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Anxiety, Depression, and Stress in Association with Alcohol Consumption: A Cross-Sectional Study

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Abstract: *Alcohol consumption represents a complex behavioural phenomenon influenced by multiple psychological factors. The present study aimed to examine the associations between emotional distress—specifically anxiety, depression, and stress—and alcohol consumption in a cross-sectional sample. A total of 121 participants completed standardised self-report measures, including the Depression Anxiety Stress Scales (DASS-21) and the Alcohol Use Disorders Identification Test (AUDIT). Spearman's correlation analyses indicated that both anxiety (ρ = .203, p = .025) and depression (ρ = .219, p = .016) were positively and significantly associated with alcohol consumption, although the strength of these relationships was weak. In contrast, stress was not significantly correlated with alcohol use (ρ = .137, p = .134). A multiple regression analysis revealed that the overall model was statistically significant, $F(3, 117) = 4.997$, p = .003, explaining 11.4% of the variance in alcohol consumption (R^2 = .114). However, none of the individual predictors—anxiety, depression, or stress—demonstrated statistically significant independent effects. Additional bootstrap analyses confirmed the absence of significant effects, suggesting that the relationships observed at the correlational level did not translate into robust predictive effects. These findings highlight the nuanced role of emotional distress in alcohol consumption, suggesting that while anxiety and depression are associated with alcohol use, their predictive power may be limited when considered concurrently. The results support the importance of adopting a multidimensional perspective when examining psychological influences on alcohol-related behaviours.*

Keywords: *alcohol consumption; anxiety; depression; stress; DASS-21; AUDIT.*

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1. Introduction

Alcohol consumption represents a major global public health concern, with significant implications for both physical and mental health. According to the World Health Organization (2018), alcohol use is responsible for approximately 5.3% of all deaths worldwide and is associated with over 200 disease and injury conditions, including psychiatric disorders, cardiovascular diseases, and cancers (Cuciureanu et al., 2019; World Health Organization, 2018). Beyond its direct physiological effects, alcohol consumption is a complex psychosocial phenomenon, shaped by cultural norms, social contexts, and individual psychological characteristics, and it can be also linked to the functional integrity of the orbitofrontal and medial prefrontal cortex, regions critically involved in emotional processing, decision-making, and reward evaluation. These cortical areas are primarily supplied by branches of the anterior cerebral artery, including the fronto-orbital artery, which is known to exhibit significant anatomical variability (Nedelcu et al., 2016). Such vascular variations may influence regional perfusion patterns and, consequently, cortical function. In this context, the associations observed between anxiety, depression, and alcohol consumption may not be solely psychological but could also reflect underlying neurobiological and structural substrates. Recent neuroimaging studies have shown that disruptions in frontal and temporal brain networks can lead to neuropsychiatric manifestations involving both emotional and cognitive domains, supporting a network-based understanding of brain dysfunction (Mavroudis et al., 2025). In addition, neuropsychiatric manifestations such as anxiety, depression, and cognitive changes may represent early indicators of underlying brain pathology, including brain tumours. These symptoms can precede classical neurological signs and are influenced by tumour location, size, and type, affecting both emotional regulation and cognitive functioning (Moroșan et al., 2024). Long-term alcohol consumption disrupts astrocyte activity, playing a significant role in the development of alcohol use disorder and related mental health conditions. Astrocytic tumours, including gliomas, are linked to alcohol use and psychological factors through intricate mechanisms involving neuroinflammation, cellular stress, and cognitive dysfunction. Management of astrocytic tumours necessitates a multidisciplinary strategy that includes surgery, chemotherapy, and radiotherapy (Moroșan et al., 2024). As such, understanding the determinants of alcohol use requires an integrative approach that considers both environmental and individual-level factors.

From a psychosocial perspective, alcohol consumption is strongly embedded in social practices and cultural expectations. It often occurs in social settings and is influenced by group norms, rituals, and interpersonal dynamics (Kuntsche et al., 2005; Room et al., 2005). However, while social influences play a crucial role in shaping drinking behaviour, individual psychological factors are increasingly recognised as key contributors to both the initiation and maintenance of alcohol use. In particular, emotional distress has been identified as a central mechanism underlying maladaptive patterns of alcohol consumption.

