

# **COMPARISON OF ESTIMATED NORMATIVE BELIEFS OF PEERS REGARDING THE USE OF SYNTHETIC CANNABINOIDS AND OF ACTUAL CONSUMPTION RATES AMONG STUDENTS.**

## **FINDINGS OF A GERMAN SUBSAMPLE OF A EUROPEAN 'SOCIAL NORMS' INTERVENTION STUDY**

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- on behalf of the SNIPE consortium -

1) Institute for Epidemiology and Prevention Research (BIPS)

2) Helmholtz Centre for Infection Research

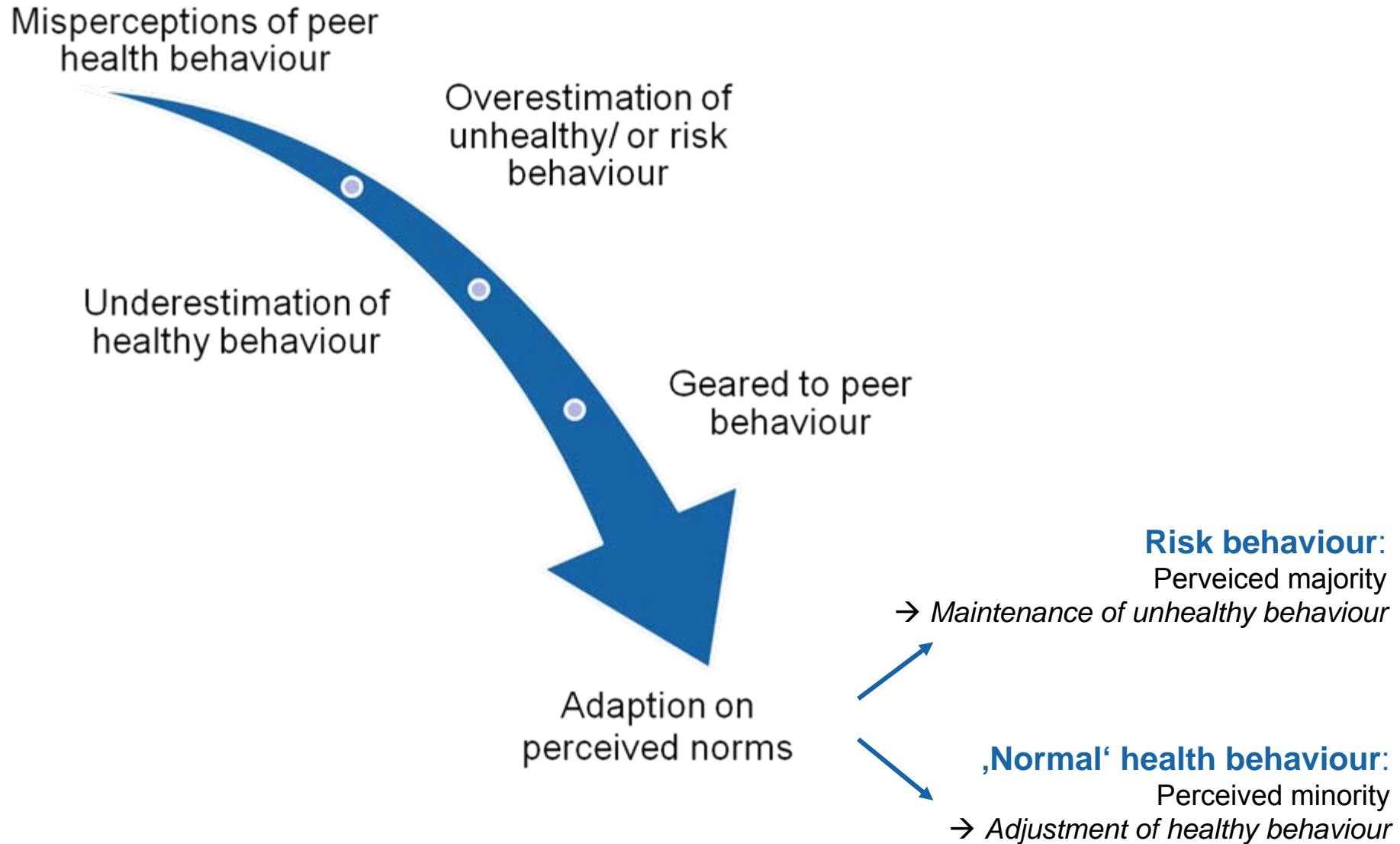
International Conference on SPICE prevention issues

