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Interpersonal Factors as Correlates of Cigarette Smoking Behaviour among undergraduates in a Nigerian University

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Abstract

This investigation arose out of the concern that despite recognition given to cigarette smoking as a major global contributor to hazardous deaths, more young persons including undergraduate students are becoming involved with this practice that is detrimental to health. Without an extensive understanding of factors that causes and mediates the preponderance of smoking behavior, developing appropriate and effective interventions to prevent and manage its occurrences would be futile. Hence, this study employed the descriptive survey design to investigate the influence of some interpersonal factors (gender, peer influence, neighborhood influence and media) on the cigarette smoking behaviour of undergraduates in the University of Ibadan, Nigeria. Using stratified random sampling, four hundred currently registered undergraduates were selected from five faculties. Four valid and standardized instruments were used to collect data in this study. Multiple regression analysis is the major statistical tool in this study.Peer influence, mass media, gender and neighbourhood influence reported collective and relative contributions to the prediction of smoking behaviour of the participants. The four variables accounted for 42% of the total variance of smoking behaviour of the participants with peer influence being the most potent. It is recommended that school-based programmes such as orientation and seminars should emphasize anti-smoking information behaviour. Method of receiving anti-smoking information such as the television, radio, magazines and school-based learning should be

enhanced..

Key words: Gender, Peer influence, Neighborhood influence, Media, Smoking

Tobacco, which describes the major composite constituent of cigarette, has been reported to be a major global contributor to deaths from many chronic and deadly diseases, such as heart disease, stroke, chronic obstructive pulmonary disease, peripheral vascular disease, periodontal disease, pneumonia, and many cancers (Wald & Hackshaw, 1996; Ockene & Miller, 1997). Described as the second most preventable cause of death next to HIV/AIDS, it has been officially recognized as a substance use disorder that has epidemiological, etiological, phenomenological and pathophysiological, outcome domains (American Psychiatric Association, 1996). In this light, cigarette smoking has no positive characterization associated with it, and is presume to be highly detrimental to human existence and sustainability. Little wonder it has been seen as a major public health problem that causes millions of premature deaths and huge economic losses globally every year, but often disregarded as a social menace.

Overall, the mortality and morbidity from tobacco use incurs an economic cost of US$ 200 billion annually (Johnston, O'Malley & Bachman, 2002). In addition the Global Youth Tobacco Survey (GYTS) conducted in 131 countries which surveyed 750,000 students of ages 13–15 years found that approximately 9% of students were current smokers while 11% currently used tobacco products other than cigarettes (Rigotti, Lee & Wechsler, 2000). Unfortunately, Nigeria falls among these developing countries with the growing problem. According to, Johnston, O'Malley & Bachman (2001), the preponderance of smoking assume prominence from the adolescent age and crystallizes somewhere in adulthood. The implication is that more young persons including undergraduate students are becoming involved with this practice that is detrimental to health.

Prior attempts (Horwitz, Hindi-Alexander & Wagner, 1985; Gilpin, White, Farkas & Pierce, 1999) to curb the rate at which cigarette

smoking is spreading, specifically among the youths have yielded little or no result. This is because the problem still persists and increases with changing times. It should be noted that students in addition to Tobacco industrial exploitation and liberalization have attributed to the use of tobacco products to many factors. These are the perceptions that smoking enhanced one's image, relieved boredom and helped in easing tension (Nichter, Nichter & Van Sickle, 2004. These factors reinforces the smoking behaviour even in the midst of anti-policies and bans. In Pakistan, a survey of students' revealed similar factors like smoking by peers, family members and spending leisure time outside home as contributing to cigarette smoking (Rozi, Akhtar, Ali & Khan, 2005). These standards culminate in the prevalence of undefined smoking behavioural practice among students.

The consequences of cigarette smoking though often slow, are grave and impacts negatively and heavily on the mental, psychological, physical and spiritual health of the individual. Unarguably, tobacco use and especially cigarette smoking is a major public health issue among students not only in developed countries but also among developing countries. Therefore, it should be a public health priority to behavioural practices of students contributing to smoking among college students in order to develop appropriate and effective interventions to prevent and manage its occurrences. Hence, this study investigates the influence of some interpersonal factors (gender, peer influence, neighborhood influence and media) on the cigarette smoking behaviours of undergraduates.

