

# Prevalence of Smokers among Air-Conditioned Coaches, Pakistan

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## Abstract

**Objective:** To estimate the proportion of smokers among passengers of air-conditioned (A/C) coaches running between Karachi and Hyderabad. Pakistan

**Method:** A cross-sectional survey was done on passengers and staff members of 20 air-conditioned coaches.

**Results:** Of 847 passengers interviewed, 17.3% were smokers and 11.7% passengers smoked during travel while rest of them remained passive smokers. Out of 147 smokers 91.2% were literate persons. Among staff members 59.3% were smokers. Approximately 56% of smokers among passengers were in the age range of 14-40 years. In 95% of A/C coaches there were no anti-smoking warning signs or written words present.

**Conclusion:** In this study majority of smokers were literate, so inter-personal communication and counseling may change the smoking behavior. Ministry of Health should disseminate educational messages regarding hazards of passive smoking among commuters of AC coaches and above all proper implementation of legislation for smoking at public places especially in transport (JPMA 51:405, 2001).

## Introduction

Smoking epidemic is decreasing steadily in Western countries because of public education and legislative control, but it continues to spread at an accelerated rate in underdeveloped and developing countries because either there is no legislation or if at all some, it is not implemented<sup>1</sup>.

Though harmful effects of tobacco were recognized in 1600's in Europe but scientific evidence started appearing in 1950's<sup>2</sup>. First study on passive smoking was done by Hirayama of Japan in 1981g. Tobacco not only causes harm to the individual who smokes but it also affects the health of the persons who live, work or travel with the smoker (passive or second hand smoking<sup>4</sup>). Many toxins are present in higher concentrations in side stream smoke than in main stream smoke and typically nearly 85% of the smoke in a room results from side stream smoke<sup>5</sup>. More than 40% children are exposed to passive smoking<sup>3</sup>. For these reasons, smoking in confined spaces (rooms, offices, buses and aircrafts) where non-smokers are also present, is morally wrong. Furthermore, in confined or closed spaces the situation becomes worse, when there is absence of exhaust fans.

Pakistan faces the increasing threat of tobacco-related health and economic hazards<sup>2</sup>. People use to smoke at public places because of ineffective legislation and little political will to control smoking<sup>6</sup>.

Pakistani cigarettes have amongst the highest levels of tar and /nicotine in the world<sup>7</sup>. The dilemma of Pakistani people is that, air-conditioned (A/C) coaches often do not use exhaust fans, hence smoke in closed coaches is inhaled by other passengers and also there is dearth of knowledge regarding smokers level among buses especially A/C coaches. So this study was conducted to estimate the proportion of smokers among commuters of A/C coaches plying between Karachi and Hyderabad, Pakistan.

## Methods

A cross-sectional survey was done on commuters and staff members of A/C coaches plying between Karachi and Hyderabad during August 1, 1999- October 3, 1999 (10 weeks). A smoker was defined as, any person of any age of either sex, who smoked while travelling in the A/C coaches during the study period. A passive smoker was defined as any person of any age of either sex who inhaled air contaminated by tobacco smoke while travelling in the A/C coaches during the study period. To select an A/C coach for every up and down journey, during ten consecutive weeks, convenience sampling was done among all the coaches ready for the journey at Sohrab Goth, Karachi and at Main Bus Stop Hyderabad. All the commuters and staff members of over 12 years of age among A/C coaches were interviewed through pre-designed questionnaires. For children up to 12 years age, the person travelling with him or her answered on behalf of that child. Data was entered in EPI4NFO (version 6.04) and analyzed through SPSS (version 8.0) and Harvard graphic (4.0).

## Results

Commuters and staff members of 20 AC coaches were interviewed. Of 847 commuters, 79.2% were male, 17.3% were smokers and 11.7% smoked during travelling. The rest of the passengers who smoked, 55.8% were between 14-40 years of age and 44.2% between 40 and 60 years and 91.2% were literate. Only on 5% A/C coaches, anti-smoking warning signs or written words were present to warn the passengers.

## Discussion

The study is limited by the cross-sectional design, so temporal or causal relationships cannot be interpreted. The study also has the potential for bias because of self-report in front of elders, so the prevalence is 11.7%, lower than 21.6% as reported by Alam SE<sup>7</sup>. The sample size of coaches was smaller than expected and finally the study has limited generalizability, because results were only applicable to a similar population. As 85% of smoke in a closed space results from side stream smoke<sup>5</sup> so passive smokers were exposed to higher concentrations of toxic gases. Keeping in view this figure, Sri Lanka and Korea banned smoking in all types of transport, including express buses, trains and aircrafts<sup>8</sup>. It is high time that Government should take action as our study found that around 88% were passive smokers. This study concluded that majority of smokers, smoking during travel, were literate; most of them were in the middle age group and very few A/C coaches had anti-smoking warning signs or written words to warn the passengers. Thus we recommend, that as majority of the smokers were literate, so inter-personal communication and counseling may change the smoking behavior. Ministry of Health should disseminate educational messages regarding hazards of passive smoking among commuters of A/C coaches and above all proper implementation of legislation for smoking at public places; especially in transport, is necessary.

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