

Mental Health Problems of Freshman College Binge Drinkers and Cigarette Smokers

Helena B. Florendo¹, Rosalito de Guzman²

¹ Department of Social Sciences, Isabela State University, Echague,

^{1,2} Graduate School, University of Santo Tomas, Espana, Manila,
PHILIPPINES.

¹ helena.florendo28@gmail.com, ² rosalitodeguzman@yahoo.com

ABSTRACT

This study aims to determine the mental health problems of freshman college binge drinkers and cigarette smokers in state universities and colleges in Region II, Philippines. Purposive sampling was used in the selection of ninety six participants. Descriptive-correlational method of research and inferential statistics were utilized in the analysis of data. Findings revealed that the mental health problems when grouped according to profile variables disclosed that male obtained higher score in depression while female got higher score in anxiety and self-esteem. Irrespective of age, family structure, and substance used the participants scored high in anxiety. Results disclosed that gender has positive significant relationship with depression and self-esteem while cigarette consumption has negative significant relationship to anxiety. The data also suggest that depression and self-esteem was associated with gender. Results of this study is useful to address mental health problems of freshman college binge drinkers and cigarette smokers, hence, an intervention program has to be prepared by experts.

Keywords: Mental health problems, anxiety, depression, low self-esteem

INTRODUCTION

Alcohol use and abuse by college students has become a major problem in campuses across the country and binge drinking is widespread among college students based on research about drinking problems (Sun & Longazel, 2008). In a study conducted it was disclosed that tertiary institutions among university students, the rates of drinking continue to be a concern due to the upsetting figure of 30-50% of those who drink in heavy episodic consumption (O'Connor, 2009).

In the United States, current estimates suggest that more than 20.6% of the population smoke cigarettes (Centers for Disease Control and Prevention as cited by Braun, et al., 2012). However, among university students 30% smoke (David, 2004). Philippine data disclosed about a third of the Filipino smoke, with nearly half of Filipino males hooked on the habit and about 23 percent of 13 to 15-year-olds smoke (Alave, 2012). These young people then become substitute of smokers who gave up smoking and those who departed from this life (WHO report, 2008).

Despite policies existing in the school like the anti-smoking policy and no-drinking policy there is apparent involvement of alcohol and cigarette use among college students. Young people seem to ignore the health risks on the use of these substances. Health warning messages are usually disregarded and regarded unimportant because the young people are physically powerful and seems invulnerable to poor health.

Freshman college students are susceptible on the use of substances like alcohol and nicotine because they are in their transition period. Their exposure to the new environment,

classmates, peers, including the freedom and less monitoring as a result of their absence in their residences contributed a lot on substance use. Their adjustment to their college life probably contributed to mental health problems that influenced them to ingest alcohol and consume nicotine. They are vulnerable to health hazards behavior due to change and challenges encountered in their new university/college life. Hence, this study was undertaken to verify the plausible role of mental health problems like anxiety, depression, and low self-esteem among freshman college binge drinkers and cigarette smokers.

STATEMENT OF THE PROBLEM

This study was conducted to determine the mental health problems of the college freshman binge drinkers and cigarette smokers in state colleges and universities in Region II, Philippines. It aims to answer the following:

1. What are the mental health problems of the participants as measured by Beck Anxiety Inventory, Beck Depression Inventory II, and the Rosenberg Self-esteem Scale when grouped according to gender, age, and family structure?
2. What are the mental health problems of the participants when grouped according to substance used?
3. Is there a significant relationship between the mental health problems of the participants when grouped according to their socio-demographic profile?

METHOD

Participants

A total of ninety six freshman college students throughout the main campuses of state colleges and universities in Region II were the participants in this research. They were enrolled during the school year 2011-2012 and were able to meet the criteria set by the researchers. To qualify as participants, they should have consumed any or combination of the alcoholic beverages per drinking session at least two times for one month to the point of intoxication. Intoxication usually leads to functional impairment of judgment and perception and motor coordination. Similarly, participants should have consumed 3 to 6 sticks of cigarette per day one month before the survey.

