Boredom Severity, Depression and Alcohol Consumption in Belarus

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Abstract

Background: *There is growing evidence that boredom, even in the absence of depressive mood, is associated with increased levels of alcohol and substance misuse. However, very little of that evidence comes from studies conducted in Eastern European countries where alcohol consumption is typically high.* ***Method:*** *A sample of 55 Byelorussian adults were assessed using Russian-language versions of the State Boredom Measure [SBM], Boredom Proneness Scale [BPS], the Beck Depression Inventory [BDI]) and the Alcohol Use Disorders Identification Test [AUDIT]). The data was collected in two waves over a nine month period.* ***Results:*** *Although levels of depression, boredom proneness and participant's recollections of boredom over the preceding two weeks were found to be highly inter-correlated, the association between alcohol use and recollections of having frequent boredom episodes of more than three hours during the preceding two weeks remained significant even after controlling for depression and boredom proneness. Among males the best predictor of current alcohol use was the recollection of having had a high frequency of sustained boredom episodes (>3hrs) during the preceding two weeks. Among women, depression was the best predictor.*

Keywords: Boredom, Boredom Proneness, Depression, Alcohol Consumption

1. Introduction

Alcohol Misuse and Depression: There is widespread and longstanding agreement that there is a high level of co-morbidity between depression and alcohol misuse, (Grant et al. 2004). For example, there is evidence to suggest that children and teens with depressive symptoms have an increased risk of later developing a problematic pattern of alcohol use (e.g., Deykin, 1987) and compared to men, women have been shown to be significantly more likely to develop a pattern of alcohol misuse in response to a depressive illness (e.g., Dixit and Crum, 2000). However, it remains unclear whether these and similar findings are attributable to an actual causal relationship (i.e., a case of "self-medication" vs. alcohol-induced depression), or to a shared underlying diathesis (Grant et al. 2004). Indeed, consistent with the latter interpretation, prospective studies that have employed experience sampling methodologies have found that while self-reported "nervousness" is predictive of subsequent levels of alcohol consumption, depressive mood is not (Swendsen, et al. 2000).

More recently, another negative affective state, boredom, has also been linked to alcohol misuse (Paulson et al. 1990), as well as a variety of other addictive behaviors, such as pathological gambling (Blaszcznski et al. 1990), drug use (Paulson et al. 1990; Todman, 2007) and overeating (Wilson, 1986).

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However, most of these studies assessed the participants' propensity or susceptibility to become bored, rather than their actual incidence or prevalence of boredom. Consequently, the question of whether the actual experience of frequent or intense episodes of boredom -- independent of an individual's susceptibility to become bored -- are predictive of higher rates of alcohol and substance use has been rarely addressed. In one of the few studies to tackle this question, Todman (2007) found that levels of current drug use in a non-clinical sample of undergraduates was better predicted by participants' recollections about how often they had been bored during the preceding two weeks and the extent to which the boredom had adversely affected the quality of their lives than measures of boredom susceptibility. These findings suggest that the manner in which individuals think about and remember their recent experiences of boredom may have a predictive value with regard to subsequent substance use that is separable from the individual's predisposition to become bored. The findings also contrast with the aforementioned failure to find a relationship between daily variations in depressed mood and actual future consumption of alcohol in the near term (Swendsen, et al. 2000).

While this difference may be largely attributable to methodological differences (i.e., experience sampling vs. retrospective judgments) it is also possible that it reflects the fact that in the life of the average individual, boredom is a far more ubiquitous experience than depressed mood. Consequently, it is also possible that fluctuations in subjective boredom may be a more integral part of the short term motivational changes associated with alcohol consumption than depressed mood, particularly in cultures in which alcohol use (socially or otherwise) is endorsed as a way of managing or avoiding unpleasant affect. This line of reasoning would lead to the prediction that individuals who report recently experiencing high levels of boredom are also more likely to report higher levels of current and recent alcohol consumption, regardless of their level of susceptibility to boredom. The current study is therefore an attempt to confirm and extend the findings from the Todman (2007) study by employing a non-clinical sample from an eastern European country, Belarus, notable for its high rates of alcohol misuse. The study also extends the original study by attempting to control for depressive symptoms, and, to our knowledge is the first study to explore the relationship of boredom and boredom susceptibility in an Eastern European population.

