

Association among Peer Substance Use, Religiosity and Substance Abuse in High School Students

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Abstract: This study examined the association among peer substance use, religiosity and substance abuse. The respondents of the study were 352 adolescents aged 13-18 years from Somolu, Lagos, Nigeria. The participants completed three validated instruments measuring, peer substance use, religiosity and substance abuse. The result indicated a partial mediation effect of religiosity in the relationship between peer substance use and substance abuse. Recommendations of the study highlighted the ameliorative capabilities of religiosity and its importance in the upbringing of a child.

Key words: Peer substance use, religiosity, substance abuse, adolescents, child

INTRODUCTION

Numerous countries in Africa have become major transit routes for various substances transported to Europe and North America, thereby increasing substance abuse among the local population of the countries concerned (UNODC, 2012). Health Statistics released by Nation Master (2009), ranked Nigeria 93rd from 106 nations examined for tobacco abuse in the world. The country was also placed 113th from 117 countries surveyed and tagged the state with the most access to substances among 138 countries examined. In the contention of Carr and McNulty (2006) poor neighborhoods with high crime rates increase the chances of substance abuse. Aina and Olorunshola (2008) declared that the factor responsible for the increase in substance abuse in Nigeria stems from its affluent portrayal in local films and videos in the country. Basically, substance abuse and psychiatric illness simultaneously occurs with relentless psychopathology and considerably higher health service costs (Lydecker *et al.*, 2010), hence, the need to remedy the situation before it becomes ingrained in the lives of adolescents. Imaginably, one of the greatest motives for substance abuse stems from an adolescent's social environment.

Contemporary studies has thus far shown substance abuse among adolescents a rising concern given that

teenagers spend much of their time with friends who ultimately shape their life course (Lee *et al.*, 2009). Peer substance use has been reliably publicized as a key proximal variable associated with adolescent substance abuse. The phenomenon adds to the risk of substance dependency because peers cultivate a support system that encourages the use of drugs give information and provide substances (Ferguson *et al.*, 2008). Following the above, LaBrie *et al.* (2009) asserted that proximity to referent groups is an important risk factor in adolescent substance abuse behavior. In the contention of Kobus (2003) peers are a major source of pressure on adolescent substance abusers altering even genetic inclination. Research has found adolescent drinking patterns similar to their peers. In this regard, peer influence on adolescent drinking has been described as encouraging heavy consumption practices.

Available literatures describe drug use as largely a socio-genic experience that depends on the social network of friends. Conversely, a number of scholars have argued that family and school dynamics may create controls that mediate peer influence by decreasing the chances of involvement in drug using subculture. In this regard religiosity becomes a necessary prerequisite because many people often belief that a relationship with God provides the necessary support in resisting the temptation of substance abuse. Within the context of adolescent substance abuse, religiosity may act as a

shock absorber against the negative pressures from peers. Furthermore, it provides a moral structure that aids the dislike of behavioral misconduct.

Religious involvement refers to an individual's behavioral attachment to a church or a religious institution. Essentially, religion fosters caring, integrity, honesty, responsibility and restraint among adolescents (Benson, 2007). In the contention of Van Dyke and Elias (2007), religious adolescents can receive the blessing or support from a supernatural power. Religion with the aim of maintaining social order is a beneficial force in adolescent development. In this vein, religious involvement reduces the destructive influence of peer substance use (French *et al.*, 2008). In a study conducted by Baier and Wright (2001) religiosity promoted the affiliation to orthodox institutions and nurtures the devotion to religious or moral beliefs that forbid deviant propensities hence reducing the influence of peer substance use on gullible adolescents. Therefore, when religious involvement is compatible with an adolescent's socially approved life and environment the commitment is likely to draw external assets and exert social controls to maintain and preserve the adolescent's behaviour (Cheung and Yeung, 2011). The findings from Rostosky *et al.* (2007) supports the hypothesis that religiosity is a protective element against substance abuse. Van Den Bree *et al.* (2004) on the other hand found religiosity a defensive factor in the progression to regular smoking.

