The role of perseverative negative thinking in predicting depression in people with coronary heart disease

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MHRG seminar 23rd Feb 2015
CHD & depression

- Increased prevalence of depression
- Worse cardiac outcomes
- Effectiveness of treatments limited

- Causes of depression in CHD unclear
- Mechanism linking depression and poor medical outcomes unknown

Targets for intervention
Perseverative negative thinking

- Repetitive, prolonged, recurrent thoughts
  - Worry
  - Rumination

- Consequences?
  - Elevated state and trait anxiety
  - Onset, duration and severity of depression
  - Physical outcomes
Cross-sectional studies in chronic physical illness

* rumination & negative affect in cancer patients
* worry & depression in CHD, COPD, RA, diabetes

* Prospective studies: equivocal, few in LTCs
* Prospective association of perseverative negative thinking with depression, anxiety & negative mood in adults with any LTC

* 3267 records screened, 25 studies included

* Correlations $r=0.23$ to $r=0.73$

* Perseverative negative thinking predicts subsequent negative affect in 13/20 studies
## Cardiac studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Condition</th>
<th>N</th>
<th>Assessment times</th>
<th>PNT</th>
<th>Negative affect</th>
<th>MV supports</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denton et al. (2012, 2011)</td>
<td>ACS</td>
<td>457/387</td>
<td>T1=1 week T2=3 months</td>
<td>Rumination</td>
<td>Depression</td>
<td>Yes</td>
<td>r=0.49</td>
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<tr>
<td>Garnefski &amp; Kraaij (2010)</td>
<td>MI</td>
<td>160/88</td>
<td>T1=3-12 months T2=+12 months</td>
<td>Rumination</td>
<td>Depression Anxiety</td>
<td>Yes</td>
<td>r=0.43 to r=0.45</td>
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<tr>
<td>Vogele et al. (2012)</td>
<td>MI</td>
<td>36/24</td>
<td>T1=5-15 days T2=6-8 weeks T3=6 months</td>
<td>Rumination</td>
<td>Depression</td>
<td>No</td>
<td>ns</td>
</tr>
<tr>
<td>Baker (2014)</td>
<td>CHD</td>
<td>101/85</td>
<td>T1=baseline T2=+3 months</td>
<td>Rumination</td>
<td>Depression</td>
<td>Yes</td>
<td>r=0.73</td>
</tr>
<tr>
<td>Xiao et al. (2011)</td>
<td>Hypertension</td>
<td>650/560</td>
<td>T1=≥1 year T2=+6 months</td>
<td>Rumination</td>
<td>Depression Anxiety</td>
<td>Yes</td>
<td>r=0.37 to r=0.38</td>
</tr>
</tbody>
</table>
Limitations

- Quality
- Controlling for confounders
- Physical outcome measures
Cohort study - aims

* Investigate prospective association of worry and rumination with depression, anxiety and health-related quality of life in people with CHD

* Identify mechanisms by which worry and rumination may impact on depression in people with CHD
Methods

- Background
- Systematic review
- Cohort study
- Conclusion

Baseline | 2 months | 6 months

- Worry (PSWQ)
- Rumination (RRS)
- Depression (PHQ-8)
- Anxiety (BAI)
- Quality of Life (SAQ, EQ-5D)

Social support (ESSI)
Problem solving (SPSI)
Pleasant activities (PES)
Cognitive bias (recall, interpretation)
Better understanding of depression in CHD

Perseverative negative thinking could predict depression and physical outcomes

Future research into worry and rumination as targets for novel interventions
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