

Original Research Article

Terrorism catastrophising and hazardous alcohol use among students of a tertiary institution in Jos, Nigeria

Kingsley M. Okonoda^{1*}, James T. Obindo¹, Peter O. Onifade²,
Duwap M. Makput³, Bawo O. James⁴

¹Department of Psychiatry, University of Jos, Jos, Plateau, Nigeria

²Department of Clinical Services, Neuropsychiatric Hospital, Aro, Abeokuta, Nigeria

³Department of Psychiatry, Jos University Teaching Hospital, Jos, Plateau, Nigeria

⁴Department of Clinical Services, Federal Neuropsychiatric Hospital, Benin City, Nigeria

Received: 23 March 2017

Accepted: 27 March 2017

*Correspondence:

Dr. Kingsley M. Okonoda,

E-mail: mayorking2001@yahoo.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Being a maladaptive means of coping with stress, alcohol abuse may be associated with level of terrorism in a community. Jos has had a number of terrorists' attacks which have had devastating effects on the city and its environs. This study aimed to determine the prevalence of terrorism catastrophizing, hazardous alcohol use as well as the relationship between terrorism catastrophizing and hazardous alcohol use among students of the Plateau State Polytechnic, Jos Campus.

Methods: A cross sectional study of 230 students in the departments of accountancy, business administration and management who completed self-administered questionnaires during one of their classes following a random cluster sampling of departments.

Results: The TCS showed that 43.5% of the participants had terrorism catastrophizing. Pearson correlation showed a high significant positive correlation ($p < 0.05$) across the three dimensions of terrorism catastrophizing: rumination, $r = 0.807$; magnification, $r = 0.726$; and helplessness, $r = 0.754$. However, no significant correlation exists between terrorism catastrophising (rumination, magnification and helplessness), alcohol use disorder, $r = -0.016$, $p = 0.817$ (AUDITc), and problem drinking behavior, $r = -0.157$, $p = 0.06$.

Conclusions: There was no positive correlation between terrorism catastrophizing and hazardous alcohol drinking.

Keywords: Hazardous drinking, Terrorism, Terrorism catastrophizing

INTRODUCTION

Historically, terrorism dates to the first organized human interactions. At minimum, it could be traced back to the period when Jewish zealots and Arab nationalists used terrorism to resist the imperial authority (Romans) by killing many Roman soldiers, destroying Roman property and the Arabs also fight each other (Shiites versus Sunni) over religious doctrine as well also revolt against the crusaders by the Arabs. The terrorism of the modern era was conceived as a tool to achieve political and religious

goals it began during the French Revolution (1793-1794).¹

The US State Department in Title 22 of the United States Code Section 2656f (d) made the following definitions as regards terrorism : "(1) the term "international terrorism" means terrorism involving citizens or the territory of more than one country; (2) the term "terrorism" means premeditated, politically motivated violence perpetrated against non-combatant targets by subnational groups or clandestine agents; and (3) the term "terrorist group"

means any group practicing, or which has significant subgroups which practice, international terrorism.”²

Various definitions of the term ‘catastrophizing’ are in the literature. These include ‘an inflated negative orientation toward some deleterious stimuli’, “the maximization of and worry about particular negative life events”, or “thinking always focused on the negative events”.³⁻⁵ It is one of the most basic causal mental process that can lead to diverse forms of psychopathology, in which anxiety and depression are common.

After the September 11 2001 bombings in the United States of America (USA) many people in the USA felt they were at risk of terrorism. Risk perceptions, along with antiterrorism programs, laws and policies e.g. airport security regulations, visa restrictions and warrantless surveillance affected American’s lifestyles and behaviors. In the months following the attacks 40% to 50% still feared for their safety and 11% reported changes in their behavior e.g. avoiding public gatherings. The study concluded that the mentally ill are more likely to perceive population level risk as high, and that vulnerable populations experience a disproportionate burden of the psychosocial impact of terrorism threats and the national response to it.⁶

In Nigeria, the advent of the Boko Haram terrorist group has led to Nigeria witnessing a series of terrorist attacks. Though these attacks were more rampant in the North-Eastern zone of the country, Plateau State has had its fair share of such attacks. Each act of terrorism though relatively localized geographically, leads to anxiety on a global scale.⁷