2. Boredom

2.1. The Phenomenon of Boredom: There is no universally agreed upon definition of boredom. Indeed, like most affective states, it is possible to define boredom in terms of its phenomenology, its objective/observable features, its physiological underpinnings, and even its functional characteristics (Csikszentmihalyi, 1975; Leary et al., 1986; Mikulas and Vodanovich, 1993; Todman, 2003, 2013; Vodanovich, 2003). However, in the present study, boredom was simply characterized as an unpleasant subjective experience that results from an interaction between individual differences in the predisposition to perceive environments as monotonous and variations in the intrinsic capacity of environments to evoke feelings of sameness. In addition to being general enough to be compatible with most of the definitions that are commonly found in the literature, it also captures a distinction that is often obscured in studies of boredom, which is the distinction between the concept of susceptibility to boredom (trait boredom or boredom proneness) and the actual experience of boredom (state boredom). While having a high susceptibility to boredom might place an individual at higher risk of experiencing boredom, how much boredom that individual actually experiences in their daily life depends in large part on the kinds of environments that they typically encounter (e.g., a high volume emergency room vs. sorting mail in the mailroom) and/or and the strategies that they have developed to avoid or mitigate boredom (e.g., racing high performance cars, sky diving, daydreaming, ultra marathons). In other words, individuals are often aware of both their propensity to become bored and the environments and tasks that are likely to make them feel bored. And they can also alter their behavior and the environments that they interact with in order to minimize the risk of actually experiencing boredom.

Conversely, there are some individuals with a low susceptibility to boredom who are compelled to inhabit under-stimulating, attention-demanding, monotonous environments for extended periods of time (e.g., an assembly line worker, military sentries in remote and isolated outposts, prison inmates) and as a result are frequently bored (Todman, 2003; 2013).

2.2. Depression and Boredom: Depression and boredom are generally considered to be negative affective states that are intimately related but nonetheless conceptually and functionally separable and distinct. For example, in one of the first attempts to empirically evaluate the relationship between boredom and depression, Vodanovich and his colleagues found that scores on the Boredom Proneness Scale (BPS; Farmer and Sundberg, 1986) and on the depression dimension of the Multiple Affect Adjective Checklist (MAACL) (Zukerman et al. 1983) were positively correlated, but that the association was relatively modest (r=.33), suggesting a conceptual overlap but not equivalence (Vodanovich and Verner, 1991). Similarly, in the context of a recent attempt to validate a new measure of state boredom, the Multidimensional State Boredom Scale, Fahlman, et al (2013) also found a positive association between scores on the MSBS and depressive affect. However, they were able to demonstrate in the same study that participants who had been experimentally induced into a bored state could be identified on the basis of MSBS scores, whereas measures of boredom proneness and depression failed to provide such discrimination, thus suggesting a degree of divergence between the constructs of state boredom and depressed mood.

2.3 Other Correlates of Boredom: In addition to substance and alcohol misuse, the propensity to become bored (trait boredom or boredom proneness) has been positively associated with a wide range of psychosocial and emotional problems. They include feelings of hopelessness (Farmer and Sundberg, 1986), loneliness (Farmer and Sundberg, 1986), hostility and anger (Rupp and Vodanovich, 1997), and anxiety (Gordon et al. 1997; Vodanovich and Verner, 1991). Boredom proneness has also been positively associated with somatic complaints, psychotic disturbances, social and interpersonal dysfunction, apathy, distractibility, neurotransmitter abnormalities, lack of purpose, physical symptoms, and depression (Farmer and Sundberg, 1986, Gordon et al. 1997; Sommers and Vodanovich, 2000; Vodanovich, 2003).

With respect to gender differences in boredom, research in Western samples has generally found that men are significantly more boredom prone than women (Vodanovich and Kass, 1990). For example, in a cross-cultural study, American and Australian males were found to have significantly higher levels of boredom susceptibility than females (Zukerman et al. 1978). However, no significant gender differences in terms of propensity to become bored were found in studies conducted in Hong Kong and Lebanon (Sundberg et al. 1988). Perhaps not surprisingly, there have been no studies to date on the actual prevalence of boredom within or across demographic groupings. Moreover, we are not aware any studies to date that have documented the existence of gender differences (or their absence) in either the susceptibility to boredom or the prevalence of actual boredom in an eastern European population.

2.4. Belarus, Alcohol Use, Depression and Boredom: The level of alcohol consumption in Belarus, Russia, and other Central and Eastern European countries is one of the highest in the world (Razvodovsky, 2009). On average, 23% of Byelorussian men are described as being heavy episodic drinkers. Moreover, the high rates of binge alcohol drinking in Belarus and neighboring Russia are associated with equally high incidences of depression and suicidal behavior (Pomerleau et al. 2008; Grogan, 2006; Hufford, 2001; McCloud et al. 2004; Radzvodovsky, 2009), with Belarus reporting one of the highest rates of suicides in the 2007 WHO report (World Health Organization, 2011). For every 100,000 individuals, there were 47.8 male deaths and 8.8 female deaths attributable to suicide. By contrast, in 2005, the United States reported 17.7 male suicides and 4.5 female suicides per 100,000. Interestingly, however, alcohol abuse is reportedly still relatively low among Byelorussian women (i.e., approximately 2%; Pomerleau et al. 2008).