25.09.2012, Frankfurt

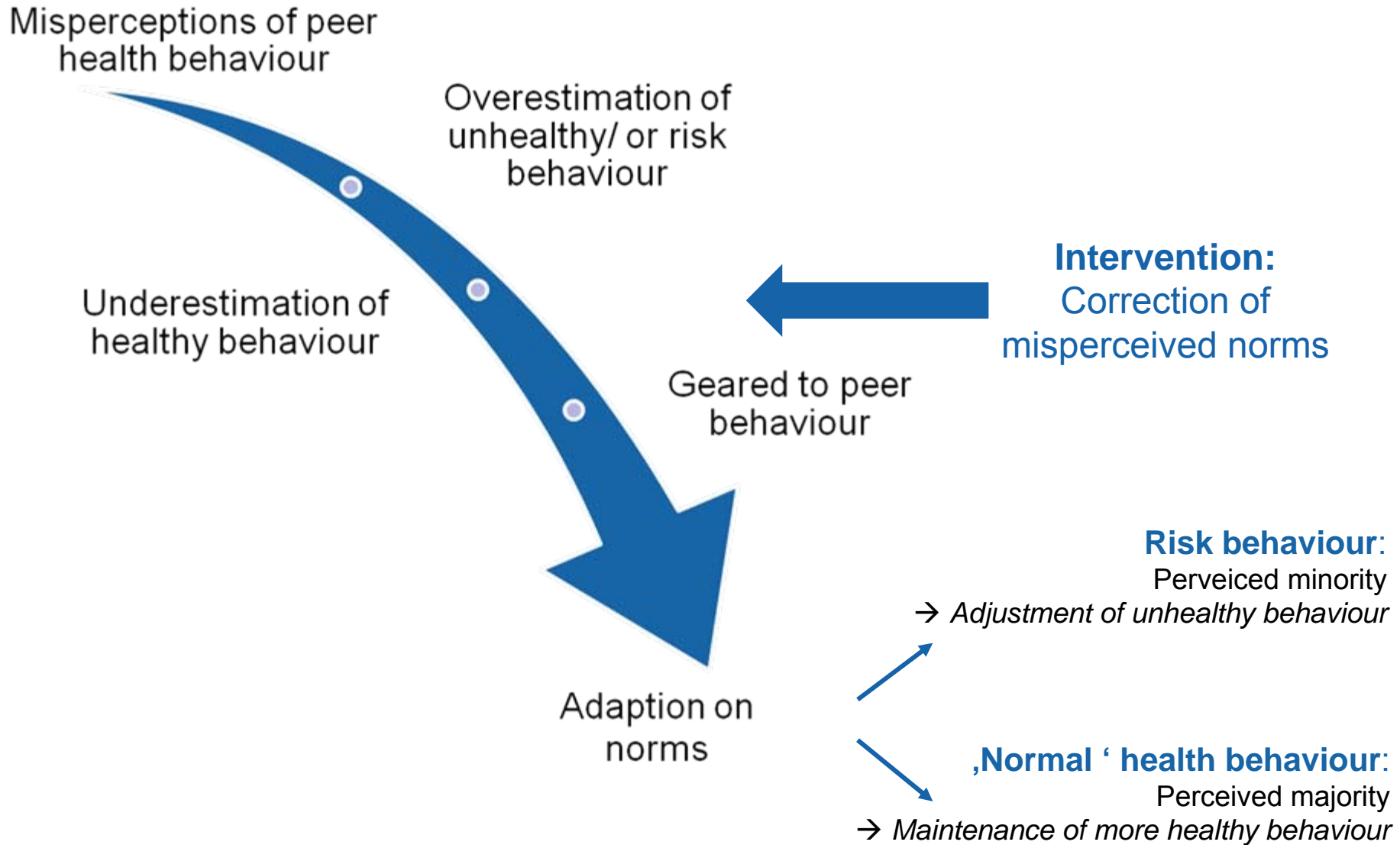


# Background

# The social norms approach



# The social norms approach



# Perceived Social Norms: Legal Drug Use among College and University Students

## US & Canada & Australia

*Binge drinking, Tobacco use, Marijuana use*

*e.g., Haines & Barker, 2003 (In: Perkins, 2003); Kilmer et al., J Stud Alcohol, 2006*

Europe – Scotland, England, Hungary, Slovak  
Republic, Romania, Czech Republic, Finland,  
Denmark

*Binge drinking*

*e.g., McAlaney et al., J Stud Alcohol Drugs, 2007; Bewick et al., Addict Behav, 2008; Page et al., Subst Use Misuse, 2008*

# Effects of Social Norms Interventions



Change toward less exaggerated perception of peer alcohol and tobacco use