Evidence from qualitative and quantitative research has maintained that at the individual level, religiosity was negatively associated with substance abuse and as such assisted in recuperation efforts. A popular maxim in the academia is that religiosity performs the role of social control by safeguarding adolescents from the involvement in deviant behaviors such as substance abuse (Chitwood *et al.*, 2008). In view of the above, religiosity may be described as a form of social control that enhances adolescent's conformance with societal values. Abundant evidence suggests that the involvement in religious activities reduces the risk of substance abuse. Walker *et al.* (2007) revealed religiosity as a shield in cases of substance abuse. Chu (2007) showed that adolescents who attend church or mosque at least once monthly may engage in smoking or drinking but are significantly less likely to use marijuana and cocaine, compared to those who infrequently or never attended church.

Given that the relationship among variables have been over researched by scholars, the current study extended earlier research by scrutinizing the mediating

effect of religiosity in the relationship between peer substance use and substance abuse. Available literatures based on theory indicate that religiosity might have an indirect effect through the relation with other variables linked to substance abuse (Wallace *et al.*, 2007; Walker *et al.*, 2007). Since, no study to the knowledge has examined the association among peer substance use religiosity and substance abuse in high school students. This study therefore filled a gap by responding to the following salient issues:

- What is the relationship between peer substance use, substance abuse and religiosity?
- To what extent is the relationship between peer substance use and substance abuse mediated by religiosity?

MATERIALS AND METHODS

Participants: The participants of the study comprised of three hundred and fifty two respondents between 13-18 years ($M = 15.48$, $SD = 1.53$) from randomly selected schools in Somolu local government area of Lagos, Nigeria. Of the number, 192 (54.5%) were males while 160 (45.5%) were females. The specific age bracket was chosen because emerging studies from other parts of the globe have highlighted the importance of the period in the life course of adolescents.

Procedure: Ethical approval for the study was obtained from the Lagos State Ministry of Education. Due to the problem associated with the listing of the target population, schools within Somolu Local Government were selected randomly from a list of schools, one school from the North and the other from the South. Four research assistants supported the researcher in the process of data collection. Pertinent issues like confidentiality and the voluntary nature of their participation were read to the respondents after meeting the research sample criteria. Data for the study was collected using the multi-stage cluster sampling technique. In each class sampled, information regarding the study was collected during a 2 h period. To ensure the proper filling of the scales, the research assistants read the questions aloud. However, despite the efforts of the research assistants in ensuring the proper filling of the instruments, 20 booklets were rendered void due to incomplete and inconsistent responses.

Measures: The participants completed a number of validated scales and demographic questions. They also provided details such as their age, gender, number of siblings and other relevant demographic information.

Peer substance use was measured with the Peer Substance Use sub-Scale (PSUS) of the Communities that Care Youth Survey (Hawkins *et al.*, 1992) a 4 item self-report measure scored on a 6 point scale ranging from 0-5. Examples of questions include: "In the past year, how many of your best friends have smoked cigarettes?"; "In the past year, how many of your best friends have tried beer, wine or hard liquor that their parents did not know about" and "In the past year, how many of your best friends have used marijuana". The scale assesses the rate to which an adolescent's peer uses substances. The scores range from 0-20. High scores indicate high peer substance use. In the opinion of Hawkins *et al.* (1992), the PSUS has acceptable internal consistency with a Cronbach alpha coefficient of 0.84. In the current study, the Cronbach alpha reliability obtained was 0.75.

Religiosity was measured with the Religious Background and Behaviors Questionnaire (RBB: Connors *et al.*, 1996) a 13 item Likert scale scored on an 8 point scale. Example of questions includes: "Which of the following best describes you at the present time"? "atheist", "agnostic", "unsure", "spiritual", "religious". "How often have you"? "thought about God", "prayed", "meditated", "attended worship service", "read-studied scriptures holy writings", "had direct experiences of God". The scale assessed the degree of religiosity of the respondents. The higher the score obtained in the RBB, the higher the level of religiosity. The RBB has acceptable internal consistency with a Cronbach alpha coefficient of 0.94. In the current study, the Cronbach alpha reliability obtained was 0.96. The measure has been widely used in several studies (Watlington and Murphy, 2006).

Substance abuse was measured with the Drug Abuse Screening test (Skinner, 1982), a 20 item self-report measure scored on a 2-point scale ranging from no to yes, "no" is scored as 0 and "yes" is scored as 1. Example of questions includes: "Have you used drugs other than those required for medical reasons"? "Have you abused prescription drugs"? "Do you abuse more than one drug at a time"? The scale was used in evaluating the degree to which substances are abused. The scores of DAST were obtained by reversing the tallies on items 4 and 5 before summing all the scores of the 20 item. The higher the score obtained in DAST, the higher the level of substance abuse. The internal consistency as reported by the authors was from 0.74-0.92. In the present study, the Cronbach alpha coefficient obtained was 0.86. The measure has been extensively used in numerous studies.

