Salutogenetic and pathogenetic factors of equal importance to predict mortality in a Swedish general population

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Conclusion
Social support and physical exercise seem to be salutogenetic factors of importance for long-term survival to balance traditional risk factors such as smoking and defined diseases. The results support health promotion initiatives focused on salutogenetic factors and not only prevention in relation to traditional risk factors and diseases.

Background
Pathogenetic factors are by definition supposed to have negative impact on health and often on survival. The relationship between pathogenetic and salutogenetic factors in relation to mortality is less investigated.

Aim
To compare the impact of pathogenetic and salutogenetic factors in predicting mortality.

Methods
• Random sample of an adult (age 35–74) Swedish general population (n=1498)
• Comprehensive questionnaire on health, diseases, lifestyle, work and socioeconomic factors in 1988. Response rate 90%
• Mortality data between 1988 and 2002 from the National register of causes of death.
• Cox proportional regression was used to study factors influencing survival.
• A final analysis with factors bivariately related to survival (p<0.20).
• Hazard ratio (HR) for death was used as the outcome.

Results

<table>
<thead>
<tr>
<th>HR</th>
<th>0.5</th>
<th>1.0</th>
<th>1.5</th>
<th>2.0</th>
<th>2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social support (friends)</td>
<td>0.98</td>
<td>0.94</td>
<td>0.92</td>
<td>0.88</td>
<td>0.87</td>
</tr>
<tr>
<td>Member of an association</td>
<td>3.18</td>
<td>3.19</td>
<td>3.26</td>
<td>3.34</td>
<td>3.42</td>
</tr>
<tr>
<td>Living alone</td>
<td>0.38</td>
<td>0.38</td>
<td>0.38</td>
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</tr>
<tr>
<td>Feeling depressed</td>
<td>0.66</td>
<td>0.66</td>
<td>0.66</td>
<td>0.66</td>
<td>0.66</td>
</tr>
<tr>
<td>Regular physical exercise</td>
<td>0.43</td>
<td>0.43</td>
<td>0.43</td>
<td>0.43</td>
<td>0.43</td>
</tr>
<tr>
<td>Daily smoking</td>
<td>0.92</td>
<td>0.92</td>
<td>0.92</td>
<td>0.92</td>
<td>0.92</td>
</tr>
<tr>
<td>Report of chronic disease</td>
<td>1.55</td>
<td>1.50</td>
<td>1.45</td>
<td>1.40</td>
<td>1.35</td>
</tr>
</tbody>
</table>

Hazard ratios with 95% CI for factors significantly (p<0.05) related to survival in a bivariate analysis. Adjusted by age and gender.

Definitions
Regular physical exercise: physical activity of moderate intensity during 30 minutes at least twice a week
Chronic disease: report of prolonged disease from cardiovascular, endocrine (diabetes, thyroid disease) and musculoskeletal system.

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