Among psychological variables, anxiety, depression, and stress are consistently associated with alcohol use, often through their role in coping mechanisms. The self-medication hypothesis suggests that individuals may consume alcohol to alleviate negative emotional states, such as anxiety or depressive symptoms (Kushner et al., 2000). While alcohol may produce short-term relief through its sedative and anxiolytic effects, chronic use is associated with neurobiological changes that can exacerbate emotional dysregulation over time. Moreover, psychiatric disorders are frequently associated with significant cognitive deficits, which substantially impact patients' quality of life. These impairments vary depending on diagnosis, severity, and individual characteristics, emphasising the importance of systematic cognitive assessment using standardised tools (Moroșan et al., 2025). Additionally, alcohol consumption affects neurotransmitter systems involved in mood regulation, including gamma-aminobutyric acid (GABA), dopamine, and serotonin, leading to both acute and long-term alterations in emotional functioning (American Psychiatric Association, 2022).

Anxiety disorders are among the most prevalent mental health conditions worldwide and are frequently comorbid with alcohol use disorder. Research indicates that individuals with elevated anxiety may be more likely to engage in alcohol consumption as a means of reducing physiological

arousal and emotional discomfort (D'Aquino et al., 2024). However, this relationship is often bidirectional, as alcohol use can also increase anxiety symptoms through withdrawal effects and neurochemical dysregulation. Furthermore, gender differences and sociocultural factors may influence how anxiety relates to alcohol use, with men more likely to externalise distress through substance use and women more likely to exhibit internalising symptoms (Torres et al., 2023).

Depression represents another key psychological factor linked to alcohol consumption. Globally, depression affects over 300 million individuals and is a leading cause of disability (Griswold et al., 2018). The relationship between depression and alcohol use is complex and reciprocal.

On the one hand, individuals experiencing depressive symptoms may use alcohol to temporarily improve mood and reduce emotional pain. On the other hand, chronic alcohol use contributes to neurochemical imbalances, particularly involving serotonin depletion, which can intensify depressive symptoms. This cyclical interaction has been associated with an increased risk of dependence, poorer treatment outcomes, and higher rates of comorbidity (Bulloch et al., 2012; Dixit & Crum, 2000).

Stress is also widely recognised as a critical factor in alcohol consumption. Exposure to stressful life events and chronic stress conditions has been linked to increased alcohol use and a higher risk of developing alcohol use disorder (Keyes et al., 2011). From a physiological perspective, stress activates the hypothalamic–pituitary–adrenal (HPA) axis, leading to increased cortisol levels and emotional dysregulation. Alcohol may be used as a coping mechanism to dampen stress responses; however, empirical findings regarding the relationship between stress and alcohol consumption remain inconsistent. Some studies report positive associations, while others suggest weak or non-significant relationships, highlighting the complexity of this interaction (Becker et al., 2011).

In addition to these individual psychological factors, alcohol consumption is influenced by broader biopsychosocial mechanisms, including socioeconomic status, social support, and environmental context. Recent research emphasises the importance of adopting multidimensional models that integrate psychological distress with social and biological determinants (Morris et al., 2023). Such models are particularly relevant in contemporary research domains, including interdisciplinary fields such as brain sciences and artificial intelligence, where predictive modelling of behaviour increasingly incorporates psychological variables.

Despite the growing body of literature, important gaps remain in understanding the relative contribution of different dimensions of emotional distress to alcohol consumption. In particular, it is unclear whether anxiety, depression, and stress exert independent predictive effects when considered simultaneously, or whether their influence is primarily associational. Moreover, the mechanisms through which these variables interact to influence alcohol use behaviour require further clarification.

Therefore, the present study aims to examine the relationships between anxiety, depression, stress, and alcohol consumption in a cross-sectional sample. Specifically, it investigates (1) the associations between these psychological variables and alcohol use, and (2) their combined role in explaining alcohol consumption. By addressing these objectives, the study seeks to contribute to a more nuanced understanding of the psychological factors underlying alcohol use and to inform future research and intervention strategies targeting emotional distress.

2. Material and Methods

2.1. Study Design

The study employed a cross-sectional correlational design, aimed at identifying relationships between the psychological variables: depression, anxiety and stress and alcohol consumption.

