Why medication or tobacco consumption enhance life satisfaction of cardiovascular patients?

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Background

- Monitoring of LS is a key element of the social progress of Europeans (Eurofound, 2013)

- LS of patients may be related to:
  - incidents of cardiovascular diseases
  - risk factors
  - unhealthy behaviours
  - socioeconomic conditions

- Their respective influence remains unclear

Aim

- To analyse LS and its relationships with cardiovascular risk factors and unhealthy behaviours
Methods

➤ Design
Retrospective health record audit of the Luxembourgish National Institute of Cardiac Surgery and Cardiological Intervention (INCCI)

➤ Inclusion criteria
All patients who underwent coronary angiography in 2008-2009

➤ Procedure
5 years after, self-administered questionnaire

➤ Data analysis
Multiple regression including interaction effects
Variables

- LS [1-10] (DV)
- CV disease incidence
  - Bypass surgery, myocardial infarction, angina pectoris
- CV risk factors
  - Diabetes, Hypertension, Hypercholesterolemia
  - Weight & height (for calculating BMI)
- Unhealthy behaviours
  - Tobacco consumption
  - Physical inactivity
  - Eating habits
  - Change over 5 years
- Socioeconomic characteristics
Characteristics of the participants

- n = 1289 (response rate 35.5%)
- Aged 69.2 years (± 11.1)
- 71.3 % men
- 74 % live in a couple
- 78.1 % retired
- 68.9 % secondary or higher education level
- 33.9 % income < 36 000 € /year
## Descriptive results

<table>
<thead>
<tr>
<th>LS [1;10]</th>
<th>( m = 7.3 \ (\pm \ 2.1) )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Incidence of CV disease over 5 previous years</strong></td>
<td></td>
</tr>
<tr>
<td>Bypass surgery</td>
<td>Yes</td>
</tr>
<tr>
<td>Myocardial infarction</td>
<td>Yes</td>
</tr>
<tr>
<td>Angina pectoris</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>CV risk factors</strong></td>
<td></td>
</tr>
<tr>
<td>Hypercholesterolemia</td>
<td>Yes</td>
</tr>
<tr>
<td>Hypertension</td>
<td>Yes</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Yes</td>
</tr>
<tr>
<td>BMI</td>
<td>Normal</td>
</tr>
<tr>
<td>Overweight</td>
<td>44 %</td>
</tr>
<tr>
<td>Obesity</td>
<td>32 %</td>
</tr>
<tr>
<td><strong>Behaviours</strong></td>
<td></td>
</tr>
<tr>
<td>Tobacco consumption</td>
<td>Yes</td>
</tr>
<tr>
<td>Pay attention to eating habits</td>
<td>No</td>
</tr>
<tr>
<td>Physical activity</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Occasional</td>
</tr>
<tr>
<td></td>
<td>Regular</td>
</tr>
</tbody>
</table>
Factors related to low life satisfaction

Adjusted on age, sex, income and all CV risk factors

- No physical activity: $rc = -0.678^{***}$
- Angina pectoris: $rc = -0.763^{**}$
- Hypercholesterolemia: $rc = -0.300^{*}$
Interactions and life satisfaction

Adjusted on age, sex, income and all CV risk factors

<table>
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<tr>
<th>Life satisfaction [1-10]</th>
<th>Estimate</th>
</tr>
</thead>
</table>
| Tobacco cons. x hypercholesterolemia                         | Smoker-Yes
| Smoker-Yes                                                   | 0.958 *   |
| Hypertension x hypercholesterolemia                          | Yes-Yes   | 0.698 *   |
| Physical act. x hypercholesterolemia                         | No-Yes    | -0.603 *  |
| Occasional-Yes                                               | -0.244 *  |
| Regular-Yes                                                  | -0.000 *  |
| Tobacco cons. x attention to eating habits                    | Smoker-Yes
| Smoker-Yes                                                   | 1.052 *   |
Interaction effects and LS

- **Hypercholesterolemia x smoking** → high LS Hyp. Patients with no intention to change may feel unconcerned. Attitude is in coherence with behaviour; “disinclined abstainers”? (Godin)

- **Hypercholesterolemia x low physical activity** → low LS Hyp. Patients may intend to change, but abstain from acting.

- **Smoking x paying attention to eating habits** → high LS Hyp. Patients know the risks of unhealthy behaviours and try to change it by being active. “Inclined actors”?

- **Hypercholesterolemia x hypertension** → high LS Hyp. Adapted care and treatment?
Implications

- Importance of treating biological risk factors
  - Medication

- Necessity to take behaviour change into account in the cardiac context

- Implementation of motivational interviewing groups
Thank you.

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