RESULTS

The data for all the instruments were numerically scored and quantified. Each of the quantitative scores

was analyzed with SPSS Version 20. Inferential, descriptive and regression analysis were also performed. Descriptive statistics were used to calculate means, Standard Deviation (SD) and range. The interpretation of correlation was based on Cohen (1988)'s guideline $r = 0.10-0.29$ small correlation, $r = 0.30-0.49$ medium correlation and $r = 0.50-1.0$ large correlation. Consistent with Baron and Kenny (1986), three conditions must subsist for the conduct of mediation analysis. First, the independent variable must be significantly correlated with the dependent variable without the mediator. Furthermore, the independent variable must be significantly related with the mediator. Lastly, the mediator must be significantly correlated with the dependent variable. Besides, the inclusion of the mediator into the regression model must reduce (partial mediation) or eliminate (full mediation) the initial effect of the independent variable on the dependent variable (Table 1).

A multiple regression analysis was conducted to examine the indirect effect of religiosity in the relationship between peer substance use and substance abuse among adolescents. Table 1 suggests a direct effect of peer substance use on substance abuse ($B = 0.769$, $SE = 0.072$, $t = 10.730$, $p < 0.05$) and religiosity ($B = -2.872$, $SE = 0.251$, $t = -11.457$, $p < 0.05$). The relationship between religiosity (mediator) and substance abuse (dependent variable) was also significant ($B = -0.107$, $SE = 0.014$, $t = -7.733$, $p < 0.05$). In the fourth regression step (Table 1) after fixing the effect of peer substance use the effect of substance abuse was significantly reduced. The result substantiates the notion of partial mediation. This is because the initial relationship between peer substance use and substance abuse was still significant ($B = 0.633$, $SE = 0.083$, $p < 0.05$) even after the fixing (Fig. 1).

The amount of mediation was accomplished by subtracting the unstandardized coefficient (B) in the fourth step of the multiple regression ($B = 0.633$) (when peer substance use was controlled for) from the first step ($B = 0.769$) (Direct effect of peer substance use on substance abuse). The result therefore was $0.769 - 0.633 = 0.136$. As noted by Baron and Kenny (1986), the mediation effect was tested using Sobel test. In conducting Sobel test, the unstandardized coefficients and standard errors of path (a), peer substance use and religiosity ($B = -2.872$, $SE = 0.251$) and path b, religiosity and substance abuse ($B = -0.107$, $SE = 0.014$) were scrutinized (Sobel, 1982). The Z-value for the indirect path was 6.36, $p < 0.05$, substantiating the mediation effect of religiosity in the relationship between peer substance use and substance abuse.

Table 1: Multiple regression of peer substance use and substance abuse mediated by religiosity

Steps	IV	DV	B	SE	β	t-values
1	Peer substance use	Substance abuse	0.769**	0.072	0.498	10.730
2	Peer substance use	Religiosity	-2.872**	0.251	-0.522	-11.457
3	Religiosity	Substance abuse	-0.107**	0.014	-0.382	-7.733
4	Peer substance use	Substance abuse	0.633*	0.083	0.410	7.630
	Religiosity		-0.047**	0.015	-0.168	-3.129

B = Unstandardized coefficient; β = Standardized coefficient; *p<0.05; **p<0.01

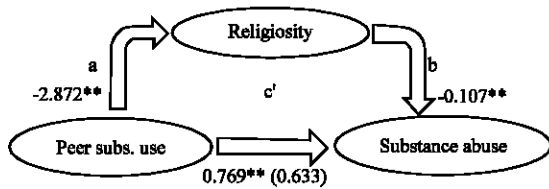


Fig. 1: The mediator role of religiosity in the relationship between peer substance use and substance abuse

