**FEMALE SNUS USE AND HEALTH CORRELATES**

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**Background:** Over the last decade, snus (Swedish moist snuff) has become increasingly popular among Norwegian women.

**Proportion of ever-users in female age groups:**
- 18-19 yrs: 30%
- 20-29 yrs: 22%
- 30-39 yrs: 6.5%
- 40-45 yrs: 4.4%

**Different categories of users:**
- Older users are typically earlier smokers,
- Younger users often recruited from non-tobacco-users

**Lifestyle correlates:**
- Intermediate education
- Higher alcohol consumption
- More lifetime sexual partners
- More hard physical activity

**Aim:** Study the relationship between female snus use, body mass index (BMI) and self-rated general health.

**Snus**
- Non-combustible tobacco
- Less harmful than smoking but possible risk for some cancers, myocardial infarction, reduced cancer survival rate.
- During pregnancy: associated with low birth weight, premature delivery and pre-eclampsia.
- Nicotine delivery comparable to that of cigarettes.

**Participants**
- 25 233 women aged 18-45 randomly drawn from the National Registry in 2011/2012.
- A self-administered, structured questionnaire on lifestyle and health.
- Response rate 54.5% (N=13 756).
- The study approved by the Regional Committee for Medical and Health Research Ethics.

**Measures & Analyses**
- Exposure variable: snus use (former, occasional, daily, ref: never use).
- BMI categorized as low (<23), medium (23-24.99) or high (≥25), corresponding to moderate underweight, normal weight and overweight.
- Global health categorized as fair/poor, good or very good/excellent.
- Two cumulative ordered logit models (one for health, one for BMI), adjusted for confounders.

**Associations between snus use and self-rated health**

<table>
<thead>
<tr>
<th>Level</th>
<th>N</th>
<th>OR (95% CI), &lt; Good health</th>
<th>OR (95% CI), &lt; Very good health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never (ref.)</td>
<td>9479</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Former</td>
<td>327</td>
<td>1.29 (0.85; 1.97)</td>
<td>1.17 (0.91; 1.49)</td>
</tr>
<tr>
<td>Occasional</td>
<td>410</td>
<td>0.97 (0.65; 1.43)</td>
<td>1.11 (0.88; 1.39)</td>
</tr>
<tr>
<td>Daily</td>
<td>736</td>
<td>1.43 (1.08; 1.90)*</td>
<td>1.30 (1.10; 1.55)**</td>
</tr>
</tbody>
</table>

**Associations between snus use and BMI**

<table>
<thead>
<tr>
<th>Level</th>
<th>N</th>
<th>OR (95% CI), BMI ≥=23</th>
<th>OR (95% CI), BMI ≥=25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never (ref.)</td>
<td>9469</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Former</td>
<td>332</td>
<td>0.96 (0.76; 1.20)</td>
<td>0.86 (0.67; 1.11)</td>
</tr>
<tr>
<td>Occasional</td>
<td>408</td>
<td>1.19 (0.96; 1.46)</td>
<td>0.83 (0.65; 1.05)</td>
</tr>
<tr>
<td>Daily</td>
<td>738</td>
<td>0.87 (0.74; 1.02)*</td>
<td>0.79 (0.66; 0.95)**</td>
</tr>
</tbody>
</table>

Both models: Adjusted for age, units alcohol per week, leisure and work activity levels, current pregnancy. Odds ratios (OR) with 95% confidence intervals (CI) for higher versus lower BMI, from cumulative ordered logit models. * p<0.05; **p<0.01

**Conclusion:** Daily snus use is associated with poorer self-rated health and lower BMI among women.

**Disclosure:** No conflict of interest

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**BMI** = body weight kg / (height m)²