

## Illiteracy, Ignorance, and Willingness to Quit Smoking among Villagers in India

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During the field work to control oral cancer, difficulty in communication was encountered with illiterates. A study to define the role of illiteracy, ignorance and willingness to quit smoking among the villagers was undertaken in a rural area surrounding Doddipatla Village, A.P., India. Out of a total population of 3,550, 272 (7.7%) persons, mostly in the age range of 21-50 years, attended a cancer detection camp. There were 173 (63.6%) females and 99 (36.4%) males, among whom 66 (M53 + F13) were smokers; 36.4% of males and 63% of females were illiterate. Among the illiterates, it was observed that smoking rate was high (56%) and 47.7% were ignorant of health effects of smoking. The attitude of illiterate smokers was encouraging, as 83.6% were willing to quit smoking. Further research is necessary to design health education material for 413.5 million illiterates living in India (1991 Indian Census). A community health worker, trained in the use of mass media coupled with a person-to-person approach, may help the smoker to quit smoking.

Key words: Illiteracy — Smoking — India

While carrying out field work for prevention of Chutta cancer (carcinoma of hard palate), which is due to reverse smoking of a cigar (Chutta),<sup>1</sup> we encountered difficulty with illiterates. At the free cancer detection camps,<sup>2</sup> we distributed pamphlets in Telugu (local language) with a strong anti-smoking message. There were not many takers of the pamphlets at the camp except for the curious children who carried away these pamphlets, not with a view to read them but to make toys out of the paper! The utility of the pamphlets detailing Seven Warning Signals of Cancer,<sup>3</sup> distributed at the free cancer detection camps, was uncertain. We were also surprised that many persons did not realize that tobacco use was injurious to health. Some even attributed curative properties to tobacco for relieving cough and toothache! This study was undertaken to define the relationship between illiteracy, lack of knowledge of ill effects of tobacco smoking and willingness to quit smoking. One question that we particularly wished to resolve was, whether illiteracy is a stumbling block to cancer control and cessation of tobacco use. The number of illiterates in India as of March 1st, 1991 (1991 Census)<sup>4</sup> was 413.5 million and they need to be educated about ill effects of tobacco use as part of a program of primary prevention of tobacco-related cancers.

### MATERIALS AND METHODS

A village, Doddipatla, located in the West Godavari District, Andhra Pradesh, India, was chosen to conduct the survey. As part of our campaign to control cancer, a free cancer detection camp was organized on January 20th,

1991 with the help of Lions Club, Palakol and 'Chaitanya Samakhya,' a cultural organization of the village. The camp was announced using a microphone and a loud speaker mounted on a rickshaw (a three wheeler pedalled by one man) and playing a tape recorder with a pre-recorded message mixed with film music. The rickshaw with the P.A. system went around ten villages (all within a 5 km radius) broadcasting the pre-recorded message containing Seven Warning Signals of Cancer and offered a free health check-up at the camp. Handbills with the details of the camp and also with the Seven Warning Signals of Cancer were distributed in these villages.

Volunteers from Palakol Lions Club and Chaitanya Samakhya recorded the identity particulars and socio-economic data of the persons who attended the camp. Male doctors examined the males and female doctors examined the females. Persons requiring further evaluation were seen by one of us (S.G). Accuracy in recording the identity particulars and socio-economic data was checked by one member of our team (Gorty). Some key terms used in this article are defined below.

**Illiteracy:** Any person who can not read or write was considered illiterate. Literates were persons who have attended school or college and who can read and write.

**Ignorance:** Testing ignorance is a difficult proposition. In our survey, we explained to the person interviewed that tobacco use in any form is injurious to health and then we asked the same person whether he was aware of this information.

**Willingness to quit smoking:** We ascertained the willingness of the person interviewed after explaining in detail about the ill effects of tobacco smoking. Some people were surprised to know that smoking caused ill health and some had read the warning on the cigarette carton

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that smoking is injurious to health, but were unwilling to give up smoking.

The camp was held in the village high school. As it was a holiday (Sunday) for the school, the class-rooms were temporarily converted into consultation rooms. Complete physical examination was carried out with special emphasis on oral cancer. All persons who attended the camp came of their own volition, had their personal details and history recorded, and underwent physical examination and appropriate tests. All the records were analysed and no selection was made. A computer program was written specifically for this study and a statistical analysis was made.

**RESULTS**

The combined population of ten villages including Doddipatla Village was 3550 and 272 (7.7%) persons attended the camp: 173 females (63.6%) comprising of mostly housewives and others and 99 males (36.4%). Farmers constituted the largest group among males.

**Age, sex and literacy** Table I shows the distribution of persons according to age, sex and literacy. Persons in the age group of 41 to 50 years constituted the largest group (25.4%). Among the males there were 63 (63.6%) liter-

ates and 36 (36.4%) illiterates and among the females there were 64 (37%) literates and 109 (63%) illiterates (chi square 16.95, dF=1,  $P < 0.001$ ).