2.2.Participants

The study included a total of 121 participants recruited from the general population. Inclusion criteria targeted adult individuals capable of completing self-report questionnaires. Participants were eligible for inclusion if they met the following criteria: being adults (aged 18 years or older), being able to understand and complete self-report questionnaires, providing informed consent to participate in the study, and completing all relevant study instruments, including the AUDIT and DASS-21**.** Participants were excluded if they provided incomplete or invalid responses on the questionnaires, failed to complete key variables required for analysis, or if their responses suggested inconsistent or random answering patterns.

2.3. Instruments

The following validated instruments were used: the DASS (Depression Anxiety Stress Scales) – to measure levels of anxiety, depression, and stress, and the AUDIT (Alcohol Use Disorders Identification Test) – to assess alcohol consumption patterns. Additional demographic variables were included for control purposes.

The internal consistency of the instruments used in the present study was acceptable. The AUDIT demonstrated good reliability (Cronbach's $\alpha = .837$), while the DASS-21 showed excellent internal consistency (Cronbach's $\alpha = .933$), indicating that both measures are reliable tools for assessing alcohol consumption and psychological distress in the study sample.

2.4. Procedure

Participants completed the questionnaires anonymously. Data collection followed ethical standards, ensuring confidentiality and informed consent.

2.5. Statistical Analysis

All statistical analyses were conducted using *IBM SPSS Statistics* (Version 21)**.** Given that the distribution of the dependent variable significantly deviated from normality, non-parametric statistical methods were applied for the correlation analyses. Spearman's rank-order correlations were used to examine the associations between psychological variables and alcohol consumption. In addition, multiple linear regression analysis with bootstrap procedures (5,000 resamples, BCa 95% confidence intervals) was conducted to assess the predictive role of anxiety, depression, and stress on alcohol consumption.

3. Results

3.1. Sociodemographic Characteristics

The sample consisted of 121 participants aged between 20 and 60 years ($M = 35.60$, $SD = 9.89$). The gender distribution included 74 male participants (61.2%) and 47 female participants (38.8%). Regarding educational level, 33.9% of participants had completed secondary education (high school or post-secondary education), 46.3% held a bachelor's degree, and 19.8% had postgraduate qualifications (master's or doctoral level).

In terms of marital status, 69.4% of participants were married or in a relationship, while 30.6% were single. The majority of participants were from urban areas (67.8%), with 32.2% residing in rural areas. Additionally, most participants were employed (85.1%), while 14.9% were unemployed. Concerning living arrangements, 73.6% lived with family or a partner, 14.0% lived with friends or colleagues, and 12.4% lived alone. Furthermore, 58.7% of participants reported having children, whereas 41.3% did not.

3.2. Preliminary Analysis and Assumption Testing

Prior to conducting inferential statistical analyses, the distribution of the dependent variable, namely alcohol consumption, was examined in order to determine the appropriate analytical approach. The Kolmogorov–Smirnov test indicated that the distribution significantly deviated from normality ($Z = 1.867$, $p = .002$), suggesting that the assumption of normality was violated.

Table 1. One-Sample Kolmogorov-Smirnov Test

	Personal alcohol consumption behaviour
N	121
Kolmogorov Smirnov Z	1.867
Asymp. Sig. (2-tailed)	.002

Given this result, non-parametric statistical methods were employed for correlation analyses, and bootstrap procedures were applied in regression analyses to ensure the robustness of the estimates (Table 1) .

The use of non-parametric techniques was considered appropriate due to their reduced sensitivity to non-normal data distributions, allowing for more reliable estimation of relationships between variables in the present sample. This analytical decision is particularly relevant in behavioral research, where psychological variables often exhibit skewed distributions.

3.3. Associations Between Psychological Variables and Alcohol Consumption

A positive association was observed between anxiety and alcohol consumption (ρ = .203, p = .025), indicating that higher levels of anxiety are related to increased alcohol use. Although the strength of the association was weak, the relationship was statistically significant, suggesting that individuals experiencing higher anxiety symptoms tend to report higher levels of alcohol consumption (Table 2).

Table 2. Spearman correlation coefficients between anxiety and alcohol consumption

Variable	**ρ**
	Alcohol Consumption
Anxiety	0.203*

Note. **p< 0.01; *p<0.05

Similarly, depression was positively and significantly correlated with alcohol consumption (ρ = .219, p = .016). This finding indicates that individuals with higher levels of depressive symptomatology are more likely to report increased alcohol use. The magnitude of the association was weak but statistically meaningful, supporting the relevance of depressive symptoms as a psychological correlate of alcohol consumption (Table 3).