To our knowledge, this is first study to address the impact of boredom and boredom proneness on an outcome of any kind in a Byelorussian sample.

3. Method

3.1 Participants

A sample of 55 adults was recruited from a small Byelorussian town, Liozno, using a snowball sampling technique (26 women, 29 men, M_{age} = 44.28, age range: 22-66). Recruitment and assessment took place over two separate visits to Belarus by the lead author, six months apart. Thirty-two of the 55 participants were recruited during the first visit, whereas the remaining 23 participants were recruited during the second visit.

In terms of demographic characteristics, fifteen of the participants (27.3%) reported having earned a high school diploma, 28 (50.9%) reported completing 2-3-years of college education, and 12 (21.8%) reported having completed a 5-year-university degree. With regard to employment status, 33 (60%) of the participants were employed at the time of the study, 16 (29.1%) were retired, 4 (7.27%) were looking for work, and 2 (3.64%) were unemployed but not actively seeking employment. Fifty-five participants, 26 (47.27%) reported being married at the time of study, 11 (20%) were never married, nine (16.36%) divorced, six (10.9%) were in relationship with a man or woman, two (3.64%) were widowed, and one (0.18%) was separated.

3.2. Procedure

Before participating in the study, the participants were provided with a University-approved IRB approved Russian-language Informed Consent form. The participants who consented to participate were asked to complete Russian versions of five (5) questionnaires (described below). Each participant received $1 as an incentive, (approximately equivalent to 0.37% of the average monthly wage in Belarus) for participating in the study. The participants were not informed of the specific purpose of the study prior to completing questionnaires, but they were informed of the more general purpose, which was to understand how emotions have an effect on the quality of their lives. The questionnaires were completed in various locations, but occurred most often in the homes of the participants. All of the locations afforded an acceptable level of privacy. The first author was present while the questionnaires were completed by the participants and provided clarification whenever it was requested. Participants were fully debriefed after completing the questionnaires.

3.3. Measures

The following measures were employed in the study:

3.3.1 The Boredom Proneness Scale (BPS): Farmer and Sundberg, 1986) is 28-item measure that was developed to assess the trait of susceptibility to boredom. Several researchers have suggested that boredom proneness is a multidimensional construct, although there are differing estimates as to the number and the nature of the factors involved (e.g., Vodanovich and Kass, 1990). The measure has sound psychometric properties and has been subjected to a number of validation studies (e.g., Farmer and Sundberg, 1986; Gordon et al. 1997; Vodanovich and Kass, 1990).

3.3.2. The State Boredom Measure (SBM): [12]) was developed to measure retrospective (state) boredom. The SBM consists of eight questions about different aspects of the boredom experience, ranging from estimates of frequency, duration, degree of aversiveness, tolerability, impact on life quality and causal attributions. Each question is associated with a 7-point Likert-type scale.

The participant is asked to base his/her responses on their recollections about boredom experiences during the preceding two weeks. Since the SBM was originally conceived as being both a

less costly alternative to experience sampling and a more direct method of estimating the prevalence and quality of an individual's actual boredom experiences in the recent past, the instrument is most often used in its non-aggregated form in which each of the eight test items are considered separately. However, it also possible to obtain a summary score for the SBM by simply summing the individual scores of each of the eight questions. In this regard, the reported psychometric properties for the measure are satisfactory and consistent with what would be expected of a state measure. Reliability and Validity have been established using a sample of 160 adults, ranging in age from 24 to 65. The scale has been found to have good internal consistency (Alpha = 0.81), item-total correlations that range from .67 to .30, and test-re-test reliability that ranges from .78. to .45, across the eight items. In terms of validity, all of eight items have been found to have significant correlations with the BPS and the Boredom Susceptibility Scale (BSS; Zukerman and Link, 1971) that range from .82 to .37 and .78 to.25, respectively (Todman, 2013).

3.3.3. The Beck Depression Inventory (BDI: Beck et al. 1961) was constructed to measure the severity of depressive symptoms. The 21 items are scored on a 0–3 scale to reflect the absence or degree of the symptom. The range of possible scores is 0–63, with higher scores indicating greater severity of **depression.** The psychometric properties of the BDI are sound and have been well documented (Beck et al., 1988)

3.3.4. The Alcohol Use Disorders Identification Test (AUDIT; Babor et al. 2001), consists of 10 questions about recent alcohol use, alcohol dependence symptoms, and alcohol-related problems. The measure was developed on the basis of an extensive six-nation validation trial. Based on the comparative field study conducted in six countries, such as Norway, Australia, Kenya, Bulgaria, Mexico, and the United States of America, the AUDIT has high validity and reliability. The AUDIT has been found to provide an accurate measure of risk across gender, age, and cultures (Babor et al. 2001).

