

6. SUMMARY

The primary aim of presented cross sectional study was to investigate the influence of tobacco products usage on dental caries in the groups of Indian and Czech respondents. The secondary aim was to compare the results found in the Indian group with those obtained in the Czech group; taking into consideration the differences in culture, race, socioeconomic status, food and drink habits, oral hygiene practices, and the use of tobacco in different forms. Participants in this study were patients of dentists cooperating with authors of the study. Age was principal criterion for their participation (30 – 69 years). Two different sets of questionnaires were prepared; one for the Czech participants, and the another, with minor variations, for the Indian participants. All participants were requested to complete the questionnaire which included questions concerning their personal history, economic status, educational qualification, profession, health status, food habits, frequency of dental visits, brushing habits, dental aids used and a detailed tobacco consumption history. Information concerning the use of tobacco included determination of current tobacco consumption status and form of tobacco use. We found six forms of tobacco consumption in the group of Indian respondents: tobacco with betel nuts and leaves, tobacco alone, bidi/chutta, cigarettes without filters, cigarettes with filters, pipes and other minority forms. Subsequently, the Indian respondents were classified into 5 groups: 1) regular smokers, 2) occasional smokers, 3) ex-smokers, 4) tobacco chewers (tobacco alone or tobacco with betel nuts and leaves), and 5) tobacco non-users. The respondents in the group 1, 3 and 4 are next specified as tobacco users. In the group of Czech respondents, unambiguously most prevalent form of tobacco consumption was smoking in different forms like cigarettes, pipes and cigars. Thus, the Czech respondents were classified only into 4 groups: 1) regular smokers, 2) occasional smokers, 3) ex-smokers, and 4) non-smokers. In both groups of respondents, intra-oral clinical examination (DMFT index) was used for detailed evaluation of dental health status. The whole Indian group of respondents comprised 580 men and 225 women. The group of Indian regular smokers was formed mostly of men (98%) while the group of Indian tobacco non-users (73%) and the group of tobacco chewers (75%) was formed mostly of women. The whole Czech group of respondents comprised 339 men and 340 women. The group of Czech regular smokers was formed mostly of men (60%) while the group of Czech non-smokers was formed mostly of women (59%). In both groups of respondents the tobacco non-users had higher education when compared to tobacco users. In both groups the tobacco use was associated with higher intake of alcohol. Smokers from both groups reported frequent intake of sugar rich soft drinks. The group of Czech regular smokers consumed fewer vegetables and fruits than Czech non-smokers while the group of Indian tobacco-users (smokers, chewers) consumed more vegetables and fruits when compared with the Indian group of tobacco non-users. In both groups of respondents tobacco non-users or non-smokers showed better oral health status than tobacco users. The Indian regular smokers and tobacco chewers demonstrated a higher percentage of oral mucosal changes or lesions. The Indian group of tobacco users-chewers and smokers (regular smokers and ex-smokers) showed more decayed teeth than Indian tobacco non-users and the group of Czech smokers (regular smokers and ex-smokers) showed more decayed teeth than Czech non-smokers. The group of Czech smokers (regular smokers, ex-smokers) had more missing teeth than Czech non-smokers. In the Indian group of respondents we found no significant association between the tobacco use and the number of missing teeth. Higher number of filled teeth was found in the group of Indian tobacco users when compared with Indian tobacco non-users. We found higher number of filled teeth in the group of Czech tobacco non-smokers when

compared with Czech tobacco users (regular smokers and ex-smokers). Selected factors (variables) which can play the role of "confounding factors" influenced dental health of respondents quite differently in both groups of participants. In the Indian group of respondents, older participants had higher number of decayed, missing and filled teeth. Participants with higher education showed higher frequency of decayed and filled teeth but lower frequency of missing teeth. Surprisingly, attendance of preventive dental check ups increased the number of decayed and filled teeth. Higher brushing frequency decreased the number of decayed, missing and filled teeth. In the Czech group of respondents the age influenced the number of missing teeth (the number increased according to the age) while sex mostly influenced the number of filling teeth (women had a higher number of filled teeth when compared to men). The level of education particularly influenced the number of missing teeth and decayed teeth (the respondents with lower education had more missing and decayed teeth). Regular attendance of preventive dental check ups reduced the number of decayed teeth and the number of filled teeth (higher number). Brushing frequency influenced the number of decayed teeth, the number of missing teeth and the number of filling teeth. The respondents with low frequency of brushing showed worse results of DMF index and higher treatment need. It can be concluded that tobacco using (in all studied forms) influenced negatively all components of DMF-T index in Indian respondents. Smokers and tobacco chewers had higher average number of decayed, missing and filled teeth. In addition, higher number of missing and filled teeth was found even in ex-smokers. Likewise, smoking influenced negatively all components of DMF-T index in Czech respondents. Smokers had higher average number of decayed and missing teeth and lower number of filled teeth. In both groups of respondents, the tobacco non-users had higher education compared to tobacco users. Different effect of income on tobacco status in both groups of respondents can be stated. Except the intake of vegetables, the tobacco non-users in both groups of respondents had better dietary habits. Finally, we can conclude that our results confirmed the negative influence of tobacco consumption on dental carries in both groups of respondents.