

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/351618756>

Life Stress, Alcohol Addiction Personality & Alcohol Addiction: Evidence from Tsunami Resettles in Sri Lanka

Article · May 2021

CITATIONS

2

READS

427

1 author:



Sagara Chandrasekara
University of Colombo

16 PUBLICATIONS 115 CITATIONS

SEE PROFILE

Life Stress, Alcohol Addiction Personality & Alcohol Addiction: Evidence from Tsunami Resettles in Sri Lanka

Chandrasekara W.S¹.

Institute of Human Resource Advancement, University of Colombo, Sri Lanka

Abstract

Perceived Life Stress in adults is one of the main reasons for alcohol consumption in many countries. This study aimed to (i) evaluate the relationship between life stress and alcohol addiction, and (ii) evaluate the related personality traits of alcohol addiction. Exploring the relationship between Alcohol Addiction Personality (AAP), Alcohol Addiction and Perceived Stress in the Sri Lankan context is relatively unexplored. The study was based on a sample of 50 alcohol users and 50 non-alcohol users among Tsunami Resettles in Southern Province in Sri Lanka. The average age of respondents was 24 years. Two clusters were selected to collect data using the stratified cluster sampling method. Addictive Proven Personality, Alcohol Addiction, Perceived Life Stress were measured using already developed scales with necessary changes. Correlation analysis and Structural Equation Modeling (SEM) were conducted to test the relationship between life stress, addiction-prone personality, and alcohol addiction. The results indicated that: 1) The Life Stress is significantly associated with predicting alcohol addiction, 2) Psychoticism and neuroticism personality traits associated with alcohol addiction, 3) Extraversion personality has a negative significant association with alcohol addiction 4) There is a reciprocal relationship between life stress and alcohol addiction. Findings suggest that the scales used in this study could assist to diagnose addictive personality. This understanding is significant to provide suitable interventions to prevent alcohol addiction and perceived life stress. The personalized treatment approach highlights that stress management strategies in those who have a clear connection between stress and alcohol addiction will become particularly significant.

Keywords: Alcohol Addiction Personality, Life Stress, Personality, Sri Lanka

¹ Dr. WS Chandrasekara (Ph.D.), Senior Lecturer, Institute of Human Resource Advancement, University of Colombo, Sri Lanka. sagara@ihra.cmb.ac.lk, +94715308574

1.1. Introduction

Alcohol addiction has been a key social problem all over the world (Agrawal & Lynskey, 2014). It leads to severe health and societal costs in many countries. Ethanol or ethyl contained beverage is known as an alcoholic beverage. Ethanol is a toxic compound to the body. A high level of doses of ethanol can cause the death of a person where at low doses of ethanol damages the functioning of the mind. Recurrent alcohol consumption leads to addiction, which is also known as alcoholism. Alcoholism can be broadly defined as any recurrent drinking contained alcohol (Ethanol or ethyl) that results in mental or physical health problems (Paduwawala, 2014). The rapid spread of alcohol use around the world has created problems for both the individuals and their families, as well as several health problems for individuals (Paduwawala, 2014). Alcohol use can have a profound effect on a person's life, both physically, socially, and economically. The overall and long-term effects of alcohol use are felt by all sectors and are specific to the health sector (Paduwawala, 2014). The World Health Organization (WHO) reported in 2014 that the number of deaths worldwide due to alcohol abuse was around 2.5 million a year or 5.9 percent of deaths are due to alcohol consumption worldwide (WHO, 2014). This is more than the number of deaths worldwide from infections such as HIV/AIDS and tuberculosis as well as social crimes (WHO 2014).

Many studies have identified personality traits and life stress are positively related to alcohol consumption and addiction (Kuntsche, Von Fischer, & Gmel, 2008; Enoch, 2012). Stress is considered to be one of the main factors among psychological and physiological factors that affect alcohol addiction (Vrieze, McGue, & Iacono, 2012). Kuntsche et al., (2008) found that drinking intention mediates the relationship between personality traits and alcohol consumption. From a theoretical perspective, it is found that people with life stress may use alcohol to manage or give up stresses. Research in the United States on the personality of alcoholics has shown that 8% of the population suffers from alcohol-related disorders and 28% of them suffer from some form of personality disorder (Panduwawala, 2014). It has also been found that 47% of drug addicts suffer from personality disorders. Furthermore, it has been found that anti-social and magical personality traits among alcoholics are about five times higher than the average population (Panduwawala, 2014). It has been found that the anti-social personality traits among women are very serious and

high compared to men. Dependent personality traits among men are serious compared to women (Panduawala, 2014).