3.3.5. Demographic Questionnaire: This questionnaire was created by the authors and contains questions about participants' drinking habits, age, psychiatric history, alcohol-related medical conditions, general medical conditions, gender, number of children and friends, income, marital status, occupation, and ethnicity.

3. 4. Creation of Russian-Language Versions of Measures

The consent form and all of the above described study measures, including the Demographic Questionnaire, were first translated into Russian but the first author, a native Russian speaker. The Russian version was then back-translated into English by another native Russian speaker from the same laboratory. The back-translated versions were then compared with the original English versions by two independent English speakers who were asked note any discrepancies between two. The first author and the second native Russian speaker then collaborated to address the identified discrepancies and to craft the final Russian language versions of the consent form and the study measures.

4. Results

Since the non-aggregated form of the SBM has the potential to provide more detailed information about the aspects of the participants' recent experiences with boredom that were most salient to them (e.g., frequency of episodes, duration of episodes, degree of unpleasantness) each of the eight items on the measure were considered separately in most of the analyses. As shown in table 1, and consistent with findings obtained with samples in the United States, the measures of depression (BDI), boredom proneness (BPS) and participants' recollections of boredom over the preceding two weeks (SBM) were found to be positively correlated with each other.

Also consistent with previous findings, depression scores were positively associated with alcohol use, $r(53) = .46$. p .000, as were boredom proneness scores, $r(53) = .52$, $p < .000$ and six of the eight SBM items.

Table 1: Pearson Correlations between State Boredom (SBM1-8), Boredom Proneness (BPS), Depression (BDI), and Alcohol Consumption(AUDIT) (N= 55)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	**BDI**	1													
2	**BPS**	0.58**	1.00												
3	**SB1**	0.37**	0.44**	1.00											
4	**SB2**	0.39**	0.42**	0.68**	1.00										
5	**SB3**	0.43**	0.44**	0.65**	0.69**	1.00									
6	**SB4**	0.33*	0.21	0.53**	0.69**	0.60**	1.00								
7	**SB5**	0.60**	0.50**	0.58**	0.67**	0.72**	0.69**	1.00							
8	**SB6**	0.36**	0.17	0.49**	0.48**	0.30**	0.47**	0.41**	1.00						
9	**SB7**	0.35**	0.37**	0.36**	0.25	0.20	0.29*	0.34*	0.37**	1.00					
10	**SB8**	0.54**	0.44**	0.58**	0.44**	0.44**	0.45**	0.60**	0.45**	0.70**	1.00				
11	**AUDIT**	0.47**	0.52**	0.40**	0.51**	0.46**	0.26	0.48**	0.09	0.15	0.40**	1.00			
12	**AGE**	-0.04	0.00	-0.22	-0.07	-0.10	-0.26	-0.11	-0.07	0.01	-0.10	-0.10	1.00		
13	**EDU**	-0.36**	-0.33**	-0.09	-0.17	-0.11	-0.09	-0.12	-0.04	-0.10	-0.12	-0.27*	0.18	1.00	
14	**INC**	0.02	-0.10	0.15	0.03	-0.02	0.08	-0.04	-0.08	-0.16	-0.19	-0.02	-0.387**	0.08	1.00
15	**EMP**	0.02	-0.03	0.09	-0.08	-0.02	0.08	0.13	-0.07	-0.17	-0.04	0.14	-0.54**	-0.06	0.28

*p < .0*p < .05. **p < .001

Note: BPS = Boredom Proneness Scale; BDI = Beck Depression Inventory; AUDIT = Alcohol Use Disorders Identification Test; SBM = State Boredom Measure [SBM1= SBM1 = Frequency of state boredom (over previous 14 days); SBM2 = Frequency of sustained (>3hrs) state boredom (over previous 14 days); SMB3= Capacity of tolerate boredom over an extended period of time (over previous 14 days); SBM4=Unpleasantness of boredom (over previous 14 days); SBM5 = Impact of state boredom on quality of life (over previous 14 days); SBM6 =Boredom worse than in the past (over previous 14 days); SBM7 = Boredom attributed to physical health (over previous 14 days); SBM8 =Boredom attributed to social causes (over previous 14 days)]; AGE = Years of age; EDU = level of education [1=9grade or less to 5=graduate degree]; INC= Income [annual household income from all sources]; EMP = Employment [2= Employed outside of home vs. 1 =Unemployed outside of home]

Unlike the inverse relationship that has been frequently reported in some western samples the relationship between the participants' age and boredom proneness was not significant, $r(53) = -.00$, $p = .99$. Similarly, age was not associated with alcohol use, even though older participants were more likely to be unemployed and have lower incomes ($r(54) = -.54$, $p = .00$; $r(44) = -.39$, $p = .01$, respectively). Nor is there any indication that employment status was differentially associated with either boredom proneness, $r(53) = -.03$, $p = .83$, depression, $r(53) = .02$, $p = .87$, or alcohol use, $r(53) = .14$, $p = .32$. Interestingly, however, education level was found to be negatively correlated with boredom proneness, $r(55) = -.33$, $p = .01$, depression, $r(55) = -.36$, $p = .01$, and alcohol use, $r(55) = -.27$, $p = .05$.

