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SCIENTIFIC ARTICLE

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Impact of Basic Human Values on Alcohol Use as a Coping Strategy During Chronic Stress: Insights for Sustainable Health Behaviours

ABSTRACT

Alcohol misuse has been a persistent challenge in Hungary, and the COVID 19 pandemic intensified the complexities of how people respond to collective stress. This study offers several new insights into the problem. First, drawing on a nationally representative survey of Hungarian adults, we move beyond broad patterns to pinpoint which demographic and social factors most influenced alcohol consumption during the pandemic. The analysis shows that increased drinking was more common among older adults and women, and among those experiencing financial hardship, while caregiving responsibilities (children under 14 in the household) were associated with a greater likelihood of increase rather than protection. Second, this research deepens understanding by applying Schwartz's Theory of Basic Human Values in combination with a Heckman selection model. This approach distinguishes not only who drinks, but also how intrinsic values shape drinking behaviour under stress. Disaggregating the ten basic values reveals that Power (status/dominance) was a robust predictor of increased alcohol use across models; Achievement (competence/goal attainment) showed a modest protective tendency; and Hedonism, net of thrill seeking and status, was negatively associated with escalation. In contrast, social focus values (e.g., benevolence, universalism, tradition) did not consistently predict change once other values and covariates were considered. Finally, the study provides practical guidance for policymakers. The findings suggest that reducing alcohol misuse will require more than rules or information campaigns: value tailored strategies (e.g., framing moderation as professionalism for Power oriented groups, emphasising performance for Achievement, and promoting mindful "savouring" for Hedonism) should be paired with supports that mitigate economic stress. Attention must also be given to the ways risk behaviours cluster and how financial strain can make communities more vulnerable.

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Introduction

Alcohol use – and misuse – touches nearly every aspect of social and economic life. In Hungary, as in much of the world, it is both common and consequential: when alcohol consumption rises, the toll is felt in health care systems, family wellbeing, workplace productivity, and public safety. Yet despite decades of research and intervention, the drivers behind why some individuals turn to alcohol – especially during periods of collective crisis – remain surprisingly puzzling. The COVID-19 pandemic, with its cocktail of stress, isolation, and uncertainty, brought this puzzle into sharper focus. Why did some Hungarians respond to the pandemic by drinking more, while others drank less or not at all? And what does this say about the deeper psychological and socio-demographic forces that shape our coping behaviours?

Recent Hungarian research has also emphasised the broader importance of value-driven behaviours in food and health-related contexts. For example, Török *et al.* (2022) highlight how short food supply chains create business opportunities by leveraging consumer trust and local embeddedness, while Nagy-Pető *et al.* (2023) segment consumers based on their commitment to local products, revealing strong links between personal values and purchasing decisions. These studies reinforce the idea that underlying value orientations shape not only economic and consumption

behaviours but also broader lifestyle and coping strategies. By situating our analysis within this emerging body of work, we recognise that understanding the role of values is essential for designing effective interventions, whether in public health, sustainable consumption, or resilience-building during periods of societal stress.

This paper addresses the question: How do basic human values influence alcohol consumption as a coping strategy during chronic societal stress? More specifically, do the ten basic Human Values as defined by Schwarz (1992) give explain on why some individuals turn to alcohol during hard times, increasing vulnerability? By combining a nationally representative survey with state-of-the-art statistical methods, this study seeks to provide a clear, evidence-based answer to this question – one that has both scientific and policy significance.

Much of the existing literature has explored the effects of demographic, economic, and psychological factors on alcohol use (Dawson *et al.,* 2005; Pollard *et al.,* 2020; Oroszi *et al.,* 2021). While important, these papers often treat individual values as secondary or assumes their influence is uniform across contexts. Recent advances, including those using Schwartz's theory of basic human values (Nordfjærn and Brunborg, 2015; Paramita *et al.,* 2023), suggest that values may matter greatly for coping behaviours. However, prior studies are typically limited by small or selective samples, a narrow focus on specific subgroups, or simplistic value frameworks that fail to capture the complexity of real-world behaviour during acute, society-wide stress.