Instruments

Beck Anxiety Inventory (BAI)

It is an instrument to measure anxiety level and the author is Aaron Beck. It has 21 items that cover symptoms of anxiety. To get the score, a 4-point scale could be used ranging from 0 to 3. All items are added to obtain the overall score that range from 0-63. There is an adequate internal consistency and validity for both clinical and non-clinical participants (Beck & Steer, 1991). The scale obtained high internal consistency and item-total correlations ranging from .30 to .71 (median = .60) and studies have demonstrated its convergent and discriminant validity (Evans et al, 2008).

Beck Depression Inventory-II (BDI-II)

It is prepared by Aaron Beck, Robert A. Steer, and Gregory K. Brown. The instrument has 21-item self-report to determine depression. The items in the instrument is rated on a 4-point Likert-type scale that measure depression ranging from 0 to 3. The highest score is 63 and in this instrument, the higher the score the higher level of depression exist. Psychometric

properties of the Beck Depression Inventory have been well documented (Simons et al, 2010).

Rosenberg Self-Esteem Scale (RSES)

It is a tool for assessing global self-esteem. The 10 items of the RSES evaluate the overall worthiness of an individual (Rosenberg, 1979). The RSES is a Likert-type scale with responses ranging from 1 (strongly agree) to 4 (strongly disagree); total score range of 10 to 40. The RSES was divided into both positively and negatively worded items that measures positive and negative self-esteem. A score of 20 or higher denotes high self-esteem while low score signifies low self-esteem. RSES has high reliability: test-retest correlations in the range of .82 to .88 and Cronbach's alpha for various samples are in the range of .77 to .88. Studies have demonstrated both a unidimensional and a two-factor (self-confidence and self-deprecation) structure to the scale (Rosenberg, 1989).

Procedure

The researcher coordinated with the CHED Regional Office regarding the conduct of the research. When permitted, communication was forwarded to the University President of the research locale. Upon approval, the researcher consulted the professors of the freshman college students re: floating of the pre-survey questionnaire. The researchers determined the participants based on their responses on the pre-survey questionnaire. Explanatory statement was provided and informed consent was explained to those participants. Schedule for tests taking and interview was set to fifteen participants per session to have a manageable group. After tests taking, the inventories and scale were checked, scored and interpreted by the researcher.

Data Analysis

The data obtained by the researchers were analyzed through SPSS program. Descriptive statistics were used like frequency, percentage, mean and standard deviation. Similarly, Kendall's tau b and Chi-square examined the significant relationship between mental health problems and the socio-demographic profile variables.

RESULTS

In this section Tables 1, 2 presents the descriptive statistics and table 3 illustrated the significant relationship between mental health problems and profile variables of the participants.

Table 1. Descriptive Statistics on Mental Health of the Participants when Grouped according to Gender, Age, (Part-I)

		<i>Anxiety</i>		<i>Depression</i>		<i>Low Self-Esteem</i>	
		<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Gender	Male	2.77	0.38	2.23	1.24	1.69	0.48
	Female	2.85	0.50	1.63	0.71	2.01	0.46
Age	15-17	2.74	0.55	1.74	0.79	1.95	0.40
	18-21	2.85	0.36	1.72	0.86	2.00	0.56
	22-25	2.67	0.65	1.58	0.79	1.92	0.29

Table 1. Descriptive Statistics on Mental Health of the Participants when Grouped according to Family Structure (Part-II)

		<i>Anxiety</i>		<i>Depression</i>		<i>Low Self-Esteem</i>	
		<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Family Structure	Complete	2.77	0.53	1.73	0.81	1.95	0.49
	Single Mother	3.00	0.00	1.73	0.90	1.91	0.54
	Single Father	2.40	0.55	1.40	0.55	2.20	0.45
	Grand Parents	2.77	0.44	1.85	0.99	1.92	0.28
	Foster parents	2.80	0.45	1.40	0.55	2.20	0.45

