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

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(JLS/2009-2010/DPIP/AG)
Background
The social norms approach

Risk behaviour:
- Perceived majority
  → Maintenance of unhealthy behaviour

'Normal' health behaviour:
- Perceived minority
  → Adjustment of healthy behaviour
The social norms approach

**Misperceptions of peer health behaviour**

- Overestimation of unhealthy/or risk behaviour
  - Adjustment of unhealthy behaviour

**Underestimation of healthy behaviour**

- Geared to peer behaviour
  - Maintenance of more healthy behaviour

**Adaption on norms**

- Correction of misperceived norms

**Intervention:**

- Risk behaviour: Perceived minority
  - Adjustment of unhealthy behaviour

- Normal health behaviour: Perceived majority
  - Maintenance of more healthy behaviour
Perceived Social Norms: Legal Drug Use among College and University Students

US & Canada & Australia

Binge drinking, Tobacco use, Marihuana 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
Social norms approach

- 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 SNIPE 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 (± 4.5)
  • January/February 2012
SNIPE consortium

- 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 Kosicé, Slovakia
- Marmara University, Turkey
Main objectives of the SNIPE-project

Development of an E-health intervention for the

- reduction of licit and
- prevention of illicit drug consumption

in university/college students in Europe
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?

<table>
<thead>
<tr>
<th>Alcohol</th>
<th>Tobacco</th>
<th>Cannabis</th>
<th>Medication</th>
<th>Synthetic cannabis</th>
<th>Cocaine</th>
<th>Ecstasy</th>
<th>Other stimulants</th>
<th>Sedatives</th>
<th>Hallucinogens</th>
<th>Inhalants</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Alcoholic beverages (beer, wine, spirits, etc.)</td>
<td>15. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)</td>
<td>16. Cannabis (marijuana, pot, grass, hash, etc.)</td>
<td>17. Medication to improve academic performance (e.g. Ritalin) which was not prescribed for you</td>
<td>18. Synthetic cannabis (Spice etc.)</td>
<td>19. Cocaine (coke, crack, etc.)</td>
<td>20. Ecstasy</td>
<td>21. Other amphetamine-type stimulants (speed, meth, etc.)</td>
<td>22. Sedatives or sleeping pills (diazepam, alprazolam, flunitrazepam, midazolam, stilmot, etc.) which were not prescribed for you</td>
<td>23. Hallucinogens (LSD, acid, mushrooms, trips, ketamine, etc.)</td>
<td>24. Inhalants (nitrous, glue, petrol, paint thinner, etc.)</td>
</tr>
<tr>
<td>Never in my life</td>
<td>Have used but not in the last two months</td>
<td>Once in the last two months</td>
<td>Twice in the last two months</td>
<td>Once every two weeks in the last two months</td>
<td>Once every week in the last two months</td>
<td>Twice every week in the last two months</td>
<td>Three times every week in the last two months</td>
<td>Four times every week in the last two months</td>
<td>Every day or nearly every day in the last two months</td>
<td></td>
</tr>
</tbody>
</table>
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 |
| 31. Tobacco products (cigarettes, chewing tobacco, cigars, etc.) | Ok to use occasionally if it doesn’t interfere with study or work |
| 32. Cannabis (marijuana, pot, grass, hash, etc.) | Ok to use frequently if it doesn’t interfere with study or work |
| 33. Medication to improve academic performance (e.g. Ritalin) which was not prescribed for you | Ok to use occasionally even if it does interfere with study or work |
| 34. Synthetic cannabis (Spice etc.) | Ok to use frequently if that is what the person wants to do |
| 35. Cocaine (coke, crack, etc.) |
| 36. Ecstasy |
| 37. Other amphetamine-type stimulants (speed, meth, etc.) |
| 38. Sedatives or sleeping pills (diazepam, alprazolam, flunitrazepam, midazolam, stilmct, 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)

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

* Not prescribed
Perceived and actual use of synthetic cannabinoids

Perceived synthetic cannabinoid use in peer group of own gender

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

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

Actual synthetic cannabinoid use

Women
- Never used

Men
- Never used
Attitude towards use of synthetic cannabinoids

Perceived attitude

- Women: Never ok to use
- Men: OK if does not interfere with study or work

Actual attitude

- Women: OK even if does interfere with study or work
- Men: Never ok to use
Discussion
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!
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:

77% Have smoked tobacco

23% Have NOT smoked tobacco
**Wussten Sie, dass...**

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

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**ALKOHOL**

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

<table>
<thead>
<tr>
<th>Sie haben gesagt</th>
<th>Ich habe in den letzten zwei Monaten kein Alkohol getrunken</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Die meisten der männlichen Studierenden der Universität Bremen (83%) sagen</th>
</tr>
</thead>
</table>

| 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! |

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

<table>
<thead>
<tr>
<th>Anzahl von alkoholischen Getränken (in den letzten 2 Monaten)?</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Sich betrinken (in den letzten 2 Monaten)?</th>
</tr>
</thead>
</table>
References


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).


Thank you very much for your kind attention!

www.bips.uni-bremen.de

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