1.2. Tsunami and Alcoholism

The most accepted model of alcoholism is the medial model. This perspective has been accepted for a long time. However, by now, multidimensional models of alcoholism have been recognized as an acceptable model in recent past research. It means alcoholism comprises different types of disorders. According to literature, there is a strong positive association between alcohol consumption related to negative consequences (Hicks, Durbin, Blonigen, Iacono, & McGue, 2012). Therefore, it is very essential to comprehend the socio-economic factors of alcohol consumption. Though it is generally identified that there is a positive relationship between personality traits, life stress, and alcohol consumption, there are no adequate studies that have observed the relationship between major stressful events such as the Tsunami. Alcohol addiction is prominent in victims of natural disasters like Tsunami events. The tsunami was a major catastrophic event in Sri Lanka, December 2004 it killed 35,000 people and lost houses for 900,000 families. This is quite a lot in a country that has just 20 million inhabitants, with the bulk of them living on the coast. Almost 40 percent of those who died were infants. The worst natural disaster in recorded history in Sri Lanka was this. According to the previous researchers, thousands of survivors suffered from depression, post-traumatic stress disorder, and other types of long term mental health problems (Siriwardhana, Pannala, Siribaddana, Sumathipala, & Stewart, 2013). Hence, understanding the factors associated with alcohol consumption among adults is important to introduce alcohol prevention interventions. The study was designed to identify the relationship between life stress and alcohol addiction and evaluate the related personality traits of alcohol addiction.

1.3 Addiction and Addictive personality

Addiction is a word we often use in our daily lives. Although doing something as a habit can be interpreted as an addiction, it is always a question of whether it is as addictive as eating rice. Although addiction has a general meaning, it has a special meaning in medical usage (Samarasinghe, 2005). The common denominator of all addictive substances is that they have the potential to cause some psychological change in mind. This difference is

twofold, fluids in one cube cause mental arousal. Tea, coffee, marijuana, cocaine, and amphetamines belong to this category. The other type is narcotic substances that slow down the nervous system. Various drugs and alcohol, heroin are examples of this category. A common feature of these addictive substances is that they quickly activate the brain (Samarasinghe, 2005). Alcohol addiction is activated in accordance with the biological and psychological responses that are genetically predisposed to interact with specific environmental conditions. That condition is called addiction. Biomedical researchers estimate that genetic factors may contribute to the development of alcohol addiction by 25 to 50 percent (Rajapakse, 2016). European and American researchers say that alcoholism may be a genetic condition, but it is unlikely to reach its peak in an alcohol-free or non-alcoholic environment. For example, women in rural Sri Lanka do not consume alcohol, despite their genetic potential, they are prevented by the sociocultural environment (Rajapaksa, 2011). This indicates that the alcohol prone personality is activated with the other favorable factors such as attitudes and alcoholic environment.

The addictive personality concept has been discussed in the literature sufficiently (Nathan, 1988). Different psychometric scales have been recognized to measure addictive personality. The first such psychometric scale was developed by MacAndrews (1965). It was called as Alcoholism Scale (AS). According to literature, there is a strong positive relationship between personality and substance use behaviours (Barnes, Murray, Patton, Bentler, & Anderson, 2000; Hicks, Durbin, Blonigen, Iacono, & McGue, 2012). In general, alcoholism can be defined as excessive consumption of alcohol or alcohol addiction (Enoch, 2012). Biological, environmental, social, and psychological factors may affect alcohol use and alcohol addiction (Enoch, 2012). There are many risk factors for developing alcoholism such as drinking at an early age and frequent alcohol consumption over a long period, family history with alcohol addiction, and peer pressure, high levels of stress, and individual personality differences (Edwards, 2000). Genetic and environmental factors play an approximately equivalent role in alcohol addiction development (Enoch, 2012). According to Vrieze et al., (2012), the period that development of adolescence is more influential for alcohol addiction as the impact of genetic factors tends to be increased during this period. Genetic effects on alcohol addiction are mediated by many factors such as differences in personality (Gorwood et al., 2012). However, it is difficult to determine

the causal relationship between genetic variation and alcohol addiction, because alcohol addiction develops over a period of time.