For instance, gender refers to those distinguishing features that are socially constructed. The concept configures both the material and symbolic positions that men and women occupy in the social hierarchy, and shapes the experiences that condition their lives. There have been disturbing trends whereby smoking rates among teenage girls exceeded smoking rates among teenage boys for the first time (Greaves, Hankivsky & Amaratunga, *2000*). Among girls aged 15 to 19, 25.1% reported being daily smokers in 1998–1999 and 26% in 2001, as compared with 18.5% and 20% respectively for boys in this

age group (Statistics Canada, 2000). Girls also started smoking at a younger age, 41% of girls aged 15 to 17 reporting having smoked their first cigarette before age 13 as compared with 29% of boys(Greaves, Hankivsky & Amaratunga, 2000). The author also reported that in the last decade, daily consumption increased for girls aged 15 to 19 from 11.5 cigarettes per day in 1990 to 12.7 cigarettes per day in 1999; this has decreased to 10.8 in 2001. Notably there are studies that found males to smoke cigarettes more than females (Padgett, Selwyn and Kelde, (1998, Health, Canada, 2001) however, discrepant studies such as Etter, Prokhorov and Perneger (2002), reported that there was no gender difference in the distribution of smokers by stage of change.

Peers and peer relationship have been cited frequently as major factors involved in cigarette use (McPherson et al. 2001; Alexander, Piazza, Mekos & Valente, 2001; Omigbodun & Babalola 2004; Flay, Hu, & Richardson, 1998). There is a substantial body of research suggesting that the lines of friendship are often characterized by smoking behaviour, where smokers befriend smokers and non-smokers befriend non-smoker (Brook, Pahl, & Ning, 2006; White, Violette, Metzger & Stouthamer-Loeber, 2007; Livaudais, Napoles-Springer, Stewart, & Kaplan, 2007; Chen, Stanton, Fang, Li, Lin, Zhang, 2006) . Non-smoker who affiliate with smokers have been found to be at greater likelyhood for transitioning to tobacco use than youth without smoking friends (Urberg, Degirmencioglu, & Pilgrim, 1997). In addition, transitions to increased levels of smoking have been linked to friends' encouragement and approval (Urberg, 1992) and the message conveyed that smoking is an enjoyable activity that promotes popularity (Mcalister, Smith-Lovin, & Cook, 1984).

The Neighbourhood influence is another factor in this study. For instance, Adeyemo (2007) noted that neighbourhood impacts significantly on one person's behaviour. Theories of neighborhood influences as proposed by (Coleman, 1988) clearly demonstrated the overwhelming influence of neighborhood on the gamut of adolescent behaviour. It is also likely that the neighborhood's ethnic composition influences social interactions, which in turn can affect the transmission

of health-related information and perceived social norms toward smoking. Living in an ethnic enclave may also strengthen community-level social support or cohesiveness. These influences are brought about through mediating paths such as local organizations, informal social control, residents' consensus on conventional norms, deviant peer groups, social network and parental characteristics (Crum, 1996). Perceived neighborhood social cohesion (Sampson, Raudenbush, Earls, 1997), which is could be viewed as the extent of connectedness and solidarity in a group, can affect smoking behaviors through social norms, as well as by being protective against depression or buffering against stress, both of which have been linked to smoking (Tsoh, Lam, Delucchi & Hall. 2003; Kim, Son & Nam, 2005; Delva, Tellez & Finlayson, 2006). All these show that residing in a disadvantageous neighbourhood increased the likelihood that adolescents could be introduced to all forms of socially unaccepted behavior (conducts.)