This paper makes three contributions relative to this prior work. First, it leverages a large, representative sample of Hungarian adults collected during the COVID-19 pandemic – an extraordinary natural experiment in chronic societal stress. Second, it applies a rigorous Heckman selection model, allowing us to distinguish not only who drinks but how different values shape changes in consumption, while correcting for selection bias between abstainers and drinkers. Third, it moves beyond descriptive associations to offer concrete, policy-relevant insights about how certain human values can be fostered to reduce harmful alcohol use, especially in times of crisis.

Literature Review

The COVID-19 pandemic has significantly impacted global alcohol consumption patterns, highlighting the intricate interplay between stress, behavioural adaptations, and health outcomes. There is robust evidence linking chronic stress to increased alcohol use, as individuals often turn to alcohol as a coping mechanism (Dawson *et al.,* 2005; Becker, 2017; Paramita *et al.,* 2023). Pandemic-related stressors – social isolation, economic uncertainty, and health-related anxiety – have further intensified these tendencies (Bridgland *et al.,* 2021; Taylor *et al.,* 2021). However, epidemiological data also reveal considerable heterogeneity, with some populations reporting increased alcohol consumption and others reporting reductions or no change (Pollard *et al.,* 2020; García-Cerde *et al.,* 2021).

To understand these patterns, it is essential to consider the psychological and motivational determinants of health behaviours. Theories such as the Health Belief Model (HBM), Theory of Planned Behaviour (TPB), and Lazarus and Folkman's Stress and Coping Theory have provided crucial insights into why individuals engage in specific health behaviours in response to stress. For example, Lazarus and Folkman's framework posits that stress responses, including alcohol use, are shaped by both individual appraisals of stressors and available coping resources. TPB and HBM highlight the role of beliefs, intentions, and perceived behavioural control in shaping actions like substance use.

Compared with the HBM, TPB, or Lazarus–Folkman's stress–coping theory, Schwartz's Theory of Basic Human Values (Schwartz, 1992; Schwartz *et al.,* 2012) hereon BHV, is more general for alcohol research since it captures universal, transsituational motivations with demonstrated crosscultural measurement invariance (Schwar and Cieciuch, 2021) enabling comparable inference across populations. BHV offers a robust framework for examining the motivational basis of health behaviours, including alcohol consumption. The theory encompasses ten basic values, which empirical research has consistently grouped into higher-order dimensions, four or two. The four dimensions are openness to change (self-direction, stimulation, hedonism), self-enhancement (hedonism, achievement and power), conservation (security, tradition and conformity) and self-transcendence (benevolence, universalism). Further aggregations are possible, for instance the binary grouping of social focus (conservation plus self-transcendence) and personal focus (openness to change plus self-enhancement). Numerous empirical studies in psychology, sociology, and public health have utilised BHV to examine the relationship between values and health-related behaviours, including substance use (Nordfjærn & Brunborg, 2015; Dollinger and Kobayashi, 2003; Corti *et al.,* 2024). The basic values, and components of higher order dimensions are best emphasised by the BHV wheel (see Figure 1.)

Figure 1: The circumplex model of basic human values.
Source: Schwartz (2012)

In this paper we use a mix of the most detailed groupings of BHV, namely the aggregation into four groups to explain the determinants of whether the respondent is abstinent or not, and further, the ten BHV themselves, as determinants of change in alcohol consumption during a period of stress. Within Hungary, with its unique sociocultural and economic landscape, the detailed, ten value framework seems to be the most relevant. Marked regional disparities, strong cultural traditions, and the intensification of stressors during the pandemic all interact with population-level value orientations. Our approach is intended as a pragmatic and theoretically informed starting point, suitable for identifying population-level patterns and generating hypotheses for more detailed future research. This approach provides a clear, evidence-based lens for investigating the interplay between values, stress, and alcohol use, and offers valuable guidance for public health strategies in Hungary and beyond.