DISCUSSION

The present study examined the association among peer substance use religiosity and substance abuse using a Nigerian sample of adolescents. The findings demonstrated a partial mediation of the relationship between peer substance use and substance abuse by religiosity. This finding highlighted the important role played by religiosity given the influence of peer substance use on substance abuse by revealing the ameliorative role of religiosity among the sample of the study. Consistent with this result, Henry (2008) pin pointed peer influence as the central socialization unit with greater influence than the school and the family. The current findings in the light of the above revelation is consistent with previous researches (Cheung and Yeung, 2011; Van Den Bree *et al.*, 2004) indicating that peers become the avenue of negative socialization to adolescents with low religious value. It may be that friendships brings youths in contact with those who share their attitudes and behavior with respect to substance abuse, thereby, exerting reinforcement for their behavior. It may also be that adolescents who are interested in experimenting with drug use make friends with those who already use them or are interested in experimenting with their use (Simons-Morton *et al.*, 2004).

On the other hand, religiosity as a protective behavior reduces the possibility of progressing to addictive behavior for highly religious adolescents (Van Den Bree *et al.*, 2004). In this case, the importance of social religiosity (frequency of attendance) and perceived religious support from family and peers highlights how an adolescent’s engagement with others may encourage healthy decision-making related to substance use (Wallace *et al.*, 2007). For example, these relationships

may provide the peer and adult modeling necessary for adolescents to uphold their health beliefs and health-related goals. Thus, developing and establishing socio-religious support systems may help to remind youths that they are not alone in positive developmental achievement and in turn may help reduce substance consumption. Teaching a child religious values when they are young implies that they will have the greater chance of overcoming substance abuse occasioned by peer substance use or peer pressure. Parents are therefore enjoined to inculcate religious values into their adolescence. Like the saying goes, teach a child the way he should go and when he grows up he will not depart from it.

This study is important because research is essential in the understanding of previously hypothesized factors in relation to substance abuse and for the development of empirically grounded preventive mediations that draws on culturally relevant issues. The association between peer substance use and substance abuse has significant implications for prevention and mediation agenda aimed at the comprehension of the general image of adolescent mental health (Fleming *et al.*, 2008).

CONCLUSION

The study suggested the partial mediation effect of religiosity in the relationship between peer substance use and substance abuse. The finding therefore revealed that religiously inclined adolescents maybe immune from substance abuse because religiosity helps adolescents identify substance abuse as a form of deviant behaviour, thereby helping them overcome its disastrous consequences. This study should encourage a continued effort toward decoupling the different dimensions of religiosity when studying substance abuse among young adults. It also offers initial evidence of the importance of religiosity as a protective factor against substance abuse. Nonetheless, the result should be interpreted with caution as the present study may be limited because the cross-sectional design confines the capability to make causal deductions. Second, several background variables were not assessed in the study, however effort were made to contain their limitations hence giving credence to the

findings of the study. In view of the foregoing, later researchers are enjoined to highlight the importance of religiosity particularly in the upbringing of a child in their writings.