Also, exposure to tobacco-related media could be associated with increased current and former smoking in both early and middle adolescence. Despite some evidence that antismoking campaigns are effective (Farrelly, Davis, Haviland, Messeri & Healton, 2005), not all have uniformly achieved their desired results (Farrelly, Pechacek, Thomas & Nelson, 2008; Wakefield, Cameron, Inglis, Letcher & Durkin, 2005). This could be because tobacco issues have become increasingly newsworthy as organized public health efforts to reduce tobacco use have grown and tobacco issues have become more politicized. Some research has found that stakeholders who seek to shape media coverage in an effort to guide or oppose social change can instigate news coverage of an issue (Shoemaker & Rees, 1991). Exposure to pro-tobacco marketing and media more than doubles the odds that a child will start smoking (Primack, Gold, Switzer, Hobbs, Land, Fine, 2006). A cross-sectional study of US youth found the more smoking in the movies a teen sees, the higher the risk of trying cigarettes. This is true regardless of race/ ethnicity or place of residence (Sargent, Beach, Adachi-Mejia, Gibson, Titus-Ernstoff, Carusi, Swain, Heatherton & Dalton, 2005). This is also noticeable among the Nigerian youths..

The purposes of the present study were to examine the combine and relative effect of gender, peers, neighbourhood, and media influences on cigarette smoking behaviour of undergraduates.

Research questions

1. Are there any significant relationship among gender, peer , neighbourhood and media on the cigarette smoking behaviour of undergraduates?
2. What is the joint contribution of gender, peer, neighbourhood and media to cigarette smoking behaviour of undergraduates?
3. What is the relative contribution of gender, peer , neighbourhood and media influenc on the cigarette smoking behaviour of undergraduates?

Method

The study adopted the descriptive survey design.

Participants

The participants in the study were four hundred undergraduates from the university of Ibadan, Oyo state, Nigeria. The participants were selected via stratified random sampling from five faculties within the university of Ibadan campus. These faculties include Arts, Social Science, Education and Law. The participants consist of 238 males and 162 females at different levels (year 1-5) of university education. The age of the participants ranged from 18 to 31 with a mean age of 27.71years and a standard deviation of 5.46.

Instruments

Four valid and standardized instruments were used to collect data in this study.

Peer influence scale (PIS)

The Peer Influence Scale is a sub scale of Learner's Aggressive Questionnaire developed by Velistiwe (2005). Peer Influence only contains 14 items out of the total of 83 items of the original scale.

These 14 items structured as 1- No (N). 2= Undecided (U), and 3= Yes (Y). pilot testing was carried out on the 14 items of this subscale and yielded 0.74 alpha coefficient value while the original scale has 0.73 Cronbach Alpha Coefficient.

Neighbourhood influence scale (NIS)

The neighbourhood influence scale is also a subscale of Learner's Agreesive Questionnaire developed by Velisiwe (2005). 10 items under neighbourhood influence was adapted. This scale has a response format structured as (SD-strongly disagree, D-disagree, U-undecided, A-agree, SA- strongly agree). 50 (fifty) respondents were used outside the targeted population for pilot testing on the 10 items of neighbourhood influence. This subscale returns 0.55 alpha coefficient value while the original scale has 0.73 Cronbach Alpha Coefficient.

Media scale

A self developed scale was used as a measure for media influence. The self developed instrument includes five items with response options ranging from 1 (strongly disagree) to 5 (strongly agree). A typical item in the scale is "Watching smoking on television is very important to me." The scale demonstrates good face validity, construct validity, and criterion-related validity. In addition, the scale is reliable with Cronbach alpha of scale range from 0.79 to 0.93 in prior studies and a two week test re-test reliability of 0.76.

Smoking Behaviour Scale

The scale used as a measure of smoking behaviour is a self developed instrument. The scale consists of ten (10) items, organized in both positive and negative dimension. The scale is designed in a five point likert format with response ranging from 1 Agree to 5 Disagree. To avoid the effects of random responses some questions were scored inversely. Inversely scored items were 7, 8, 10. It has test-retest reliability coefficient of 0.71

Procedure for data collection

The researcher administered and collected the completed questionnaires from the participants in this study. The participants were informed of the confidentiality of data provided and the required genuineness. They were guided on how to fill the questionnaire and the completed questionnaire collected afterwards. The entire process was completed within a period of three weeks.

Data Analysis

Multiple regression analysis was used to determine the combine and relative effects of the independent variables on the dependent variable.