Reduced alcohol & tobacco consumption

**Perkins, *Addict Behav*, 2007**

**Page et al., *Subst Use Misuse*, 2008**

**Larimer et al., *J Stud Alcohol Drugs*, 2009**

**Moreira et al., *Cochrane Library*, 2009**

- Huge research gap
  - Approach already well known in the US
  - Little research in Europe
- Most studies focus alcohol and alcohol-related consequences
  - Only a few studies examined the effect of social norms campaigns on tobacco or illicit drug use
- Since now, no studies on synthetic cannabinoid use

# Data & Methods

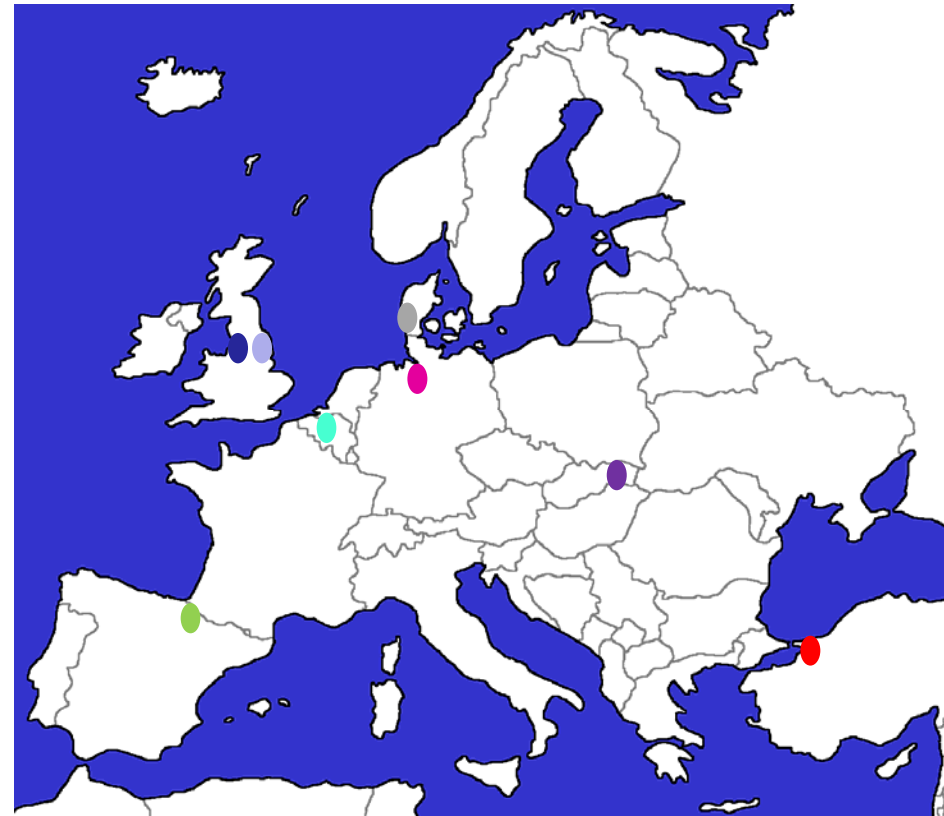
The **SNIFE** study  
**Social Norms Intervention**  
for the prevention of **Polydrug use**