Table 2. Descriptive Statistics when Grouped according to Substance Used

<i>Mental Health Problems</i>		<i>Anxiety</i>		<i>Depression</i>		<i>Low Self-Esteem</i>	
		<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Cigarette Consumption	3 sticks	2.73	0.46	1.53	0.64	1.87	0.35
	4 sticks	2.64	0.58	1.67	0.79	2.00	0.38
	5 sticks	2.67	0.82	1.83	0.75	2.00	0.63
	6 sticks	3.00	0.00	1.82	0.95	1.97	0.59
Alcohol Consumption	Once a Week	2.55	0.63	1.86	0.79	1.93	0.46
	Twice a Month	2.83	0.44	1.83	0.82	2.00	0.42
	Three times a month	3.00	0.00	1.56	1.01	1.89	0.60
	Four times a month	3.00	0.00	1.00	0.00	1.75	0.96
	Five times a month or more	3.00	0.00	1.00	0.00	2.13	0.35

Table 3. Significant Relationship between Mental Health Problems and Profile Variables of the Participants

<i>Mental Health Problems</i>	<i>Age</i>		<i>Gender</i>		<i>Cigarette Consumption</i>		<i>Alcohol Consumption</i>		<i>Family Structure</i>	
	<i>Kendall's Tau b</i>	<i>P-value</i>	<i>Chi-Square</i>	<i>P-value</i>	<i>Kendall's Tau b</i>	<i>P-value</i>	<i>Kendall's Tau b</i>	<i>P-value</i>	<i>Chi-Square</i>	<i>P-value</i>
Anxiety	-0.03 ^{ns}	0.74	0.07 ^{ns}	0.79	-0.28*	0.00	-0.33*	0.00	0.10 ^{ns}	0.75
Depression	0.08 ^{ns}	0.35	4.48*	0.03	-0.08 ^{ns}	0.36	0.28*	0.00	0.09 ^{ns}	0.76
Low Self-Esteem	-0.04 ^{ns}	0.68	5.22*	0.02	-0.04 ^{ns}	0.69	-0.03 ^{ns}	0.74	0.92 ^{ns}	0.34

Legend: *Significant; ^{ns} Not significant; Significant at .05 level

DISCUSSION

The result shown in Table 1 reveals gender difference in terms of anxiety and depression. Higher anxiety in female was predicted by limited access to effective emotion regulation strategies, and lack of emotional clarity (Bender et al, 2012). Environmental, biological and experiential factors are also possible explanations for the higher prevalence of anxiety among girls (Zahn-Waxler et al., as cited by Bender et al., 2012). The relationship between anxiety sensitivity and negatively reinforced drinking is stronger among males than among females (Lawyer, 2002).

Among male participants, higher mean score is obtained in depression. This finding agrees with Pedersen, (2013) and concurred by Nguyen et al (2012), that depression is directly and positively associated with binge drinking among male. Men hazardous/harmful consumption of alcohol was linked with higher levels of anxiety and depression (Caldwell, 2002). Young female who binge drank and smoked were more likely to report depressive symptoms (Caldwell, 2002). For women, hazardous/harmful drinkers were found to have higher levels of depression and negative affect (Pirkle et al, 2006). Inconsistent findings imply that gender difference in mental health problems anxiety and depression remains inconclusive.

Numerous studies revealed that smokers are high in anxiety sensitivity. This increases the development of anxiety symptoms, panic attacks, and anxiety and other mood disorders (Zvolensky et al, 2014). On the other hand, patterns of alcohol consumption indicate that anxiety sensitivity may take key role in certain aspects of alcohol use and alcohol use problems (Howell, Leyro, Hogan, Buckner, & Zvolensky, 2010). Researches findings indicate that weekly drinking rates, extreme episode of alcohol drinking, and alcohol use disorders were evident among those with higher anxiety sensitivity levels (as cited by Howell et al, 2010). According to Nguyen et al. (2012), cigarette smoking and alcohol drinking is high among adolescents and young adults. The finding of this research is in agreement with the previous researches conducted. Hence, the study suggests that those adolescents and young adults who participated in this study experienced high anxiety level.

