Depression, anxiety and apathy in young-onset and atypical dementia: A systematic review

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Background
Depression, anxiety and apathy are among the most frequent neuropsychiatric symptoms (NS) in typical Alzheimer’s disease¹, and impact quality of life, risk of institutionalisation, and caregiver burden²,³,⁴. However, prevalence in atypical and young-onset phenotypes remains unknown.

Aim
To examine the body of empirical studies investigating the prevalence of depression, anxiety, and apathy in atypical and young-onset dementia.

Methods
• Systematic search of Embase, PsycINFO and PubMed up to September 2017
• 3659 records identified – 37 met inclusion criteria for review

Results

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Depression</th>
<th>Anxiety</th>
<th>Apathy</th>
<th>Quality score (/24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YOAD</td>
<td>11-56%</td>
<td>10-56%</td>
<td>45-71%</td>
<td>12-20</td>
</tr>
<tr>
<td>FTD</td>
<td>8-70%</td>
<td>0-100%</td>
<td>50-100%</td>
<td>11-16</td>
</tr>
<tr>
<td>PPA</td>
<td>33-43%</td>
<td>15-33%</td>
<td>48-67%</td>
<td>10-12</td>
</tr>
<tr>
<td>bvFTD</td>
<td>7-52%</td>
<td>19-63%</td>
<td>73-100%</td>
<td>10-19</td>
</tr>
<tr>
<td>SD</td>
<td>44-78%</td>
<td>41-56%</td>
<td>23-80%</td>
<td>7-12</td>
</tr>
<tr>
<td>LPA</td>
<td>29-46%</td>
<td>38-71%</td>
<td>32-57%</td>
<td>11-12</td>
</tr>
<tr>
<td>PNFA</td>
<td>33-57%</td>
<td>27-36%</td>
<td>9-64%</td>
<td>11-13</td>
</tr>
<tr>
<td>PCA</td>
<td>42-55%</td>
<td>45-64%</td>
<td>42-60%</td>
<td>11-12</td>
</tr>
<tr>
<td>FAD</td>
<td>42-47%</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 1. Range of prevalence figures of depression, anxiety, and apathy reported for each atypical dementia diagnosis, and the range of quality assessment scores assigned to papers. N represents number of papers.

Conclusions
• Apathy is the most frequent NS compared to depression and anxiety, with high variability across phenotypes
• Very few highly representative studies, with the most common limitations being generally small sample sizes, and recruitment from tertiary care settings

References

Quality assessment
The likely representativeness of each study’s results was assessed against the following criteria:

- Diagnosis of dementia
- Measure of mental health symptoms
- Reporting age and disease severity
- Exclusion of those with psychiatric history
- Recruitment setting
- Sample size

Atypical dementias:

- Familial Alzheimer’s (FAD)  Decline in memory caused by genetic mutation
- Young-onset Alzheimer’s (YOAD) Decline in memory <65 years
- Posterior cortical atrophy (PCA) Decline in visual function

Behavioural variant frontotemporal dementia (bvFTD)
- Change in behaviour, lack of social awareness
- Logopenic progressive aphasia (LPA)
- Deficits in naming and repetition
- Progressive non-fluent aphasia (PNFA)
- Effortful, non-fluent speech, grammatical errors
- Semantic dementia (SD)
- Decline in conceptual knowledge

Figure 1. Flow diagram of study selection