A myriad of symptoms may follow act of terror including but not limited to fear, anxiety, crying, whimpering, screaming, excessive clinging, fear of darkness or animals, confusion, disobedience, depression, nightmares, irritability, fear of being left alone, sleep disturbances, alcohol and other drug use, sensitivity to loud noises Etc. Children might face problems like poor academic performance and behavioral problems in school environment.⁸ One public health definition of terrorism proposes that the effects of terrorism ‘real or threatened’ may include adverse health effects in those immediately affected.⁹ Being a maladaptive means of coping with stress, alcohol abuse may be associated with level of terrorism in a community.¹⁰

There are studies in other climes on the immediate, short term and long term psychological impacts of terrorism on family and social life as well as development of death anxiety and substance use, and one study examined the catastrophic burden of the fear of future terrorism and associated psychiatric burden among adult population in Kaduna City, Nigeria.¹⁰⁻¹³ There is paucity of studies on terrorism catastrophizing in Nigeria. This study aimed to determine the prevalence of terrorism catastrophizing,

hazardous alcohol use as well as the relationship between terrorism catastrophizing and hazardous alcohol use among students of the Plateau State Polytechnic, Jos Campus.

METHODS

The study was a cross sectional survey. Study was carried out among students of the Plateau State Polytechnic, Jos Campus. This is one of the two Campuses of the institution, the main campus being in Barkin Ladin in another local government of the State in North Central Nigeria. The institution is made up of the School of Administration and Business, School of Engineering Technology, School of General Studies, School of Science and Technology and School of Technical Education.¹⁴

This report is part of a larger study carried out in Jos, Kano and Maiduguri being cities that have had terrorist attacks in Nigeria.

Using an absolute standard error of 0.05 and a standard normal variance of 1.96 (95% C.I) and prevalence of 0.5 (since we do not have figure for terrorism catastrophizing in this environment), it was determined that a minimum of 153 participants will be adequate, calculated using appropriate formula for prevalence studies.¹⁵ Based on the recommendation of the United Nations Office on Drug and Crime for school survey on alcohol and drug use, 230 students in the departments of Accountancy and Business Administration and Management were interviewed during one of their classes haven been selected by random cluster sampling of departments.¹⁶

Ethical considerations

Ethical approval was obtained from the Ethics Committee of the Federal Neuropsychiatric Hospital, Maiduguri and approval was also obtained from the management of the Plateau State Polytechnic. Informed consent was obtained from all respondents after being assured of confidentiality.

Study procedure

Interview was done by a composite questionnaire comprising of four parts namely Socio-demographic characteristics, terrorism catastrophizing scale and AUDIT-C. The socio-demographic section consists of age, gender, tribe, religion, marital status, occupation and fluency in Hausa language.

Instruments

AUDIT-C is a 3-item alcohol screen that can help identify persons who are hazardous drinkers or have active alcohol use disorder (including alcohol abuse or dependence).¹⁷ It is a modified version of the 10 question AUDIT. It is score on a scale of 0-12. Each AUDIT-C

question has 5 answer choices. Points allotted are A=0, b=1, c=2, d=3, e=4. A score of greater than 2 in women or a score of greater than 3 in men is considered positive, optimal for identifying hazardous drinking or active alcohol use disorders.

However, if all the scores are from question 1 alone, it can be assumed that the patient is drinking below the recommended and it is suggested the provider review the patient's alcohol intake over the past month to confirm accuracy.

The development of the Terrorism Catastrophizing Scale (TCS) was a reaction to the recent call to academia to develop the "psychological science" necessary to provide proper and effective mental-health treatment for victims and others suffering as a result of terrorist attacks.¹⁸ Since effective treatment must begin with valid and reliable assessment, the TCS was developed to measure the effects of ongoing fear of future terrorism. The TCS specifically measures the extent to which people experience anticipatory fears, or "catastrophize" about, future terrorism.

The 13 item TCS measures three items (magnification, rumination and helplessness). TCS is a five point Likert scale, ranging from Strongly Agree to Strongly Disagree with a range of 13 to 65 and a cut-off of 33. It has an overall alpha coefficient reliability of 0.85 and test-retest reliability of 0.89.

Data analysis

In order to test the three primary objectives proposed for this study, a series of correlation coefficients were computed to ascertain the association between terrorism catastrophizing, alcohol use and problem drinking behavior. Next, the influence of hazardous alcohol use was tested by correlation analysis using continuous quantitative variables such as age and ethnicity. Finally, Multivariate Regression analysis was used to test three categorical variables: gender, marital status and religion as predictors of terrorism catastrophizing among the students. Level of significance was set at $p < 0.05$.