Result of the study revealed that anxiety is the common mental health problem encountered by the participants raised in different family structure. According to Bramlett et al (2007), children in step, single-mother, or grandparents-only families had poorer health than children living with two biological parents. They also stated that children in single-father families generally better have better mental health or better physical health than children living with two biological parents. Relevant literature cited is limited due to scarcity of studies conducted along this area. Thus, the finding has to be verified.

Prior research has documented that there was an association of anxiety and smoking (Mykletun et al, 2008). Moreover, there were abundance of researches that proved higher rates of cigarette smoking, is related to an increased risk of anxiety disorder and problems like panic-relevant symptoms, panic attacks, panic disorder, and agoraphobia (McLeish et al, 2008).

Table 2 explains that pertinent findings also support the result of this research on anxiety and alcohol consumption. Lechner et al (2014), disclosed that fear of anxiety sensations has been linked to increased incidence of alcohol use disorders and increased alcohol consumption including increased motivation to drink. Social anxiety was also correlated significantly positive to alcohol-related problems, coping, conformity, and social motives for alcohol use (Schry et al, 2013). Hence, findings proved that alcohol drinking is related to mental health problem on anxiety.

Table 3 presents the significant relationship between mental health problems and profile variables of the participants. There are evidences that indicate anxiety is associated with cigarette smoking and alcohol drinking (Walitzer et al, 2012; LaBrie et al, 2008; Ham et al, 2007). The findings of this study conform to the above mentioned researches. However, the finding disclosed negative significant relationship of anxiety and cigarette and alcohol consumption. This means that the higher amount of alcohol and cigarette consumed, the lower anxiety could be experienced. The direct outcome of the anxiolytic property of both cigarette smoking and alcohol drinking can be a means to relieve anxiety or symptoms of anxiety.

There are researches that are congruent to the findings of this study that depression is associated with alcohol consumption (Fröjd et al, 2013; Ralston et al, 2010; Geisner et al, 2007). Likewise, recent studies reported that cigarette smoking is correlated with depression (De Wilde et al, 2013; Munhoz et al, 2013). The positive correlation of depression and alcohol consumption among freshman college students binge drinkers and cigarette smokers implies that the remarkably large amount of alcohol is consumed; the higher level of depression exists.

The finding in this study revealed that depression has an association with gender. The result could not clearly state whether male or female participants experienced more depression. However, there were several studies that pointed out those girls or females were more affected with depression than boys or male gender. There was a robust gender difference in the levels of depressive symptoms with girls more affected than boys (Galambos et al, 2004). Girls and boys who have higher initial levels of substance use like smoking and binge drinking report higher levels of depressive symptomatology (Needham, 2007). Girls (boys) who reported drinking weekly, 24% (13%) scored as depressed, compared with 7% (4%) of those not drinking. Girls (boys) who reported having experimented with substances five times or more, 37% (28%) scored as depressed compared with 8% (5%) of those who reported never having experimented with substances (Torikka et al, 2001). Elevated depressive symptoms were 8.6% in females and 2.6% in males (Poulin et al, 2005). Among adolescents showing light and moderate risk behavior patterns, females experienced significantly more depressive symptoms than males (Waller et al, 2006). These findings contradict the result of this study hence, result has to be verified.