Table 3. Spearman correlation coefficients between depression and alcohol consumption

Variable	**ρ**
	Alcohol Consumption
Depression	0.219*

Note. **p< 0.01; *p<0.05

In contrast, the relationship between stress and alcohol consumption was not statistically significant (ρ = .137, p = .134), indicating that higher levels of perceived stress were not reliably associated with increased alcohol use in the present sample (Table 4) .

Table 4. Spearman correlation coefficients between stress and alcohol consumption

Variable	**ρ**
	Alcohol Consumption
Stress	.137

Note. **p< 0.01; *p<0.05

Taken together, these findings indicate that while anxiety and depression are significantly associated with alcohol consumption, stress does not demonstrate a statistically significant relationship. The overall pattern suggests that specific components of psychological distress may differentially contribute to alcohol use behaviours.

3.4. Regression Analysis of Anxiety, Depression, and Stress

A multiple regression analysis was conducted to examine the combined effects of anxiety, depression, and stress on alcohol consumption. The overall model was statistically significant, $F(3, 117) = 4.997$, $p = .003$, explaining 11.4% of the variance in alcohol consumption ($R^2 = .114$) (Table 5).

Table 5. Results of the regression analysis predicting alcohol consumption based on depression, anxiety, and stress scores

Variable					
	R	R^2	β	B	95% CI (BCa)
	0.337	0.114			
Depression			0.213	0.352	[- 0.081 - 0.783]
Anxiety			0.201	0.137	[- 0.265 - 0.509]
Stress			0.192	-0.102	[- 0.477 - 0.314]

Note. VD: alcohol consumption, **p< 0.01; *p<0.05

Despite the statistical significance of the overall model, none of the individual predictors reached statistical significance. Depression showed a positive but non-significant association ($\beta = 0.213$, $B = 0.352$), indicating a non-significant tendency towards higher alcohol consumption among individuals with elevated depressive symptoms (Table 5). Anxiety also showed a non-significant contribution ($\beta = 0.201$, $B = 0.137$), suggesting limited predictive value.

Similarly, stress exhibited a non-significant effect ($\beta = 0.192$, $B = -0.102$), indicating no meaningful association with alcohol consumption (Table 5).

Overall, although psychological variables collectively contributed to the model, their independent predictive effects were not statistically significant.

3.5. Bootstrap Analysis of Regression Estimates

To further assess the robustness of the regression results , a bootstrap analysis with 5,000 resamples was conducted. The bootstrap results confirmed the pattern observed in the regression model.

Depression showed a positive but non-significant effect ($B = 0.352$, $p = 0.101$),with the 95% bias-corrected confidence interval including zero (95% CI [−.081, .783]) , indicating the absence of a statistically significant effect (Table 5). Anxiety also showed a non-significant effect ($B = 0.137$, $p = 0.496$), with confidence intervals crossing zero (95% CI [−.265, .509]), further confirming the lack of a significant effect (Table 5). Similarly, stress did not show a statistically significant effect ($B = -0.102$, $p = 0.595$),with confidence intervals ranging from −.477 to .314 (95% CI [−.477, .314]), again including zero and indicating a lack of statistical significance (Table 5).

The bootstrap analysis therefore confirms that none of the psychological variables exert statistically significant effects on alcohol consumption, suggesting that the observed relationships are not supported at the regression level.

3.6. Integrated Interpretation of Findings

Overall, the results indicate that anxiety and depression are significantly associated with alcohol consumption at the correlational level, although the strength of these relationships is relatively weak. In contrast, stress does not show a statistically significant association with alcohol use.

At the regression level, the model was statistically significant as a whole; however, none of the individual psychological variables emerged as significant predictors. This suggests that the combined effect of psychological distress may have limited explanatory value, while the independent contribution of each variable is minimal.

Furthermore, the bootstrap analysis did not support the presence of statistically significant effects, indicating that the relationship between psychological distress and alcohol consumption is not supported at the regression level.

Taken together, these findings highlight a complex relationship between psychological variables and alcohol consumption, in which significant associations do not necessarily translate into strong predictive effects.

4. Discussion

The present study aimed to examine the relationships between emotional distress—specifically anxiety, depression, and stress—and alcohol consumption, as well as their combined effects. The findings provide a nuanced perspective, highlighting statistically significant associations at the correlational level but limited effects when these variables are considered simultaneously.