REFERENCES

- Aina, O.F. and D.A. Olorunshola, 2008. Alcohol and substance use portrayals in Nigerian video tapes: An analysis of 479 films and implications for public drug education. *Int. Q. Commun. Health Educ.*, 28: 63-71.
- Baier, C.J. and R.E. Wright, 2001. If you love me, keep my commandments: A meta-analysis of the effect of religion on crime. *J. Res. Crime Delinquency*, 38: 3-21.
- Baron, R.M. and D.A. Kenny, 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *J. Pers. Social Psychol.*, 51: 1173-1182.
- Benson, P.L., 2007. Developmental Assets: An Overview of Theory, Research and Practice. In: *Approaches to Positive Youth Development*, Sibereisen, R.K. and R.M. Lerner (Eds.). Sage, London, pp: 33-58.
- Carr, A. and M. McNulty, 2006. *The Handbook of Adult Clinical Psychology: An Evidence Based Practice Approach*. Routledge, New York, pp: 673-719.
- Cheung, C.K. and J.W.K. Yeung, 2011. Meta-analysis of relationships between religiosity and constructive and destructive behaviors among adolescents. *Children Youth Ser. Rev.*, 33: 376-385.
- Chitwood, D.D., M.L. Weiss and C.G. Leukefeld, 2008. A systematic review of recent literature on religiosity and substance use. *J. Drug Issues*, 38: 653-688.
- Chu, D.C., 2007. Religiosity and desistance from drug use. *Crim. J. Behav.*, 34: 661-679.
- Cohen, J., 1988. *Statistical Power Analysis for Behavioural Sciences*. Erlbaum, Hillsdale, NJ.
- Connors, G., J.S. Tonigan and W.R. Miller, 1996. The religious background and behavior instrument: Psychometric and normed findings. *Psychol. Addictive Behav.*, 10: 90-96.
- Ferguson, D.M., J.M. Boden and L.J. Horwood, 2008. The developmental antecedents of illicit drug use: Evidence from a 25 year longitudinal study. *Drug Alcohol Dependence*, 96: 165-177.
- Fleming, C.B., W.A. Mason, J.J. Mazza, R.D. Abbott and R.F. Catalano, 2008. Latent growth modeling of the relationship between depressive symptoms and substance use during adolescence. *Psychol. Addictive Behav.*, 22: 186-197.
- French, D.C., N., Eisenberg, J. Vaughan, U. Purwono and T.A. Suryanti, 2008. Religious involvement and the social competence and adjustment of Indonesia Muslim adolescents. *Dev. Psychol.*, 44: 597-611.
- Hawkins, J.D., R.F. Catalano and J.Y. Miller, 1992. Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychol. Bull.*, 112: 64-105.
- Henry, K.L., 2008. Low pro-social attachment, involvement with drug-using peers and adolescent drug use: A longitudinal examination of mediational mechanisms. *Psychol. Addictive Behav.*, 22: 302-308.
- Kobus, K., 2003. Peers and adolescent smoking. *Addiction*, 98: 37-55.
- LaBrie, J.W., J. Cail, J.F. Hummer and A. Lac, 2009. What men want: The role of reflective opposite-sex normative preferences in alcohol use among college women. *Psychol. Addictive Behav.*, 23: 157-162.
- Lee, J.P., R.S. Battle, R. Lipton and B. Soller, 2009. Smoking: Use of cigarettes, cigars and blunts among Southeast Asian American youth and young adults. *Health Educ. Res.*, 25: 83-96.
- Lydecker, K.P., S.R. Tate, K.M. Cummins, J. McQuaid, E. Granholm and S.A. Brown, 2010. Clinical outcomes of an integrated treatment for depression and substance use disorders. *Psychol. Addictive Behav.*, 24: 453-465.
- Nation Master, 2009. Health statistics. <http://www.nationmaster.com/>.
- Rostosky, S.S., F. Danner and E.D. Riggle, 2007. Is religiosity a protective factor against substance use in young adulthood? Only if you're straight. *J. Adolescent Health*, 40: 440-447.
- Simons-Morton, B., R. Chen, L. Abroms and D.L. Haynie, 2004. Latent growth curve analyses of peer and parent influences on smoking stage progression among early adolescents. *Health Psychol.*, 23: 612-621.
- Skinner, H.A., 1982. Drug abuse screening test. *Addictive Behav.*, 7: 363-371.
- Sobel, M.E., 1982. Asymptotic confidence intervals for indirect effects in structural equation models. *Sociol. Methodol.*, 13: 290-312.
- UNODC, 2012. The cannabis problem among prisoners in Lagos. United Nations Office of Drug and Crime. http://www.unodc.org/unodc/en/data-and-analysis/bulletin/bulletin_1971-01-01_2_page003.html.
- Van Den Bree, M.B.M., M. Whitmer and W.B. Pickworth, 2004. Predictors of smoking development in a population based sample of adolescents: A prospective study. *J. Adolescent Health*, 35: 172-181.

- Van Dyke, C.J. and M.J. Elias, 2007. How forgiveness, purpose and religiosity are related to the mental health and well-being of youth: A review of the literature. *Mental Health Religion Culture*, 10: 395-415.
- Walker, C., M.G. Ainette, T.A. Wills and D. Mendoza, 2007. Religiosity and substance use: Test of an indirect-effect model in early and middle adolescence. *Psychol. Addictive Behav.*, 21: 84-96.
- Wallace, J.M., R. Yamaguchi, J.G. Bachman, P.M. O'Malley, J.E. Schulenberg and L.D. Johnson, 2007. Religiosity and adolescent substance use: The role of individual and contextual influences. *Social Problems*, 54: 308-327.
- Watlington, C.G. and C.M. Murphy, 2006. The roles of religion and spirituality among African American survivors of domestic violence. *J. Clin. Psychol.*, 62: 837-857.