The Addiction-Prone Personality (APP) scale is a measure that has been developed to understand the relationship between personality and substance use (Anderson, Barnes, & Murray, 2011). Personality traits may help to understand why some people become addicted to alcohol while others do not so in the same socio-cultural environment. Many studies have discovered that a significant association between personality traits and alcohol use (Hicks, Durbin, Blonigen, Iacono, & McGue, 2012; Barnes, Murray, Patton, Bentler, & Anderson, 2000). Cooper et.al., (1995) states that those who start drinking at an early age consume more alcohol in adulthood than those who start drinking at later in adolescence. According to Lackner et. al., (2013), personality traits play an important role in the prediction of problematic substance use behavior.

1.4. Perceived Life Stress, Personality, and Alcohol Addiction

There is no accepted unique definition of life stress. Hence, it's very hard to measure stress in life, as there is no common agreement on what is life stress. However, life stress is associated with the tensions that humans experience in their daily living. Across all ages, people tend to experience life stress (Saleh, Camart, Sbeira, & Romo , 2018). Life stress can be in the form of acute stressors or chronic strain. Acute stressors may arise based on reasons such as the death of a loved one whereas chronic strain may arise based on reasons such as ongoing financial problems. Three personality traits that have frequently been related to alcohol consumption among adults. They are Neuroticism, extraversion, and Psychoticism. There is a significant relationship between neuroticism and alcohol use among a sample of non-clinical college students (Ruiz, Pincus, & Dickinson, 2003). The high neuroticism personality trait is prone to experience mental distress and maladaptive surviving strategies such as drinking alcohol (Piedmont, 1998; Kuntsche, Von Fischer, & Gmel, 2008). There is a tendency for those who high on neuroticism to occurrence negative emotions and that may lead to alcohol use as a strategy for coping with psychological distress (Stewart, Loughlin, & Rhyno, 2001).

In literature, the APP scale was discovered as a very good scale for discriminating drug addicts from non-addicts and predicting the harshness of addiction (Barnes, Murray, Patton, Bentler, & Anderson, 2000). The APP scale was significantly associated with three of the Five-Factor Personality trait, high APP scores are associated with high Neuroticism, low Agreeableness, and low Conscientiousness (Barnes, Murray, Patton, Bentler, & Anderson, 2000). According to Stewart et. al., (2001), the extraversion personality trait is associated with high alcohol consumption. According to Simons et.al., (2004) impulsivity has a positive significant relationship with alcohol use. Psychoticism is defined as control of behavior by emotional processes, with moderately slight cognitive control such as preparation, precaution, or expectancy of results (MacAndrew, 1965; Enoch, 2012).

According to Cooper (1994), people use alcohol in order to obtain certain changes in effect. Those expected changes or effects could be either positive or negative or either internal emotional state or external social environment. Based on two dimensions, positive (internal and external) and negative (internal and external), Cooper (1994) assumed that there are four separate intentions to drink: enhancement intention (positive, internal), social intention (positive, external), coping intention (negative, internal), and conformity intention (negative, external). According to this intention model of alcohol use includes the social factors (social intention), enhancement factors (enhancement intention), coping factors (coping intention), and conformity factors (conformity intention). Research findings indicate that alcohol use rates among students are greater than their same-aged adolescents who are not involved in higher education (Wechsler, et al., 2002). According to Oster-Aaland et.al. (2007), students drink in different situations and different settings. Thus, based on the above literature, this study postures the following hypothesis;

H₁, a higher level of life stress is significantly correlated with a higher level of alcohol addiction.