The results indicated a statistically significant positive association between anxiety and alcohol consumption, although the magnitude of this relationship was weak. This finding suggests that individuals experiencing higher levels of anxiety may be more likely to engage in alcohol use, supporting the notion that alcohol may be used as a coping mechanism to reduce emotional discomfort.

These results are consistent with previous research emphasising the relationship between anxiety and alcohol use. Kushner et al. (2000) argue that individuals with anxiety symptoms may consume alcohol due to its short-term anxiolytic effects. Similarly, McCaul et al. (2017) reported that anxiety and perceived stress are associated with increased alcohol consumption and craving, particularly in individuals with higher levels of alcohol use.

However, the relatively weak strength of the association observed in the present study suggests that anxiety alone may not represent a strong predictor of alcohol consumption in non-clinical populations. This interpretation is supported by O'Grady et al. (2011), who highlight that the relationship between anxiety and alcohol use is context-dependent and influenced by situational and social factors.

Depression also showed a statistically significant positive association with alcohol consumption, with a slightly stronger association compared to anxiety. This finding supports the view that individuals experiencing depressive symptoms may engage in alcohol use as a means of coping with negative effects.

Previous research has consistently documented the bidirectional relationship between depression and alcohol consumption. Dixit and Crum (2000) found that depressive symptoms increase the risk of heavy alcohol use, while Bulloch et al. (2012) emphasise the importance of alcohol dependence in shaping this relationship.

The present findings align with these perspectives, suggesting that depressive symptomatology plays a relevant role in alcohol use behaviour. However, the weak association indicates that depression alone may not fully account for variations in alcohol consumption, reinforcing the need to consider additional psychological and contextual factors.

In contrast to anxiety and depression, stress was not significantly associated with alcohol consumption in the present study. This finding suggests that higher levels of perceived stress do not necessarily translate into increased alcohol use.

Although this result may appear inconsistent with certain theoretical models, it is supported by previous research indicating variability in the relationship between stress and alcohol consumption. Becker et al. (2011) and Pohorecky (1999) highlight that the effects of stress on

alcohol use are complex and influenced by individual differences, prior experiences, and environmental context.

Furthermore, Anthenelli and Grandison (2012) suggest that stress does not universally lead to increased alcohol consumption, as individuals may adopt different coping strategies, including avoidance or abstinence. Similarly, findings reported by José et al. (2000) indicate that individuals exposed to stress may exhibit heterogeneous behavioural responses, ranging from increased to decreased alcohol use.

The absence of a significant relationship in the present study may reflect the multifactorial nature of stress and its interaction with other variables.

Although the regression model was statistically significant overall, none of the individual predictors—anxiety, depression, or stress—were statistically significant when analysed simultaneously. This finding suggests that the combined influence of emotional distress may have limited explanatory value, while the independent contribution of each variable is minimal.

This pattern is consistent with previous research reporting inconsistent associations of psychological variables on alcohol consumption. McCaul et al. (2017) found that clinical measures of anxiety may be more strongly associated with alcohol use than general measures of perceived stress.

The present findings therefore support the idea that alcohol use behaviour is influenced by a complex interplay of psychological processes, rather than by a single dominant predictor.

The bootstrap analysis confirmed the absence of statistically significant effects for individual predictors, as all confidence intervals included zero. This reinforces the conclusion that anxiety, depression, and stress do not exert strong independent effects on alcohol consumption within the tested model.

These results highlight the importance of considering additional variables that may influence or moderate the relationship between emotional distress and alcohol use, such as coping styles, emotional regulation, or social influences. The findings are consistent with previous research suggesting that alcohol consumption is shaped by multiple interacting factors rather than direct linear relationships (O'Grady et al., 2011).

Taken together, the results of the present study support a multidimensional perspective on alcohol consumption. While anxiety and depression are significantly associated with alcohol use, their associations are relatively modest and do not translate into strong explanatory relationships. Stress, in contrast, does not show a significant association, further emphasising the variability of its role.

These findings align with contemporary approaches emphasising the biopsychosocial nature of alcohol use. As highlighted by Morris et al. (2023), alcohol consumption should be understood as the result of interactions between psychological vulnerability, social context, and environmental factors. The observed pattern of results, particularly the discrepancy between significant correlations and non-significant predictive effects, suggests that emotional distress may function more as a general vulnerability factor rather than a direct predictor of alcohol consumption.