- EU-funded online intervention study
- 7 European countries
- Target group: College- and University students
- **German Survey:**
  - 3 Colleges/ Universities (University of Bremen, University of applied sciences of Bremen, University of applied sciences of Bielefeld)
  - Participants of baseline survey: **471** students
    - 58.8 % female
    - Ø 25.7 years old ( $\pm 4,5$ )
  - January/February 2012



- University Antwerp, Belgium
- Bremen University, Germany
- University of Bradford, UK
- University of Southern Denmark, Denmark
- University of Navarra, Spain
- University of Leeds, UK
- University of Koscicé, Slovakia
- Marmara University, Turkey



Development of an E-health intervention for the

- reduction of licit and
- prevention of illicit drug consumption

in university/college students in Europe

# Questionnaire Drug consumption

Content of online survey:

- **Own consumption** of alcohol, tobacco and illicit drugs
  - How often do you use the following substances?
- **Perceived consumption** of the majority of students of gender-specific peer group (last 2 months)
  - How often in the last two months do you think most (at least 51%) of the **[participant gender]** students at your university will have used the following?

|  |  |
|--|--|
| 14. Alcoholic beverages (beer, wine, spirits, etc.)  | Never in my life                                     |
| 15. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)   | Have used but not in the last two months             |
| 16. Cannabis (marijuana, pot, grass, hash, etc.)   | Once in the last two months                          |
| 17. Medication to improve academic performance (e.g. Ritalin) which was not prescribed for you                                     | Twice in the last two months                         |
| 18. Synthetic cannabis (Spice etc.)  | Once every two weeks in the last two months          |
| 19. Cocaine (coke, crack, etc.)  | Once every week in the last two months               |
| 20. Ecstasy  | Twice every week in the last two months              |
| 21. Other amphetamine-type stimulants (speed, meth, etc.)  | Three times every week in the last two months        |
| 22. Sedatives or sleeping pills (diazepam, alprazolam, flunitrazepam, midazolam, stilnoct, etc.) which were not prescribed for you | Four times every week in the last two months         |
| 23. Hallucinogens (LSD, acid, mushrooms, trips, ketamine, etc.)  | Every day or nearly every day in the last two months |
| 24. Inhalants (nitrous, glue, petrol, paint thinner, etc.)   |  |

# Questionnaire

## Attitude towards drugs

- **Own attitude** towards consumption of alcohol, tobacco and illicit drugs
  - Which of the following best describes your attitude to using each of these substances?
- **Perceived attitude** of the majority of students of gender-specific peer group (last 2 months)
  - Which of the following do you think best describes the attitude of most (at least 51%) of the [participant gender] students at your university to the use of each of these substances?

|  |   |
|--|---|
| 30. Alcoholic beverages (beer, wine, spirits, etc.)  | Never ok to use<br>Ok to use occasionally if it doesn't interfere with study or work<br>Ok to use frequently if it doesn't interfere with study or work<br>Ok to use occasionally even if it does interfere with study or work<br>Ok to use frequently if that is what the person wants to do |
| 31. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)   |   |
| 32. Cannabis (marijuana, pot, grass, hash, etc.)   |   |
| 33. Medication to improve academic performance (e.g. Ritalin) which was not prescribed for you                                     |   |
| 34. Synthetic cannabis (Spice etc.)  |   |
| 35. Cocaine (coke, crack, etc.)  |   |
| 36. Ecstasy  |   |
| 37. Other amphetamine-type stimulants (speed, meth, etc.)  |   |
| 38. Sedatives or sleeping pills (diazepam, alprazolam, flunitrazepam, midazolam, stilnoct, etc.) which were not prescribed for you |   |
| 39. Hallucinogens (LSD, acid, mushrooms, trips, ketamine, etc.)  |   |
| 40. Inhalants (nitrous, glue, petrol, paint thinner, etc.)   |   |



