

Review      *Neurooncol Pract.* 2023 Jun 13;10(5):408-417. doi: 10.1093/nop/npad031.  
eCollection 2023 Oct.

# Psychosocial interventions for personality and behavior changes in adults with a brain tumor: A scoping review

Emma McDougall <sup>1</sup>, Lauren J Breen <sup>2 3</sup>, Anna K Nowak <sup>4 5</sup>, Haryana M Dhillon <sup>6 7</sup>,  
Georgia K B Halkett <sup>1</sup>

Affiliations

PMID: 37720389    PMCID: PMC10502785 (available on 2024-06-13)    DOI: [10.1093/nop/npad031](https://doi.org/10.1093/nop/npad031)

## Abstract

**Background:** The objective of this scoping review was to describe the intervention characteristics and effectiveness of psychosocial interventions aimed at managing personality and behavior changes in people with brain tumors. A secondary objective was to explore if these interventions had an impact on outcomes for carers. Personality and behavior changes considered included aggression, apathy, paranoia, disinhibition, and emotional lability.

**Methods:** This review was conducted following the Joanna Briggs Institute methodology for scoping reviews and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) extension for scoping reviews. Searches were conducted in PsycINFO, CINAHL, Medline (Ovid), and Scopus. We synthesized studies published from 1996 to 2022 that evaluated interventions to manage brain tumor related personality and behavioral changes in adults. A data extraction tool were used based on the Joanna Briggs Institute template. Results are presented in a summary table and a narrative synthesis was conducted.

**Results:** Three thousand and five hundred and ninety-four records were screened. Title and abstract screening resulted in 29 potentially eligible studies. Full screening excluded 24 articles and 5 interventions met the inclusion criteria. The interventions were diverse in duration, delivery modality, setting, and participation (eg, the patient individually or patient and carer). The interventions reported improvements in the targeted personality and behavior change symptoms for patients with primary brain tumors. Four studies included a measure of personality and behavior change symptoms and two studies included a measure of outcomes for carers and reported improvements in carer knowledge and a reduction in carer distress. All studies sampled fewer than 100 participants. Studies had limited follow-up data and different tools were used to assess the presence and nature of personality and behavior changes.

**Conclusions:** There is a dearth of psychosocial interventions to support patients and their carers to manage brain tumor related personality and behavior changes.

**Keywords:** Brain tumor; interventions; personality and behavior changes; scoping review.

© The Author(s) 2023. Published by Oxford University Press on behalf of the Society for Neuro-Oncology and the European Association of Neuro-Oncology. All rights reserved. For permissions, please e-mail: [journals.permissions@oup.com](mailto:journals.permissions@oup.com).