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Ubah, Nneoma; Ahuja, Manik; and Annor, Eugene, "Association of Alcohol Use, Depression, and Pain among Cancer Patients" (2023). *Appalachian Student Research Forum*. 78.
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Association of Pain, Alcohol Use, and Depression Among Cancer Patients

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Abstract

Pain is a common symptom affecting over 60% of cancer patients and is one of the leading causes of poor outcomes in this population. Major depressive disorder has been reported among cancer patients and is highly associated with substance use disorders. This study aimed to identify the association between pain, alcohol use, and depression among cancer patients. After data collection, stratification, and analysis, it was found that cancer pain was associated with depression but not alcohol use. Proper pain management is essential in cancer care to reduce the risk of depression.

Background

Cancer is the umbrella term for the abnormal proliferation of human cells that leads to cell destruction. Not all cancer patients experience pain. Pain among cancer patients varies with the type of cancer, the staging, associated co-morbidities and one's threshold to pain. This symptom has been recognized as a complication of cancer and its treatment. It is often managed with opioids which may result in drug tolerance, physical dependence, or addiction. For this reason, approximately 30% of cancer patients do not receive pain medication appropriate for the intensity of pain they experience. Studies have also suggested possible alcohol use for self-medicating cancer pain.

Pain is related to other physiologic symptoms such as lack of sleep, fatigue and mental issues. Depression is common co-morbidity among cancer patients, which is significantly underdiagnosed. Major depression has been recognized in cancer patients as early as one year after the diagnosis is made. It has high rates of co-morbidity with substance use disorders ranging from 12% to 80%. However, there is limited data on the relationship between pain, depression, alcohol use among cancer patients.

Objectives

- To identify the prevalence of pain among cancer patients
- To evaluate the association between pain and alcohol use among cancer patients
- To determine the association between pain and depression among cancer patients

Methods

- Cross-sectional data were collected from the 2021 Behavioral Risk Factor Surveillance System, a nationally representative U.S. telephone-based survey of adults aged 18 years or older.
- Data for cancer patients were extracted (n=8,963)
- Logistic regression analyses were conducted to test the association between cancer pain and two outcomes, depression, and alcohol use.
- Age, race/ethnic minority status, income, educational status, and health insurance status were controlled for in this study.

Results

Table 1. Logistic Regression Analysis for Pain Among Cancer Patients

	ODDS RATIO, 95% CI	
	Depression	Alcohol Use
Pain from Cancer	1.75 (1.49, 2.05)*	1.23 (0.95, 1.42)
Gender (male)	0.73 (0.59, 0.82)*	1.46 (1.34, 1.58)*
Race/ethnic minority	0.81 (0.61, 1.12)	0.92 (0.73, 1.10)
Low Income	1.93 (1.73, 1.57)*	1.26 (0.99, 1.42)
< High School Education	1.30 (1.20, 1.87)*	1.20 (0.93, 1.39)
Age	1.03 (1.00, 1.08)*	1.02 (0.97, 1.03)

*statistically significant

Results (Contd.)

- Overall, 8.6% (n=843) of patients reported pain with their cancer.
- Among them, 20.2% reported depression and 44.4% reported alcohol use.
- Pain from cancer was associated with significantly higher odds of depression (OR=1.75, 95% CI, 1.49, 2.05) along with low income (OR=1.93, 95% CI, 1.73, 2.16) and less than high school education (OR=1.30, 95% CI, 1.02, 1.65).
- Pain from cancer was not significantly associated with alcohol use.
- Male gender (OR=1.46, 95% CI, 1.34, 1.58) among cancer patients predicted higher odds of alcohol use.

Conclusion

- The study showed that pain among cancer patients was associated with higher odds of depression along with low income and less than high school education.
- It was also reported that cancer pain was not significantly associated with increased alcohol use, although the male gender had higher odds of alcohol use among cancer patients.
- Early and proper pain management for cancer patients can decrease the risk of depression and improve their quality of life.

References

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