# Results

# Misperception of drug consumption rates among peers (lifetime)

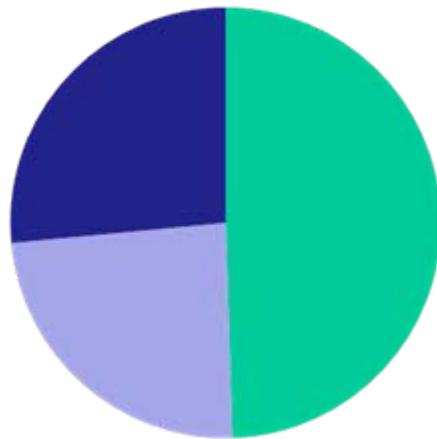
|  | Women  |  | Men  |  |
|--|--|--|--|--|
|  | ... percent of respondents think that the majority use drugs | <b>Actual</b> proportion of drug users in peer group | ... percent of respondents think that the majority use drugs | <b>Actual</b> proportion of drug users in peer group |
| Cannabis                                     | 92.3   | 48.9   | 95.6   | 67.5   |
| Cocaine                                      | 41.8   | 10.8   | 42.9   | 16.5   |
| Amphetamins                                  | 42.4   | 10.5   | 45.2   | 18.1   |
| Hallucinogens                                | 44.3   | 7.9  | 46.8   | 18.1   |
| Ecstasy                                      | 46.6   | 10.5   | 46.4   | 13.0   |
| <b>Synthetic cannabinoids</b>                | <b>50.5</b>  | <b>3.2</b>   | <b>52.4</b>  | <b>7.8</b>   |
| Inhalants                                    | 34.7   | 1.8  | 28.6   | 4.6  |
| Medication to improve academic performance * | 62.7   | 1.4  | 61.9   | 5.7  |
| Sedatives or sleeping pills *                | 68.0   | 10.5   | 55.3   | 10.4   |

\* Not prescribed

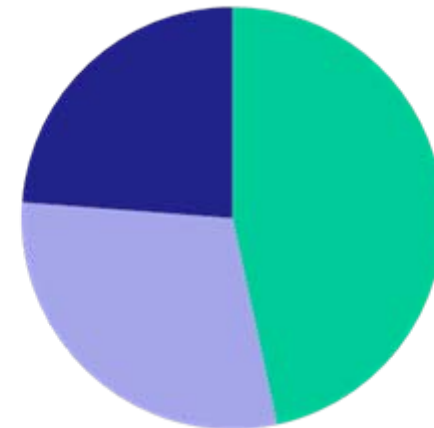
# Perceived and actual use of synthetic cannabinoids

## Perceived synthetic cannabinoid use in peer group of own gender

Women

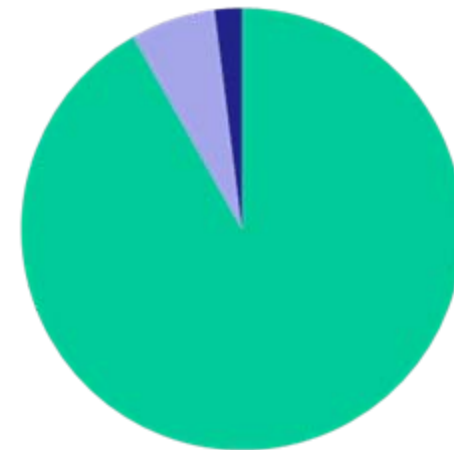
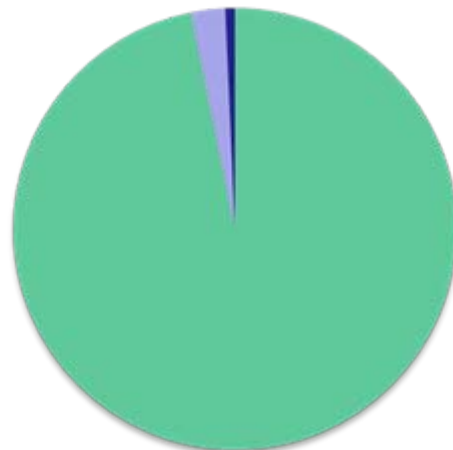


