

Smoking prevalence among young people in Papua New Guinea

Abstract: This study done was done during the 1996/1997-school break in NCD and Manus. There were total of 2000 and 1000 young people were interviewed respectively from NCD and Manus. From the 1150 males and 850 females interviewed in NCD, 115(10%) males and 315(37%) females were non-smokers. There were 138(12%) males and 68(8%) females smoked cigarettes. There were 150(13%) males and 84(10%) females smoked marijuana. Those who smoked marijuana also smoked cigarettes and mutrus. Even though there was higher rate of smokers among males, there is a high rate among female smokers in NCD. There were 163(10%) and 63(7%) smokers for the age group 8-10yrs in NCD and Manus respectively. For the age group 11-12 there were 186(12%) in NCD and 91(11%) in Manus. In NCD there were 257(16%) smokers and 107(13%) in Manus in the age group of 13-14yrs. There were 281(18%) and 153(18%) smokers in the age group 15-16yrs in NCD and Manus respectively. There were 157(37%) of non-smokers in NCD and 28(18%) in Manus did not smoke because of they were told by their teachers on the dangers of tobacco and marijuana smoking. The effort by health workers on health messages on the dangers of smoking tobacco and marijuana did influence 72(17%) non-smokers in NCD and 56(36%) in Manus on young people. Parents and teachers have full responsibility of ensuring that messages on the dangers of tobacco and marijuana smoking are given to the young people. Aggressive promotion of cigarette products has influenced smoking and should be stopped.

Gilbert Hiawalyer*

Introduction

Tobacco with its 4,000 active compounds¹ has contributed to many preventable morbidity and premature deaths in industrial countries². In Papua New Guinea (PNG) the proportion of those who use commercial produced tobacco has increased from 28% to 93% between 1960 and 1979³. This has done through aggressive marketing by cigarette companies which have replaced home grown air cured tobacco and twisted tobacco with factory made cigarettes⁴. Mostly they are targeting young people through glamorous activities through music and sports. These young people will be the smokers for the rest of their life since tobacco is addictive. Despite of no direct evidence of tobacco and chronic lung disease^{5,6}, however PNG will see more tobacco related diseases if the current trend of smoking is continuing.

There have been limited studies done in PNG on the prevalence of smoking among young people. This study done was done during the 1996/1997-school break in NCD and Manus. The study looked at the prevalence of tobacco smoking and cannabis (Marijuana) and the following are the methods, results, discussion and conclusion.

Tobacco with its 4,000 active compounds has contributed to many preventable morbidity and premature deaths in industrial countries.

Methods

A questionnaire was designed for both studies. There were 10 interviewers from NCD and 5 from Manus, using the same questionnaires. The questionnaires were tested and the interviewers were trained in a standardized method. This was done to minimize interview bias.

The study subjects were picked at the main vantage points in NCD and in Manus. Every third person was chosen and when the interviewer identified the age of the interviewee in order to interview within the required age group. Totals of 2000 interviews were done in NCD while 1000 were done in Manus.

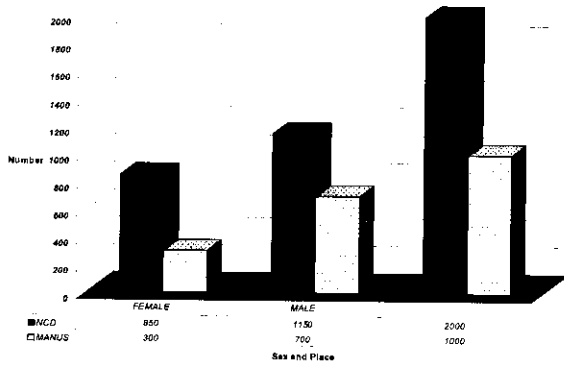
Results

There were total of 2000 and 1000 young people were interviewed respectively from NCD and Manus. There were 850 (43%) females and 1150 males in NCD while 300 (30%) and 700 respectively in Manus (see Graph 1).

