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The effect of virtual reality cognitive behavioral therapy on paranoia and mood states

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Learning Goal:

Gain insights in a novel virtual reality intervention, and the effects of the intervention on mental states as measured by daily diary assessment.

Abstract Text:

Background: Recently, the efficacy of a novel virtual reality based cognitive behavior therapy (VR-CBT) for paranoia was demonstrated. Evidence is growing that the maintenance of psychosis may be influenced by affective processes. This study examined how treatment with VR-CBT influenced paranoia and emotional states, and whether the interplay between mental states was affected.

Methods: The sample consisted of 91 patients with a psychotic disorder randomized either to 16-session individual VR-CBT or treatment as usual. The experience sampling method (ESM; a structured diary technique) was used to assess mental states at baseline, post-intervention and 6-month follow-up. Mixed model analyses were conducted to study treatment effects. Lagged associations between mental states were estimated at baseline and post-intervention, and were visualized with networks.

Results: VR-CBT, but not treatment as usual, resulted in reduced levels of paranoia and negative affect. At pre-intervention networks depicting the dynamic interplay between mental states over time had very limited significant connections, with most stable connections being auto-relations. I.e., paranoia was best predicted by paranoia at the previous moment. The dynamic interplay between affective states did not change over time after VR-CBT.

Conclusion: We found that VR-CBT specifically targets paranoia and there are indications that VR-CBT had an enduring effect on negative emotions. This positive effect of the treatment does not seem to transfer to positive affective states. We did not find evidence that negative mental states such as feeling down or lonely triggered paranoia in the next moment even at pre-intervention, and these temporal relations between mental states did not change over time in response to treatment.



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