RESULTS

Socio-demographic characteristics

Ages ranging between 21-30 years old were the majority (38.7%). The overall mean age for participants was ($M=25.26$; $SD=3.83$ years). More females (55.7%) participated in the study. Participants with single marital status were more (81.7%).

Those from other ethnicity (98.3%) outnumbered participants who are Hausa, Fulani or Kanuri likewise; Christians (97.8%) were more. Lastly, those participants who reported having a little fluency for Hausa language (44.3%) were the majority in this study (Table 1).

Table 1: Participants demographic characteristics.

Variable	Frequency	Percentages
Age		
< 20	66	28.7%
21 - 30	89	38.7%
31 - 40	37	16.1%
41 - 50	9	3.9%
51 - 60	11	4.8%
Gender		
Male	101	43.9%
Female	128	55.7%
Marital status		
Single	188	81.7%
Married	37	16.1%
Others	1	0.4%
Ethnicity		
Hausa	17	7.4%
Fulani	1	0.4%
Kanuri	1	0.4%
Others	192	98.3%
Religion		
Muslim	4	1.7%
Christian	225	97.8%
Hausa language fluency		
Not at all	10	4.3%
A little	102	44.3%
Very well	94	40.9%
Excellently	19	8.3%

Prevalence of terrorism catastrophizing and hazardous drinking

The table of research variables below indicates that 56.5% of the participants do not catastrophise terrorism while 43.5% have terrorism catastrophising. Similarly, participants with low risk drinking constitute 79.1% as against those with hazardous drinking who form 15.2% of the participants.

Correlates and predictors of terrorism catastrophizing

In Table 2. Pearson correlation showed a high significant positive correlation ($p < 0.05$) across the three dimensions of terrorism catastrophizing: rumination, $r=0.807$; magnification, $r=0.726$; and helplessness, $r=0.754$. This suggests that if a student is catastrophizing terrorism, the symptoms will be evidenced across the three dimensions. However, no significant correlation exists between terrorism catastrophizing (rumination, magnification and helplessness), hazardous drinking, $r=-0.016$, $p=0.817$ (AUDITc), and problem drinking behavior, $r=-0.157$, $p=0.065$

No significant associations were found between demographic variables such as age, gender, marital status, religion and ethnicity and hazardous alcohol use among the study participants ($p > 0.05$). Although participants aged 20-30 years old engaged more in hazardous drinking

(6.0%), the correlation between age and hazardous alcohol use was weak and not significant, $r=0.098$, $p=0.166$. Similarly, while males engaged in more hazardous drinking (8.35%) the association between gender and hazardous drinking was not significant, $r=-0.066$, $p=0.335$.

Also, participants who were single were involved in more hazardous drinking (13.6%) however, the correlation between marital status and hazardous alcohol use was not significant, $r=-0.003$, $p=0.970$. Likewise, more Christians (16.2%) were noted to engage in hazardous drinking even though, the correlation between religion and hazardous alcohol use was not significant, $r=0.060$, $p=0.377$. Lastly, participants from other ethnic groups (14.5%) engaged

more in hazardous drinking even though, the correlation between ethnicity and hazardous alcohol use was also weak and not significant, $r = 0.026$, $p = 0.710$ (Table 3).

Table 2: Prevalence of terrorism catastrophizing and hazardous drinking.

Research variables	Frequency	Percent
TCS		
No Catastrophizing	130	56.5%
Catastrophizing	100	43.5%
AUDITc		
Low risk drinking	182	79.1%
Hazardous drinking	35	15.2%

Table 3: Correlation between terrorism catastrophizing (subscales), alcohol use and problem drinking behavior.

Scales	TCS	Rumination	Magnification	Helplessness	AUDITc
TCS	1	0.807**	0.726**	0.754**	-0.016
		0.000	0.000	0.000	0.817
Rumination		1	0.446**	0.418**	0.049
			0.000	0.000	0.493
Magnification			1	0.320**	-0.016
				0.000	0.816
Helplessness				1	-0.040
					0.567
AUDITc					1

** . Correlation is significant at the 0.05 level (2-tailed).

Table 4: Hazardous alcohol use across demographic characteristics.