Moreover, the data suggest that self-esteem was associated with gender. The finding of this study revealed that self-esteem among male and female participants did not point out any gender distinction. This finding is consistent with the finding of Kavas (2009). However, previous studies between gender differences on self-esteem among alcohol drinkers and cigarette smokers showed conflicting results. The finding of Neumann et al (2009) proved that males with higher self-esteem reported greatest alcohol drinking frequency. Zeigler-Hill et al (2012) disclosed that men with low self-esteem continued to report relatively high levels of alcohol consumption, and more harmful drinking. Another study showed associations between negative self-esteem and risky behavior (smoking), but only among boys (Veselska et al, 2009). Low body-image, self-esteem and global self-worth were also uniquely associated with risk behaviors in girls, but not in boys (Wild et al, 2004). Since there is no certain agreement on gender differences on self-esteem and alcohol drinking and cigarette smoking the findings of this study remain uncertain.

CONCLUSION

The following conclusions were derived based on the findings of the study:

1. Male freshman college binge drinkers and cigarette smokers obtain higher scores in mental health problem depression while female participants got higher scores in mental health problem anxiety.
2. Participants who belong to the different developmental stage and different family structures obtained high score in mental health problem anxiety. Irrespective of the number of cigarette sticks consumed and the frequency of alcohol drinking, all of the participants scored high in anxiety. Thus, freshman binge drinkers and cigarette smokers possessed high anxiety level.
3. Depression and self-esteem among male and female participants did not point out any gender distinction.
4. The higher amount of alcohol and cigarette consumed, the lower anxiety was experienced by the participants.
5. The larger amount of alcohol consumed by the binge drinkers and cigarette smokers the higher level of depression exists.
6. Intervention program for freshman binge drinkers and cigarette smokers has to address the mental health problems of the participants.

REFERENCES

- [1] Alave, K. L. (2012, August 29). Tobacco farmers exposed to smoking risks, doc says. *Philippine Daily Inquirer*, p. A8.
- [2] Beck, A. T., & Steer, R. A. (1991). Relationship between the Beck Anxiety Inventory and the Hamilton Anxiety Rating Scale with anxious outpatients. *Journal of Anxiety Disorders*, 5(3), 213-223.
- [3] Bender, P. K., Reinholdt-Dunne, M. L., Esbjørn, B. H., & Pons, F. (2012). Emotion dysregulation and anxiety in children and adolescents: Gender differences. *Personality and Individual Differences*, 53, 284–288.
- [4] Best, D., Manning, V., Gossop, M., Gross, S., & Strang, J. (2006). Excessive drinking and other problem behaviours among 14–16 year old schoolchildren. *Addictive Behaviors*, 31(8), 1424-1435.
- [5] Bramlett, M. D., & Blumberg S. J. (2007). Family structure and children's physical and mental health. *Health Affairs*, 26(2), 549-558.
- [6] Braun et al. (2012). The separate and combined effects of alcohol and nicotine on anticipatory anxiety: A multidimensional analysis. *Addictive Behaviors*, 37, 485–491
- [7] Caldwell et al. (2002). Patterns of association between alcohol consumption and symptoms of depression and anxiety in young adults. *Addiction*, 97(5), 583-594.
- [8] Chapell et al. (2005). Test Anxiety and Academic Performance in Undergraduate and Graduate Students. *Journal of Educational Psychology*, 97(2), 268.
- [9] David, A. (2004). *Building blocks for tobacco control: A handbook* (1st Ed.). Geneva: World Health Organization.