Men



- Never used
- Not used in the last two months
- Used in the last two months

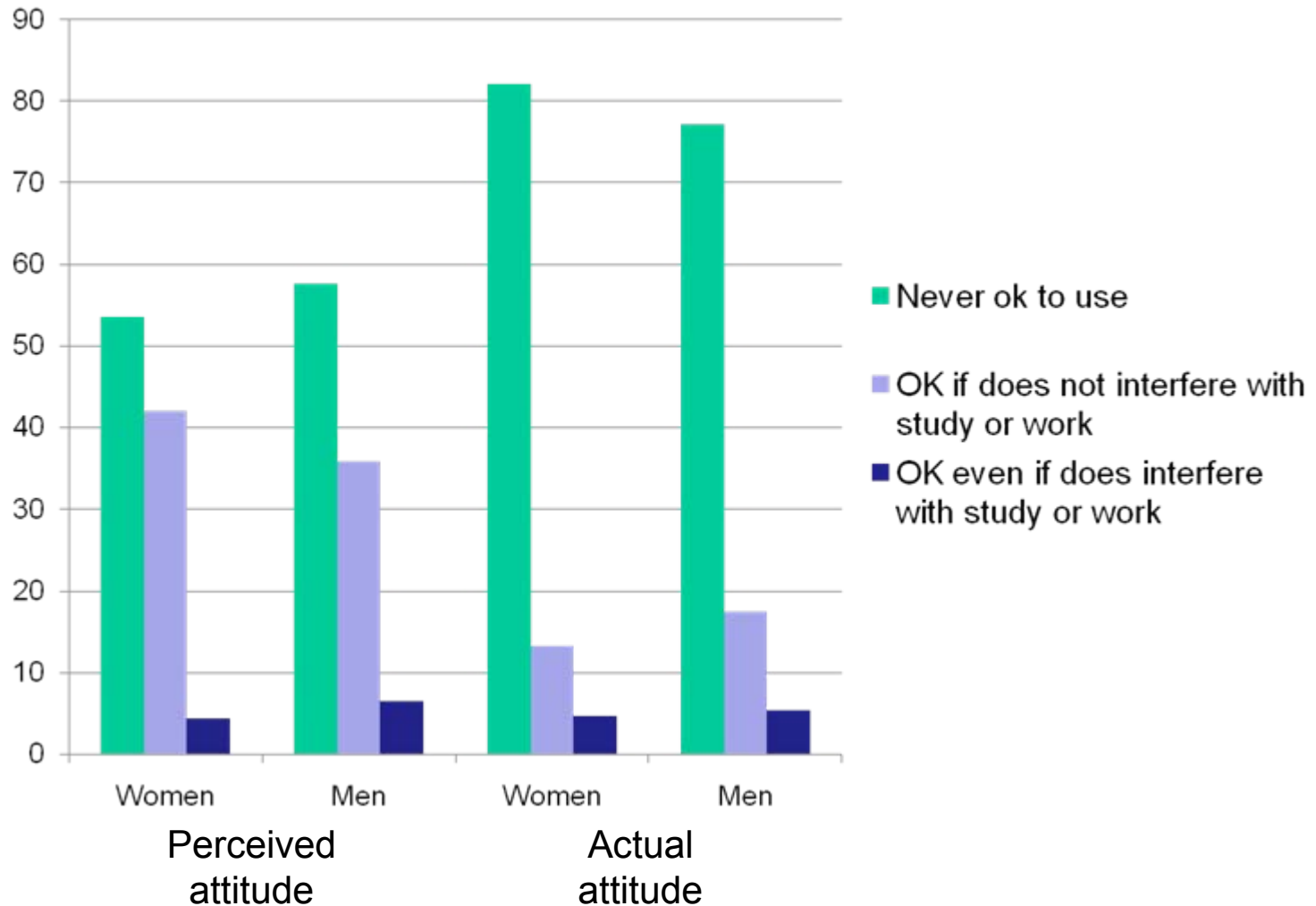
## Actual synthetic cannabinoid use



- Never used
- Not used in the last two months
- Used in the last two months



# Attitude towards use of synthetic cannabinoids





# Discussion

- German university students appear to highly **overestimate** the use
- and acceptance of synthetic cannabinoids in their peer group.

→ This might be due to media hype on SPICE.

- Future research should examine the efficacy of interventions targeting **norm misperceptions regarding the use of synthetic cannabinoids.**
  - Before young students will begin to adapt on perceptions!



Alcohol

Tobacco

Cannabis

Alcohol & Smoking

### Did you know?

**97%** of female Bremen students have **NEVER** used synthetic cannabis (e.g. SPICE)

### Smoking Tobacco (in the last two months) ?

I said 

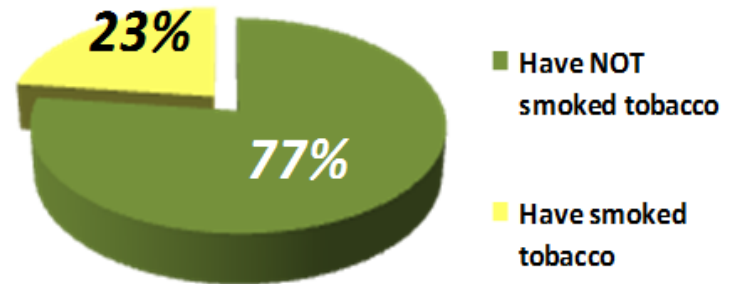
'I smoked cigarettes twice a week'

'I think the majority of female students from Bremen smoke cigarettes daily'

**Most female students (79%) at Bremen University said:** 

We think most female Bremen students smoked at **least one cigarette a fortnight**


What female Bremen students **actually** do:





Universität Bremen

Sie sind eingeloggt als STEFANIE.HELME@UNI-BIELEFELD.DE [Ausloggen](#)




- Alkohol
- Tabak
- Cannabis
- Alkohol & Tabak