H₂, a higher level of psychoticism is significantly correlated with a higher level of alcohol addiction

H₃, a higher level of neuroticism is correlated with a higher level of alcohol addiction

H₄, a higher level of Extraversion is correlated with a lower level of alcohol addiction

2. Methods

2.1. Participants

This study was based on a sample of fifty percent alcohol users (N=50) and fifty percent non-alcohol (N=50) users among Tsunami Resettles in Southern Province in Sri Lanka. This sample was a hundred male between the age of 24 to 50 years participated in the research study. 100 participants were selected comprising 50 from each group, alcohol uses, and non-alcohol users. The average age of respondents was 24 years. Two clusters were selected to collect data using stratified cluster sampling methods. However, the convenient sampling method was used when the sampling unit was selected. Conversely, present diagnoses of any psychotic illness, alcoholism, or a serious physical illness such as cancer or heart disease were excluded. Participants were selected and interviewed with the support of the GN officer (*Gramaniladari*) by visiting their places.

2.2. Measures

2.2.1. Perceived Life Stress

Perceived stress was measured using a 10-item questionnaire of the Perceived Stress Scale (PSS) developed by Cohen et al., (1983). PSS measure respondents' current level of stress on a Likert scale, 0 = *never*, 1 = *almost never*, 2 = *sometimes*, 3 = *fairly often*, 4 = *very often*. Sample items include "In the last month, how often have you felt nervous and stressed". A high score on this scale indicates a high level of perceived control which indicates a lower level of perceived stress, whereas a low level of score indicates a low level of perceived control and a higher level of perceived stress.

2.2.2. Addictive personality traits

In order to measure personality traits, Addictive Proven Personality (APP) was measured through Personality Questionnaire-Revised [EPQ-R] developed by Eysenck & Eysenck (1975). This scale comprises 4 subscales such as the Psychoticism scale (9 items), Neuroticism scale (13 items), Extraversion scale (4 items), Lie scale (6 items). The Cronbach alpha coefficient of this study was 0.81.

2.2.3. Alcohol Addiction

Alcohol addiction was measured using the Daily Drinking Questionnaire (DDQ) developed by Collins et.al., (1985). The DDQ is a self-report questionnaire used to measure the quantity and frequency of drinking. This scale estimates the average number of drinks consumed each day and the number of hours spent drinking each day within the past month. All patients were informed about the purpose of the study and got their consent to participate in the research study. Data collection was done within a month, in January 2020.

3. Results

3.1. Reliability and validity analysis

Confirmatory Factor analysis (CFA) was done to measure the construct validity of each variable used in this research. CFA helps to recognize immaterial items and to design the measurement model. According to Karriker and Williams (2009), the value of factor loading should be less than 0.4. The factor loading values of all variables, Perceived Life Stress (PLS), Addictive Personality Traits (APT), and Alcohol Addiction (AA) are well above the average level. According to Hair et al., (2003), values of AGFI, GFI, NFI, CFI, and TLI should be above 0.90 or closer to 1, it shows the better fit of the model. Hence, as given in Table 01 all the values of the above catalogues are above the average level. Therefore, data is ideal for analysis. The value of Root Mean Square Error of Approximation (RMSEA) should be less than .05, and Chi-square (χ^2/ df) should be less than 4.5 for a better fit of the model (Browne and Cudeck, 1993). As given in Table 01, both RMSEA and Chi-square values are above the average level, which indicates the better fit of the model. All the measurement values are above the average level, which means a good model fit of CFA in this study.

Table 01: Confirmatory Factor Analysis

Vari- ables	Chi- square	<i>RMSEA</i>	<i>GFI</i>	<i>AGFI</i>	<i>CFI</i>	<i>TLI</i>	<i>NFI</i>	AVE	CR
PLS	3.640	0.043	0.901	0.892	0.886	0.951	0.917	.46	.91
APT	3.742	0.050	0.860	0.931	0.902	0.857	0.871	.60	.92
AA	3.530	0.041	0.910	0.916	0.911	0.940	0.940	.54	.81

PLS = Perceived Life Stress, APT = Addictive Personality Traits, AA = Alcohol Addiction

3.2. Results and Discussion

First, examine the mean differences in Alcohol Addiction Prone Personality, Alcohol Addiction, and Perceived Life Stress scores. Second, correlations were calculated between variables.