To establish the extent to which each of the variables enjoyed a unique association with alcohol use, a series of partial correlation analyses were conducted. The analyses revealed that when boredom proneness was held constant, the correlation between depression and alcohol failed to reach significance, r (52) = .23, p = .09. Conversely, when depression was held constant, the relationship between boredom proneness and alcohol use remained statistically significant, r (45) = .29, p = .05, but not when the eight scores on the SBM were also controlled for, r (44) = .21, p = .16. Additionally, when boredom proneness and depression scores were held constant, the only SBM item to attain statistical significance was the participants' recollections of having frequent boredom episodes of more than three hours in duration during the preceding two weeks (Item 2; r (51) = .35, p = .01).

In fact, this remained true even when employment status (employed vs. unemployed), income level, education level, and age were also statistically controlled, r (38) =. 33, p = . 04.

As shown in table 2, and confirming findings from other studies of alcohol use patterns in eastern European countries, a significant difference was found in self-reported alcohol consumption among the males and female participants, $F(1, 53) = 17.12$, $p < .001$, with men reporting considerably more alcohol consumption than women, (males [$M = 17.48$] vs. females [$M = 6.81$]). However, there were no significant gender differences in terms of the propensity to become bored (boredom proneness), $F(1, 53) = 2.32$, $p = .134$, nor were there significant gender differences on any of the items of the SBM (i.e., retrospective state boredom) and, somewhat surprisingly, no significant gender differences in levels of reported depression, $F(1, 53) = .38$, $p = .539$.

Table 2: A Comparison by Gender of Scores on Measures of Depression (BDI), State Boredom (SBM11-8), Employment, Alcohol Use (AUDIT)

	Males N=		Females N=			Total N= 55	
	M	SD	M	SD		M	SD
BDI	15.97	10.10	14.38	8.81	*NS*	15.22	105.35
BPS	108.41	14.20	101.92	17.40	*NS*	9.41	15.97
SB1	3.72	1.81	3.31	1.83	*NS*	3.53	1.81
SB2	3.14	1.98	2.42	2.00	*NS*	2.80	2.00
SB3	2.53	2.01	1.92	1.52	*NS*	2.24	1.80
SB4	3.03	1.68	2.96	2.27	*NS*	3.00	1.96
SB5	2.52	1.86	2.15	2.07	*NS*	2.35	1.96
SB6	3.9	2.37	4.19	2.40	*NS*	4.04	2.36
SB7	3.03	2.23	2.92	2.42	*NS*	2.98	2.30
SB8	3.69	2.24	3.54	2.44	*NS*	3.62	2.31
AUDIT	17.48	9.50	6.81	9.61	*	12.44	10.88
EMP	1.72	0.45	1.46	0.51	**	1.60	0.49

NS = Difference between groups not significant; (M v F) *$p < .05$. **$p < .001$.

Note: BPS = Boredom Proneness Scale; BDI = Beck Depression Inventory; AUDIT = Alcohol Use Disorders Identification Test; SBM = State Boredom Measure [SBM1= SBM1 = Frequency of state boredom (over previous 14 days); SBM2 = Frequency of sustained (>3hrs) state boredom (over previous 14 days); SMB3= Capacity of tolerate boredom over an extended period of time (over previous 14 days); SBM4=Unpleasantness of boredom (over previous 14 days); SBM5 = Impact of state boredom on quality of life (over previous 14 days); SBM6 =Boredom worse than in the past (over previous 14 days); SBM7 = Boredom attributed to physical health (over previous 14 days); SBM8 =Boredom attributed to social causes (over previous 14 days)]; EMP = Employment [2= Employed outside of home vs. 1 =Unemployed outside of home]

Finally, the results from a stepwise multiple regression using scores from the BDI, SBM, BPS and education level as the predictor variables, depressive mood (BDI) was found to be the single best predictor of alcohol use among the women in the sample, $b = .57$, $t(25) = 3.48$, $p < .002$, accounting for 31% of the variance. Among males, using the same variables in a separate stepwise analysis, recollections of having frequent boredom episodes of more than three hours in duration during the preceding two weeks (SBM; Item 2) was the single best predictor of alcohol use, $b = .60$, $t(28) = 3.93$, $p < .001$, accounting for 34% of the overall variance.

