Patterns and predictors of anxiety and depression symptom trajectories in patients diagnosed with primary brain tumors

Alayna E Ernster [1], Anjelica Body [2], Phuong Deleyrolle [2], Jennifer St Clair [2], Deborah Sampson [2], Kelsey Bacharz [2], Sandra C Yan [2], Kaitlyn Melnick [2], Annie Allen [2], Maryam Rahman [2], David D Tran [3], Duane A Mitchell [2], Deidre B Pereira [#] [2], Ashley P Ghiaseddin [#] [4] [5]

Affiliations
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Abstract

Background: Patients with primary brain tumors (pPBTs) often exhibit heightened distress. This study assesses how symptoms of anxiety and depression change over time in pPBTs and identifies factors that may predict patients' symptom trajectories.

Methods: Ninety-nine adult pPBTs completed psychosocial assessments at neuro-oncology appointments over 6-18 months. Quality of life was assessed with the Functional Assessment of Cancer Therapy-Brain; symptoms of anxiety and depression were assessed with the Patient-Reported Outcomes Measurement Information System short forms. The prevalence of patients with clinically elevated symptoms and those who experienced clinically meaningful changes in symptoms throughout follow-up were examined. Linear mixed-effects models evaluated changes in symptoms over time at the group level, and latent class growth analysis (LCGA) evaluated changes in symptoms over time at the individual level.

Results: At enrollment, 51.5% and 32.3% of patients exhibited clinically elevated levels of anxiety and depression, respectively. Of patients with follow-up data (n = 74), 54.1% and 50% experienced clinically meaningful increases in anxiety and depression scores, respectively. There were no significant changes in anxiety or depression scores over time, but better physical, functional, and brain-cancer well-being predicted lower levels of anxiety and depression (p < 0.001). Five sub-groups of patients with distinct symptom trajectories emerged via LCGA.

Conclusions: pPBTs commonly experience elevated symptoms of anxiety and depression that may fluctuate in clinically meaningful manners throughout the disease. Routine screening for elevated symptoms is needed to capture clinically meaningful changes and identify factors affecting symptoms to intervene on.

Keywords: Anxiety; Depression; Primary brain tumor; Trajectories.

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