VIRTUAL REALITY INTERVENTIONS TO IMPROVE COGNITIVE FUNCTIONING IN MAJOR PSYCHIATRIC DISORDERS: A NARRATIVE SYSTEMATIC REVIEW

Cognitive impairment is increasingly recognized as a potential contributor to psychosocial dysfunction in major psychiatric illnesses. However, there are few treatments with proven efficacy for cognitive dysfunction, especially as it translates to improvements in real-world functioning. Virtual Reality (VR) cognitive training, which has shown promise in stroke and traumatic brain injury (TBI), could be one such method. This systematic review aims to assess the efficacy of VR cognitive or functional training in adults between 18 and 65 years old diagnosed with major psychiatric disorders (including mood disorders, schizophrenia /psychotic disorders, anxiety disorders, or substance use disorders). This narrative systematic review was conducted as per PRISMA guidelines. A keyword search of MEDLINE, EMBASE, PsychINFO, and Web of Science was conducted. Papers were selected via a two-step review process (abstracts followed by full text) conducted independently by two co-authors.

The search yielded 13 papers. Disorders examined included schizophrenia (9), substance use (1), anxiety (2) and depression (2). The most commonly targeted cognitive domains were social cognition (6), executive functioning (5), and attention (2). VR cognitive training resulted in cognitive improvements in all but 1 paper. 6 out of 8 papers that compared VR with traditional methods of cognitive/functional training showed greater cognitive improvements in VR versus traditionally delivered training. Our review suggests that there is preliminary evidence supporting the efficacy of VR training in improving cognitive functioning in psychiatric disorders. Future research should investigate long terms effects and measure improvement in real world functionality.