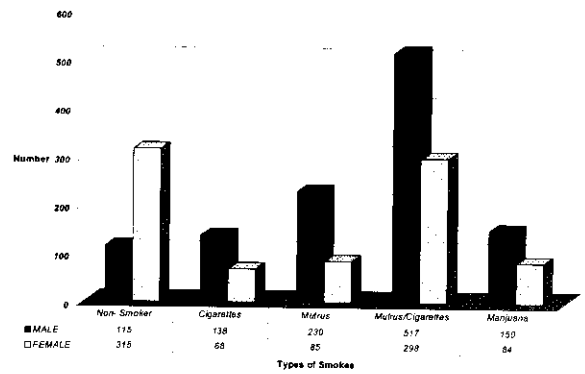
From the 1150 males and 850 females interviewed in NCD, 115(10%) males and 315(37%) females were non-smokers (see Graph 2). There were 138(12%) males and 68(8%) females smoked cigarettes. Two hundred and thirty (20%) males and 85(10%) females smoked mutrus. There were 517(45%) males and 298(35%) females smoked both cigarettes and mutrus. There were 150(13%) males and 84(10%) females smoked marijuana. Those who smoked marijuana also smoked cigarettes and mutrus. Proportionally on average there were two male smokers to one female in NCD. Even though there was higher rate of smokers among males, there is a high rate among female smokers in NCD.

*Director, Monitoring & Research Branch, Department of Health, Papua New Guinea.

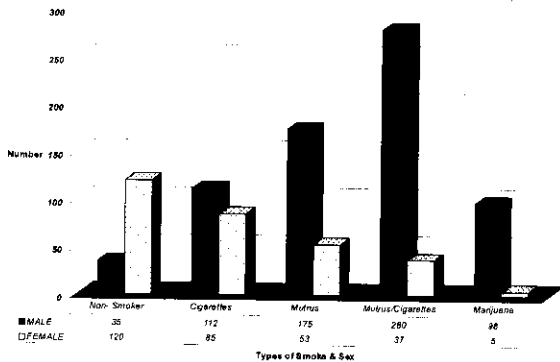
Graph 1: Sex distribution of the study subjects



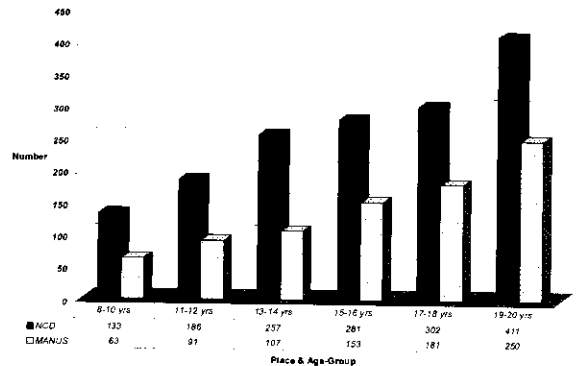
Graph 2: Smoking prevalence in NCD, by sex



Graph 3: Smoking prevalence in Manus, by sex



Graph 4: Smoking prevalence, by age group



In Manus there were 35(5%) males and 120(40%) females interviewed were non-smokers from the total of 300 females and 700 males interviewed (see Graph.3 not Table.3). There were 112(16%) males and 85(28%) females smoked cigarettes. 175 (25%) males and 53 (18%) females smoked Mutrus. There were 280(40%) males and 37(12%) females smoked both cigarettes and mutrus. The 98(14%) males and 5(2%) females smoked marijuana as well as cigarettes and mutrus. It seems that proportionally there was higher rate of smokers among women in Manus. Also many of these young girls interviewed were non-smokers.

The distribution of smokers by age group from 1570 smokers in NCD and 845 in Manus are shown in Graph 4. The trend is similar for both NCD and Manus. There were 163(10%) and 63(7%) smokers for the age group 8-10yrs in NCD and Manus respectively. For the age group 11-12 there were 186(12%) in NCD and 91(11%) in Manus. In NCD there were 257(16%) smokers and 107(13%) in Manus in the age group of 13-14yrs. There were 281(18%) and 153(18%) smokers in the age group 15-16yrs in NCD and Manus respectively.

There were 302(19%) and 181(21%) in NCD and Manus respectively for the age group 17-18yrs. There were 411(26%) smokers in NCD for the age group 19-20yrs and 250(30%) in Manus.

