CHAPTER 7: CONCLUSION

The study aimed to investigate periodontal health among a sample of Vietnamese middle-aged population and examine the effect of smoking as a risk indicator for periodontal disease. The strength of the study was its precise sampling and measurement methodologies. Sample size and representativeness of the study population were statistically determined. The high response rate ensured that a representative sample was obtained, and representativeness was further enhanced through re-weighting procedures.

The study showed the applicability of loss of periodontal attachment (LOA) as a measurement of periodontal status for large-scale epidemiological investigations in developing countries. This measurement is time consuming and technique sensitive, but the value of the collected information overweighs the technical difficulties. The use of LOA measurement among such populations will contribute greatly to the understanding of the nature of periodontal disease and its underlying processes and modifying factors.

The study, in addressing its specific aims, drew several conclusions as follows:

1. The oral hygiene status of the study population was poor characterised by high accumulation of plaque, high prevalence of calculus, and gingival inflammation assessed in terms of bleeding on probing. The oral hygiene status was significantly dependent on socioeconomic status and tobacco smoking.

2. The prevalence of periodontal pockets, gingival recession and loss of attachment among the present population was high. However, only a limited number of sites or subjects presented with severe disease. The prevalence, extent and severity of periodontal disease among the present population were intermediate between those of developed and other developing countries. The main characteristics of the disease
as reported by previous research such as universality of loss of attachment, positive skewness of destruction and site- and teeth-specificity were supported by findings of this study.

3. A number of putative risk factors such as lower income, education and rural residency were significantly associated with poorer periodontal status. On the other hand, dental visiting pattern did not significantly improve periodontal health of the population.

4. The case definitions used in the present study identified individuals with significantly higher levels of periodontal disease. These case definitions had high reliability in determining disease status among the study sample.

5. The study revealed high prevalence of smoking among the male population of Vietnamese middle-aged adults. On the other hand, females were less likely to be smokers. Vietnamese smokers consumed less amount of tobacco as compared with other populations.

6. Smoking was significantly associated with the prevalence, extent and severity of periodontal disease as identified by bivariate analyses. The strength of these associations indicated that the pathogenic effects of smoking on periodontal health were not due to chance alone.

7. The extent and severity of periodontal destruction varied significantly across sites and teeth, indicating that smoking might affect sites in the mouth differently. This finding suggests that some local factors might play a role in enhancing or preventing detrimental effects of smoking on particular sites or teeth. This finding needs further investigation to confirm and uncover the nature of the processes involved and explain some proportion of site- and teeth-specificity of the disease.
8. Multivariate models further supported the link between smoking and poorer periodontal status. These models were suitable in determining the factors, which might relate to the outcomes of periodontal disease in the present population. Also, the evident dose-response effect of smoking on the periodontal status was observed irrespective of indicators investigated.

To conclude, the findings of the present study supported the working hypothesis, which was to provide evidence of smoking as a significant risk indicator for the periodontal disease among Vietnamese middle-aged population.

The study revealed that the Vietnamese middle-aged population was considerably burdened by periodontal disease. This was aggravated by a high prevalence of factors contributing to the disease, such as smoking, poor living conditions and low oral hygiene status. The close link between oral diseases, socio-economic and behavioural conditions was also uncovered. Appropriate goals and strategies for improving periodontal health need to be developed through co-operation at all levels and sensitivity to the cultural and economic circumstances. Furthermore, it is necessary to determine the type of oral health care system response that would be the most effective in reducing the extent of inequality in oral health in a situation where resources are very scarce. The preventive approach should be the most important role in the oral care provided. The prevention of alterable risk indicators for the disease, such as smoking, should be implemented in the dental practice. Oral health should be integrated with general health and improvement of living conditions in measures to reduce exposure to deleterious factors such as tobacco smoking. To achieve those goals, the population strategy with an orientation to the common risk factor approach would be the most appropriate. Also, the high-risk strategy targeted at reducing risk among groups or individuals at high risk would help to improve the periodontal health of the population.