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Relationship Between Alcohol Use, Spirituality, and Coping

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Abstract

Authors investigated a relationship between the frequency of alcohol consumption, spirituality, and coping with everyday life events in a cross-sectional, community-based sample of 320 adults in Ukraine, the country with one of the highest alcohol consumption levels in the world. Face-to-face interviews with participants took place in rural and urban locations across Eastern, Southern, and Central Ukraine. Results of the ordinary least-squares regression suggest that a higher frequency of alcohol consumption was related with the lower use of positive reappraisal ($\beta = -.27$, $p < .001$), higher use of escape-avoidance ($\beta = .23$, $p < .01$) and confrontive ($\beta = .15$, $p < .05$) coping strategies, lower spirituality ($\beta = -.20$, $p < .001$), and younger age ($\beta = -.11$, $p < .05$). On the whole, current findings suggest that specific coping behaviors, younger age, and lower spirituality are involved in higher frequency of alcohol consumption among Ukrainian adults.

Keywords

Spirituality; Alcohol use; Coping; Eastern Europe; Ukraine

With a population of 44.8 million people (United Nations 2015), Ukraine ranks sixth among all nations in overall consumption of alcohol (World Health Organization 2014). An average Ukrainian consumes 20.3 l of pure alcohol, which places the level of alcohol consumption in Ukraine at a 28% higher rate than that of the European average. In comparison to all other European countries, average individual alcohol consumption in Ukraine is estimated to be 124% higher (WHO 2014). In Ukraine, only 1.0% of male and 4.7% of female admit to having never used alcohol (Webb et al. 2005), while in the rest of the world, 48% of people are estimated to be abstainers (WHO 2014). Although alcohol abuse (19.7%) and alcohol abuse with dependence (6.7%) are among three most common disorders in Ukrainian men (Bromet et al. 2005), very little research has been done to understand specific factors contributing to such significant differences in alcohol use in the Ukrainian sociocultural

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Compliance with Ethical Standards.

Conflict of Interest The authors declare that they have no conflict of interest.

Consent form Informed consent was obtained from all individual participants included in the study.

context. This study aims to examine the relationship between alcohol consumption, spirituality, and coping strategies in a sample of 320 Ukrainian adults.

Although some research suggests that limited drinking may decrease the mortality (Di Castelnuovo et al. 2006), more frequently, excessive alcohol consumption is directly linked to the multiple negative consequences. In a meta-analysis by Corrao et al. (2004), the consumption of 20 to 72 g of ethanol per day was associated with higher risks for cancers of the esophagus, pharynx and larynx, and oral cavity, rectum, colon, liver, and breast as well as increased violence, injuries, hypertension, chronic pancreatitis, and cirrhosis of the liver. Heavy alcohol use is prevalent among 22% of Ukrainian adult with women consuming 80 g and men averaging 120 g of ethanol in a typical drinking session (Webb et al. 2005). It is estimated that 3.3 million people die each year as a result of excessive alcohol consumption globally (WHO 2014). In Ukraine, 40% of all deaths among men and 22% among adult women were alcohol attributable (Levchuk 2009) and 27% of all crimes are committed by intoxicated individuals (Stasiv 2012).

Risk Factors for Alcohol use

Sociodemographic Characteristics and Alcohol Consumption—Prior research linked multiple factors to alcohol use and abuse. Epidemiological research in Ukraine suggests that the highest rates of heavy drinking is observed in males aged 26–54 and in females aged 18–25 years (Webb et al. 2005). Additionally, Bromet et al. (2005) found that although the median age of onset for alcohol use disorder for Ukrainian population was 24 years for both genders, the ratio of drinking men to women was 9:1. Similarly, research from the neighboring with Ukraine Russia demonstrated that male sex was a risk factor for heavy alcohol use (Bobak et al. 1999). In addition to age and gender, higher education and adequate income were linked to lower consumption of alcohol drinks in Ukraine (Bromet et al. 2005; Webb et al. 2005).

