TOTAL PROHIBITION OF SMOKING BUT NOT PARTIAL RESTRICTION EFFECTIVELY REDUCED EXPOSURE TO TOBACCO SMOKE AMONG RESTAURANT WORKERS IN FINLAND

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Abstract
Objectives: To assess work-related exposure to tobacco smoke in Finnish restaurants, a series of nationwide questionnaire surveys were conducted among restaurant workers and the levels of indoor air nicotine concentrations were measured in restaurants. The survey aimed to evaluate the impact of the smoke-free legislation in general and in particular after the total smoking ban launched in 2007. Materials and Methods: In 2003–2010, four national questionnaire surveys were conducted among restaurant workers and the concentration of nicotine in indoor air was measured in different types of restaurants, bars and nightclubs. Results: Between 2003 and 2010, the proportion of restaurant workers reporting occupational exposure to tobacco smoke dropped from 59% to 11%. Among pub workers, the decrease was from 97% to 18% and in workers of dining restaurants from 49% to 10%, respectively. The median concentration of nicotine in indoor air of all restaurants decreased from 11.7 μg/m³ to 0.1 μg/m³. The most significant decrease was detected in pubs where the decrease was from 16.1 μg/m³ to 0.1 μg/m³. Among all restaurant workers, in 2003–2010 the prevalence of daily smokers was reduced from 39% to 31% in men and from 35% to 25% in women. Conclusion: Total prohibition of smoking but not partial restriction in restaurants was effective in reducing work-related exposure to tobacco smoke. Strict tobacco legislation may partly be associated with the significant decrease of daily smoking prevalence among restaurant workers.

Key words: Secondhand smoke, Occupational exposure, Prevention, Restaurants

INTRODUCTION
Exposure to tobacco smoke increases the risk of developing several serious adverse health effects including asthma, respiratory infections, cardiovascular diseases and lung cancer [1–4]. It is also associated with lowered birth weight and premature death [5–7].

Many countries in Europe, Asia, Australia and the Northern America have recently launched strict legislation against smoking in various workplaces including restaurants [8–11]. WHO Framework Convention on Tobacco Control (FCTC) has had a significant global role in actions undertaken to prevent tobacco epidemic
MATERIALS AND METHODS

Questionnaire

The total workforce in the hospitality industry in Finland varied between 47,918 and 53,062 individuals in 1999–2010 (Statistics Finland, 2012). Out of them approximately 75–85% belonged to the national workers union (the Service Union United, PAM).

The follow-up survey consisted of individual cross-sectional surveys. The present study reports the results of them. The data from the first two have been reported earlier [14]. In each annual survey the “target group” was the group of restaurant workers belonging to the restaurant workers union from whom a random sample of 3000 restaurant workers was identified. The questionnaires were sent and returned by mail. In 2003, the questionnaire was re-sent to those who did not respond to the first one. In subsequent years no second attempt was made.

Altogether 6 surveys including questionnaire surveys in restaurants were conducted between the years 1999–2010. In the present study, the data concerning the questionnaires from 2003–2010 were evaluated to assess the impact of the latest reform in Tobacco Act concerning restaurant work and the launch of the total smoking ban in 2007. The first survey was carried out in 2003, four years before the total smoking ban and the second in 2007, five months before the total ban. The third survey in 2009 was conducted almost two years and the last survey in 2010 three years after the launch of the total smoking ban in restaurants.

In each survey, the member list of restaurant workers was updated so that those who retired, were unemployed or who worked in a different sector were excluded from the group. The questionnaires aimed at collecting the participants’ background information, smoking habits, restrictions on smoking at their workplace, occupational exposure and symptoms related to tobacco smoke.

The present national survey assesses the whole process of a gradual introduction of the smoke-free legislation in Finland. From 1999 to 2010, altogether six national questionnaire surveys were conducted among restaurant workers along with seven indoor air measurement surveys in restaurants of three municipalities to assess the impact of tobacco legislation on restaurant workers’ exposure to tobacco smoke [13,14]. The present study focuses on the impact of the partial restriction and especially the total ban of smoking in restaurants, which was launched in 2007. Additionally, a comparison between the time period of the partial prohibition (1999–2004 and 2004–2007) and the total prohibition (since 2007) is presented in the report.