CHAPTER 3: RATIONALE AND OBJECTIVES OF THE STUDY

3.1 RATIONALE FOR THE STUDY

Smoking prevalence is at a very high rate in Vietnam, especially among the Vietnamese male population as reported by Jenkins et al. (1997). Being a causal factor for a number of diseases and conditions in human beings, smoking is a significant public health problem in Vietnam. Unless radical changes are applied, Vietnam does and will face a tremendous health and economic burden in the very near future. Scientific evidence is needed to uncover and support possible pathogenic associations between smoking and health issues. The study of a relationship between smoking and periodontal disease among the Vietnamese population can serve as a significant contribution to answer the question.

One of the main issues in the rationale for this study was the opportunity to study the natural history of periodontal diseases and their related social and environmental factors where they are little confounded by professional dental care. Vietnam is a less developed Asian country, with income per capita among the ten lowest countries (World Bank Statistics). Health care resources, especially dental care with a dentist/population ratio of 1:30,000, are largely incapable of meeting the normative needs of the population. The majority of periodontal disease cases are left untreated or subjects receive medication prescription only. Moreover, the quality of care provided can be much lower than the accepted standards of the West. Thus, the vast majority of periodontal disease cases can be considered as untreated and were presented in the natural course of the disease.

The study can help to support the consistency of research findings on smoking as a major risk factor for periodontitis. The study of the association between smoking and
periodontitis has been done mostly in industrialised countries through cross-sectional and case-control studies. The number of longitudinal studies and intervening studies remains very few owing to the complexity of the follow-up processes and ethical issues. Thus, the consistency of smoking as a major risk factor for periodontitis must be found in a reasonably large number of studies in various populations with different lifestyles, living standards, level of oral hygiene practice and professional dental care.

The assessment of smoking as a risk indicator for periodontitis can be done among a population little confounded by professional dental care. Almost all of the research on the association of smoking with periodontal diseases has been conducted in industrialised countries with high living and dental care standards. However, further understanding of the patterns of distribution of destructive periodontal diseases and the possible existence of high risk groups for periodontal destruction could be best obtained by studies of populations in non-industrialised countries. In such populations, the availability of dental care services is low and the use of various treatment measures known to interfere with the natural course of the disease processes is minimal (Baelum, Manji & Fejerkov, 1991).

The purpose of this study was to evaluate smoking as a risk indicator for periodontitis among the Vietnamese population 35–44 years old with its specific demographic, physical conditions, socio-cultural and behavioural characteristics.

The study was a great opportunity to test the useability of LOA measurement in a large-scale epidemiological study in a developing country, Vietnam. Loss of attachment measurement remains the most reliable instrument of measuring periodontal disease activity. However, LOA measurement is still hampered with some technical problems, such as time constraints and technique sensitiveness. To date, LOA measurement finds less application in large-scale population-based studies in developing countries. The NOHSV 1999 was an opportunity to test the applicability of LOA measurement.
3.2 HYPOTHESIS

The working hypothesis of the study is:

Smoking is a major risk indicator for periodontitis irrespective of professional dental care and oral hygiene status. Smoking exposure increases the prevalence, extent and severity of periodontitis and has a dose-response effect on patterns of periodontal attachment loss.

3.3 OBJECTIVES

1. To describe the prevalence, extent and severity of periodontal disease among the 35–44-year-old population in Vietnam.
2. To assess smoking as a major risk indicator for periodontitis in this population.

Specific objectives

1. To describe oral hygiene status of the population;
2. to describe pocket depth, gingival recession and loss of periodontal attachment among the Vietnamese middle-aged population;
3. to compare pocket depth, gingival recession and loss of periodontal attachment by a number of putative risk factors;
4. to set up suitable case definitions of established periodontitis;
5. to describe the smoking rate among the Vietnamese middle-age population;
6. to analyse effects of smoking exposure on the prevalence, extent and severity of periodontitis with different criteria;
7. to develop multivariate models for periodontal destruction.