A third stepwise multiple regression study of the entire sample (i.e., males and female participants combined) found that the combination of being male, highly boredom prone and self reports of a high frequency of sustained boredom episodes (> 3hrs) during the preceding two weeks (SBM; Item 2) accounted for 48% of the variance in AUDIT scores, $F(3, 53) = 17.38$, $p = .000$, $R^2 = .48$.

5. Discussion

Overall, the findings from the current study are consistent with many of the findings from other studies that have been conducted in the United States and western European populations (Paulson et al. 1990; Todman, 2007). In particular, the current study supports the long held claim that negative affect, broadly defined, is a strong correlate of substance misuse (Grant et al. 2004). To the extent that the susceptibility to be bored is positively correlated with the prevalence and salience of boredom in an individual's daily life, it seems reasonable that boredom proneness -- a vulnerability to a particular type of negative affective state -- should enjoy a significant and positive association with alcohol use in the current sample. Similarly, the well-established relationship between depressive mood and alcohol use is replicated in the present study (Grant et al. 2004).

As expected, the current study confirmed that Byelorussian males consume considerably more alcohol than females. Moreover, the difference is quite substantial. However, unlike what is typically found in Western samples, there were no significant gender differences in the rates of boredom proneness, self-reported depression, and retrospective state boredom. Although it is possible that these findings are a function of the relatively small sample size, it is nonetheless intriguing that no differences in depression could be found in the present study, given the large gender difference in suicide rates in Belarus.

Strong positive associations were found between alcohol use and not only the propensity to be bored (BPS) and self reported depression (BDI), but also recollections about the quantity and type of boredom episodes that have been experienced in the recent past (i.e., preceding two weeks; SBM). The latter association has been less well studied than trait boredom or boredom proneness, but it was included in the present study because it has been shown to have predictive value over above that provided by individual differences in boredom proneness (Todman, 2007; 3013)

There are several findings from the present study that appear to underscore the wisdom of assessing levels of recent state boredom in addition to participants' susceptibility to boredom. Although levels of depression, boredom proneness and participant's recollections of boredom over the preceding two weeks (SBM) were found to be highly inter-correlated, the association between alcohol use and recollections of having frequent boredom episodes of more than three hours during the preceding two weeks (SBM; Item 2) remained significant even after controlling for depression and boredom proneness. Albeit based a relatively small sample, this finding seems to suggest that subjective reports on the prevalence and nature of recent boredom episodes matter. And they seem to matter in the sense that the more episodes of sustained boredom an individual remembers experiencing in the recent past, the more alcohol that individual is likely to report consuming – even if the individual is not particularly boredom prone or depressed.

This distinction between boredom proneness and actual state boredom is also relevant to what is perhaps the most interesting finding from the current study, which is that different variables tend to predict increased rates of alcohol use in males and females. Although there is no evidence from the present study that suggests that the men and women differ significantly in terms of reported depression, it would appear that when women do report higher levels of depressed mood, they are also more likely to report that they consume more alcohol. By contrast, higher consumption of alcohol by men seems to be best predicted by reports of recently experienced bouts of sustained boredom.

It is of course possible that heavy alcohol is the cause, rather the result of, depressed mood and feelings of excessive boredom. It is also highly likely that like many other societies, Belarus has more restrictive expectations regarding alcohol consumption by women than for men, particularly in places of public consumption, such as in a tavern (Heath, 1991; MacDonald, 1994). However, this only explains the differential rates of alcohol consumption between men and women. It does not account for the finding that when men report more boredom they also tend to drink more, whereas women report drinking more only if they become more depressed. One possible explanation is the fact that boredom is a far more ubiquitous negative affect (and thus, self-medication target) than depressed mood, especially for those who are afforded the most freedom to consume alcohol (i.e.,., Byelorussian men). Consequently, highly bored Byelorussian men may be more likely to consume more alcohol than less bored Byelorussian males simply because the consumption of alcohol is assumed to an effective and gender-appropriate strategy for regulating all forms of negative affect, including feelings of boredom. In the case of women, however, it may be that only when depressive mood, a far less common and more severe feeling state, becomes salient that they are likely to break with tradition and seek to self-medicate with alcohol.

The results presented here must be considered in light of several limitations. First, the sample size was extremely small and was drawn from a relatively limited region of the country using a sample that is not particularly representative of the country as a whole. Second, the first wave of data collection occurred 1-2 weeks after New Year Eve, which is the most important celebration in the Byelorussian culture, and a time when alcohol consumption is particularly high. However, the fact that gender disparity in alcohol use remained unchanged over the two waves of data collection provides some reassurance that this was probably not a significant confound. Another limitation of the present study is the exclusive reliance on self-report measures.