Materials and Methods

This cross-sectional study utilised data collected from a representative survey of the Hungarian adult population (aged 18 years and older) during the third wave of the COVID-19 pandemic in June 2021. Data collection adhered to the STROBE guidelines for observational studies (Von Elm *et al.,* 2007) and was conducted via structured telephone interviews by a professional survey company. When structured telephone interviews are employed to collect quantitative data within a cross-sectional framework, STROBE guidelines are appropriate for survey studies as well (Von Elm *et al.,* 2007). The sample (N=1031) was stratified to reflect demographic characteristics, including gender, age, education level, type of settlement, and regional distribution, as recorded in the 2016 Hungarian Microcensus.

Ethical approval was obtained from the Ethical Committee of the HUN-REN Centre for Economic and Regional Studies, Hungary. Participants provided informed consent prior to participation, and their involvement was voluntary, with the option to withdraw at any stage without justification.

The primary outcome variable was self-reported changes in alcohol consumption during the COVID-19 pandemic. Respondents were classified into four categories: abstinent, decreased consumption, no change, and increased consumption. Abstainers comprised 53% of the sample, while the remaining respondents provided detailed information on their alcohol use, capturing a range of behavioural responses to pandemic-related stress.

Psychological mechanisms underpinning these behaviours include coping strategies, emotional regulation, and social support. Chronic stress often drives individuals to rely on alcohol to alleviate negative emotions. Concurrently, basic human values – core beliefs that guide behaviour – may moderate or mediate these coping responses. Schwartz's (Schwartz, 1992) circumplex model of human values provides a framework for understanding how these values influence health behaviours.

Data on BHV was collected using the Portrait Value Questionnaire (PVQ), adapted from (Pascucci *et al.,* 2016) As discussed earlier, this versatile tool evaluates ten value dimensions that may be aggregated into four, and further to two overarching categories**.**

We further included well-established predictors of alcohol use – age, gender, education, household composition (presence of children under 14), smoking status, and physical activity – based on extensive prior research on substance use and coping (Pollard *et al.,* 2020; Oroszi *et al.,* 2021).

In addition, dietary and lifestyle variables such as fast food and soft drink consumption were incorporated. These variables are relevant given growing evidence of clustering of health-related risk behaviours (e.g., poor diet, smoking, alcohol use), which often share common psychosocial and economic drivers, especially under chronic stress (Paramita *et al.,* 2023). Including these factors helps capture broader lifestyle patterns that may confound or mediate the relationship between stress and alcohol consumption. Data were electronically recorded and reviewed for completeness. The alcohol consumption variable was analysed as an ordered response, with sociodemographic and psychological variables serving as covariates. The dependent variable, alcohol consumption, was categorised into four groups: abstinent, decreased consumption, no change, and increased consumption.

Table 1 illustrates the distribution of alcohol consumption changes among respondents. The majority (53%) reported abstaining from alcohol, while 36% indicated no change in their drinking habits. A smaller proportion reported either decreased (8%) or increased (3%) alcohol consumption. These results suggest that while a significant portion of the population abstained, a notable subset exhibited changes potentially linked to stressors arising from the pandemic. Conversely, the low percentage of increased consumption points to resilience among most individuals, although this group's vulnerability to stress-induced drinking behaviours warrants targeted public health interventions.

Table 1: The dependent variable.

Alcohol consumption	Observations	Per cent
Abstinent	546	53
Decreased	79	8
Did not change	370	36
Increased	27	3
Total	1,022	100

Source: Own estimations

Table 2 presents the key explanatory variables resulting from BHV of our models. As discussed earlier, along the use of the ten original values, four and two group aggregations are also suitable. There is of course a trade-off in the use of ten, four or two value/group specifications. The use of higher order aggregation generates more compact results – that is, fewer variables and thus less collinearity – yet more difficult interpretation. In the selection equation we will use the four groups of HBV (lower panel of Table 2) whilst in the outcome equation the ten HBV (upper panel of Table 2) are used. The rather high mean scores for BHV 10 and BHV 4 variables

values underscore the variability in psychological orientations, which are key determinants of health behaviours.