Table 02: Descriptive statistics and correlations of the study variables

Construct	Mean	SD	1	2	3	4	5
1 Perceived Life Stress	3.94	0.47					
2 Psychoticism	3.71	0.48	0.53				
3 Neuroticism	3.72	0.73	0.49	0.38			
4 Extraversion	3.35	0.68	0.4	0.3	0.5	0.2	
5 Alcohol Addiction	4.07	0.65	0.51	0.38	0.42	0.8	0.25

4. Discussion

This study aimed to evaluate the relationship between life stress and alcohol addiction and to evaluate the correlated personality traits of alcohol addiction. It was found that the Life Stress is significantly associated with predicting alcohol addiction, and psychoticism and neuroticism personality traits associated with alcohol addiction. It was found that extraversion personality has a negative significant association with alcohol addiction. Significantly, finding shows that there is a reciprocal relationship between life stress and alcohol addiction. According to the research findings, it was found different personality types in the community. They adopt different types of coping strategies. Findings show that personality traits are likely to risk for addiction. They are also in harmony with Nees et al. (2012) who discovered that personality traits described more of the modification than brain reactions in their model of alcohol use in youths. According to this study, the inborn profile and addictive personality together affect the incidence of addictive behaviors.

This accord with Chandrasekara W.S., (2017), that agreeableness and extraversion personality traits help for life satisfaction. According to literature, when people are unsatisfied, they tend to use alcohol (Kuntsche, Stewart, & Cooper, 2008).

Furthermore, the effect of addictive personality traits has backed almost half the overall effect of inborn obligation on addictive performances. It means personality trait is the main factor between inborn weakness and behavioral consequences. This study suggests that the measurements used in this research study could use to diagnose addictive personality and introduce interventions for alcohol addiction. On the other hand, the findings of this study could be used to develop alcohol usage reduction programs. The personalized treatment approach highlights that stress management strategies in those who have a clear connection between stress and alcohol addiction will become particularly significant. This understanding is significant to provide suitable interventions to prevent alcohol addiction and perceived life stress. The finding of this research study suggests further research on personality traits that discourage alcohol addiction behaviors.

Works Cited

- Agrawal, A., & Lynskey, M. (2014). Genetics of substance use disorders . In S. Rhee, & A. Ronald, *Behavior genetics of psychopathology* (pp. 185–230). New York, NY: Springer.
- Anderson, R., Barnes, G., & Murray, R. (2011). Psychometric properties and long-term predictive validity of the addiction-prone personality (APP) scale. *Personality and Individual Differences*, 50(5), 651–656.
- Barnes, G., Murray, R., Patton, D., Bentler, P., & Anderson, R. (2000). *The addiction-prone personality*. New York: Kluwer Academic/Plenum Publishers.
- Chandrasekara, W. (2019). Relationship Among Big Five Personality Traits, Job Performance & Job Satisfaction: A Case Of School Teachers In Sri Lanka. *International Journal of Information, Business and Management*, P. 219-232.
- Cooper, M. (1994). Motivations for alcohol use among adolescents: Development and validation of a four-factor model. *Psychological Assessment*, 6, 117–128.
- Cooper, M., Frone, M., Russell, M., & Mudar, P. (1995). Drinking to regulate positive and negative emotions: A motivational model of alcohol use. *Journal of Personality and Social Psychology*, 990–1005.
- Edwards, G. (2000). *Alcohol: The World's Favorite Drug*. London: Penguin Press.
- Enoch, M. (2012). The influence of gene-environment interactions on the development of alcoholism and drug dependence. *Current Psychiatry Reports*, 14.