Furthermore, the relatively small effect sizes identified in the present study are in line with previous research indicating that psychological variables such as anxiety and depression contribute to alcohol use in a context-dependent manner. O'Grady et al. (2011) emphasise that alcohol consumption is strongly influenced by situational factors, including social interactions and emotional triggers, rather than being driven solely by stable psychological traits.

The absence of a significant relationship between stress and alcohol consumption further supports the notion that stress does not uniformly lead to increased alcohol use. As noted by Becker et al. (2011) and Pohorecky (1999), the relationship between stress and alcohol consumption is complex and may vary depending on prior experiences, coping strategies, and individual differences. In some cases, stress may lead to increased consumption, while in others it may result in reduced or unchanged alcohol use.

In addition, epidemiological research has shown that the relationship between depression and alcohol consumption is often bidirectional and influenced by broader contextual factors (Dixit and Crum, 2000; Bulloch et al., 2012). This further reinforces the idea that alcohol use behaviour cannot be attributed to single psychological variables, but rather reflects a network of interacting influences.

Overall, the findings of the present study support a multifactorial and integrative model, in which alcohol consumption is shaped by the interaction between emotional distress, cognitive processes, and environmental context. This perspective underscores the importance of moving beyond linear, single-variable explanations and adopting more comprehensive frameworks in both research and clinical practice.

The findings of the present study have several implications. First, they suggest that interventions targeting alcohol consumption may benefit from addressing multiple dimensions of emotional distress rather than focusing on a single psychological factor.

Second, the results highlight the need for future research to explore additional mechanisms underlying alcohol use, including coping strategies, social influences, and personality traits. Longitudinal designs may be particularly useful in clarifying the directionality of the observed relationships.

Finally, the relatively weak associations observed in this study suggest that alcohol consumption is not solely determined by emotional distress, but rather reflects a broader and more complex process.

5. Limitations of the Study

The present study should be interpreted in light of several limitations that may influence the generalisability and interpretation of the findings.

Firstly, the use of a cross-sectional design limits the ability to draw causal inferences regarding the relationships between emotional distress and alcohol consumption. Although significant associations were identified, the directionality of these relationships cannot be established. Future longitudinal studies are required to clarify whether psychological distress leads to increased alcohol consumption or whether alcohol use contributes to the development of emotional symptoms.

Secondly, the study relied exclusively on self-report measures, which may be subject to response biases, including social desirability bias and recall bias. Participants may underreport or overreport their alcohol consumption or psychological symptoms, potentially affecting the accuracy of the results.

Thirdly, the use of a convenience sampling method limits the representativeness of the sample. The majority of participants were recruited from the general population, with a predominance of urban and employed individuals, which may restrict the generalisability of the findings to other populations, such as clinical samples or individuals from different socioeconomic backgrounds.

Another limitation concerns the non-normal distribution of the dependent variable, which required the use of non-parametric statistical methods for correlation analyses and bootstrap procedures in regression analyses. Although these techniques provide robust estimates, they may limit comparability with studies using parametric approaches.

Furthermore, although the overall regression model was statistically significant, the individual predictors were not significant**,** and the effect sizes observed at the correlational level were relatively weak. This suggests that important variables influencing alcohol consumption may not have been included in the present study. Factors such as coping strategies, personality traits, social context, and environmental influences may play a significant role and should be considered in future research.

Finally, the study focused exclusively on general population participants, rather than individuals with clinically diagnosed alcohol use disorders. As a result, the findings may not fully

capture the dynamics present in clinical populations, where the relationships between psychological distress and alcohol consumption may be stronger or qualitatively different.

6. Conclusion

The present study examined the relationships between emotional distress—specifically anxiety, depression, and stress—and alcohol consumption. The findings indicate that anxiety and depression are positively associated with alcohol use, although these relationships are relatively weak. In contrast, stress was not significantly associated with alcohol consumption. Although the overall regression model was statistically significant, none of the individual psychological variables emerged as significant predictors. This suggests that the association between emotional distress and alcohol consumption may be limited when these variables are considered simultaneously.

Overall, the results highlight the complexity of alcohol use behaviour and support a multidimensional perspective in which psychological distress represents only one component among multiple contributing factors. Future research should aim to further explore additional mechanisms, such as coping strategies and social influences, to better understand the factors underlying alcohol consumption.

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