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Student Nurses' Exposure to Passive Smoking at a Community in Eastern Nigeria

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Abstract:

The prevalence of passive smoking is becoming a concern. The aim of this study is to determine the proportion of respondents that are passive smokers.
A descriptive study was conducted among student nurses living at a community in Eastern Nigeria. A total of 160 student Nurses were selected using accidental sampling method. The instrument for data collection was a self-structured questionnaire. The study protocol was reviewed and approved before the actual study. A total of 160 student nurses completed the questionnaire while all (100%) administered copies were suitable for analysis. Descriptive statistic was used to analyze data.

Findings from the study revealed that 62% of the respondents live around passive smokers, 43.1% inhale smoke from cigarette while 70% were of the opinion that passive smoking aggravates health status of patients.

In conclusion, smoking ban should be effectively enforced by the government and its agencies in order to maintain a healthy society and nation.

Keywords
Student Nurses, Passive Smoking, Community, Eastern Nigeria

1. Introduction

According to Victoria State Government [1] passive smoking means breathing in other people's tobacco smoke. Exhaled smoke is called exhaled mainstream smoke. The smoke drifting from a lit cigarette is called sidestream smoke. The combination of mainstream and sidestream smoke is called second-hand smoke (SHS) or environmental tobacco smoke (ETS). Second-hand smoke is a serious health risk for both those who smoke and those who do not. Children are particularly at risk of serious health effects from second-hand smoke. Newcombo [2] reported in his study of a group of married people that being married to a smoker or living around and with smokers meant that the group under study were exposed to secondhand smoke (SHS). It is difficult to distinguish exposed persons from non-exposed.

1.1. Understanding passive smoking

Zhiwen, Jianmeng, Rongwei, Le, Xiaoying and Aigwo [3] claimed that passive smoking during pregnancy was associated with an increased risk for cleft lip and palate in offspring. Andreas [4] recorded the examination of the relationship between passive smoking and cardiovascular disease. A study [4] suggested that here is a great increase in the risk of developing cardiac syndrome or chronic lifetime coronary events associated with exposure to Environmental Tobacco Smoke with a reduction in the incidence of myocardial infarction in the absence of passive smoking. Andreas [4] added that the mechanisms contributing to the passive smoking-induced increased cardiovascular disease risk are complex and include endothelial dysfunction, lipoprotein modification, increased inflammation and platelet activation. The vascular effects of passive smoking are well known but its effects on the heart have not been reviewed despite that recently several studies have shown that passive smoking exposures can result in cardiac remodeling and compromised cardiac function. In addition, Andreas [4] recorded that passive smoking exposure affects air way hyper responsiveness and is associated with changes in lung development and morphology and heart development. However, passive smoking-induced effects are not universally supported while we lack a complete understanding of passive smoking effects on pulmonary function as well as its mechanism of action. Furthermore, some studies have reported a delay in reaching intellectual maturation by non smokers who are exposed to smoke from active smokers. Others have not been able to show intellectual impairment in non smokers [4].

1.2. Health Consequences of Passive Smoking

Kliegman, Maecdante, Jenson and Behrman [5] documented that cocaine exposed and opiate-exposed individuals have their co-existing high risk factors for cognitive deficits. Exposed ones believe that they can perform better than the non-exposed persons. This situation may set the individual up for failure and contribute to increased rates of depression, anxiety, and low self esteem. The parents more accepting attitudes towards alcohol and drug seem to increase the change that their children will use substance during adolescence. Zhang, Shu, Yang,

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Hong, Xiang, Guo, Li and Zhong [6] stated that prevalence of stroke also increase with increasing duration of husbands' smoking. This involves both ischaemic and haemorhagic stroke. Even though non smokers would less smoke than active smokers, the effect of passive smoking on their heart disease risk is as high as 1/3 the effect of active smoking. In as little as 30 minutes, chemicals in tobacco smoke change the actions of blood vessels in non smokers, to a similar extent found in smokers. This effect and other changes to the blood chemistry help to build up fatty deposits in blood vessels, narrow the blood vessels, cause blood clots and inflammation, which may eventually lead to heart attack.

Glantz and Parmley [7] posited that non smokers appear to be sensitive to low doses of the compounds emitted in the smoke, perhaps because of physiological adaptation smokers undergo as a result of long term exposure to the toxins. Kestinogbu, Cimrin and Aksakogbu [8] concluded that the risk factors to the health consequences of passive smoking are: age, gender, crowded living conditions, occupation, bad environmental conditions, low income and perceived economic status. Densky [9] added that smoking also affects the health of the people around you, friends, children, family, co-workers and even people who just happen to be nearby may suffer health problems from passive smoking.

2. Method

The study adopted descriptive cross-sectional design. Student nurses of the Department of Nursing Science, Faculty of Health Sciences and Technology, Nnamdi Azikiwe University, Anambra State, Nigeria who live in a community in Eastern Nigeria were respondents in the study. Total student nurses' population was 200 during the 2009/2010 academic session. The study applied accidental sampling technique to select 160 (80%) study participants. A researcher-prepared questionnaire was used as instrument for data collection. Instrument was tested for validity and reliability. Participation was voluntary while the researcher explained the content of the questionnaire as well as the purpose of the study during the assessment process including an assurance of anonymity. Questionnaires were administered to participants who completed and returned all (100%) without any loses. Descriptive data analyses was done and presented in tables and charts.

