

Prevalence of tobacco use in Fiji

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Abstract

A prevalence study of tobacco use in Fiji showed ethnic and age differences with urban-rural gradients. About 19% more rural Fijians were likely to be smokers whereas urban Indians smoke more than their counterparts. Males smoked more than females. Older age groups smoked more especially urban males. This study confirms previous studies and suggests preventative measures.

Introduction

The World Health Organisation (WHO) estimates that tobacco use kills three million people world wide each year, and is the leading cause of preventable death and disease in the developed world.^{1,2}

The cost of tobacco consumption is increasingly borne by developing countries. The detrimental economic effect of tobacco on the improvised economy and health system of Fiji is very significant. Tobacco is clearly diverting a significant amount of money from productive investments in food, education and health, while simultaneously reducing productivity by increasing disease prevalence.

WHO has targeted the prevention and treatment of tobacco in developing countries as a high priority³. However, without prevalence data or information about the knowledge, attitudes and practices of a given country's population towards smoking, it is difficult to tailor appropriate health promotion, prevention and cessation interventions.

Smoking is deeply integrated into the social practices of the Fijian society⁴. Cigarettes were given out freely during ceremonial activities. Several anecdotes of history indicate that tobacco appears to have come to Fiji from the earliest explorers, possibly via Tonga. When Cook visited Tonga, they were familiar with tobacco. *Tapaka* is the first recorded English lone word in Fijian, which adds to the evidence for its early introduction⁵. The word *Tapaka* is so ingrained in the Fiji tradition, that it is often part of the formula for asking and giving money. When a son gives money to a father, it is *Tapaka* money, which means pocket money. This may be one reason why Fijian culture appears resistant to change on smoking. No one wants to give up pocket money.⁵

The costs to society, and to the burden of health care costs are most significant for the 775,077 people of Fiji.⁶

This paper presents a prevalence study of tobacco use in Fiji. The objectives of this study were:

- To collect prevalence data on tobacco use by ethnic population groups.
- To identify high risk age groups
- Strengthening of advocacy positions
- To identify the level of knowledge on tobacco use and establish a valid survey instrument for the national survey
- To evaluate the effects of various sources of information on tobacco use.

Subjects and methods

Four hundred and fifty seven (457) subjects between 12 and 82 years old in the central division of Viti Levu in Fiji were surveyed⁶.

A Multi-staged stratified sampling was utilized for getting the sample. Two rural and two urban districts were randomly selected. For each rural district, two villages and two settlements were selected randomly from the list of villages and settlements obtained from the sub-divisional hospital. For each village and settlement selected, households were systematically selected and every member of the household twelve years and over were interviewed.

For each urban district, four boundaries were randomly selected from a list obtained from a map. From each boundary, one street was selected randomly and members of households were interviewed. In situation where there

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Table 1. Prevalence of smoking in Fijians and Indo-Fijians. n = 457

	Fijian	Indian	Total prevalence
Region			
Rural	40.88%	11.58%	
Urban	21.53%	25.26%	
<i>Total prevalence n = 456</i>	33.08%	18.42%	26.97%*
Gender			
Male	48.62	30.19	39.81
Female	22.29	3.61	15.83
<i>Total prevalence n = 457</i>	33.08%	18.52%	27.13%
Male - rural	56.72%	23.26%	
Male - urban	35.71%	34.92%	
Female - rural	29.35%	1.92%	
Female - urban	12.31%	6.45%	
Age group			
12-18 yrs	Male - rural	0%	0%
	Male - urban	8.33%	13.60%
	Female - rural	0%	0%
	Female - urban	5.88%	9.09%
19-49 yrs	Male - rural	67.50%	23.81%
	Male - urban	47.62%	37.50%
	Female - rural	32.73%	0%
	Female - urban	12.50%	6.25%
50+ yrs	Male - rural	57.89%	55.56%
	Male - urban	44.44%	36.80%
	Female - rural	37.50%	9.09%
	Female - urban	16.67%	0%

* Missing data Ref. 1

was non-response the next street was selected.

Procedure

Twelve interviewers, senior nurses with wide experiences in primary health care, were trained in a one-day workshop and details of every question and its purpose explained. Members of the research team then traveled to selected sites and administered questionnaire to all individuals in the household over twelve years. Participants answered the questions after prior consent. The first part of the three-page questionnaire included items of information like, age, sex, race, and place of residence.

The second part consisted of eight core questions to assess tobacco use among the sample population. These included: lifetime experience of smoking, current smoking status at the time of survey, local tobacco use patterns, cumulative years of smoking, previous smoking experiences, the age of initiation and changes in smoking habit.

