



**RESEARCH SUMMARY**  
Date Compiled: August 2024

**Key takeaways from included research:**

- Researchers examined adult hospitalizations with alcohol-related cirrhosis, mortality and demographic data of these individuals. They determined that there was a high percentage (72.6%) of male admissions as well as those 50 years old and above (80.4%). Females to be admitted with ARC were significantly younger than men, however they had significantly lower mortality. Overall researchers determined that hospital admissions with ACR have risen substantially in Australia over the last decade.
- A new study was conducted to examine the relationship between lifestyle behaviors and mental illness in college women. The researchers found overall poor diet quality, no significant differences in sleep or tobacco use, however alcohol use was significantly associated with mental illness. Those with fewer concurrent unhealthy lifestyle choices and behaviors had less severe symptoms of depression and anxiety.
- Alcohol use disorder (AUD) is present in nearly half the people with bipolar disorder (BD), therefore researchers wanted to examine alcohol use patterns, mood, anxiety, and functioning over time in this population. They found more problematic alcohol use was associated with worse depressive and manic or hypomanic symptoms as well as lower workplace functioning. Researchers also concluded that alcohol use, regardless of diagnostic status, was associated with mood instability and poorer work functioning in those with BD.
- Researchers wanted to evaluate the relationship between average amount of alcohol consumed per day and death by suicide. During a systematic literature search, they found that as consumption of alcohol increased, so did the risk of suicide, particularly among females.

## **RISING HOSPITAL ADMISSIONS FOR ALCOHOL-RELATED CIRRHOSIS AND THE IMPACT OF SEX AND COMORBIDITY – A DATA LINKAGE STUDY**

July 2024

**Objectives:** International studies have shown shifting demographic data and rising hospitalizations for alcohol-related cirrhosis (ARC), with a paucity of data from Australia. We examined hospitalizations, mortality and demographic data for people admitted with ARC over the last decade in Queensland, Australia.

**Study design:** Data linkage study.

**Methods:** A retrospective analysis of adults hospitalized with ARC during 2008–2019 was performed using state-wide admissions data. International Classification of Diseases, 10th revision, codes identified admissions with the principal diagnosis of ARC based on validated algorithms. Comorbidity was assessed using the Charlson Comorbidity Index.

**Results:** A total of 7152 individuals had 24,342 hospital admissions with ARC (16,388 were for ARC). There was a predominance of males (72.6%) and age  $\geq 50$  years (80.4%) at index admission. Females were admitted at a significantly younger age than men (59% of women and 43% of men were aged  $< 60$  years,  $P < 0.001$ ). Comorbidities were common, with 45.1% of people having at least one comorbidity. More than half (54.6%) of the patients died over the study period (median follow-up time was 5.1 years; interquartile range 2.4–8.6). Women had significantly lower mortality, with 47.6% (95% confidence interval [CI] 45.0–50.2) probability of 5-year survival, compared with 40.1% (95% CI 38.5–41.6) in men. In multivariable analysis, this was attributable to significantly lower age and comorbidity burden in women. Significantly lower survival was seen in people with higher comorbidity burden. Overall, the number of admissions for ARC increased 2.2-fold from 869 admissions in 2008 to 1932 in 2019.

**Conclusions:** Hospital admissions for ARC have risen substantially in the last decade. Females were admitted at a younger age, with fewer comorbidities and had lower mortality compared with males. The association between greater comorbidity burden and higher mortality has important clinical implications, as comorbidity-directed interventions may reduce mortality.

**Source:** Sarraf, B., Skoien, R., Hartel, G., O'Beirne, J., Clark, P. J., Collins, L., ... & Valery, P. C. (2024). Rising hospital admissions for alcohol-related cirrhosis and the impact of sex and comorbidity—a data linkage study. *Public Health*, 232, 178-187. <https://doi.org/10.1016/j.puhe.2024.04.030>

## **THE RELATIONSHIP BETWEEN LIFESTYLE BEHAVIORS AND MENTAL ILLNESS IN WOMEN IN COLLEGE**

June 2024

### **Abstract**

Women, particularly those in college, have the highest prevalence of any mental illness (MI), which negatively impacts social connection, academic performance, and health. Research into alternative treatment methods suggests that lifestyle behaviors are safer and more effective than medication at reducing MI symptoms. This study explores the relationship between lifestyle behaviors and MI in college women through an online survey. The survey included a food frequency questionnaire (Diet History Questionnaire II) and questions about lifestyle behaviors, symptoms of MI, and sociodemographic information. Diet quality was calculated using the Healthy Eating Index (HEI), and MI was assessed using the Depression, Anxiety, and Stress Scale-21. Independent sample t-tests, ANOVA, and chi-square analyses were conducted. A total of 222 women completed the survey. Overall, diet quality was poor, with a mean HEI of  $62.6 \pm 10.4$ . No significant differences or

associations were found between MI groups for total HEI score, sleep, or tobacco use. However, alcohol use was significantly associated with MI ( $p = 0.049$ ). Individuals with fewer concurrent unhealthy lifestyle behaviors had less severe symptoms of depression ( $p = 0.009$ ) and anxiety ( $p < 0.001$ ) compared to those with more unhealthy lifestyle behaviors. In this study, alcohol use was the only independent lifestyle behavior associated with symptoms of MI. We also found an association between the number of concurrent unhealthy lifestyle behaviors and depression and anxiety symptoms. Future research should explore the benefits of a healthy lifestyle on MI in a more diverse sample of women.