- [10] De Wilde et al. (2013). Smoking patterns, depression, and sociodemographic variables among Flemish women during pregnancy and the postpartum period. *Nursing Research*, 62(6), 394-404.
- [11] Diego, M. A., Field, T. M., & Sanders, C. E. (2003). Academic performance, popularity, and depression predict adolescent substance use. *Adolescence*, 38(149), 35-42.
- [12] Evans et al. (2008). Mindfulness-based cognitive therapy for generalized anxiety disorder. *Journal of Anxiety Disorders*, 22(4), 716-721.
- [13] Fröjd, S., Ala-Soini, P., Marttunen, M., & Kaltiala-Heino, R. (2013). Depression predicts smoking among adolescent girls but not among boys. *Journal of Child Adolescent Behavior*, 1(3), Retrieved May 08, 2014, from <http://dx.doi.org/10.4172/2375-4494.1000114>
- [14] Galambos, N., Leadbeater, B., & Barker, E. (2004). Gender differences in and risk factors for depression in adolescence: A 4-year longitudinal study. *International Journal of Behavioral Development*, 28(1), 16-25.
- [15] Geisner, I. M., Neighbors, C., Lee, C. M., & Larimer, M. E. (2007). Evaluating personal alcohol feedback as a selective prevention for college students with depressed mood. *Addictive Behaviors*, 32, 2776–2787.
- [16] Ham, L. S., Bonin, M., & Hope, D. A. (2007). The role of drinking motives in social anxiety and alcohol use. *Journal of Anxiety Disorders*, 21(8), 991-1003.
- [17] Howell, A. N., Leyro, T. M., Hogan, J., Buckner, J. D., & Zvolensky, M. J. (2010). Anxiety sensitivity, distress tolerance, and discomfort intolerance in relation to coping and conformity motives for alcohol use and alcohol use problems among young adult drinkers. *Addictive Behaviors*, 35(12), 1144-1147.
- [18] Kavas, A. B. (2009). Self-esteem and health risk behaviors among Turkish late adolescents. *Adolescence*, 44, 143, 187-198.
- [19] LaBrie, J. W., Pedersen, E. R., Neighbors, C., & Hummer, J. F. (2008). The role of self-consciousness in the experience of alcohol-related consequences among college students. *Addictive Behaviors*, 33, 812–820.
- [20] Lawyer, S. R., Karg, R. S., Murphy, J. G., & Dudley McGlynn, F. (2002). Heavy drinking among college students is influenced by anxiety sensitivity, gender, and contexts for alcohol use. *Journal of anxiety disorders*, 16(2), 165-173.
- [21] Lechner et al. (2014). The mediating role of depression in the relationship between anxiety sensitivity and alcohol dependence. *Addictive Behaviors*, 39, 1243–1248.
- [22] McLeish, A. C., Zvolensky, M. J., Yartz, A. R., & Leyro, T. M. (2008). Anxiety sensitivity as a moderator of the association between smoking status and anxiety symptoms and bodily vigilance: Replication and extension in a young adult sample. *Addictive Behaviors*, 33, 315–327.
- [23] Munhoz, T. N., Santos, I. S., & Matijasevich, A. (2013). Major depressive episode among Brazilian adults: A cross-sectional population-based study. *Journal of Affective Disorders*, 15(2), 401-407.

