Individual Negative Affective Trajectories Can Be Detected during Different Depressive Relapse Prevention Strategies
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The primary aim of this study (see Slofstra et al. [6] for details on the design) is to explore, using experience sampling methodology (ESM), whether individual negative affective trajectories can be detected in remitted previously depressed individuals undergoing different relapse prevention treatments. It was hypothesized that affective trajectories would vary from person to person. A second aim was to tentatively explore whether these individual trajectories during treatment may be relevant for subsequent depressive relapse. It was hypothesized that increases in mean negative affect or negative affective inertia would be discerned in a subset of individuals that relapsed. Furthermore, decreases in mean negative affect or negative affective inertia were hypothesized to signal decreased vulnerability for depressive relapse.

Affect was repeatedly assessed in daily life for 8 weeks, using ESM. Sufficient assessments to be eligible for analyses were provided by 42 (out of 72) previously depressed participants, and 11 (out of 15) matched never depressed controls. Previously depressed individuals had been randomly assigned to continuation of antidepressants (n = 10), continuation of antidepressants with preventive cognitive therapy (n = 15), or tapering of antidepressants with preventive cognitive therapy (n = 17).

To explore whether individual trajectories in negative affect can be detected, the presence of significant change in mean negative affect or negative affective inertia was analysed per individual [10]. Additional information about the methods and results can be found in the supplemental materials (for all online suppl. material, see www.karger.com/doi/10.1159/000489044). Table 1 summarizes the changes in mean negative affect or negative affective inertia per group. These results show that individual trajectories while receiving various relapse prevention treatments can be detected and that these affective changes indeed vary from person to person. As a striking example, 2 individuals in 1 group experienced increases in mean negative affect while 2 others experienced decreases. Finally, 1 never depressed individual participant from the matched control group demonstrated decreased negative affective inertia.

For the secondary aim of this study, it was descriptively explored whether individual affective trajectories are related to depressive relapse as assessed using repeated clinical interviews over 15 months. The expected increases in mean negative affect were observed in 2 (out of 42 = 5%) previously depressed individuals, both of whom relapsed. However, no decreases in negative affective inertia were observed in any previously depressed individuals, including those who relapsed at the end or soon after the ESM study period. Of the 42 previously depressed participants, 22 relapsed (52%). Thus, increases in mean negative affect were observed in a small minority of previously depressed individuals that relapsed (2 out of 22 = 9%). Nine previously depressed individuals displayed decreases in mean negative affect or negative affective inertia (21%). Of these 9 individuals, 5 (56%) did subsequently relapse. Unexpectedly, a decrease in negative affective inertia co-occurred
with an increase in mean negative affect in 1 previously depressed individual.

Thus, although individual negative affective trajectories can be observed in previously depressed individuals undergoing different relapse prevention strategies, the results cast doubt upon their presumed relevance for depressive relapse in recurrent depression. A limitation of the current study is that the ESM study period was limited to 8 weeks while many individuals relapsed many months later. Continuing the high-intensive ESM procedure for years might be too burdensome and unpractical and therefore unfeasible. However, to examine the clinical relevance of affect dynamics and individual trajectories in depression, individual affective trajectories need to be monitored over a longer period of time in larger patient samples. If individual trajectories need to be monitored over a longer period of time in larger patient samples. If individual trajectories can be assessed using ESM. On the other hand, this might open up the possibility of tailoring interventions to individual affective trajectories. On the other hand, with in-individual increases in mean negative affect were only found in a very small proportion (9%) of previously depressed individuals who subsequently relapsed. Moreover, most (56%) individuals who demonstrated decreases in mean negative affect or negative affective inertia nevertheless relapsed. These results therefore call for future research to investigate whether these individual trajectories are clinically meaningful.

### Table 1. Summaries of within-individual negative affective trajectories

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Compl. reports, %</th>
<th>Increased NA</th>
<th>Decreased NA</th>
<th>Increased NA inertia</th>
<th>Decreased NA inertia</th>
<th>Time invariant</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Previously depressed individuals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>65</td>
<td>2 (5)b</td>
<td>8 (19)a,c</td>
<td>0</td>
<td>2 (5)b</td>
<td>25 (60)</td>
<td>8 (19)c</td>
</tr>
<tr>
<td>Per condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADM</td>
<td>10</td>
<td>59</td>
<td>0</td>
<td>3 (30)</td>
<td>0</td>
<td>0</td>
<td>5 (50)</td>
<td>2 (20)</td>
</tr>
<tr>
<td>PCT + ADM</td>
<td>15</td>
<td>69</td>
<td>0</td>
<td>3 (20)a</td>
<td>0</td>
<td>1 (7)a</td>
<td>11 (73)</td>
<td>1 (7)</td>
</tr>
<tr>
<td>PCT – ADM</td>
<td>17</td>
<td>66</td>
<td>2 (12)b</td>
<td>2 (12)c</td>
<td>0</td>
<td>1 (6)b</td>
<td>9 (53)</td>
<td>5 (29)c</td>
</tr>
<tr>
<td><strong>Relapse yes/no</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (total)</td>
<td>22</td>
<td>72</td>
<td>2 (9)b</td>
<td>4 (18)c</td>
<td>0</td>
<td>1 (5)b</td>
<td>11 (50)</td>
<td>6 (23)c</td>
</tr>
<tr>
<td>At the start</td>
<td>3</td>
<td>68</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2 (67)</td>
<td>1 (33)</td>
</tr>
<tr>
<td>At the end/soon after</td>
<td>4</td>
<td>74</td>
<td>1 (25)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3 (75)</td>
<td>0</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>58</td>
<td>0</td>
<td>4 (20)a</td>
<td>0</td>
<td>1 (5)a</td>
<td>14 (70)</td>
<td>2 (10)</td>
</tr>
<tr>
<td><strong>Never depressed individuals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>59</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1 (9)</td>
<td>10 (91)</td>
<td>0</td>
</tr>
</tbody>
</table>

Figures in parentheses are percentages. Compl. reports, percentage of completed reports; NA, negative affect; Time invariant, the time series did not demonstrate a structural change of time (fluctuations over time may have been present); other, model could not be fitted or interpreted; ADM, assigned to the antidepressant medication continuation arm of the trial; PCT + ADM, assigned to the antidepressant medication continuation in combination with preventive cognitive therapy arm of the trial; PCT – ADM, assigned to the arm of the trial that combines preventive cognitive therapy with tapering of antidepressant medication; at the start, relapse during the first 4 weeks of the ESM study period; soon after, relapse at the end of or within 3 weeks after the ESM study period. A one individual (patient 14) displayed both decreased negative affect and negative affective inertia. B One individual (patient 26) experienced increased negative affect and decreased negative affective inertia. C One individual (patient 39) demonstrated decreased negative affect while the analyses could not be interpreted in terms of invariant or changing inertia. Because of particular patients (superscripts a + b + c), not all rows add up to 100%. Details on analyses per individual can be found in the supplemental materials.

### References