The number of smokers increases with the age. One likely to find a smoker in the older age group than amongst the young people. It is worrying to see children as young as eight could smoke.

The number of smokers as in relation to the grade attended in school for NCD and Manus are shown in Graph.5. There were 106(7%) and 152(18%) smokers who didn't attend any school at all for year and more in NCD and Manus respectively. There were 99(6%) and 57(7%) smokers were found among those attended grades 5 to 6 in primary schools. For the smokers in grades 7 and 8, there were 126(8%) in NCD and 108(13%) in Manus. There were 373(24%) in NCD and 143(17%) in Manus who attend grade 9 and 10 smoked. There were 429(27%) smokers in NCD and 156(18%) in Manus were of senior high schools, grade 11 and 12. There were 437(29%) and 229(27%) smokers in NCD and Manus respectively among those who attended tertiary institutions. There were higher numbers of smokers who do not attend school and those in primary schools (grades 5 to 8). They're higher proportions of senior high school and tertiary students in NCD because of there is greater numbers of these institutions in NCD and also quite number of students from other parts of the country usually come into NCD for holidays.

From those who smoke, the main influencing groups of people were their friends and parents as shown in graph

6. Those in NCD 526(34%) and 327(39%) in Manus smoked because their parents do so, 653(42%) and 375(44%) of them were smokers because their friends smoked or asked them to try in NCD and Manus respectively. There were 269(11%) in NCD and 88(11%) in Manus smoked because of media promoting of the product. There were 122(8%) and 55(7%) smokers in NCD and Manus smoked because of other reasons such as getting stress, bored, to feel high, to feel mature and grown up, just want to smoke and to loose weight. The media also play important role in influencing young people to smoke. Those who smoked marijuana were mostly influence by their peer group and friends.

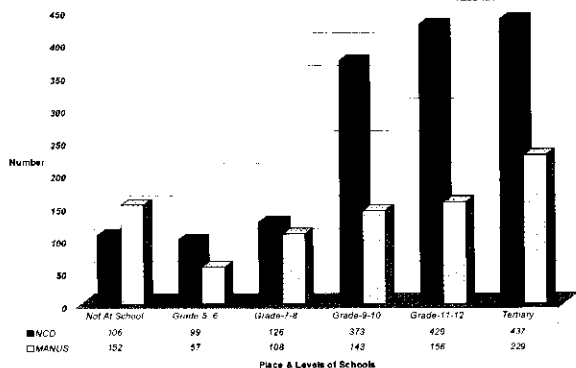
From the total of 430 non-smokers in NCD and 155 in Manus, questions were asked on why they did not pick up the habit (see Graph 7). Christian principles had made some grounds on recruiting non-smokers as seen from 53(12%) in NCD and 15(10%) in Manus did not smoke because of their religion. There were 157(37%) of non-smokers in NCD and 28(18%) in Manus did not smoke because of they were told by their teachers on the dangers of tobacco and marijuana smoking. The parents also had influence on non-smokers of which 123(29%) of non-smokers in NCD and 36(23%) in Manus did not smoke because their parents did not smoke or told them not to do so because of religious and health reasons. The parents also told them the health and legal implications on marijuana smoking.

There were 25(6%) non-smokers in NCD and 20(13%) in Manus said that through reading newspapers and programs on overseas media discouraged them to smoke. There were greater coverings on dangers and legal implications on marijuana as well. They were not many coverings on the local TV, EMTV on anti smoking campaign. The effort by health workers on health messages on the dangers of smoking tobacco and marijuana did influence 72(17%) non-smokers in NCD and 56(36%) in Manus on young people.