Results

The results revealed that all the participants were aware of smoking and have high knowledge as well as highly knowledge on the problems associated with smoking. A total of 164 (41%) of the 400 sampled participants in this study have negative attitudes towards smoking practices, 42 (10.5%) were not sure, while the rest indicated positive attitudes. Also, 118 (29.5%) of the 200 sampled participants in this study engage in smoking practices, while the rest do not. From the 118 smokers, 14 (11%) were females and the rest males. Furthermore, out of the 118 smokers, 61 (51.7%) have had unsuccessful attempts to stop smoking in the past.

Research question 1 Are there any significant relationship among gender, peer , neighbourhood and media on the cigarette smoking behaviour of undergraduates?

Table.1 Descriptive Statistics and Correlations among Variables.

Variables	N	X	SD	1	2	3	4	5	6
Smoking behaviour	400	39	I2.02	1.00					
Peer influence	400	57	8.91	.438	1.00				
Neighbourhood influence	400	38	7.26	.117	.237	1.00			
Gender	400	1.42	1.7	.268	.165	.203	1.00		
Media influence	400	18	11.4	.371	.224	.102	.318	1.00	

The correlation above indicates the means (N), standard deviations (SD) and degree of relationships between the independent variables investigated and the criterion measure. From the table, the most potent relationships were observed between peer influence and smoking behavior (r=.438), media influence and smoking behavior (r=.371) and that of media influence and gender(r=.318). The relationship between neighbourhood influence and smoking behaviour (r=.117) was observed to be the weakest. However, it is observed generally that there were significant positive relationships among all the variables.

Research question 2

1. What is the joint contribution of gender, peer influence, neighbourhood influence and media influence on the cigarette smoking behaviour of undergraduates?

Table 2. Summary of Regression Analysis between Predictor Variables and Smoking behaviour

PREDICTOR S	R	R^2	Adj R^2	F-RATIO	Beta	t	Sig
Combined effect	.65	.42	.41	59.67			
Peer influence					.351	3.477	.004
Neighbourhood influence					.111	1.090	.081
Mass media					.114	2.075	.007
Gender					.161	2.041	.025

From the results presented in table 2, the independent variables collectively yielded a coefficient of multiple regressions (R) of 0.65 and an R2 of 0.42 and an adjusted R2 of 0.41. This shows that 42% of the total variance of smoking behaviour by the participants is accounted for by the combination of the four predictive variables studied. The table as well indicates that the analysis of variance of multiple regression data produced an F- ratio value significant at 0.05

level (F = 59.67; < .05). The findings thus confirm that the four variables are significant predictors of the criterion measure and that this prediction could not be by chance.

Research question 3

What is the relative contribution of gender, peer influence, neighbourhood influence and media influence on the cigarette smoking behaviour of undergraduates?

From the results displayed in table 2 above, each of the independent variables made significant relative contributions to the prediction of the criterion measure (smoking behaviour) in varying weights, with the exception of neighbourhood influence. The results indicated that the following beta weights represent the predictive strength of the independent variables observed in accordance to the most effective to the least; Peer influence, B = .351, t = 3.477, P< 0.05; mass media, B = .114, t = 2.075, P< 0.05; gender, B =-.161 t = 2.041, P<0.05; neighbourhood influence, B =-.111, t = 1.090, P> 0.05).

Discussion

The multiple regression analysis in table 2 shows that gender, peer influence, neighbourhood and media influence could predict cigarette smoking behaviour of undergraduates. The magnitude of this relationship in predicting cigarette smoking behaviour among the participants is reflected in the values of coefficient of multiple R2 .42 and an adjusted Multiple R2 .41 as shown in table 2. Thus, it can be said that 41% of the total variance in the cigarette smoking behaviour of the participants is accounted for by the combination of gender, peer influence, neighbourhood and media influence. Hence, the other 59% variation of smoking behaviour could be attributed to factors not included in this study. The F-ratio value of 59.67 significant at 0.05 further confirmed that the predictive capacity of the independent variables could not have be attributed to chance factor.

