Psychosocial risk factors for chronic low back pain in primary care – a systematic review

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BACKGROUND

Low back pain (LBP) = Public health problem
Low back pain in primary care (PC):
- LBP = a frequent reason for seeking care
- PC = a preferential setting to observe the transition from acute to chronic LBP

What are the decisive factors for this transition?
- Traditional medical & biomechanical factors
- Psychosocial factors, more recently studied

OBJECTIVE

To review the psychosocial factors identified as risk factors for transition from acute to chronic low back pain in primary care settings.

METHODS

IDENTIFICATION & SELECTION OF THE LITERATURE

Systematic search for literature published until December 2009 (English / French), in 3 databases:
- Medline via PubMed
- the Cochrane Library
- PsycINFO via EBSCO

Criteria for articles to be included:
- Original prospective cohort study
- Primary care settings (from the European definition of general practice
- Open access care providers, first medical contact, unselected health problems)
- Adults with non specific LBP lasting for < 3 months at baseline
- Follow-up of the cohort ≥ 3 months
- « patient-centered » outcome criteria: pain, disability, social participation (incl. work participation), global satisfaction

Exclusion criteria:
- Secondary analyses of randomized controlled trials

ASSESSMENT OF THE METHODOLOGICAL QUALITY

Criteria derived from the Cochrane Collaboration Back Review Group for Spinal Disorders and from the French Health Agency's quality of description of the patient inclusion criteria; validity and reproducibility of the scales used to assess psychosocial factors at inclusion / outcome criteria; quality of statistical analyses (incl. adjustment for confounding factors); cohorts size; study duration; drop out rate

→ Total score allocated to each article (max. 20 points)

2 reviewers independently assessed the methodological quality of the articles included

Papers scoring ≥ 15 were considered as « high-quality papers »

DATA EXTRACTION & ANALYSIS

Several articles related to the same cohort = considered together (score allocated = mean of the scores of each paper)

RESULTS

DATA EXTRACTION & ANALYSIS (Tables 1 and 2).

Table 1: Factors often found not to be associated with outcome (number of studies concluding a significant association between psychosocial factors & outcome)

<table>
<thead>
<tr>
<th>FACTORS STUDIED</th>
<th>ASSOCIATION?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HIGH</td>
</tr>
<tr>
<td></td>
<td>QUALITY</td>
</tr>
<tr>
<td>Socio-économique classification, educational level, civil status (married or not), job satisfaction</td>
<td>1/5</td>
</tr>
<tr>
<td>Social support</td>
<td>0/1</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0/2</td>
</tr>
<tr>
<td>Pain control</td>
<td>0/2</td>
</tr>
</tbody>
</table>

Lack of data for firm conclusion

Table 2: Factors sometimes / often found to be associated with outcome (number of studies concluding a significant association between psychosocial factors & outcome)

<table>
<thead>
<tr>
<th>FACTORS STUDIED</th>
<th>ASSOCIATION?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HIGH</td>
</tr>
<tr>
<td></td>
<td>QUALITY</td>
</tr>
<tr>
<td>Depression</td>
<td>1/2</td>
</tr>
<tr>
<td>Fear-avoidance beliefs</td>
<td>1/1</td>
</tr>
<tr>
<td>Passive coping strategies</td>
<td>1/1</td>
</tr>
<tr>
<td>Low self-perceived general health</td>
<td>1/1</td>
</tr>
<tr>
<td>Compensation issues</td>
<td>2/3</td>
</tr>
<tr>
<td>Patient’s or care provider’s initial expectations of recovery</td>
<td>2/2 a, b, c, d, e, f</td>
</tr>
</tbody>
</table>

Strong & independent prognostic factor

DISCUSSION / CONCLUSION

Strengths = focus on primary care; rigorous review process
Limitations = only quantitative data; few databases screened

Main results & implications for future research?

1) Most factors not found as linked as expected → Inadequate scales to assess them → Inadequate statistical models used?
2) Patient’s / care provider’s initial expectations = unexpected → should be explored with qualitative approach?

1 Wonca News, Volume 31, Number 3, June 2005
3 ANAES. Guide d’analyse de la littérature et gradation des recommandations 2000