Spirituality and Alcohol Use—Spirituality addresses such ordinary experiences as “awe, joy that lifts one out of the mundane, and a sense of deep inner peace” (Underwood 2006, p. 22). To our knowledge, research on spirituality and alcohol use is quite limited and mostly focuses on participating in treatment programs. Lee et al. (2014) found that increased daily spiritual experiences score was associated with greater likelihood of abstinence in a residential treatment program for adolescents. Other studies examined the role of spirituality in 12-step programs and suggested that spiritual growth predicted reduced drinking (Tonigan et al. 2013) and that better alcohol outcomes for Alcoholics Anonymous members were partially mediated by increased spirituality (Kelly et al. 2011). Still, to our knowledge, no study has examined the association between alcohol use and spiritual involvement in general population in Ukraine.

Ways of Coping and Alcohol Use—Another factor that has been linked with different patterns of alcohol consumption relates to strategies people use to cope with everyday stress. These strategies can be grouped as either problem-focused or emotion-focused (Lazarus and Folkman 1984) and some of them (such as avoidant coping) were found to be linked to alcohol use (Hasking et al. (2011), while others (such as planful coping, positive

reinterpreting, seeking social support) were associated with decreased risk of developing alcohol-related problems and with lower involvement with alcohol (Corbin et al. 2013; Merrill and Thomas 2013). At the same time, research on confrontive way of coping and substance use remains limited.

The Present Study

The fact that alcohol use is significantly higher among Ukrainians than it is in other countries suggests potentially different mechanisms for development and maintenance of the alcohol use disorder in this part of the world. Also, because alcohol use is among leading causes of death in Ukraine (Levchuk 2009), research with Ukrainian samples should be warranted. In the present study, we sought to examine the association of alcohol consumption with gender, socioeconomic status (SES), spirituality, and coping styles. To our knowledge, a model that includes all of these predictors has not been tested. Based on the literature, we hypothesized that the alcohol use would be lower for participants who are female, are of younger age, who have higher socioeconomic status (education and income), and have higher scores on spirituality. We also hypothesized that participants who tend to rely on confrontive and avoiding coping strategies would have higher scores on alcohol use while participants who rely on problem-solving approaches would have lower scores on alcohol use.

Methods

Participants

Our sample included 320 adults between the ages 24 and 63 years ($M = 37.82$, $SD = 6.50$), living in Eastern, Southern, and Central Ukraine. The majority of respondents (92%) self-identified as Ukrainian, and others were Russian, Roma, Polish, and Armenian. Participants spent, on average, 13.26 ($SD = 2.1$) years in school. Nineteen percent of participants completed 11 grades of school or less, 49% had vocational training, 6% had a few years of college, and 26% had a university degree. Sixty percent were married or lived with a partner and others were single, widowed, divorced, or married and living separately. Most participants (94%) were female, and the monthly household income was \$406 ($SD = \255) (Table 1).

Procedures

This study used a cross-sectional, community-based sample. The study was approved by the Ukrainian Methodological Psycho-medico-pedagogical Center of the Department of Education, and data collection was performed by Ukrainian social workers and psychologists in 2013. All participants signed informed consent forms before participation in the study. Face-to-face interviews with 320 adults were conducted in rural and urban locations in Eastern, Southern, and Central Ukraine. The participants received an incentive of small fee for participation (\$12.5). Interviewers met with participants either at participants' child's school or subject's place of residence and conducted interviews in respondent preferred language, Ukrainian or Russian. The data were made available to authors without personal identifiers of participants and authors' university Institutional Review Board granted a non-regulation status to this study. Additional details about the

study, data collection, and measurement approach have been described previously (author reference).

Measures

Demographic Characteristics: Participants provided answers about their education at various education establishments that was converted in total number of years, household income (converted to US\$), age (measured in years), ethnicity, and sex.

