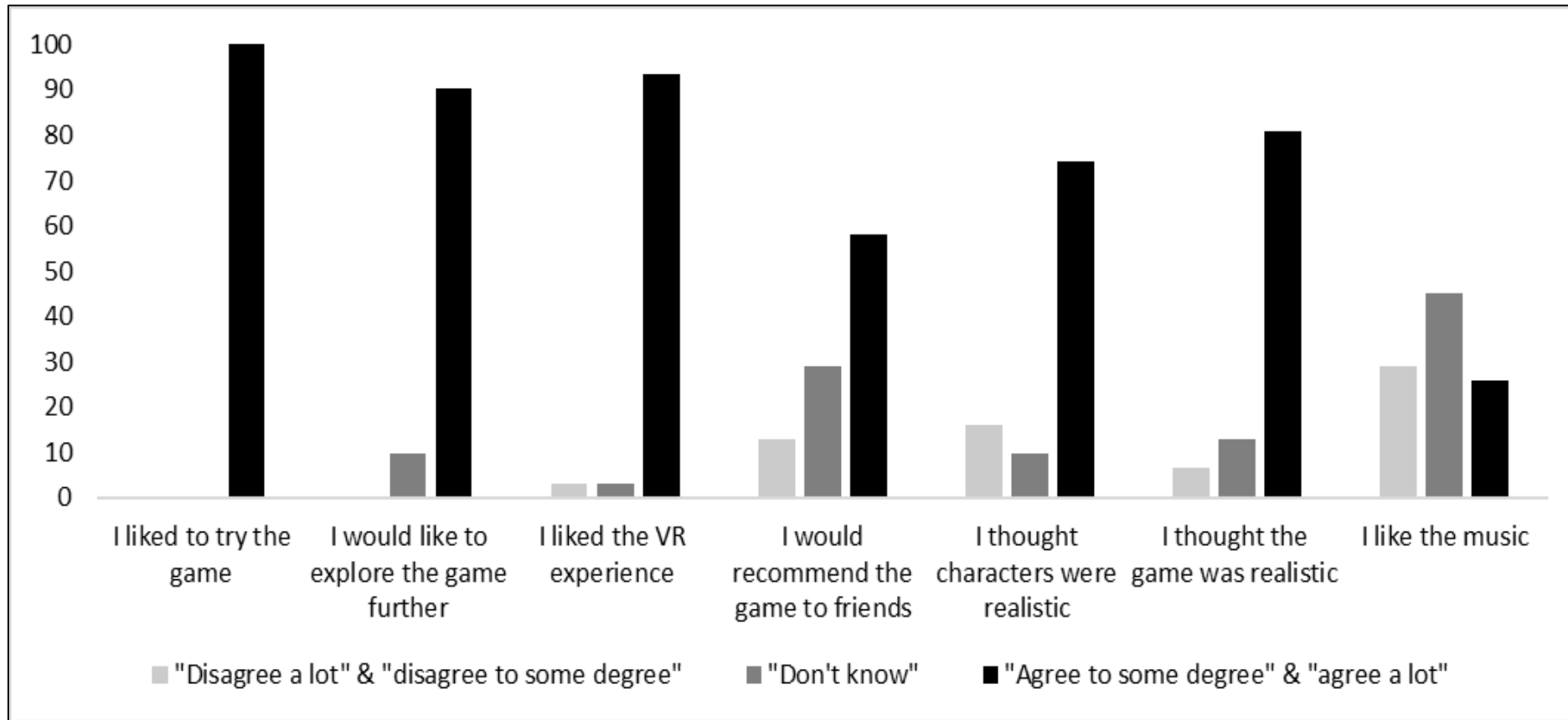


# Pilot testing and user experience

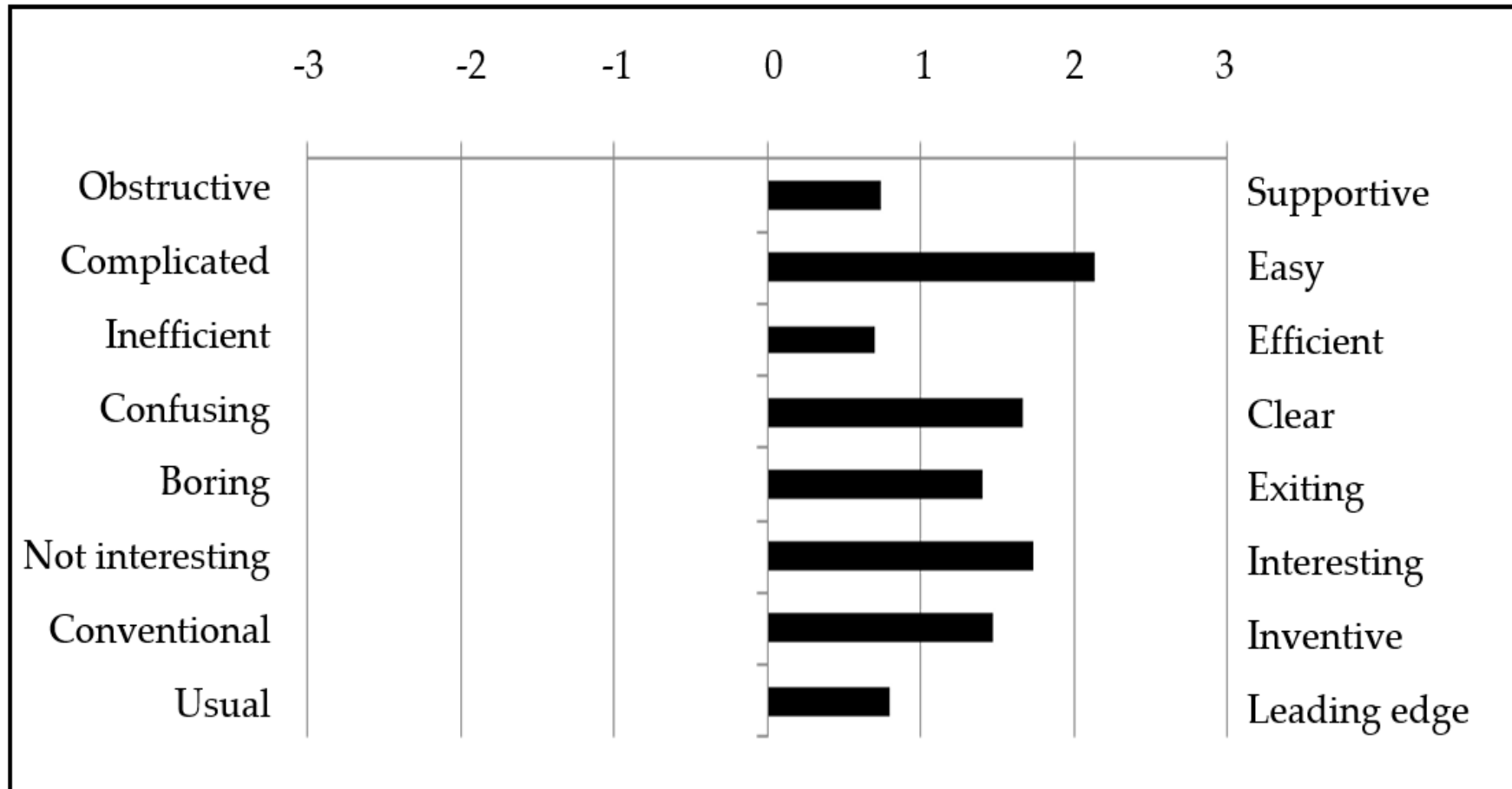
- 31 adolescents Askov Efterskole testing VR FestLab
- Questionnaire (n = 31)
- Structured focus group interviews (n = 10, 31 participants)



# User feedback (n = 31)



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



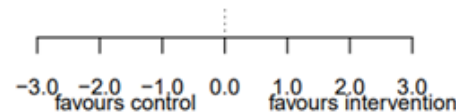
# Results from focus groups

- 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

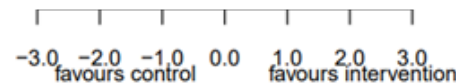
| group                                | intervention (95%CI) |                 | control (95%CI) |                 |  | p-value | effect, 95%CI   |
|--------------------------------------|----------------------|-----------------|-----------------|-----------------|--|---------|-----------------|
| resist soc press drink (full 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



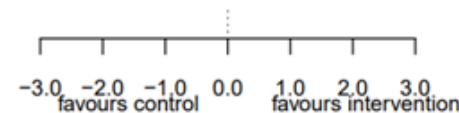
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# Results of the evaluation of VR FestLab

- 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 addressing all action areas of the Ottawa Charter to prevent alcohol and other drug use among youth
- Implementation and use of approaches addressing 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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