- Gorwood, P., Le Strat, Y., Ramoz, N., Dubertret, C., Moalic, J., & Simonneau, M. (2012). Genetics of dopamine receptors and drug addiction. *Human Genetics*, 131, 803–822.
- Hair, J. A. (2003). *Multivariate data analysis (5th ed.)*. India: Pearson Education.
- Hicks, B., Durbin, C., Blonigen, D., Iacono, W., & McGue, M. (2012). Relationship between personality change and the onset and course of alcohol dependence in young adulthood. *Addiction*, 107(3), 540–548.
- Karriker, J., & Williams, M. (2009). Organizational justice and organizational citizenship behavior: A mediated multi-foci model. *Journal of Management*, 112-124.
- Kuntsche, E., Stewart, S., & Cooper, M. (2008). How stable is the motive-alcohol use link? A cross-national validation of the Drinking Motives Questionnaire-Revised among adolescents from Switzerland, Canada, and the United States. *Journal of Studies on Alcohol and Drugs*, 69, 388–396.
- Kuntsche, E., Von Fischer, M., & Gmel, G. (2008). Personality factors and alcohol use: A mediator analysis of drinking motives. *Personality and Individual Differences*, 45(8), 796-800.
- Lackner, N., Unterrainer, H., & Neubauer, A. (2013). Differences in Big Five personality traits between alcohol and polydrug abusers: Implications for treatment in the therapeutic community. *International Journal of Mental Health and Addiction*, 11(2), 682–692.
- MacAndrew, C. (1965). The differentiation of male alcoholic outpatients from non-alcoholic male psychiatric outpatients by means of the MMPI. *Quarterly Journal of Studies on Alcohol*, 238–246.
- Nathan, P. (1988). The addictive personality is the behavior of the addict. *Journal of Consulting and Clinical Psychology*, 183–188.
- Nees, F., Tzschoppe, J., Patrick, C., Vollstadt-Klein, S., Steiner, S., & Poustka, L. (2012). Determinants of early alcohol use in healthy adolescents: The differential contribution of neuroimaging and psychological factors. *Neuropsychopharmacology*, P.C986–995.
- Organizational justice and organizational citizenship behavior: A mediated multi-foci model. (2009). *Journal of Management*, 112-124.
- Oster-Aaland, L., & Neighbors, C. (2007). The impact of a tailgating policy on students' drinking behavior and perceptions. *Journal of American College Health*, 56(3), 281–284.
- Piedmont, R. (1998). *The Revised NEO Personality Inventory: Clinical and Research Applications*. New York: Plenum Press.

- Ruiz, M., Pincus, A., & Dickinson, K. (2003). NEO-PI-R predictors of alcohol use and alcohol-related problems. *Journal of Personality Assessment*, 81(3), 226- 236.
- Saleh, D., Camart, N., Sbeira, F., & Romo, L. (2018). Can we learn to manage stress? A randomized controlled trial carried out on university students. *PLoS One*, 13(9), 1-20.
- Samarasinghe, D. (2005). *Strategies to Reduce Alcohol Problems*. Colombo: Forut.
- Siriwardhana, C., Pannala, G., Siribaddana, S., Sumathipala, A., & Stewart, R. (2013). Impact of exposure to conflict, tsunami, and mental disorders on school absenteeism: findings from a national sample of Sri Lankan children aged 12–17 years. *BMC Public Health*, P.1-9.
- Stewart, S., Loughlin, H., & Rhyno, E. (2001). Internal drinking motives mediate personality domain-drinking relations in young adults. *Personality and Individual Differences*, 30(2), 271–286.
- Vrieze, S., McGue, M., & Iacono, W. (2012). The interplay of genes and adolescent development in substance abuse disorders: Leveraging finds from GWAS meta-analyses to test developmental hypotheses about nicotine consumption. *Human Genetics*, 131, 791–801.
- Wechsler, H., Lee, J., Kuo, M., Seibring, M., Nelson, T., & Lee, H. (2002). Trends in college binge drinking during a period of increased prevention efforts: Findings from four Harvard School of Public Health College alcohol study surveys. *Journal of American College Health*, 50(5), 203–217.
- WHO. (2014). *Global Status Report on Alcohol and Health*. Geneva: WHO.

ආශ්‍රිත ග්‍රන්ථ නාමාවලිය (සිංහල)

- පඬුවාවල, එස්. (2014). මද්‍යසාර භාවිතයෙන් මිදෙන හැටි: මද්‍යසාර භාවිතය ආශ්‍රිත සෞඛ්‍ය ගැටළු හා පිළියම්. මිනිසර පොත් ප්‍රකාශයෝ. ගම්පහ
- රාජපක්ෂ, ආර්. (2016). සුරාධූතර්ථය: මත්පැන්ට ඇබ්බැහිවීම සහ එය හඳුනාගැනීම, ඒ හා බැඳී රෝග ලක්ෂණ හා ඒවායෙන් සිදුවන කායික මානසික බලපෑම. පසිඳු ප්‍රකාශකයෝ. පානදුර.