Table 3 provides descriptive statistics for the study's core independent variables. The mean age of respondents was 51.89 years, reflecting a predominantly middle-aged population. Gender distribution showed a slightly higher representation of females (56.6%) compared to males (43.4%). Educational attainment varied, with 22.2% holding higher education degrees, indicative of a diverse socioeconomic background. Households with children under 14 years accounted for 20.4% of the sample, suggesting a subset with additional caregiving responsibilities that may influence stress and coping mechanisms. Behavioural characteristics, such as smoking prevalence (29%) and engagement in light physical activity (83.2%), provide insight into lifestyle factors that may interact with stress and alcohol consumption. These findings highlight the interplay between demographic, psychological, and lifestyle variables, forming a comprehensive basis for analysing alcohol consumption patterns during the pandemic.

Table 2: Descriptive statistics of the Schwartz's Theory of Basic Human Values independent variables.

Variables	N	Mean	SD	Min.	Max.
BHV 10					
Universalism	1,024	5.19	0.72	1.33	6
Benevolence	1,029	5.10	0.77	1	6
Tradition	1,027	4.63	0.99	1	6
Conformity	1,029	4.91	0.94	1	6
Security	1,015	5.18	0.84	1	6
Power	1,029	3.66	1.14	1	6
Achievement	1,028	4.25	1.19	1	6
Hedonism	1,031	4.84	0.89	1	6
Stimulation	1,030	4.02	1.13	1	6
Self-direction	1,030	4.92	0.88	1	6
BHV 4					
Openness to change	1,029	4.59	0.75	1	6
Self-enhancement	1,026	4.25	0.85	1	6
Conservation	1,009	4.91	0.72	1	6
Self-transcendence	1,022	5.15	0.65	1.5	6

Note: BHV 10 emphasises the 10 basic values, whilst BHV 4 the four composite value aggregation
Source: Own estimations

Table 3: Descriptive statistics of the common independent variables.

Variable		N	Frequency /mean	SD	Min.	Max.
Age		1,031	51.89	17.31	18	91
Gender*		1,031		–	–	–
	0: Male	448	43.4%	–	–	–
	1: Female	583	56.6%	–	–	–
Education		1,031		–	–	–
	1: primary	153	14.8%	–	–	–
	2: vocational	288	27.9%	–	–	–
	3: secondary	361	35%	–	–	–
	4: higher education	229	22.2%	–	–	–
Kids (children under 14)		1,028		–	–	–
	0: none	818	79.6%	–	–	–
	1: minimum 1	210	20.4%	–	–	–
Light activity		1,031				
	0: otherwise	173	16.8%	–	–	–
	1: at least once a week	858	83.2%	–	–	–
Smoking		1,021		–	–	–
	0: otherwise	725	71%	–	–	–
	1: yes	296	29%	–	–	–

* The questionnaire presented the following options: male, female, rather not say. All responses were of the first two categories.
Source: Own estimations

Several additional variables were used to give a more detailed aspect to our estimations. Thus, chronic stress indicators, including financial burden and caregiving responsibilities, were also integrated into the analysis to capture their influence on drinking behaviours. Further variables proxying various unhealthy diet and lifestyle variables were also employed. Since the descriptive statistics of these additional categorical variables are of low importance, to save space these are available in (Table 4). These variables are:

Table 4: Descriptive statistics of the additional independent variables.