6. Conclusions

The present study examined the relationship between boredom, depression and alcohol use/abuse in a sample of Byelorussian adults. The results obtained from data collected in two waves over a six-month period were consistent with many of the findings from earlier studies conducted in the United States and other parts of Europe. Interestingly, however, in the current study, the association between alcohol use and recollections of having frequent boredom episodes of more than three hours during the preceding two weeks (SBM; Item 2) remained significant even after controlling for depression and boredom proneness. Consistent with previously reported findings from studies conducted in Belarus and other eastern European countries, the males in the current sample reported consuming considerably more alcohol than the female participants. However, the findings from the current study also suggest that the rates of alcohol consumption are predicted differently in men and women. Among males, the best predictor of current alcohol use was the recollection of having had a high frequency of sustained boredom episodes (>3hrs) during the preceding two weeks, whereas self-reported depression was the best predictor among females. Overall, the results underscore the prominent but still under-appreciated role that state and trait boredom play in the dynamics of alcohol use. It is speculated that this may be particularly true for males who are likely view alcohol consumption as having a culturally prescribed role as a management strategy for boredom.

References

Babor, T. F., Higgings-Biddle, J. C., Saunders, J. B., & Monteiro, M. G. (2001). *AUDIT The Alcohol Use Disorders Identification Test: Guidelines for Use in Primary Care,* 2nd ed., Geneva: World Health Organization.

Beck**,** A. T., Steer, R. A., & Garbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory**.** *Clinical Psychology Review, 8*, 77– 100.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J. E., & Erbaugh, J. K. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4,* 561-571.

Blaszczynski, A., McConaghy, N., & Frankova, A. (1990). Boredom proneness in pathological gambling. *Psychological Reports,* 67, 35-42.

Bromett et al., (2011). Cross-national epidemiology of DSMIV Major Depressive Disorder. BMC Medicine, 9:90 http://www.biomedcentral.com/1741-7015/9/90

Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. San Francisco, CA: Jossey-Bass.

Deykin, E.Y., Levy, J.C., & Wells, V. (1987). Adolescent depression, alcohol and drug abuse. *American Journal of Public Health*, 77, 178-182.

Dixit, A.R., & Crum, R.M. (2000) Prospective Study of Depression and the Risk of Heavy Alcohol Use in Women. *American Journal of Psychiatry,* 157, 751-758.

Drory, A. (1982). Individual differences in boredom proneness and task effectiveness at work. *Personnel Psychology, 35,* 141-151.

Fahlman, S.A., Mercer-Lynn, K.B., Flora, D.B., & Eastwood, J.D., (2013). Development and validation of the multi-dimensional boredom scale. *Assessment,* 20(1), 61-85.

Farmer, R., & Sundberg, N. D. (1986). Boredom proneness: The development and correlates of a new scale. *Journal of Personality Assessment, 50(1),* 4-17.

Gordon, A., Wilkinson, R., McGown, A., & Jovanoska, S. (1997). The psychometric properties of the boredom proneness scale: An examination of its validity. *Psychological Studies, 42,* 85-97.

Grant, B. F., Stinson, F., Dawson, D.A., Chou, P., Dufour, M.C., Compton, W., Pickering, R.P., & Kaplan, K. (2004). Prevalence and co-occurrence of substance use disorders and independent mood and anxiety disorders: results from the national epidemiological survey on alcohol and related conditions. *Archives of General Psychiatry*, 61, 807–816.

Grogan, L. (2006). Alcohol, tobacco, and drug use in the countries of Central and Eastern Europe and former Soviet Union. *Substance Use & Misuse, 41(4),* 567-571.

Heath, D.B. (1991). Women and alcohol: Cross-cultural perspectives. *Journal Of Substance Abuse*, 3: 175-185.

Hill, A. B. (1975). Extraversion and variety seeking in a monotonous task. *British Journal of Psychology, 66,* 9-16.

Hufford, M. R. (2001). Alcohol and suicidal behavior. *Clin. Psychol. Rev., 21(5),* 797-811.

Irey, P. A. (1974). *Personality dimensions of crisis interveners vs. academic psychologists, traditional clinicians and paraprofessionals.* Unpublished doctoral dissertation, Southern Illinois University, Carbondale.

Kuo, P.H., Gardner, C.O., Kendler, K.S.,& Prescott, C.A., (2006). The temporal relationship of the onsets of alcohol dependence and major depression: using a genetically informative study design. *Psychological Medicine*, 36 (8), 1153–1162.

Lapham, S. C., Smith, E., Baca, J. C., Chang, L., Skipper, B. J., Baum, G., & Hunt, W. C. (2001). Prevalence of psychiatric disorders among persons convicted of driving while impaired. *Arch. Gen. Psychiat., 58,* 943-949.

Leary, M. R., Rogers, P. A., Canfield, R. W., & Coe, C. (1986). Boredom in interpersonal encounters: Antecedents and social implications. *Journal of Personality and Social Psychology, 51,* 968-975.