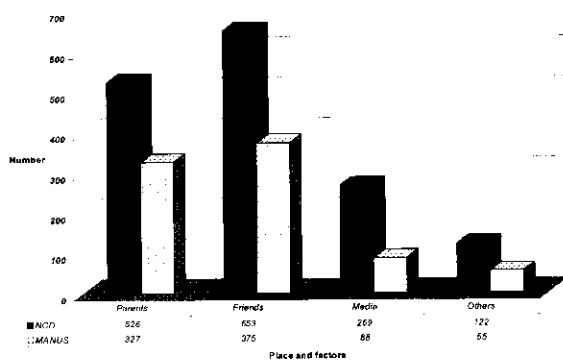
Discussion

Tobacco smoking said is the most preventable morbidity and premature mortality in the industrialized countries². Scientific evidence has shown tobacco smoking is causal related and it is the main causes of death from lung cancer in 90-95% cases, other cancers 45-50%, chronic obstructive lung diseases 75-80% and cardiovascular diseases 20-25%⁷. Other than chronic obstructive lung and cardiovascular diseases, sudden deafness⁸, oral melanin pigmentation⁹, periodontal diseases^{10,11} gastric ulcers^{12,13}, colon polyps¹⁴ and congenital malformation¹⁵. It is also known that tobacco smoking also contribute to many other diseases and conditions with few examples such as cervical cancers, abortion and loss of libido in males.

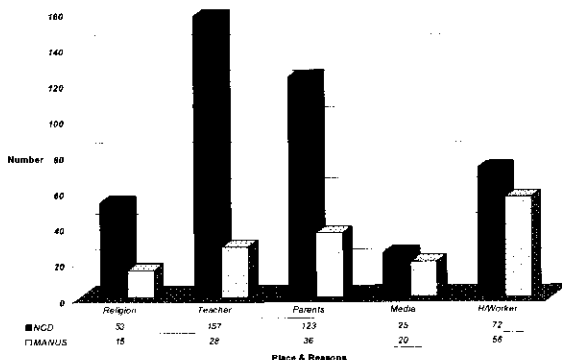
Graph 5: Smokers, according to school level



Graph 6: Factors influencing smokers to smoke



Graph 7: Reasons for not smoking



There is a general shift from traditional communicable disease to non-communicable disease in many developing countries of which many are linked to tobacco smoking⁴. In Papua New Guinea, studies^{5,6} had shown that chronic lung diseases were not associated with tobacco smoking. However with increase advertisement and promotion of tobacco products targeting future smokers, the young people we will anticipate increase of tobacco smoking related diseases in the country.

In this study it is alarming to know that children as young as 8 years were smoking and the rate increased with age. There is a significant proportion of smokers among the females. There were higher rates of smokers in the higher grades of schooling, which is closely associated with age. Similar studies have shown that smoking is prevalent among high schools¹⁶. From a large representative study in Australia¹⁷ young as 14 years old were smoking of which 41% were males and 29% were females. Tertiary students were found to be smoking more as seen elsewhere¹⁸.

It is important now to target this age group with health education rather than waiting to treat them 20 years down the line.

Combination of mutrus and cigarettes are the common choice in this study. Though there is health warning on the packets of the cigarettes, it is the selling of the loose single cigarettes and mutrus without health warning that could not warn people of the danger of smoking.

Marijuana (cannabis) is used commonly among young people around the world^{19,20}. In this study smoking of marijuana (cannabis) was not as high as tobacco products but it does raise concerns of it being used and might pave way for hard core drugs.

Parents and teachers have full responsibility of ensuring that messages on the dangers of tobacco and marijuana smoking are given to the young people. Many of the young smokers pick up the habits from their parents and from peer pressure. Aggressive promoting of cigarette products has also influenced smoking. Teachers, parents and health workers have to continue to play important role in discouraging young people to smoke. There should be more materials and messages on smoking of tobacco products and marijuana distributed to the media for publication and other groups like churches. These to ensure health messages have wider coverage.

Many of the young smokers pick up the habits from their parents and from peer pressure. Aggressive promoting of cigarette products has also influenced smoking.

Conclusion

This is a prevalence study and the findings from this study showed an alarming smoking rate among our young people. Parents, teachers, health workers and pastors have important roles of disseminating information on the dangers of tobacco and marijuana smoking and also to be role models. The Tobacco (Health Control) Act of 1987 needs to be enforced to curtail tobacco advertising.

Acknowledgements

I would like to thank the students of NCD and Manus whom on their own will to participate in this survey. I also would like to thank Steven Bonny and the late Peter Lausy for their effort in and help in collecting data in Manus.