A further seven questions were asked in part three assessing knowledge on tobacco use and the best sources of health information pertaining to tobacco use from various media and non-media sources. The reporting and results of this part will be made elsewhere. Each questionnaire took an average of 15 minutes to complete. During the conduct of the survey, we anticipated a non-response of

three percent in the urban area. Characteristics of those household or individuals who did not respond were not known, however this did not alter the outcome of the results.

For each response, a coding sheet was prepared. Microsoft Excel was used for data input and HALIBAN statistical software was used for analysis of the survey data.

Results

The prevalence of smoking in this survey was 27.13%. Four hundred and fifty seven subjects were surveyed. The ages ranged from twelve to eighty two years. Mean age of subjects surveyed were 34.6 years, mean age of initiation of tobacco use was 22 years and the mean number of years one individual smoked was 15 years.

The overall prevalence of smoking in Fijians was 33.08% and 18.42% in Indians. The prevalence of smoking in rural Fijians was 40.88% and 11.58% in Indians. The rates in urban Fijian were 21.53% and 25.26% in Indians (see Table 1). Rural Fijians were 20% more likely to be current smokers than urban Fijians. Urban Indians were 16% more likely to be current smokers than rural Indians.

Gender

The proportion of males who smoked was 48.62% for Fijians and 30.19% for Indians. 22.29% of Fijian females and 3.61% of female Indians were smokers. A total prevalence of smoking in males was 39.81% compared to 15.83% in females (see Table 1).

The proportion among rural male Fijians was 56.72% and 35.71% among urban Fijian males. 29.35% prevalence in rural Fijian female and 12.31% in urban Fijian females (see Table: 1).

The proportion in Indian rural male was 23.26% and 1.92% in rural Indian female. The rate in urban Indian male was 34.92% and 6.45% for females (see Table 1). Rural Fijian males have the highest prevalence in 19-49 year age category and were 20% more likely to be current smokers than urban Fijian males. Rural Fijian female were twice as likely to be current smokers than urban Fijian female

Age

The total prevalence of smoking among 12-18yrs category was 4% for Fijians, 6.35% for Indians. Neither of rural population in this age category were smokers. Meanwhile, the rate of smoking in urban Fijian males was 8.33 % and

13.6% for Indians. Subsequently, 5.9% of urban Fijian female and 9.1% of urban Indian females were smokers (see Table 1).

In the 19-49yrs category, the total prevalence was 41.43% in Fijians, 19.15% in Indians. Rural Fijian male had the highest prevalence of 67.5% compared to 23.8% in rural Indian males. The rates in urban Fijian male were 47.6% and 37.5% in Indian males. None of the rural Indian females surveyed smoked in this category compared to 32.7% in Fijian females. The prevalence in urban Fijian female was 12.5% and 6.25% in Indians (see Table 1).

The total prevalence in 50 yrs and over category was 36.84% in Fijians and 39.39% in Indians. The rates for rural males were 57.9% in Fijian and 55.6% in Indians. Urban males had rates of 44.4% in Fijians and 36.8% in Indians. Rural Fijian females had rates of 37.5% compared to 9.1% in Indians. None of the urban Indian females surveyed in this age category smoked while 16.7% of urban Fijian females were

current smokers (see Table 1). Urban Indian females in 19-49 year category are 6 times more likely to be smokers than their rural counterparts. Where as rural Indian females in 50

years and over category were 9 times more likely to be smokers. Rural Fijian female in 19-49 years category were 11% more likely to be smokers than their urban counterparts, and twice as likely to be smokers in 50 years and over category.

Discussion

The survey revealed a total prevalence of 27.13% in contrast to 38% in 1994 study.⁶ The comparison of the prevalence data collected in the 1994 suggests the trend towards less smoking. This cannot be generalised since this trend was evident in the central Viti Levu only. A national survey will reveal a more reliable national rate.

The mean ages of subjects surveyed were 36 years. The median age of Fiji's population during the 1996 census was 21.6 years.⁶ The mean age of initiation of tobacco was 22 years, which is higher than other developing countries in the Western Pacific region. This reaffirms lower rates in the 12-18 year category.

The results show a significant difference on the rates of smoking among two major ethnic communities in Fiji. Rates of smoking were highest among rural Fijians. Prevalence in Indians was highest in the urban region. Local level initiatives are important adjuncts, as initiatives need to be developed for specific ethnic groups.

The mean age of initiation of tobacco was 22 years, which is higher than other developing countries in the Western Pacific region.

Gender

Males smoked more than females. Fijian males had the highest rates compared to Indian males. They were 20% more likely to be smokers than urban males and twice as likely to be smokers than rural Indians were. Rates among urban Fijian male and urban Indian males were similar. Rural Fijian females were more likely to be smokers than urban Fijian females and conversely urban Indian females were 6 times more likely to be current smokers than rural Indian females. Prevalence of 18.5% in females is much higher than the WHO estimate for its Western Pacific region of 2-10%.