	AUDITc		r	p
	Low risk drinking	Hazardous drinking		
Age			0.098	.116
< 20	27.0%	4.5%		
20 - 30	35.5%	6.0%		
31 - 40	13.0%	4.0%		
41 - 50	3.0%	1.5%		
51 - 60	4.5%	1.0%		
> 61	0.0%	0.0%		
Gender			-0.066	0.335
Male	35.6%	8.35%		
Female	48.1%	7.9%		
Marital status			-0.003	0.970
Single	65.5%	13.6%		
Married	13.6%	2.8%		
Others	0.5%	0.0%		
Religion			0.060	0.377
Islam	1.9%	0.0%		
Christianity	81.9%	16.2%		
Ethnicity			0.026	0.710
Hausa	7.5%	1.0%		
Fulani	0.5%	0.0%		
Kanuris	0.0%	0.5%		
Others	76.0%	14.5%		

Multiple regression indicates that age ($\beta=0.105$), gender ($\beta=0.629$), marital status ($\beta=-0.799$), religion ($\beta=-1.779$) and ethnicity ($\beta=-0.040$) were not significant predictors

of terrorism catastrophizing, $F(5, 186)=0.892$, $p>0.05$ among the participants Table 4.

Table 5: Determinants of terrorism catastrophizing.

Model		Unstandardized Coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	31.929	6.461		4.942	0.000
	Age	0.105	0.117	0.072	0.901	0.369
	Gender	0.629	0.847	0.055	0.743	0.458
	Marital status	-0.799	1.117	-0.056	-0.715	0.476
	Religion	-1.779	3.143	-0.045	-0.566	0.572
	Ethnicity	-0.040	0.573	-0.006	-0.070	0.945
	ANOVA	$R^2 = 0.334$, $F(5, 186) = 0.892$				

Dependent Variable: TCS; Predictors: (Constant), Age, Gender, Marital Status, Religion, Ethnicity.

DISCUSSION

Present study aimed at determining the relationship between terrorism catastrophizing and hazardous alcohol use among students of the Jos Campus of the Plateau State Polytechnic.

We found no significant correlation between terrorism catastrophizing, hazardous drinking and problem drinking. Although we found no previous studies on association between terrorism catastrophizing and alcohol use, previous studies have shown significant positive correlations of terrorism catastrophizing with anxiety and depression as well as with perceived stress and death anxiety.¹¹⁻¹³ Our finding may be due to the fact that majority of the students were not direct victims of terrorist attacks.¹³ Also, majority of our respondents are female and this may be responsible for the low rates of alcohol use in our study and the lack of correlation between terrorism catastrophizing and hazardous alcohol drinking. Previous studies have demonstrated people who use alcohol are more likely to be male.^{19,20}

Our prevalence rate of terrorism catastrophizing of 43.5% contrasts with the 78.8% found among students of Kaduna State University, Kaduna Polytechnic and students awaiting admission into Kaduna State University.¹³ This contrast in the rates may be explained by the differences in the number of terrorists' attacks witnessed by both sets of participants. The higher frequency of occurrence of acts of terrorism in Jos, Plateau State and the environs as compared to fewer acts of similar occurrences in Kaduna might have led to the desensitization of a vast majority of the Jos students to such catastrophizing fears of terrorism. Also, there may be a significant difference in the interval between witnessing of terrorists' attack, exposure to reportage of such attacks in the media and the period that the questionnaires were administered between the two

studies. Although the age group 21-30years, males, singles and Christians were found to engage more in hazardous drinking, these variables were not found to be statistically significantly associated with hazardous drinking. This is in contrast with previous studies in the same environment that found younger participants who are males and profess the Christian faith to be more likely to have Alcohol Use Disorders.^{19,20} This difference may be explained by the fact that these previous studies involved the use of diagnostic instruments as against our study which used only screening instruments. Moreover, the self-reporting nature of the instruments and the fact that most of our participants were not direct victims of terrorists' attacks are further limitations to present study.

CONCLUSION

We concluded from present study that terrorism catastrophizing is not associated with hazardous drinking among students of Plateau State Polytechnic, Jos Campus. There are no sociodemographic characteristics that are predictive of terrorism catastrophizing and the level of hazardous drinking is more in the younger males who are Christians but none of these are significant. There may be need for further research in these areas to find out the impact of terrorism on the mental health and behavior.