Frequency of alcohol use—Was measured with the Alcohol Use Section of the Drinking and Drug History and Current Use Patterns questionnaire (Zucker et al. 1990). Participants answered questions about how often they consumed beer, wine (or a punch containing wine), and liquor on an 11-point scale (0 = *never*, 1 = *less than once a year*, 3 = *less than once a month, but at least once a year*, 4 = *about once a month*, 5 = *two or three times a month*, 6 = *once or twice a week*, 7 = *three or four times a week*, 8 = *nearly every day*, 9 = *once a day*, 10 = *two times a day*, and 11 = *three or more times a day*). The total Annual Alcohol Use Frequency scale was obtained by summing up drinking frequencies for all alcoholic drinks.

Spirituality—The Daily Spiritual Experience Scale (DSES; Underwood and Teresi 2002) was used to measure spirituality of participants. The measure consists of 16 items designed to assess frequency of occurrence of ordinary spiritual experiences in daily life. Example questions include “I find strength in my religion or spirituality,” “I feel God’s presence.” Participants rated ways in which first 15 statements of the measure related to their life using six-point Likert scale including 1 (*many times a day*), 2 (*every day*), 3 (*most days*), 4 (*some days*), 5 (*once in a while*), and 6 (*never*). The last question with answer categories from 1.5 (*not at all*) to 3 (*somewhat close*), to 4.5 (*very close*), and to 6 (*as close as possible*) on a modified Likert scale. Participants’ answers were then reverse-scored and summed to produce a total score on spirituality. This scale has been used extensively both in English and in other languages with reported reliability $\alpha = .89$ (Underwood 2011). In our study, Cronbach’s alpha was .97.

Ways of Coping—The Ways of Coping Checklist (WOC; Folkman and Lazarus 1985) was used to assess strategies participants use to cope with stressful life events. The WOC consists of 66 items representing different approaches to dealing with life stress: confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem-solving, and positive reappraisal. The items were rated on a four-point Likert scale ranging from 0 (*does not apply or not used*), to 1 (*used somewhat*), to 2 (*used quite a bit*), to 3 (*used a great deal*). The WOC has a reported $\alpha = .60-.79$ (Folkman et al. 1986). In our study, reliability α ’s for different coping scales ranged from .57 to .79 (Table 2).

Analyses

We utilized a predictive mean matching approach of the multiple imputation procedure (Molenberghs and Kenward 2007; Rubin 1986) for missing cases (5%) using Stata (StataCorp 2015). There was no statistically significant difference between groups with and

without missing cases on sociodemographic characteristics, suggesting that data were missing at random. Alcohol use was treated as the dependent variable, and sociodemographic variables as well as spirituality and coping were included in the ordinary least-squares (OLS) regression as predictor variables. Standardized betas were computed to assess the relative strength of individual predictor variables.

Results

Participants in this sample used alcohol a median (interquartile range [IQR]) of 78.5 (24–212.25) times during last year. The reported beer median (IQR) use was 30 (6–78) times per year. The median (IQR) use of wine was 12 (6–78) and liquor median (IQR) use in this sample was 6 (0–30) times per year. Only 7.5% of participants did not use alcohol during past year. Statistics for the analytic sample are presented in Table 2.

The WOC scales showed moderate to high internal consistency reliability ranging from Self-Controlling Coping scale $\alpha = .57$ to Seeking Social Support scale, $\alpha = .79$. The highest reported score was on Positive Reappraisal coping scale ($M = 1.85$, $SD = .92$) and the least used coping strategy was Escape-Avoidance ($M = 1.03$, $SD = .53$).

Spirituality scale showed excellent internal consistency, Cronbach alpha = .97. Every fifth Ukrainian participant reported not at all being close to God, every second participant reported being somewhat close, 19% felt very close, and 11% reported being as close to God as possible.

Results presented in Table 3 suggested negative correlations between participants' alcohol use and spirituality, $r(318) = -.39$, $p < .001$, age, $r(318) = -.17$, $p < .01$, education, $r(318) = -.13$, $p < .05$, planful problem-solving, $r(318) = -.18$, $p < .01$, and positive reappraisal, $r(318) = -.30$, $p < .001$. There were positive significant correlations between participants' alcohol use and distancing coping, $r(318) = .23$, $p < .001$, escape-avoidance coping, $r(318) = .34$, $p < .001$, confrontive coping strategy, $r(318) = .18$, $p < .01$, and coping by accepting responsibility, $r(318) = .11$, $p < .05$.