Macdonald, S. (1994). Whisky, women and the Scottish drinking problem. A view from the Highlands. In M.McDonald (ed.), *Gender, Drink and Drugs*. Oxford: Berg.

McCloud, A., Barnaby, B., Omu, N., Drummond, C., & Aboud, A. (2004). Relationship between alcohol use disorders and suicidality in a psychiatric population: In patient prevalence study. *Brit. J. Psychiat., 184,* 439-445.

Mikulas, W. L., & Vodanovich, S. J. (1993). The essence of boredom. *Psychological Record, 43,* 3-12.

Paulson, M. J., Coombs, R. H., & Richardson, M. A. (1990). School performance, academic aspirations, and drug use among children and adolescents. *Journal of Drug Education, 20(4),* 289-303.

Piccinelli, M., & Wilkinson, G. (2000) Gender differences in Depression. *British Journal of Psychiatry*, 177, 486-492

Pomerleau, J., Mckee, M., Rose, R., Haerpfer, C. W., Rotman, D., & Tumanov, S. (2008). Hazardous alcohol drinking in the former Soviet Union: A cross-sectional study of eight countries. *Alcohol and Alcoholism, 43(3),* 351-359.

Quitkin, F.M., Rifkin, A., Kaplan, J., & Klein, D.F., (1972). Phobic anxiety syndrome complicated by drug dependence and addiction. A treatable form of drug abuse. Arch. *Gen. Psychiatry* 27 (2), 159–162

Raimo, E.B., Schuckit, M.A. (1998) Alcohol dependence and mood disorders. *Addictive Behaviors*, 23(6), 933–946

Razvodovsky, Y. E. (2009). Alcohol and suicide in Belarus. *Psychiatria Danubina, 21(3),* 290-296.

Rupp, D. E., & Vodanovich, S. J. (1997). The role of boredom proneness in self-reported anger and aggression. *Journal of Social Behavior and Personality, 12(4),* 925–936.

Sommers, J., & Vodanovich, S. J. (2000). Boredom proneness: Its relationship to psychological and physical health symptoms. *Journal of Clinical Psychology, 56(1),* 149-155.

Sundberg, N. D., Latkin, C. A., Farmer, R., & Saoud, J. (1988). Boredom in young adults: Gender and cultural comparisons. *Journal of Cross-Cultural Psychology, 55,* 5-19.

Swendsen, J.D.,Tennen, H., Carney, M. A., Affleck, G., Willard, A., Hromi, A., (2000) Mood and alcohol consumption: An experience sampling test of the self-medication hypothesis. *Journal of Abnormal Psychology,* Vol 109(2), 198-204

Todman, M. (2003). Boredom and psychotic disorders: cognitive and motivational issues. *Psychiatry, 66(2),* 146-167.

Todman, M. (2007) Psychopathology and Boredom: A Neglected Association. In K.A. Fanti_(Ed.) *Psychological Science: Research, Theory and Future Directions* Athens: Atiner Press.

Todman, M. (2013). The dimensions of state boredom: Frequency, duration, unpleasantness, consequences, and causal attributions. *Educational Research International*, 1(1), 32-40.

Vodanovich, S. J. (2003). Psychometric measures of boredom: A review of the literature. *The Journal of Psychology, 137(6),* 569-595.

Vodanovich, S. J., & Kass, S. J. (1990). A factor analytic study of the Boredom Proneness Scale. *Journal of Personality Assessment, 55*, 115-123.

Vodanovich, S. J., & Verner, K. M. (1991). Boredom proneness: Its relationship to positive and negative affect. *Psychological Reports, 69,* 1139–1146.

Wasserman, D., Varnik, A & Eklund, G. (2007). Male suicides and alcohol consumption in the former USSR. *Acta Psychiatrica Scandinavica*, 89(5), 306-313.

Wilson, G. D. (1986). Eating style, obesity, and health. *Personality and Individual Differences,* 7(2), 215–224.

World Health Organization (2011). Mental health: Suicide rates per 100,000 by country, year and sex. *http://www.who.int/mental_health/prevention/suicide_rates/en/index.html*

Zukerman, M., & Link., K. (1971). Dimensions of Sensation Seeking. *Journal of Consulting and Clinical Psychology*, 36(1), 45-52

Zukerman, M., Eysenck, S., & Eysenck, H. J. (1978). Sensation seeking in England and America: Cross-cultural, age and sex comparisons. *Journal of Consulting and Clinical Psychology, 46,* 139-149.

Zukerman, M., Lubin, B., Rinck, C.M., (1983). Construction of new scales for the Multiple Affective Adjective Check List. *Journal of Behavioral Assessment,* 5, 119-125.