3. RESULTS

Table 1. Respondents' socio-demographics data

Demographic data	Options	Student nurses (%) n = 160
Age	< 20 years	21 (13.1)
	21-30 years	123 (76.9)
	31-40 years	6 (3.8)
	> 40 years	10 (6.2)
	Total	**160 (100)**
Gender	Male	32 (20%)
	Female	128 (80%)
	Total	**160 (100)**
Year of study	Second	41 (25.6)
	Third	27 (16.9)
	Fourth	27 (16.9)
	Fifth	64 (40.6)
	Total	**160 (100)**
Marital status	Single	140(87.534)
	Married	34 (12.5)
	Separated	0 (0.0)
	Divorced	0 (0.0)
	Total	**160 (100)**

Table 1 above shows that most, 123 (76.9%) of the respondents were between 21-30 years, only 32 (20%) are males, the proportion of respondents from third year and fourth year, 27 (16.9%), while 65 (40.6%) are in their final year (5th) year of the academic programme. A significant proportion, 140 (87.5%), are single.

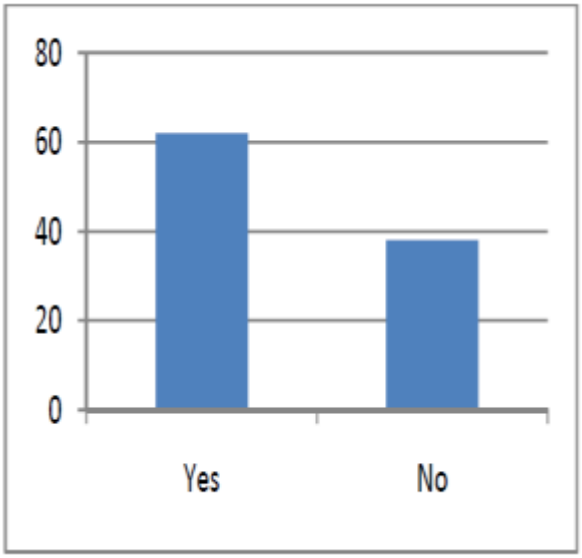

Fig 1 Showing respondents who live or do not live around active smokers

Fig 1 above shows that majority, 62%, of the respondents live around active smokers while 38% do not.

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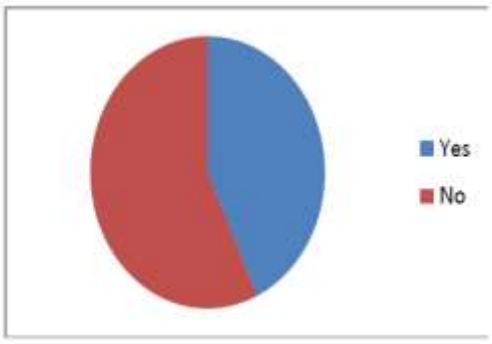

Fig 2 Showing the frequency distribution of respondents who inhale smoke from smokers' cigarette.

Fig 2 shows that 69 (43.1%) inhale smoke from smokers' cigarette while 91 (56.9%) do not.

Table 2. Respondents' body response to inhalation of passive smoke

Parameter	Options	Student Nurses (%) n = 160
How does your body respond after inhaling passive smoke? Choose only one option.	Eye irritation	34 (21.3)
	Coughing	60 (37.5)
	Stimulation	
	Cognitive impairment	4 (2.5)
	Headache	24 (15.0)
	Sore throat	8 (5.0)
	Choking or suffocation	5 (3.1)
	No experience	5 (3.1)
	Stomach ache	5 (3.1)
	Breathlessness	4 (2.5)
	Nausea	2 (1.3)
	Discomfort	2 (1.3)
	Nasal congestion	5 (3.1)
	Nasal irritation	2 (1.2)
	Total	**160 (100)**

Table 2 shows that 60 (37.5%) of the respondents' body react to passive smoke by coughing, 34 (21.3%) experience eye irritation while 24 (14.0%) develop head ache when they breath in passive smoke.

4. Discussion

Previous studies on passive smoking were conducted among participants of varying characteristics but no research investigation on passive smoking among students of tertiary institution. The assessment of respondents who live around smokers indicated that a greater proportion live around smokers while a few of them do not have smokers around their homes. However, the fact that 38% of respondents do not live around doesn't exempt them from passive smoke at public places or on the road. The proportion of study participants living around smokers is worrisome and calls for urgent attention to ban smoking. Densky [9] highlighted that there are many ways to stop smoking and one of the best ways is through the use of a quit smoking hypnosis program. In addition, Densky's [9] study documented the benefits of Hypnotherapy programs for quitting smoking.

Findings from this study revealed that more than half of study participants do not inhale smoke which shows that although most respondents live around active smokers, a few of them inhale passive smoke. The proportion of respondents who inhale or do not inhale passive smoke in our findings is in contrast to the study by Newcombe [2] who id of the opinion that it is difficult to make conclusions that some people are passive smokers while others are not because virtually everyone comes into contact with it, whether they are married to smokers or not. Hence, the fact that one does not live around smokers does not mean one is free from contact with minute proportion of secondhand smoke present in the atmosphere.

Body responses to passive smoke varied among respondents. Findings of this study revealed that respondents indicated coughing, irritation of the eye, sore throat, cognitive impairment, choking and stomach ache among others as a means by which their body responds to passive smoke. This partly consistent with Keskinogbu, Cimrin and Aksakoglu [8] which documented that individuals exposed to second hand smoke have co-existing high risk factors

as cognitive deficits. Most times, the body responds to passive smoke and such reactions are usually unsafe to the passive smokers. The experience of cognitive impairment among student nurses after inhalation of passive smoke is unacceptable because of the extensive impact it may have on their learning abilities. However, there are no published literatures to support the effect of such body response.

5. Conclusion

A long term solution to preventing health risks of passive smoking is to ban smoking. Smokers should quit smoking to safeguard their lives and those of the people living around them. A limitation of the study is that the study failed to assess the existence of health consequences of passive smoking among the respondents.

6. Acknowledgements

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