Table 4 provides results of the OLS regression. Lower use of positive reappraisal was associated with higher alcohol use ($\beta = -.27$, $p < .001$). Additionally, higher frequency of alcohol use was associated with a tendency to rely on both, escape-avoidance ($\beta = .23$, $p < .01$) and confrontive ($\beta = .15$, $p < .05$), coping strategies. Finally, lower spirituality ($\beta = -.20$, $p < .001$) and younger age ($\beta = -.11$, $p < .05$) were linked with more frequent use of alcoholic beverages.

Discussion

The current study adds to the existing literature on aspects of alcohol use in Ukraine. Participants who reported higher alcohol use were more likely to be younger, have lower spirituality, use more of escape-avoidant and confrontive coping strategies, and fewer positive reappraisal strategies.

In the present study, alcohol use was higher for younger age participants. Our sample predominantly included female participants making this finding consistent with prior research linking higher alcohol use with younger age in Ukrainian females (Bromet et al. 2005; Webb et al. 2005). This finding suggests the need for prevention policies and programming in Ukraine that specifically target younger women.

Contrary to our expectations, there was no significant relationship between participants' alcohol consumption and other sociodemographic characteristics including education, household income, and sex. One of the explanations for this unexpected finding could be the fact that the current sample predominantly includes women. Perhaps, gender-based differences in consumption could be more prominent in the more balanced samples. Future research is also needed to understand the lack of relationship between income, education, and alcohol use. Our explanation for this finding is that participants of this study reported relatively low levels of alcohol consumption and the presence of more powerful predictor variables in this model attenuated the effects of education and income on the alcohol use.

Next, our findings provide support for the hypotheses that participants with higher scores on spirituality would have a lower risk for alcohol consumption and agree with prior research (Kelly et al. 2011; Tonigan et al. 2013). It is possible that presence of higher spirituality provides ways of living life that are less compatible with alcohol consumption. For example, it is possible, although not tested in this research, that for these individuals, rich spiritual life brings positive sensations, such as a sense of joy, comfort, safety, strength, and inner peace (Underwood 2006), reducing their need to find the same sensations in alcoholic beverages. Alternatively, people who maintain a strong connection with the divine are more likely to participate in religious activities during times of the week when other people typically engage in alcohol use. Finally, the notion of higher power has been successfully used as a source of strength in maintaining the abstinence and dealing with life difficulties (Kelly et al. 2011).

Furthermore, as predicted, those participants who relied on confrontive coping strategies were at higher risk for alcohol use. This finding is intriguing because Lazarus and Folkman (1984) conceptualized the confrontive coping as a problem-focused coping strategy. Typically, problem-focused coping tends to be linked with lower levels of alcohol use (e.g., Merrill and Thomas 2013). However, while prior research reveals the connection between more moderate alcohol use and more active coping strategies (Merrill and Thomas 2013), it does not actually test the relationship between confrontive coping and alcohol consumption. Our findings that confrontive boldness is related to increased risk of alcohol use is consistent with the literature on impulsive, externalizing behaviors (Bernstein et al. 2015; Dick et al. 2010; Gray and MacKillop 2014; Jentsch and Taylor 1999). This finding adds important nuances in the general literature on the relationship between substance use and coping. These results suggest that Ukrainian helping practitioners should rather discourage confrontive behaviors associated with unnecessary risk-taking and boldness.

Consistent with our hypothesis, the use of avoiding coping strategies had a second largest effect size on alcohol use in this sample. Association between higher frequency of alcohol use and a tendency to rely on escape-avoidance coping is congruent with previous studies

(Dermody et al. 2013; Hasking et al. 2011). In spite of the significance of this relationship in our study, it is important to avoid putting the blame on people who tend to use this coping approach because when people believe that they cannot change their situation, the use of emotion-focused coping is the only choice they may have (Dermody et al. 2013; Hasking et al. 2011). For example, some Ukrainian adults may see the present sociopolitical problems as unsurmountable and in the absence of knowledge about more healthy coping strategies these adults may release their stress through the use of alcohol. Surprisingly, related to escape-avoidance coping strategy, the coping by distancing was not associated with alcohol use in this study. Distancing was significantly and positively correlated with alcohol use. Therefore, it is possible that the presence of the stronger predictor variable that tapped into similar dimension of coping in the model resulted in attenuation of the effect of distancing. Self-controlling was another emotion-focused coping that had no relationship with alcohol use.