**Literacy, sex and smoking status (Table II)** Among 272 persons who attended the camp, there were 82 (47.4%) literate non-smokers and 91 (52.6%) illiterate non-smokers, whereas there were 29 (43.9%) literate smokers and 37 (56.1%) illiterate smokers. The distribution of literates and illiterates among the ex-smokers was almost equal. Among the 16 women smokers, illiterate women smokers outnumbered the literate women smokers (14 vs. 2). There were more ex-smokers among the illiterate women too.

**Smoking status and sex** Among the males (n=99) there were 29 (29.3%) non-smokers, 53 (53.5%) smokers and 17 (17.2%) ex-smokers. The largest group of non-smokers (n=144, 52.9%) was among the females and the rest of the females had a small number of smokers (n=13, 7.5%) and ex-smokers (n=16, 9.2%) among them.

**Sex and awareness of ill effects of smoking** A question was posed to each person, whether he or she has knowledge of ill effects of smoking, and the responses are summarised in Table III. Statistically there is no significant difference between males and females as far as awareness is concerned.

**Literacy and awareness of ill effects of smoking** Interestingly, the largest group of persons (n=101) was endowed with literacy as well as knowledge about ill effects of smoking (Table IV). Lack of awareness is at a higher rate (n=59, 40.7%) among the illiterates compared to the literates (n=26, 20.5%) and this is statistically significant ( $P < 0.001$ ).

Table I. Age, Sex and Literacy of Subjects Examined

Age	Literate		Illiterate		Total	
	M	F	M	F	M	F
≤10	11	3	1	1	12	4
11-20	3	7	1	6	4	13
21-30	7	22	4	29	11	51
31-40	9	14	2	34	11	48
41-50	15	12	14	28	29	40
51-60	14	6	6	11	20	17
>60	4	0	8	0	12	0
All age groups	63	64	36	109	99	173
Total	127		145		272	

M= male, F= female.

Table III. Sex and Awareness of Ill Effects of Smoking

Awareness	Males (%)	Females (%)	Total (%)
Present	69 (69.7)	118 (68.2)	187 (68.8)
Absent	30 (30.3)	55 (31.8)	85 (31.2)
Total	99 (100)	173 (100)	272 (100)

Chi square = 0.598; dF=1;  $P=0.80909$ .

Table II. Literacy, Sex and Smoking Status

Status	Literates		Illiterates		Total	
	M (%)	F (%)	M (%)	F (%)	M (%)	F (%)
Non-smokers	24 (38.1)	58 (90.6)	5 (13.9)	86 (78.9)	29 (29.3)	144 (83.2)
Smokers	27 (42.9)	2 (3.1)	23 (63.9)	14 (12.8)	50 (50.5)	16 (9.3)
Ex-smokers	12 (19.0)	4 (6.3)	8 (22.2)	9 (8.3)	20 (20.2)	13 (7.5)
Total	63 (100)	64 (100)	36 (100)	109 (100)	99 (100)	173 (100)

M= male; F= female.

Table IV. Literacy and Awareness of Ill Effects of Smoking

Awareness	Literates (%)	Illiterates (%)	Total (%)
Present	101 (79.5)	86 (59.3)	187 (68.7)
Absent	26 (20.5)	59 (40.7)	85 (31.3)
Total	127 (100)	145 (100)	272 (100)

Chi square=12.9033; dF=1; P<0.001.

Table V. Sex and Willingness to Quit Smoking (Smokers)

Attitude	Males (%)	Females (%)	Total (%)
Willing to quit smoking	44 (83)	11 (84.6)	55 (83.3)
Not willing to quit smoking	9 (17)	2 (15.4)	11 (16.7)
Total	53 (100)	13 (100)	66 (100)

Table VI. Literacy and Willingness to Quit Smoking (Smokers)

Willing to quit smoking	Literates (%)	Illiterates (%)	Total (%)
Yes	24 (82.8)	31 (83.8)	55 (83.3)
No	5 (17.2)	6 (16.2)	11 (16.7)
Total	29 (100)	37 (100)	66 (100)

**Sex, literacy and willingness to quit smoking** Both the male and the female smokers were equally willing to quit smoking (Table V). Both the literate and the illiterate smokers were equally strong in their willingness to quit smoking (Table VI). Illiteracy is not an impediment in motivating the smoker to stop smoking.

**DISCUSSION**

**Illiteracy** According to the 1991 Census<sup>4)</sup> conducted in India, there were 843.93 million people in India and 51% of the population above the age of 7 years (excluding Jammu and Kashmir) were literate as of March 1st, 1991. The literacy among the sexes was uneven and 63% of males and 39% of females were literate. This study showed similar rates with 63.6% among males and 37% among females as literate.