**Wussten Sie, dass...**

**...96%** der männlichen Studierenden der Universität Bremen in den letzten zwei Monaten keine Halluzinogene (wie LSD, Pilze) genommen haben?

## ALKOHOL

**Genereller Alkoholkonsum (in den letzten 2 Monaten)?**

**Sie haben gesagt**  Ich habe in den letzten zwei Monaten kein Alkohol getrunken

Ich denke, dass der Großteil der männlichen Studierenden der Universität Bremen in den letzten zwei Monaten kein Alkohol getrunken hat

 **Die meisten der männlichen Studierenden der Universität Bremen (83%) sagen**

Der Großteil der männlichen Studierenden hat mindestens einmal in der Woche Alkohol getrunken

Tatsächlich hat der Großteil der männlichen Studierenden (**52%**) der Universität Bremen höchstens einmal in der Woche Alkohol getrunken!

### Genereller Alkoholkonsum (in den letzten 2 Monaten)?

Anzahl von alkoholischen Getränken (in den letzten 2 Monaten)?

Sich betrinken (in den letzten 2 Monaten)?

**Berkowitz, AD (2005):** An overview of the social norms approach. In: Lederman, L & Stewart, L (Eds.) Changing the culture of college drinking: A socially situated health communication campaign (193-214). Creskill, New Jersey: Hampton Press.

**Bewick, BM, Trusler, K, Mulhern, B, Barkman, M, Hill, AJ (2008):** The feasibility and effectiveness of a web-based personalised feedback and social norms alcohol intervention in UK university students: A randomised controlled trial. In: Addictive Behaviors, 33, 1192-1198.

