Cognitive dysfunction is associated with major psychiatric disorders. Identifying and assessing cognitive deficits is an important component of treatment and recovery. Traditional paper-and-pencil cognitive tests have generally been used to assess cognition in individuals with major psychiatric disorders; however, the ecological validity of such tests has been questioned as these objective measures often do not reflect patients’ real-world functional outcomes. To address the mismatch, virtual reality (VR) mediums have become increasingly prevalent in assessing cognition. We conducted a narrative systematic review to explore construct validity (correlation with performance on traditional cognitive tests), ecological validity (correlation with measures of real-world functioning), and sensitivity (ability to detect cognitive dysfunction) of VR cognitive assessments in adults with major psychiatric disorders. Using PRISMA guidelines, we searched four online databases for related peer-reviewed studies. Titles and abstracts were reviewed twice independently as per the registered protocol inclusion criteria. Finally, 61 papers remained for full text review. Preliminary results suggest that most studies using VR cognitive assessments in major psychiatric disorders evaluate sensitivity, while few report on the ecological and construct validity. Both non-immersive and immersive VR cognitive assessment programs are seemingly effective at detecting differences in cognition between patients and healthy controls. Additionally, VR cognitive assessments have been shown to align with real-world functional outcomes and previously validated cognitive measures. Early findings of this systematic review suggest that VR cognitive assessments can be a sensitive assessment tool in those with psychiatric disorders, and can address the ecological validity concerns of traditional paper-and-pencil tests.