Edu-ACS pilot study: satisfaction and usability of a smartphone app to support lifestyle changes after an acute coronary syndrome

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Aim
• Evaluation of the usability of the app « Edu-ACS »
• Evaluation of patients satisfaction

Background
• Secondary cardiovascular prevention remains suboptimal after an acute coronary syndrome (ACS).
• The main challenge for patients and caregivers is to maintain healthy lifestyle changes.
• « Edu-ACS » is a smartphone app providing medical explanations about coronary artery disease and individual recommendations based on an initial assessment of all cardiovascular risk factors.

Method
• Patient enrollment during the cardiac rehabilitation programme
• Evaluation of the usability of the app using the System Usability Scale (SUS) (www.usability.gov/how-to-and-tools/methods/system-usability-scale.html)
• Evaluation by participants using a satisfaction questionnaire and a semi-structured oral interview

Results
• 16 patients enrolled (15 male, 1 female);
  Mean age 55.1±11.9 years old
• Same SUS score after 7 and 35 days of use:

  - Total SUS score = 74
  - Good usability

• Satisfaction questionnaire:

<table>
<thead>
<tr>
<th>Item</th>
<th>Totally agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Overall app use was of 13 uses over 5 weeks (10 uses the first week) on average.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to use</td>
<td>81%</td>
<td>7%</td>
<td>12%</td>
<td>12 patients (75%) appreciated the risk factors assessment.</td>
</tr>
<tr>
<td>Very useful</td>
<td>75%</td>
<td>25%</td>
<td>0%</td>
<td>8 patients (50%) wished the app to provide more individualized recommendations and to track changes in risk assessment results over time.</td>
</tr>
<tr>
<td>Medical content easy to understand</td>
<td>75%</td>
<td>13%</td>
<td>12%</td>
<td>5 patients (31%) reported technical difficulties during the test.</td>
</tr>
<tr>
<td>Would recommend the app to other patients</td>
<td>75%</td>
<td>13%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>All the medical content is useful</td>
<td>63%</td>
<td>25%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Learning new notions</td>
<td>56%</td>
<td>25%</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>Need for additional information</td>
<td>50%</td>
<td>31%</td>
<td>19%</td>
<td></td>
</tr>
</tbody>
</table>

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