**Hughes, C; Julian, R; Richman, M; Mason, R; Long, G (2008):** Trialling 'Social Norms' Strategies for Minimising Alcohol-Related Harm Among Rural Youth (Social Norms Analysis Project).

**Larimer, ME; Kaysen, DL; Lee, CM; Kilmer, JR; Lewis, MA; Dillworth, T (2009):** Evaluating level of specificity of normative referents in relation to personal drinking behavior. In: Journal of studies on alcohol and drugs, H. 16, S. 115-121.

**Lewis, MA; Neighbors, C (2006):** Social norms approaches using descriptive drinking norms education: a review of the research on personalized normative feedback. In: Journal of American college health : J of ACH, Jg. 54, H. 4, S. 213-218.

**McAlaney, J; McMahon, J (2007):** Normative beliefs, misperceptions, and heavy episodic drinking in a british student sample. In: Journal of studies on alcohol and drugs, Jg. 68, H. 3, S. 385-392.

**Page, RM; Ihasz, F; Hantiu, I; Simonek, J; Klarova, R (2008):** Social Normative Perceptions of Alcohol Use and Episodic Heavy Drinking Among Central and Eastern European Adolescents. In: Substance Use & Misuse, H. 43, S. 361-373.

**Perkins, HW (2007):** Misperceptions of peer drinking norms in Canada: Another look at the "reign of error" and its consequences among college students.

**Thank you very much for your  
kind attention!**

[www.bips.uni-bremen.de](http://www.bips.uni-bremen.de)

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**BIPS**

Institut für Epidemiologie  
und Präventionsforschung

**Intervention Group:** Access to a website portal providing individualized social norms feedback (N=1000)

**Delayed Intervention Control Group:** Access to the intervention website after study completion (N=1000)

**Baseline and 5-months Follow-up Assessments:**

- Perceptions of personal and peer drug use
- Rates of personal *licit and illicit* drug use



|                                     |   | Frauen (%) | Männer (%) |
|-------------------------------------|---|------------|------------|
| <b>Studium</b>                      | Erststudium   | 83,4       | 78,9       |
|                                     | Weiterführendes Studium                               | 16,6       | 19,1       |
| <b>Semester</b>                     | 1   | 24,6       | 21,8       |
|                                     | 2   | 26,1       | 21,2       |
|                                     | 3   | 26,1       | 18,1       |
|                                     | 4   | 7,2        | 10,9       |
|                                     | 5   | 9,8        | 13,5       |
|                                     | Sonstiges   | 6,2        | 14,5       |
| <b>Studienfach</b>                  | Sozial- oder<br>Erziehungswissenschaften              | 50,2       | 26,8       |
|                                     | Geisteswissenschaften (z.B.<br>Geschichte, Geografie) | 12,3       | 11,9       |
|                                     | Naturwissenschaften                                   | 8,7        | 23,7       |
|                                     | Wirtschaft und Jura                                   | 6,1        | 11,9       |
|                                     | Ingenieurwissenschaften                               | 3,2        | 19,6       |
|                                     | Sonstiges   | 19,5       | 6,2        |
| <b>Austausch-<br/>studierende</b>   |   | 7,6        | 5,2        |
| <b>Religions-<br/>zugehörigkeit</b> | Christlich  | 52,7       | 40,2       |
|                                     | Andere  | 6,9        | 11,3       |
|                                     | Keine   | 40,4       | 48,5       |
| <b>Wohn-<br/>situation</b>          | Studierendenwohnheim                                  | 7,2        | 12,5       |
|                                     | Private Wohnung mit anderen<br>Studierenden           | 29,6       | 25,5       |
|                                     | Private Wohnung allein oder mit<br>Partner/in         | 43,7       | 35,4       |
|                                     | Bei Eltern  | 16,6       | 18,2       |
|                                     | Sonstiges   | 2,9        | 8,3        |