The magnitude of the task of providing information on prevention of cancer to 413.5 million illiterates living in India is gigantic. Prevention of tobacco-related cancers, which are highly prevalent, requires new studies and strategies. As India is a signatory to the Alma Ata Declaration assuring 'Health for all by 2000 AD,' it is

imperative for health planners in India to initiate urgent action, even though the National Cancer Control Program of India<sup>5)</sup> has already envisaged control of oral cancer and formulated guidelines for primary prevention of tobacco-related cancers.

A survey carried out in Begali Village<sup>6)</sup> by Bhargava revealed that there were 457 (32%) habituates (smoking, chewing, snuff dipping) of tobacco. Out of 414 available for interview, 304 (43.4%) were illiterate habituates and 110 (26.6%) were literate habituates. In this study there were 37 (56%) illiterate smokers and 29 (44%) literate smokers. These two studies reveal a pattern that the prevalence of smoking was high among the illiterates. In our study, out of 173 women, 139 (80.34%) were in the age group of 21 to 50 years and two-thirds of these women were illiterate. Twenty-nine (16.8%) women had been smokers at some time or other, but 16 (9.2%) women were current smokers. Smoking was taboo among the middle class and upper class women. Smoking habit was observed among the rural poor women.

The present survey covered only 272 persons representing 7.7% of the total population and the results here represent those of a health-conscious group of individuals. In future, a survey employing the list method of sampling based on the voters list of persons of 18 years and above is planned, to overcome any bias.

**Ignorance of ill effects of smoking** The illiterates were ignorant of the knowledge that tobacco smoking is directly related to higher incidence of cancer, chronic lung and heart disease. Among the illiterates, 59 (40.7%) did not know that smoking is injurious to health, whereas 26 (20.5%) of literates did not possess this information. Illiteracy is thus associated with ignorance of the harmful effects of tobacco smoking. We are in the process of collecting more information on the smoking habits, length of smoking and source of information about ill effects of tobacco use under the Vizag-Leiden project on 'Chutta cancer.'

**Health education of rural illiterates** The next question is whether we can share the experience of health educators from other countries in educating the illiterate smokers. The affluent countries in the West have no major problem of illiteracy to deal with. However, health planners in the USA encountered problems with low income, poorly educated groups such as ethnic minorities and Indians living in the reservations. Mass media campaigns<sup>7, 8)</sup> were found to be helpful in spreading the anti-tobacco message.

During our work in the villages of Andhra Pradesh, we found that printed pamphlets were of no use in dealing with the illiterate public. We relied heavily on a person-to-person approach and on popular lectures on prevention of cancer, followed by question-and-answer sessions. This is a costly approach. An Indian oncologist, M. Sharma,<sup>9)</sup> who has published 30 articles in Indian lan-

guages on prevention of cancer, lamented that the effect was bound to be limited as the literacy level of the eastern districts of Uttar Pradesh (India) was as low as 20%.

It would be interesting to go back to the same villages in future at regular intervals to assess the effects of the anti-smoking campaign and to evaluate the effectiveness of methods aimed at the illiterates.

Even in the USA, cancer education literature<sup>(10)</sup> may be of limited value in providing information to the low income, low education population, as the language and the content of the pamphlets could be understood only by persons with 11th grade reading level or higher.

In an action plan evolved at a Regional Seminar on Smoking and Health held in Kathmandu, Nepal<sup>(11)</sup> there was no mention as how to disseminate information to the illiterates and the seminar failed to take cognisance of the problem of illiteracy. We consider that the mass media like radio and television are eminently suited to take the health message to illiterates and literates alike. The manner of delivery of these programs to illiterates requires additional research. Our earlier studies (unpublished) showed that 51% of the villagers have no access to any media. The rural areas in India<sup>(12)</sup> are well served with radio and television. The entire area is covered with 180 radio stations broadcasting in local languages and in addition, there is a national radio channel with a 1000 kW transmitter. TV broadcasts from 510 television stations in India cover 82% of the population and 67.6% of the area. This massive infrastructure of mass media is of no use for our purpose, however, as the rural illiterates could not afford either to buy a radio or to own a TV set. Thus they practically live in a no media land, and they can only be reached by a health worker with health information.

To reach illiterate rural smokers with health information, we recommend creation of an institution called the 'community health worker.' A community health worker will be more effective, if he were to be chosen from among the youth of the village and he would be given training in various methods of health education. He will be able to meet smokers in groups and use video and television in imparting health information. A community television set with video located in a 'Panchayat' (Village Council) building can be utilized for group viewing. The 'Doordarshan Kendras' (television stations) could be influenced to broadcast health messages in local languages on prevention of cancer and on the methods of cessation of smoking, aimed at the rural illiterate people. There are no private television stations in India. Audiovisual research centres operated by the Universities would have to be entrusted with the task of producing a series of short (15 min) video tapes on the themes of "Tobacco or Health."

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