Our findings lent support to another hypothesis that decreased alcohol use is linked with the generally adaptive coping skills (Merrill and Thomas 2013). In our study, coping by positive reappraisal had the strongest impact size on alcohol use. These data suggest that Ukrainian adults who see stressful life situations as opportunities for personal growth, who try to change themselves, pray and look for creative solutions (Folkman and Lazarus 1985) tend to drink alcohol less frequently.

Contrary to our expectation, we did not find a significant relationship between alcohol use and such coping strategies as seeking social support, planful problem-coping, accepting responsibility, distancing, and self-controlling. The lack of relationship between alcohol use and seeking social support can be explained by the fact that alcohol use is often perceived by Ukrainians as a moral flaw rather than a disease. Ukraine is a post-Soviet country, in which alcohol use was stigmatized and strongly condemned. Additionally, talking to other people about personal problems and mental health issues is perceived in Ukraine as a sign of weakness and personal failure (Burlaka et al. 2014a). At the same time, seeking professional help is associated with stigma and distrust to helping professionals (Burlaka et al. 2014b). Finally, as in other post-Soviet countries, people in Ukraine were raised in the centralized communist societies and may have a significantly lower sense of community and interpersonal support than people in the West.

The lack of relationship between alcohol use and such coping dimensions as accepting responsibility and planful problem-solving was another unexpected finding. Ukraine is a young democracy and is in the process of considerable political, economic, and cultural transformations. As a result, the country continuously experiences social and political turmoil, which leads to the lack of predictability and inability for many of citizens to accept responsibility and plan their lives. It is possible that the data regarding the use of planful problem-solving did show a clear relationship with alcohol consumption because some participants felt the effect of general disorganization in the society on their life while others may simply have not been used to planning. Many citizens in Ukraine may still live in the shadow of the Soviet occupation when people were often punished for taking initiatives while having limited opportunities to choose food, clothes, political leaders, occupation, and lifestyles.

The results of this study revealed interesting and important relationships between the use of alcohol, spirituality, and coping strategies. Still, several important limitations should be kept in mind when interpreting these findings. First, this study uses the community sample of adults who have school-age children. This study includes participants from the Eastern, Southern, and Central Ukraine. However, the generalizability of these findings is limited because Western and Northern parts of the country were not included in this research. Some research suggests that citizens in the southeastern Ukraine have higher odds of heavy alcohol use (Webb et al. 2005).

Furthermore, future studies should include perspectives of adults who have younger or older children as well as adults who have no children. The current sample mainly includes women, therefore one should be cautioned in generalizing the present findings to Ukrainian men. Next, studies using longitudinal and experimental designs can help better understand the directionality and causality of the effects. Also, although the current study measured the effects of spirituality, it is not clear whether these participants actively practice any particular religion. Further research could examine what helps people drink less—formal church/denomination requirements or personal spirituality. Finally, qualitative research could elicit deeper perspectives and the meaning of particular behaviors as well as their relationship with alcohol use in Ukraine.

Taken together, results of the present study make a critical contribution to the limited body of knowledge about risk and protective factors related to the high use of alcohol in the Ukrainian sociocultural context. These findings can be utilized in the training of social work and psychology students who share an interest in the global mental health. Additionally, clinicians working with Ukrainian families in Ukraine and Ukrainian emigrants in other countries can utilize the results of this research when choosing the helping strategies for clients with alcohol use problems. Finally, these results can be employed by religious organizations providing help to people with addictions as well as in the policy and decision-making that affects substance using populations in Ukraine.

