The longitudinal impact of persistent depression on physical health outcomes in Rheumatoid Arthritis

Faith Matcham1, Sam Norton2, David L. Scott3, Sophia Steer3, Matthew Hotopf4
1. Department of Psychological Medicine, Institute of Psychiatry, King's College London, London, UK.
2. Psychology Department, Institute of Psychiatry, King's College London, UK.
3. Department of Rheumatology, King's College Hospital, London, UK.

Background:
- Approximately 34% of RA patients screen positive for depression [1].
- Depression in RA associated with increased mortality, disability and healthcare costs [2].
- Limited evidence assesses the longitudinal impact of depression on RA outcomes, particularly objectively-reported clinical outcomes.

Objective: To assess the impact of persistent depression on physical health outcomes over a 2-year follow-up period.

Methods:
- Secondary analysis of clinical trial data [3].
- Depression and physical health outcomes measured at baseline and 6-monthly intervals for 2-years.
- Depression measured using the EQ-5D, and patients categorised into 4 groups: 1) never depressed; 2) depressed at < 50% of time-points; 3) depressed at > 50% of time-points; and 4) depressed at every time-point.
- Physical health outcomes were: Larsen score; assessor global assessment (AGA); HAQ; pain; and DAS-28.
- Multi-level regression models with effect sizes created for each outcome adjusting for key demographic and clinical variables.

Results:
- Data available for 379 patients.
- Patients’ mean age was 54.1 (12.3), and 68.3% of the sample were female.
- In total, 25.9% were never depressed, 36.9% were depressed <50% of the time, 27.4% were depressed >50% of the time, and 15.8% were depressed at every time-point.

Conclusions:
- Increasing persistence of depression over time is associated with poor physical health outcomes, with discordance between subjectively and objectively measured outcomes.
- These findings have significant implications: firstly, that mental health should be measured and monitored throughout the course of treatment [4]; secondly, the development of mental health interventions may improve physical health in Rheumatoid Arthritis; thirdly, that DAS-28 scores may be inflated in depressed patients, which needs to be considered when making treatment decisions.

References:

Table 1. Post-treatment mean differences (b) and standardised mean differences (d) for physical health outcomes by persistence of depression/anxiety symptoms\(^a\)

<table>
<thead>
<tr>
<th></th>
<th>HAQ</th>
<th>AGA</th>
<th>Larsen Score</th>
<th>Pain</th>
<th>DAS-28</th>
</tr>
</thead>
<tbody>
<tr>
<td>b (SE)</td>
<td>d</td>
<td>b (SE)</td>
<td>d</td>
<td>b (SE)</td>
<td>d</td>
</tr>
<tr>
<td>Never Depressed/Anxious</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Depressed/Anxious &lt;50%</td>
<td>0.16 (0.07)*</td>
<td>0.22*</td>
<td>5.65 (2.18)*</td>
<td>0.31*</td>
<td>-0.04 (0.06)</td>
</tr>
<tr>
<td>Depressed/Anxious &gt;50%</td>
<td>0.37 (0.08)***</td>
<td>0.52***</td>
<td>9.63 (2.53)***</td>
<td>0.52***</td>
<td>-0.10 (0.06)</td>
</tr>
<tr>
<td>Always Depressed/Anxious</td>
<td>0.52 (0.08)***</td>
<td>0.73***</td>
<td>15.42 (2.77)***</td>
<td>0.84***</td>
<td>-0.17 (0.07)*</td>
</tr>
</tbody>
</table>

\(^a\)SJC Swollen Joint Count; ESR erythrocyte sedimentation rate; AGA assessor global assessment; DAS-28 disease activity schedule with 28 joint; HAQ health assessment questionnaire; TJC tender joint count; PGA patient global assessment. \(*\)significant at p<0.05 level \(**\)significant at p<0.01 level \(***\) significant at p<0.001 level. \(\dagger\)Adjusted for age, gender, disease duration, time, baseline physical health status, treatment, RF status, use of previous DMARDS, presence of RA nodules.