References

1. Solberg Y, Rosner M, Belkin M, The association between cigarette smoking and ocular diseases. *Surv. Ophthalmol* 1998- May June; 42(6):535-47).
2. Levesque B, Rochette L, Gingras S, [Mortality attribute to tobacco smoking in Quebec]. *Canadian Journal of Public Health* 1998 Jan-Feb; 89(1): 28-32.
3. Vallance, P J T, Anderson H R, Alpers M P, Smoking Habits in a Rural Community in the Highlands of Papua New Guinea in 1970 and 1984. *Papua New Guinea Medical Journal* 1987 30(4): 277-280.
4. Marshall M, The second fatal impact: cigarette smoking, chronic disease, and the epidemiological transition in Oceania. *Social Science Medicine* 1991; 33(12): 1327-42.
5. Anderson H R, Chronic lung disease in Papua New Guinea Highlands. *Thorax* 1979 Oct;34(5):647-53
6. Anderson H R, Vallance P, Bland J M, Nohl F, Ephraim S, Prospective study of mortality associated with chronic lung disease and smoking in Papua and New Guinea. *International Journal of Epidemiology* 1988 March; 17(1):56-61
7. Simunic M, [Does one-fifth our population really die from smoking. *Lijec Vjesn* 1993 May-Jun; 115(5-6):185-8.
8. Linke R, Matschke RG, [Is there a correlation between sudden deafness and smoking]? *Laryngorhinootologie* 1998 Jan; 1977(1): 48-51.
9. Axell T, Hedin CA, Epidemiological study of excessive oral melanin pigmentation with special reference to influences of tobacco habits. *Scandanavian Journal of Dental Research* 1982 Dec;90(6): 432-42.
10. Bergstorm J, Preber H, Tobacco use a risk factor. *Journal of Periodontal* 1994 May;65(5 Suppl):545-50.

11. Quandil R, Sandhu HS, Mathews DC, Tobacco smoking and periodontal diseases. *Journal of Candanian Dental Association*, 1997 March;63(3):187-92, 194-5.
12. Ogle CW, Qui BS, Cho CH, Nicotine and gastric ulcers in stress. *Journal of Physiology of Paris* 1993; 87(6):359-65.
13. Kopanski Z, Schlegel-Zawadzka M, Golec E, Witkowska B, Micherdzinski J, Cienciala A, Kustra Z, The significance of selected epidemiologico-clinical factors in the prevalence of the Helicobacter pylori infections in young males. *European Journal of Medical Research* 1997 Aug 28;2(8):358-60.
14. Zahm SH, Cocco P, Blair A, Tobacco smoking as a risk factor for colon polyps. *American Journal of Public Health* 1991 Jul;81(7):846-9.
15. Hemminki K, Mutanen P, Saloniemi I, Smoking and the occurrence of congenital malformations and spontaneous abortions: multivariate analysis. *American Journal of Obstetric and Gynecology*, 1983 Jan1: 145(1):61-6.
16. Amonoo-Lartson R, Pappoe ME, Prevalence of smoking in secondary schools in the Greater Accra region of Ghana. *Social Science Medicine* 1992 Jun;34(11):1291-3.
17. Gray NJ, Hill DJ, Patterns of tobacco smoking in Australia. *Medical Journal of Australia*. 1975 Nov 29;2(22):819-22.
18. Boccoli E, Federici A, Melani AS, De Paola E, Results of a questionnaire about nurse student's smoking habits and knowledges in an Italian teaching school of nursing. *European Journal of Epidemiology* 1996 Feb; 12(1):1-3.
19. Sylbing G, Persoon JM, Cannabis use among youth in the Netherlands. *Bulletin Narcotics* 1985 Oct-Dec; 37(4):51-60.
20. Mitchell CM, Novins DK, Holmes T, Marijauna use among American Indian adolescents: a growth curve analysis from ages 14 through 20 years. *Journal of American Acad Child Adolescence Psychiatry* 1999 Jan;38(1):72-8. ■

The only place where success comes before work
is in the dictionary.

Vidal Sasson (1928), hair stylist