ACKNOWLEDGEMENTS

Authors will like to thank Mr Gabriel Mwoltu of Netwealth Centre for Addiction Management and Psychological Medicine for assisting with the statistical work.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Isyaku A. Terrorism: A New Challenge to Nigeria's Stability in the 21st Century. *Terrorism.* 2013;31:12.
2. US Department of State; Legislative Requirements and Key terms [Cited 2017 Feb 9]. Available from <https://www.state.gov/documents/organization/65464.pdf>
3. Sullivan MJ, Bishop SR, Pivik J. The pain catastrophizing scale: development and validation. *Psychological assessment.* 1995;7(4):524.
4. Chaves JF, Brown JM. Spontaneous cognitive strategies for the control of clinical pain and stress. *Journal of behavioral medicine.* 1987;10(3):263-76.
5. Spanos NP, Radtke-Bodorik HL, Ferguson JD, Jones B. The effects of hypnotic susceptibility, suggestions for analgesia, and the utilization of cognitive strategies on the reduction of pain. *Journal of abnormal psychology.* 1979;88(3):282.
6. Eisenman DP, Glik D, Ong M, Zhou Q, Tseng CH, Long A, et al. Terrorism-related fear and avoidance behavior in a multiethnic urban population. *American journal of public health.* 2009;99(1):168-74.
7. DuPont RL, Spencer ED, DuPont CM. The anxiety cure: An eight-step program for getting well. John Wiley & Sons. 2003.
8. Malik F, Khawar R, Iftikhar R, Saeed S, Ilyas R. Development of terrorism impact scale: initial validity and reliability analyses. *Development.* 2010;8(2):91-118.
9. Hasin DS, Keyes KM, Hatzenbuehler ML, Aharonovich EA, Alderson D. Alcohol consumption and posttraumatic stress after exposure to terrorism: effects of proximity, loss, and psychiatric history. *American journal of public health.* 2007;97(12):2268-75.
10. Vlahov D, Galea S, Resnick H, Ahern J, Boscarino JA, Bucuvalas M, et al. Increased use of cigarettes, alcohol, and marijuana among Manhattan, New York, residents after the September 11th terrorist attacks. *American journal of epidemiology.* 2002;155(11):988-96.
11. Ayub N, Iqbal S. The fear of terrorism and its psychological impact in Pakistan. *Pakistan Business Review.* 145.
12. Nayab R, Kamal A. Terrorism catastrophizing, perceived stress and death anxiety among university students. *Pak J Soc Clin Psycho.* 2010;8(2):132-44.
13. Abiola T, Udofia O, Sheikh TL, Yusuf DA. Fear of future terrorism: Associated psychiatric burden. *Asi J Psych.* 2017.
14. Plateau State Polytechnic, Barkin Ladi, Nigeria [Internet]. [Plapoly.edu.ng](http://plapoly.edu.ng). 2017 [cited 10 February 2017]. Available from: <http://plapoly.edu.ng/index.html>
15. Araoye MO. Sample size determination: In: Araoye MO, editor. *Research Methodology with Statistics for health and social sciences.* Ilorin, Nigeria: Nathadex Publishers. 2003:115-9.
16. United Nations Office on Drugs and Crime. *Conducting School Surveys on Drug Abuse: Global Assessment Programme on Drug Abuse, Toolkit Module 3.* New York: United Nations. 2003.
17. Bush K, Kivlahan DR, McDonnell MB, Fihn SD. The AUDIT Alcohol Consumption Questions (AUDIT-C). *Arch Intern Med.* 1998;158:1789-95.
18. Sinclair SJ, LoCicero A. Fearing future terrorism: Development, validation, and psychometric testing of the Terrorism Catastrophizing Scale (TCS). *Traumatology.* 2007;13(4):75.
19. Okonoda KM, Audu MD, Obindo TJ, James BO. Prevalence of alcohol use disorders among medical and surgical in-patients at a teaching hospital in North Central Nigeria. *Jos J Med.* 2014;8(2):22-8.
20. Gureje O, Degenhardt L, Olley B, Uwakwe R, Udofia O, Wakil A, et al. A descriptive epidemiology of substance use and substance use disorders in Nigeria during the early 21st century. *Drug and Alcohol Dependence.* 2007;91(1):1-9.

Cite this article as: Okonoda KM, Obindo JT, Onifade PO, Makput DM, James BO. Terrorism catastrophising and hazardous alcohol use among students of a tertiary institution in Jos, Nigeria. *Int J Res Med Sci* 2017;5:1790-5.