Variable	N	Mean	SD	Min.	Max.
Extra burden	1,024	3.25	1.36	1	5
Worsen finance	1,021	2.19	1.37	1	5
Fast food restaurant	1,030	5.99	1.3	1	7
Convenience food	1,031	4.32	1.86	1	7
Soft drinks	1,031	4.26	2.31	1	7
Health status	1,031	2.26	0.64	1	3
Budapest	1,031	0.3	0.45	0	1

Source: Own estimations

In order to better capture the broader psychosocial and lifestyle context of alcohol use during the pandemic, several additional explanatory variables were included in the analysis. These comprised both stress-related and behavioural factors. The variable Extra burden reflects respondents' perceived increase in responsibilities and everyday challenges due to COVID-19 restrictions, measured on a five-point Likert scale ranging from "Strongly disagree" to "Strongly agree." Worsen finance captures the extent to which individuals reported a deterioration in their financial situation as a result of the pandemic, also on a five-point agreement scale. To assess pre-pandemic dietary habits that may correlate with health-related coping strategies, we included three variables based on frequency of consumption: Fast food restaurant refers to how often respondents ate at fast food outlets before the pandemic; Convenience food captures the frequency of consuming ready-made or processed snacks; and Soft drinks measures the consumption of sugary beverages, excluding plain or carbonated mineral water but including flavoured waters. All three variables were coded on a seven-point categorical scale from "Daily" to "Never." In addition, Health status was assessed through a self-reported measure with three categories: poor, satisfactory, and excellent. Finally, a binary (dummy) variable was used to account for a relevant contextual factor: Budapest indicates whether the respondent lives in the capital city.

A key methodological challenge in analysing alcohol consumption is that detailed drinking patterns are only observed among those who consume alcohol, while a large share of respondents are abstainers. This raises a selection bias issue: drinkers may systematically differ from abstainers not only in observed characteristics, but also in unobserved factors (e.g., health status, risk aversion, value orientation). Failing to account for this could bias estimates of the effects of values and other covariates on alcohol use.

There are several methodological solutions to address this issue. One could use Propensity Score Matching (PSM), a popular technique for reducing selection bias in observational studies. The method however is primarily designed for binary treatment effects (e.g., treatment vs. control) and does not directly address situations where the outcome is only observed for a selected subpopulation. PSM would also require strong assumptions about overlap and ignorability, and may result in information loss due to matching and sample reduction. In contrast, the Heckman selection model (Heckman, 1976; 1979), is specifically designed to correct for selection in models with censored or conditional outcomes – making it the most appropriate and theoretically justified choice for our research question. The Heckman selection model explicitly models the two-step process: (1) the likelihood of being an alcohol consumer (selection equation), and (2) the determinants of changes in alcohol use among drinkers (outcome equation), while correcting for potential correlation between the two stages. This approach is particularly appropriate for our data because: the distinction between abstainers and drinkers is sharp, and a large portion of the sample abstains (53%). Key independent variables (including value orientations) may influence both selection into drinking and subsequent changes in consumption. The model enables us to utilise information from the full sample, increasing statistical efficiency and minimising bias from non-random selection. The Heckman model was implemented using the semi-nonparametric estimator proposed by (De Luca and Perotti, 2011). This advanced method accommodates complex error term distributions often present in behavioural data, thereby reducing the risks of misspecification associated with traditional parametric models. The flexibility of this estimator allowed for the accurate modelling of non-standard distributions and improved the reliability of the results. The *snpopsel* command in STATA facilitated the application of this technique, ensuring precision and robustness in the analysis. Likelihood-ratio tests confirmed the model's overall fit, providing confidence in the robustness of the findings.

Results

Our analysis begins with the selection equation, which differentiates between respondents who drink and those who abstain (lower panel of Table 5). The results confirm familiar patterns from the literature on alcohol use: younger age and male gender significantly increase the likelihood of alcohol consumption, while the presence of children under 14 in the household reduces it. More education is positively related to alcohol use, indicating that drinking in Hungary is not simply a marker of disadvantage but part of the social practices of middle-class and professional life. Smoking is also strongly associated with drinking, showing that health-risk behaviours often appear together.