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Table 1Demographic characteristics of the sample ($N = 320$)

Variable	<i>n</i>	%	<i>M</i>	<i>SD</i>	Range
Household income, \$			405.73	254.81	12–2209
Age, years			37.82	6.50	24–63
24–30	12	8			
31–40	214	67			
41–50	65	20			
51–63	17	5			
Education, years			13.26	2.10	4–16
9 grades or less	30	10			
11 grades	30	9			
Vocational	158	49			
Some college	19	6			
University	83	26			
Region of Ukraine					
Eastern	223	70			
Southern	48	15			
Central	49	15			
Ethnicity					
Ukrainian	295	92			
Russian	20	6			
Other	5	2			
Marital status					
Yes	158	49			
No	162	51			
Parent sex					
Male	18	6			
Female	302	94			

Table 2Psychometric properties of the major study variables ($N = 320$)

Variable	M	SD	Coefficient alpha	Range
Alcohol use, annual use	172.73	261.85	–	0–2125
Spirituality	50.54	19.83	.97	17–96
Confrontive coping	1.30	.51	.61	0–3
Seeking social support	1.34	.64	.79	0–3
Planful problem-solving	1.35	.59	.78	0–3
Accepting responsibility	1.35	.62	.68	0–3
Distancing	1.16	.57	.73	0–3
Escape-avoidance	1.03	.53	.72	0–3
Positive reappraisal	1.85	.91	.75	0–4
Self-controlling	1.25	.44	.57	0–3

SD standard deviation

Table 3

Intercorrelations between study variables

	AU	A	E	HI	G	S	CC	SSS	PPS	AR	D	EA	PR	SC
AU	–													
A	–.17*	–												
E	–.13*	.05	–											
HI	–.07	–.10	.43*	–										
G	.07	.11	.03	–.05	–									
S	–.39*	.17*	.12*	.04	–.07	–								
CC	.18*	–.10	–.12*	–.02	–.07	–.08	–							
SSS	.00	–.03	.09	.11	–.10	.05	.51*	–						
PPS	–.18*	.06	.20*	.21*	–.06	.36*	.37*	.46*	–					
AR	.11*	.04	–.08	–.05	–.06	.05	.48*	.31*	.30*	–				
D	.23*	–.07	–.15*	–.15*	–.12*	–.21*	.32*	.04	–.03	.38*	–			
EA	.34*	–.10	–.23*	–.19*	–.08	–.20*	.42*	.12*	.01	.54*	.67*	–		
PR	–.30*	.01	.20*	.15*	–.05	.44*	.33*	.48*	.63*	.24*	.02	–.05	–	
SC	.02	–.09	.04	.12*	–.01	.07	.51*	.40*	.54*	.50*	.29*	.38*	.42*	–

AU alcohol use, A age, E education, HI household income, G gender, PS spirituality, CC confrontive coping, SSS seeking social support, PPS planful problem-solving, AR accepting responsibility, D distancing, EA escape-avoidance, PR positive reappraisal, SC self-controlling

* Statistically significant at $p < .05$ or greater

Table 4Relationship between frequency of alcohol use, spirituality, and ways of coping ($N=320$)

Predictor	<i>B</i>	<i>SE</i>	β
Age	-.09 [*]	.04	-.11
Education	.04	.15	.01
Income	.000	.001	.01
Sex, male	2.09 [†]	1.16	.09
Spirituality	-.05 ^{***}	.02	-.20
Confrontive coping	1.50 [*]	.71	.15
Seeking social support	.36	.53	.04
Planful problem-solving	.40	.67	.04
Accepting responsibility	.27	.57	.03
Distancing	.18	.65	.02
Escape-avoidance	2.32 ^{**}	.80	.23
Positive reappraisal	-1.57 ^{***}	.43	-.27
Self-controlling	-.94	.87	-.08
R^2	.29		
F	9.17 ^{***}		

SE standard error[†]
 $p < 0.10$;^{*}
 $p < 0.05$;^{**}
 $p < 0.01$;^{***}
 $p < 0.001$