With regard to the extent to which each of the four independent variables contributes to the prediction, as postulated in hypothesis 2, it

could be ascertained that peer influence is the most potent predictor of smoking behaviour among the other factors. This finding is corroborated by previous studies (McPherson et al. 2001; Alexander, Piazza, Mekos & Valente, 2001; Omigbodun & Babalola 2004; Flay, Hu, & Richardson, 1998). These studies suggest that pressures to smoke cigarette are predominantly normative and not direct or coercive in nature. Possible explanations for the current findings could be taken from prior studies. The researchers further explained that rather than peers experience, direct peer pressure to smoke, teenagers report that they experience an internal self-pressure to smoke if others around them do smoke. In this vein, the decision to engage in cigarette smoking has been attempted by youths to avoid potential exclusion by peers and to gain social approval. In addition, there is substantial body of research suggesting that the lines of friendship are often characterized by smoking behaviour, where smokers befriend smokers and non-smokers befriend non-smoker. Further, transitions to increased levels of smoking have been linked to friends' encouragement, approval and the message conveyed that smoking is an enjoyable activity that promotes popularity (Mcalister et al, 1984). Therefore, to facilitate social interactions and to achieve a sense of autonomy or independence, individuals are readily consigned to smoking behaviours to be like their peers.

Media influence also is the second significant predictor of smoking behaviour. The finding is in consonance with prior studies (Primack, Gold, Switzer, Hobbs, Land, Fine, 2006; Sargent, et al, 2005;Shavel, Niaura & Abram, (2001; 2004; Kazdin &Nock, 2003) .Clearly, exposure to cigarette on advertising appears to represent a potentially significant influence on adolescent smoking, particularly in never smoking adolescent (Kazdin &Nock, 2003). In the work of Shavel, Niaura & Abram, (2001, 2004). It was examined how individual difference in the development maturity of the self-concept may be associated with adolescent response to cigarette advertising. The work capitalizes on the findings suggesting that the images perceived by the adolescents in cigarette advertisement are critical to understanding their persuasive efficacy among adolescent. It also builds on less

formal speculation that the adolescent 'developing self-concept is a psychological mechanism through which cigarette advertising may exert an effect on adolescent. This stands as a possible explanation for the significant effect of the media on smoking behaviour.

Gender is the least significant predictor of cigarette smoking behaviour among undergraduates. This finding is supported by prior studies (Greaves, Hankivsky & Amaratunga, 2000; Padgett, Selwyn and Kelde,1998; Health, Canada, 2001). The result comes as no surprise. A pictorial application usually placed on cigarette smoking is that it is a male thing. Notably, gender configures both the material and symbolic positions that men and women occupy in the social hierarchy, and shapes the experiences that condition their lives. Specifically, Padgett, Selwyn and Kelde, (1998) adds that boys are often expected to engage in manly activities, such as smoking. For this reason, although family and friends influence boys, it is the overall perception or acceptance of smoking by peers that sets them apart from the girls who smoke. On the other hand, girls who smoke may not see themselves as smokers in a "cultural identity" sense but look to more personal models, such as a sister or friend. In addition, culturally, a woman smoking sort of depict a behaviour abhorred, considered abominable and a taboo. In other way, female smokers are often associated with promiscuity, thus discouraging its emergence. In the light of this, it is no surprise that men are more involved in cigarette smoking than women.

Neighbourhood influence is not a significant predictor of smoking behaviour in this study The current finding is therefore in contradiction of existing literature (Crum, 1996; Sampson, Raudenbush, Earls, 1997; Tsoh, Lam, Delucchi & Hall. 2003; Kim, Son & Nam, 2005; Delva, Tellez & Finlayson, 2006). Possible explanation may be as a result of socio-cultural implications as observed within the area of study. Smoking is widely considered a bad behaviour and so neighbourhood with intensity for smoking may be tagged as such. Hence, the area of study may have reduced or minimized the effect on cigarette smoking behaviour.

Conclusion

This study is an attempt to investigate the influence of some socio-psychological factors on the smoking behaviour of in-school adolescents. The finding of this study revealed that gender, peer and media influence are significant predictors of smoking behaviour among students. It is believed that appropriate understanding and further exploration of this knowledge and attitude towards these phenomena may prove vital in arresting the growing scourge of smoking among students. Creating a tobacco-free culture will depend on developing an environment that encourages abstinence and acquisition of abstinence skills accessible to diverse populations. The focus of school-based programmes should be on developing interventions to target individuals and their peers. Further, to improve on the present haphazard method of receiving anti-smoking information such as the television, radio and magazines, school-based learning should be enhanced so that information will be available to all students.

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