- [24] Mykletun, A., Overland, S., Aarø, L. E., Liabø, H. M., & Stewart, R. (2008). Smoking in relation to anxiety and depression: evidence from a large population survey: The HUNT study. *European Psychiatry, 23*(2), 77-84.
- [25] Needham, B. L. (2007). Gender differences in trajectories of depressive symptomatology and substance use during the transition from adolescence to young adulthood. *Social Science & Medicine, 65*(6), 1166-1179.
- [26] Neumann, C. A., Leffingwell, T. R., Wagner, E. F., Mignogna, J., & Mignogna, M. (2009). Self-esteem and gender influence the response to risk information among alcohol using college students. *Journal of Substance Use, 14*(6), 353-363.
- [27] Nguyen, L. T., Rahman, Z., Emerson, M. R., Nguyen, M. H., Zabin, L. S. (2012). Cigarette Smoking and Drinking Behavior of Migrant Adolescents and Young Adults in Hanoi, Vietnam. *Journal of Adolescent Health, 50*, S61–S67.
- [28] O'Connor, R. M., Stewart, S. H., & Watt, M. C. (2009). Distinguishing BAS risk for university students' drinking, smoking, and gambling behaviors. *Personality and Individual Differences, 45*, 514-519.
- [29] Pedersen, D. E. (2013). Gender differences in college binge drinking: Examining the role of depression and school stress. *The Social Science Journal, 50*(4), 521-529.
- [30] Pirkle, E. C., & Richter, L. (2006). Personality, attitudinal and behavioral risk profiles of young female binge drinkers and smokers. *Journal of Adolescent Health, 38*(1), 44-54.
- [31] Poulin, C., Hand, D., Boudreau, B., & Santor, D. (2005). Gender differences in the association between substance use and elevated depressive symptoms in a general adolescent population. *Addiction, 100*(4), 525-535.
- [32] Ralston, T. E., & Palfai, T. P. (2010). Effects of depressed mood on drinking refusal self-efficacy: Examining the specificity of drinking contexts. *Cognitive Behavior Therapy, 39*(4), 262-269.
- [33] Rosenberg, M. (1989). *Society and the adolescent self-image* (Revised edition). Middletown, CT: Wesleyan University Press.
- [34] Schinke, S. P., Fang, L., & Cole, K. C. (2008). Substance use among early adolescent girls: Risk and protective factors. *Journal of Adolescent Health, 43*(2), 191-194.
- [35] Simons et al. (2010). Training and dissemination of cognitive behavior therapy for depression in adults: a preliminary examination of therapist competence and client outcomes. *Journal of Consulting and Clinical Psychology, 78*(5), 751.
- [36] Schinke, S. P., Fang, L., & Cole, K. C. (2008). Substance use among early adolescent girls: Risk and protective factors. *Journal of Adolescent Health, 43*(2), 191-194.
- [37] Schry, A. R., & White, S. W. (2013). Understanding the relationship between social anxiety and alcohol use in college students: A meta-analysis. *Addictive Behaviors, 38*, 2690–2706.
- [38] Sun, I. Y. & Longazel, G. (2008). College students' alcohol-related problems: A test of competing theories. *Journal of Criminal Justice, 36*, 554-562.
- [39] Torikka, A., Kaltiala-Heino, R., Rimpelä, A., Rimpelä, M., & Rantanen, P. (2001). Depression, drinking, and substance use among 14-to 16-year-old Finnish adolescents. *Nordic Journal of Psychiatry, 55*(5), 351-357.

- [40] Veselska et al. (2009). Self-esteem and resilience: The connection with risky behavior among adolescents. *Addictive Behaviors*, 34, 287–291.
- [41] Walitzer, K. S., & Dearing, R. L. (2013). Characteristics of Alcoholic Smokers, Nonsmokers, and Former Smokers: Personality, Negative Affect, Alcohol Involvement, and Treatment Participation. *Nicotine & Tobacco Research*, 15(1), 282-286.
- [42] Waller et al. (2006). Gender differences in associations between depressive symptoms and patterns of substance use and risky sexual behavior among a nationally representative sample of US adolescents. *Archives of Women's Mental Health*, 9(3), 139-150.
- [43] Wild, L. G., Flisher, A. J., Bhana, A., & Lombard, C. (2004). Associations among adolescent risk behaviours and self-esteem in six domains. *Journal of Child Psychology and Psychiatry*, 45(8), 1454-1467.
- [44] World health organization (2008). *Report on the global tobacco epidemic. The M Power package*. Geneva: World Health Organization.
- [45] Zeigler-Hill, V., Madson, M. & Ricedorf, A. (2012). Does self-esteem moderate the associations between protective behavioral strategies and negative outcomes associated with alcohol consumption? *Journal of Drug Education*, 42(2), 211-227.
- [46] Zvolensky, M. J., Bogiaizian, D., Salazar, P. L., Farris, S. G., & Bakhshaie, J. (2014). An Anxiety Sensitivity Reduction Smoking-Cessation Program for Spanish-Speaking Smokers (Argentina). *Cognitive and Behavioral Practice*, 21, 350-363.