Tobacco companies in other countries are targeting women more and that smoking among younger women has been on the rise.⁷ These current smokers are more likely to continue smoking through their adulthood and pregnancy unless rigorous efforts are implemented to address their issue. Delegates at the recent Smoking and Pregnancy Consensus Conference hosted by the Australian Medical Association and the Commonwealth Department of Health and Family Services, acknowledged that smoking causes adverse pregnancy outcomes and infant ill-health, and that smoking cessation in pregnancy is beneficial to the health of the foetus and infant⁸.

The New South Wales Health Promotion Survey of 1949 reported that the use of the oral contraceptive pill was associated with higher rates of smoking, and no greater rates of attempting to quit; this suggests the need for health promoting interventions to increase community awareness of the health risks of smoking whilst using the oral contraceptive pill.

High rates among rural Fijian females (32.7% in 19-49 year age group and 37.5% in fifty years and over category) warrants further research into smoking behaviours in women. It should be noted that males still smoke more than females in Fiji, and reinforcing interventions aimed at male smokers will be necessary if the decline in smoking prevalence among men is to continue in future.

Age

Low prevalence rates among 12-18 years age group should be treated with caution because of possible information bias and under-reporting. Other international and local literatures portray similar trends in this category. Teenage smoking and its prevention remain central to preventing the onset of new smokers in Fiji. An effort to reduce the illegal sale of cigarette to minors through prosecutory enforcement of public health legislation is important. Re-

tailor education alone is insufficient and prosecutions and the publicity about them is an essential element of changing retailer selling behaviour and maintaining this behaviour.^{10,11} Reducing access for young people would predict a positive effect in delaying smoking uptake in younger adolescents.

People aged 19-49 years are one sixth as likely to be smokers compared with people aged 12 - 18 years. Rural Fijian males have the highest smoking prevalence. Sixty-seven and a half-percent prevalence are exceptionally high and have not changed since 1980. Slightly less were rural Indian males with fifty five and a half percent signifying that this group are in need for aggressive targeted interventions such as cessation programmes and counseling. Similar reasons may be attributable to Indian females over the age of 50 years living in urban region.

Rural Fijian females were more likely to be smokers than urban Fijian females and conversely urban Indian females were 6 times more likely to be current smokers than rural Indian females.

In public health, we have very few examples where behavioural intervention has been determined to be effective and improves smoking rates. What is of value, is the provision of information and accessibility of effective programs to enable them to quit⁸. Very few of our health facilities provide effective programs to help smokers.

These alarming rates among the adult population of Fiji suggest that the current epidemic of cardio-vascular disease in Fiji is likely to continue especially when one considers that the prevalence of smoking in individuals with Ischaemic heart disease presenting to hospitals in Fiji is already high at approximately sixty percent¹². The rates of both smoking and cardio-vascular disease are a cause for an active, appropriately resourced strategy for the control of smoking related ill health; they constitute a major public health problem.¹³

Limitation of the study

The small scale of the survey makes it difficult to generalise conclusions for the whole of Fiji. However, as one of the few smoking prevalence studies in the country, it does provide a baseline for future work and provides useful insights into tobacco use in Fiji while highlighting a number of important issues for further research. There were some difficulties experienced in the interpretation of the questionnaires that may have caused some information bias. Such has been improved and the instrument can be utilised in other districts.

Interviewing adolescents and teenagers in presence of their parents and guardians is a cause of information bias. They are reluctant to give correct response to questions relating to tobacco use, in view of being victimised.

Translating the questionnaire in local vernacular can strengthen the study. Although we used interviewers who were experienced in local languages, questionnaires in simple local languages will further minimise information bias.

Conclusion

This study has identified target groups that are at increased risk of developing tobacco-related diseases. Although gains have been made, smoking remains an important problem, but innovative strategies are needed, that focuses on specific target groups and issues.

With effective regulations governing the sponsorship and advertising of cigarettes passed by the government this year, education, monitoring regulatory policies, and smoking cessation are important measures to be considered for effective tobacco control planning and implementation.

It is important to have some base line data whereby we can measure our activities. Ongoing monitoring preferably using the same questions is needed to assess the success of the net effectiveness of National, District and Area strategies. Mass-reach campaigns involving media to a level where they can substantially reduce smoking prevalence together with a focus on the social, cultural, environmental and political aspects of smoking is needed.

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The tobacco business is a conspiracy against womanhood and manhood. It owes its origin to that scoundrel Sir Walter Raleigh, who was likewise the founder of American slavery.

Dr. John Kelley in 'Tobacco'