

Title: A Comparison of Mental Health of Cancer Patients between Appalachia and the United States

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Background/Purpose: The Appalachian region has health disparities including an increased mortality to cancer (Woolf 2019). Cancer can add stress in addition to the physical effects, this may increase the risks for poor mental health in people that have cancer. These challenges may be increased in Appalachia. Thus, the number of poor mental health days in adults diagnosed with cancer in Appalachia were compared to those diagnosed in the rest of the United States.

Methods: We used responses from 412,472 adults across the United States, from the 2021 Behavioral Risk Factor Surveillance System data to examine the association of cancer diagnosis excluding skin cancer to poor mental health days in Appalachia compared to the rest of the United States. The categories of age and race were also considered.

Results: The logistic regression was significant for the Appalachia, $\chi^2=(DF= 8, N= 128,275)= 2,455.72, p < 0.0001$ and for the rest of the United States $\chi^2=(DF= 8, N= 284,197)= 2,401.31, p < 0.0001$. When compared, people diagnosed with cancer in Appalachia reported *fewer* poor mental health days than the rest of the U.S.

Conclusion: Appalachian culture is characterized as having personal and religious beliefs which may contribute to resilience. Future studies should observe what factors contribute to resilience among rural cancer patients.