The influence of life-style factors on health-related quality of life

Nortvedt MW 1, Riise T 2, Moen BE 2
1 Faculty of Health and Social Sciences, Bergen University College, 2 Department of Public Health, University of Bergen, Norway

BACKGROUND
Smoking, excessive alcohol consumption and overweight are related to a number of adverse health effects, including cardiovascular diseases. Health-related quality of life questionnaires give an overall measure of the consequences of varying health on the daily living.

OBJECTIVE
To estimate the relation between life style factors and health related quality of life in a general population.

RESULTS

<table>
<thead>
<tr>
<th>Number of subjects</th>
<th>Physical summary (PCS)</th>
<th>Mental summary (MCS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never smoked</td>
<td>7 224</td>
<td>50.7</td>
</tr>
<tr>
<td>Smoked earlier</td>
<td>5 461</td>
<td>50.4</td>
</tr>
<tr>
<td>Current smokers</td>
<td>5 607</td>
<td>49.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. of cigarettes per day</th>
<th>Physical summary (PCS)</th>
<th>Mental summary (MCS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 4 sig.</td>
<td>9 648</td>
<td>50.5</td>
</tr>
<tr>
<td>0.50 - 1.0 sig.</td>
<td>2 561</td>
<td>49.3</td>
</tr>
<tr>
<td>1.50 - 2.0 sig.</td>
<td>1 149</td>
<td>47.8</td>
</tr>
<tr>
<td>2.50 - 3.0 sig.</td>
<td>2 200</td>
<td>46.7</td>
</tr>
<tr>
<td>3.50 - 4.0 sig.</td>
<td>3 53</td>
<td>42.7</td>
</tr>
</tbody>
</table>

Table 1. Smoking was related to reduced physical and mental health with clear dose-response relations. Ex-smokers had almost the same mean levels as non-smokers.

Figure 1. Inverse U-shape relationships were found for alcohol consumption reaching a maximum mean physical score for the category of 10-20 units per week and 3-4 units for mental health.

Figure 2. Inverse U-shape relationships were found also for the BMI. Maximum mean score for the physical component was found at 22 kg per m², while the maximum for the mental health component was at 30 kg per m², outside the recommended range (18.5 – 24.9).

CONCLUSIONS

- Smoking was related to reduced health-related quality of life.
- The results support the hypothesis of the positive relation between moderate alcohol consumption and health, although the maximum mental health was reached at a relatively low level of intake.
- The results suggests marked differences in the mechanisms between overweight and physical and mental health.
- Physical training was strongly related to increased physical and mental health.

METHOD
The Hordaland Health Study ’97–’99 (HUSK) was conducted during 1997-99. The study population included all individuals in Hordaland County born 1950-51 and 1953-57. A total of 22,312 individuals participated; the response rate was 60% for men and 72% for women.

Effects of smoking, alcohol consumption, body mass index (BMI) and physical activity on the physical and mental component scales of the SF-12 Health Survey were estimated using a 3-way analyses of covariance.