Value orientations already play a role at this first stage. Individuals with high Openness to Change scores – covering

Table 5: The impact of factors on alcohol use during chronic stress.

Variable	Model 1	Model 2	Model 3
Outcome equation			
Age	0.020***	0.024***	0.018***
Gender	0.618***	0.599***	0.483**
Education	–0.065	–0.038	–0.022
Kids	0.929***	0.897***	0.871***
Universalism	–0.12	–0.15	–0.171
Benevolence	0.13	0.07	0.138
Tradition	0.006	–0.031	–0.025
Conformity	0.077	0.122	0.061
Security	–0.075	–0.081	–0.092
Power	0.155*	0.172**	0.130*
Achievement	–0.112	–0.137*	–0.081
Hedonism	–0.177*	–0.138	–0.144
Stimulation	0.122	0.074	0.114
Self-direction	–0.111	–0.062	–0.083
Extra burden		–0.009	0.024
Worsen finance		0.232***	
Fast food restaurant		–0.075	
Convenience food		–0.044	
Soft drinks		0.079**	
Health status			–0.125
Budapest			0.220
Openness to change		0.265**	0.225*
Self-enhancement		0.03	0.05
Conservation		–0.243**	–0.231**
Self-transcendence		0.064	0.077
Age		–0.014***	–0.013***
Gender		–1.086***	–1.008***
Education		0.227***	0.235***
Kids		–0.374**	–0.340**
Light activity		0.034	0.042
Smoking		0.505***	0.551***
Statistics			
N		980	982
p (chi2)		0.000	0.000

Note: *, **, ***: significant at 1%, 5%, 10%, respectively.
Source: Own estimations

self-direction, stimulation, and hedonism – are more likely to drink, consistent with alcohol being part of a lifestyle of novelty-seeking and sociability. In contrast, those who place more weight on Conservation – tradition, conformity, security – are significantly less likely to consume alcohol. This result suggests that drinking decisions are not purely driven by circumstances but also by deep-seated preferences and moral frameworks.

The outcome equation (upper panel of Table 5) sheds light on which drinkers change their behaviour under stress. Age remains significant, but its role reverses: while younger respondents are more likely to drink at all (based on the selection equation), it is older respondents who are more likely to report an increase in their drinking during the pandemic. Women also report more increase than men, consistent with greater sensitivity to stress or more willingness to acknowledge behavioural adjustments. Interestingly, the presence of children, which reduced the probability of drinking in the first stage, becomes positively associated with increased drinking among those who do drink. This may reflect the heavy burdens placed on parents during lockdown – home-schooling, reduced childcare options, and work-family conflict – pushing some to rely on alcohol as a coping tool.

Among the ten basic human values, Power is by far the most consistent and significant predictor across models. Respondents who value status, control, and influence are systematically more likely to report increasing alcohol use. This is consistent with the interpretation of drinking as part of status-laden social rituals – networking dinners, client entertainment, or celebratory events – where abstaining could even signal disengagement. For those in power-oriented roles, drinking may reinforce social belonging and signal success.

Other value effects enrich this picture. Hedonism becomes negatively related to increased drinking (Model 1), implying that these individuals prefer fewer but more pleasurable drinking occasions rather than more frequent or heavier use. Achievement is negatively associated with increased drinking in Model 2, suggesting that people focused on performance and goal-attainment protect their time and energy, keeping alcohol consumption under control.

Economic stress intensifies these dynamics. Those who reported a worsening financial situation during the pandemic were significantly more likely to increase their alcohol use. This finding fits the idea that economic hardship drives some people toward maladaptive coping behaviours. Lifestyle indicators tell a similar story: soft-drink consumption is positively related to alcohol use, hinting at a pattern of less healthy dietary choices.