**Source:** Armstrong, N., Fu, Z., & Woolf, K. (2024). The Relationship between Lifestyle Behaviors and Mental Illness in Women in College. *Nutrients*, 16(14), 2211. <https://doi.org/10.3390/nu16142211>

## **LONGITUDINAL INTERPLAY BETWEEN ALCOHOL USE, MOOD, AND FUNCTIONING IN BIPOLAR SPECTRUM DISORDERS**

**June 2024**

**Importance:** Alcohol use disorder (AUD) is present in nearly half of individuals with bipolar disorder (BD) and is associated with markedly worsening outcomes. Yet, the concurrent treatment of BD and AUD remains neglected in both research and clinical care; characterizing their dynamic interplay is crucial in improving outcomes.

**Objective:** To characterize the longitudinal alcohol use patterns in BD and examine the temporal associations among alcohol use, mood, anxiety, and functioning over time.

**Design, Setting, and Participants:** This cohort study selected participants and analyzed data from the Prechter Longitudinal Study of Bipolar Disorder (PLS-BD), an ongoing cohort study that recruits through psychiatric clinics, mental health centers, and community outreach events across Michigan and collects repeated phenotypic data. Participants selected for the present study were those with a diagnosis of BD type I (BDI) or type II (BDII) who had been in the study for at least 5 years. Data used were extracted from February 2006 to April 2022, and follow-up ranged from 5 to 16 years.

**Main Outcomes and Measures:** Alcohol use was measured using the Alcohol Use Disorders Identification Test. Depression, mania or hypomania, anxiety, and functioning were measured using the 9-Item Patient Health Questionnaire, the Altman Self-Rating Mania Scale, the 7-item Generalized Anxiety Disorder assessment scale, and the Life Functioning Questionnaire, respectively.

**Results:** A total of 584 individuals (386 females (66.1%); mean [SD] age, 40 [13.6] years) were included. These participants had a BDI (445 [76.2%]) or BDII (139 [23.8%]) diagnosis, with or without a lifetime diagnosis of AUD, and a median (IQR) follow-up of 9 (0-16) years. More problematic alcohol use was associated with worse depressive ( $\beta = 0.04$ ; 95% credibility interval [CrI], 0.01-0.07) and manic or hypomanic symptoms ( $\beta = 0.04$ ; 95% CrI, 0.01-0.07) as well as lower workplace functioning ( $\beta = 0.03$ ; 95% CrI, 0.00-0.06) over the next 6 months, but increased depressive and manic or hypomanic symptoms were not associated with greater subsequent alcohol use. These latter 2 associations were more pronounced in BDII than BDI (mania or hypomania:  $\beta = 0.16$  [95% CrI, 0.02-0.30]; workplace functioning:  $\beta = 0.26$  [95% CrI, 0.06-0.45]). Alcohol use was not associated with anxiety over time.

**Conclusions and Relevance:** This study found that alcohol use, regardless of diagnostic status, was associated with mood instability and poorer work functioning in BD, but increased mood symptoms were not associated with subsequent alcohol use. Given its prevalence and repercussions, dimensional and longitudinal assessment and management of alcohol use are necessary and should be integrated into research and standard treatment of BD.

**Source:** Sperry, S. H., Stromberg, A. R., Murphy, V. A., Lasagna, C. A., McInnis, M. G., Menkes, M. W., ... & Tso, I. F. (2024). Longitudinal Interplay Between Alcohol Use, Mood, and Functioning in Bipolar Spectrum Disorders. *JAMA Network Open*, 7(6), e2415295-e2415295. <https://doi.org/10.1001/jamanetworkopen.2024.15295>

## **A DOSE-RESPONSE META-ANALYSIS ON THE RELATIONSHIP BETWEEN AVERAGE AMOUNT OF ALCOHOL CONSUMED AND DEATH BY SUICIDE**

**July 2024**

**Background:** To determine whether sub-clinical levels of drinking may contribute to suicide risk, and whether the risk differs by sex, we aimed to evaluate the relationship between average amount of alcohol consumed per day and death by suicide.

**Methods:** A systematic literature search was performed in Embase, Medline, PsycINFO, PubMed, and Web of Science from database inception up to April 27, 2022. The search strategies incorporated a combination of medical subject headings and keywords for “alcohol use” and “suicide”. One-stage dose-response meta-analyses using a restricted maximum likelihood random-effect estimator were conducted to explore the relationship between average alcohol volume consumed and suicide, by sex. Three different shapes of the dose-response relationship—linear (on the log-scale), quadratic, and restrictive cubic splines—were tested.

**Results:** A total of eight studies were included (three studies for females (n=781,205), and eight studies for males (n=1,215,772)). A linear dose-response relationship between average alcohol volume consumed and the log-risk of suicide was identified for both males and females. For males and females, a relative risk (RR) of 1.11 (95% CI: 1.05, 1.18) and 1.64 (95% CI: 1.07, 2.51) for suicide when consuming an average of 10 g of pure alcohol per day compared to lifetime abstinence, 1.38 (95% CI: 1.14, 1.66) and 4.39 (95% CI: 1.21, 15.88) for 30 g/day, and 1.71 (95% CI: 1.25, 2.33) and 11.75 (95% CI: 1.38, 100.33) for 50 g/day, respectively.

**Conclusions:** As consumption increases, the risk of suicide increases proportionally. The risk of suicide associated with average daily alcohol consumption may be elevated for females, compared with males. Albeit, more research is needed, particularly among females.

**Source:** Lange, S., Llamosas-Falcón, L., Kim, K. V., Lasserre, A. M., Orpana, H., Bagge, C. L., ... & Probst, C. (2024). A dose-response meta-analysis on the relationship between average amount of alcohol consumed and death by suicide. *Drug and alcohol dependence*, 111348. <https://doi.org/10.1016/j.drugalcdep.2024.111348>