Overall, the results provide a consistent picture. Demographic factors define who is likely to drink, but changes in consumption during crises are strongly shaped by values and situational pressures. Power heightens the probability of increasing drinking, while Achievement and "pure" Hedonism tend to hold behaviour in check. The presence of children and financial stress tilt the balance toward higher alcohol use, while access to green space has a calming effect.

Discussion

This study provides new evidence on how demographic, psychological, and economic factors shape alcohol consumption under chronic stress, using Hungary during the COVID-19 pandemic as a natural experiment. The results confirm several well-established patterns: younger age and male gender are risk factors for drinking (Dawson *et al.,* 2005; Pollard *et al.,* 2020; Oroszi *et al.,* 2021), while caregiving responsibilities reduce the probability of drinking. At the same time, among those who do drink, the presence of children is associated with higher odds of increasing alcohol use. This contrast is important: caregiving may deter some from drinking altogether, but for those who drink, the additional pressures of home-schooling and work-family conflict may push them toward higher consumption. This finding mirrors earlier research showing that stress affects men and women differently, and that family context plays a key role in shaping coping strategies (Hendriksen *et al.,* 2022; Boncz *et al.,* 2020).

Perhaps the most striking result is the consistent role of value orientations. Power emerges as the most robust predictor of increased drinking, even after adjusting for sociodemographic factors, lifestyle variables, and economic stress. This is more than a statistical finding: it reflects the way alcohol is integrated into status-driven social life. In many Hungarian business and professional settings, drinking is not just tolerated but encouraged – networking events, client meetings, and celebrations often involve alcohol. For individuals who seek influence and status, participation in these rituals can reinforce their position, making abstention costly in social terms. This finding is consistent with Nordfjærn and Brunborg (2015), who found that self-enhancement values were associated with heavier drinking in Norway.

Other values also matter. Achievement is weakly protective, suggesting that those focused on goal attainment restrain drinking to safeguard productivity. Hedonism shows a negative relationship once thrill-seeking and status motives are taken into account, meaning that hedonists may be more selective about drinking occasions and substitute toward other pleasures, such as food, travel, or cultural activities. These results add depth to theories such as the Health Belief Model, Theory of Planned Behaviour, and Lazarus and Folkman's Stress-Coping Theory, which emphasise how motivations interact with perceived norms and coping resources (Bridgland *et al.,* 2021).

Situational pressures also shape behaviour. Respondents who reported a deterioration in their financial situation were significantly more likely to increase their alcohol consumption, confirming meta-analytic evidence that stress and anxiety raise the risk of alcohol use (Paramita *et al.,* 2023). The positive association between soft-drink consumption and alcohol use points to a clustering of less healthy dietary habits, a pattern well documented in public health research (Taylor *et al.,* 2020).

These findings have direct implications for public health policy. First, alcohol consumption under chronic stress is not only about price, availability, or generic information campaigns. Thus, interventions should be targeted toward groups most likely to increase drinking under stress – including financially strained households, parents under heavy caregiving burden, and individuals with strong power motives. For the latter group, messaging that frames moderation as professionalism may be more effective than warnings about health risks.

Second, policies should consider how social norms interact with drinking. For those high in Power, moderation can be framed as professionalism and self-control. Supporting parents and reducing financial stress would have a double dividend – lower stress levels and less need for coping through drinking. In workplaces and professional settings, encouraging alcohol-free networking events or providing non-alcoholic but high-status beverage options could help decouple status signalling from drinking. Community-level interventions, such as supporting sports clubs, or cultural programmes, may also create alternative outlets for coping with stress, consistent with evidence that outdoor activity and social engagement reduce risky health behaviours.

Finally, the results support a broader agenda that integrates value-based approaches into health promotion. Programmes that build social values – benevolence, solidarity, community – through education, volunteering, and inclu-

sive storytelling could gradually shift behavioural norms, as suggested by Schwartz's (1992) value framework and later empirical studies (Schwartz et al., 2012; Schwartz and Cieciuch, 2021). Over time, such interventions can help create a culture where drinking is less tied to status display and more aligned with deliberate, moderate enjoyment.

Some limitations must be acknowledged. As in many surveys, alcohol consumption is self-reported and may be underestimated due to social desirability bias (Grossman et al., 2020). Future research could combine survey data with biomarkers, time-use diaries, or administrative records to strengthen measurement validity (Schecke et al., 2021). Moreover, the cross-sectional design does not allow for causal inference: value orientations may themselves evolve in response to stress and drinking behaviour (Paramita et al., 2023). Longitudinal research could clarify these feedback loops.

In sum, our findings show that alcohol use under chronic stress is shaped not only by who people are but also by what they value and the social contexts they inhabit. This makes a strong case for multi-layered interventions — economic, cultural, and psychological — that address both the pressures that push people toward drinking and the motives that make them more likely to increase their consumption. By combining economic support, value-based education, and opportunities for healthier coping, policymakers can reduce the risk of harmful drinking not only in future crises but in everyday life.

Several limitations should be acknowledged. First, the reliance on self-reported data for sensitive behaviours such as alcohol consumption raises the possibility of social desirability bias. Respondents may underreport or selectively recall their drinking behaviour (Grossman et al., 2020), potentially attenuating or distorting associations. While assurances of confidentiality and validated survey instruments (e.g., PVQ) help mitigate this risk, future research could enhance validity by incorporating alternative data sources – such as biomarkers, collateral reports, or time-use diaries (Bridgland et al., 2021; Schecke et al., 2021). Somewhat the same possible caveat applies to self-reported health status data.

Second, our cross-sectional design precludes any definitive statements about causality or the directionality of observed associations. It remains plausible, for example, that changes in alcohol use or chronic stress exposure might themselves shape value orientations over time (Paramita et al., 2023). Longitudinal studies would be better suited to capture these temporal dynamics and disentangle reciprocal effects between values, stress, and behaviour.

A further limitation concerns the generalisability of our findings beyond the Hungarian context. While Hungary provides a salient case study, with high prevalence rates of alcohol use disorder and pronounced regional and social disparities (WHO, 2019; Oroszi et al., 2021), cultural norms and value hierarchies may differ elsewhere. Cross-national comparative research would help clarify the extent to which these value–behaviour relationships are universal or contextually contingent.

In conclusion, our findings confirm and extend existing knowledge about the motivational underpinnings of alcohol use under chronic stress. While social focus values can serve as a buffer, and personal focus values as a risk factor, these effects are shaped by wider social, economic, and psychological contexts. Addressing these complexities will require future research designs that are longitudinal, multimethod, and culturally sensitive. Such efforts will provide a richer foundation for evidence-based interventions and more targeted public health strategies – both in Hungary and beyond.

Conclusions

This study confirms that alcohol consumption during periods of chronic stress is shaped by a mix of demographics, economic pressures, and deeper motivational drivers. In Hungary, the pandemic did not lead to a uniform rise in drinking, but it did expose clear fault lines: parents under stress, financially strained households, and individuals with strong Power values were most likely to increase consumption. At the same time, Achievement and Hedonism values acted as moderating forces, supporting more deliberate and restrained drinking patterns.

These findings have direct implications for policy. Traditional instruments – taxes, availability restrictions, and information campaigns – remain important, but they are not enough on their own. Value-sensitive approaches are needed: for those motivated by status, moderation should be framed as professionalism and self-control; for those seeking excitement, safe and engaging social alternatives must be made available. Support for families and targeted relief for financially vulnerable groups can reduce the economic stress that fuels risky coping.

Ultimately, addressing harmful alcohol use is not simply about regulating a product but about shaping the social and cultural environment in which drinking takes place. By combining economic support, education, and community-based initiatives, policymakers can create conditions where alcohol is consumed in ways that strengthen social ties rather than undermine them – building resilience not only for the next crisis, but for everyday life.

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