

**DENTAL CARIES EXPERIENCE AND PREVALENCE OF
ORAL MICROORGANISMS AMONG SCHOOL CHILDREN
IN CAMBODIA**

OUM TENG

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE
(MAXILLOFACIAL PROSTHETICS)
FACULTY OF GRADUATE STUDIES,
MAHIDOL UNIVERSITY**

2006

COPYRIGHT OF MAHIDOL UNIVERSITY

DENTAL CARIES EXPERIENCE AND PREVALENCE OF ORAL MICROORGANISMS AMONG SCHOOL CHILDREN IN CAMBODIA

OUM TENG 4736079 DTMP/ M
M.Sc. (MAXILLOFACIAL PROSTHETICS)

THESIS ADVISOR: M.L.THEERATHAVAJ SRITHAVAJ, M.S.,
SROISIRI THAWEBON, Ph.D., DUANGJAI LEXOMBOON, Ph.D., SUWAN
CHOONHARUANGDEJ, Ph.D.

ABSTRACT

Dental caries is distributed among children all over the world. In this study an attempt has been made to determine the relationship between oral health status and socio-economic status in rural and urban areas. A total of 200 school children of 10 to 15 years of age, both male and female, were examined to obtain a DMFT (Decayed, Missing, Filled teeth) count, in order to establish caries prevalence, and to assess the level of microorganisms in the saliva related to dental caries. Observations were made in Phnom Penh city and Kandal Province, Cambodia. The microorganisms measured were *mutans streptococci*, *lactobacilli*, and *candida albicans*. A questionnaire to determine knowledge and attitude of children to oral cleanliness was also distributed.

Almost all oral microorganisms were detected in every child's saliva. The total levels of bacteria were used to find the mean density; the mean density of *mutans streptococcus* was $>10^3 \leq 10^5$ CFUs/mg. The mean levels of *lactobacillus* and *candida albicans* were also moderate, not more than $>10^3 \leq 10^5$ CFUs/mg.

The highest total counts of microorganisms (*mutans streptococcus*, *lactobacillus*, and *candida albicans*) were found in the urban, rather than rural group of school children. A correlation analysis indicates that the level of *mutans streptococci* had a low correlation with DMFT value, and the level of *lactobacilli* had a moderate correlation with DMFT value. Mean DMFT value also had little correlation with knowledge of the children concerning dental caries. Regarding their attitude, children who had a low attitude to oral hygiene had a high DMFT value.

Overall, the results indicate that different levels of practice regarding oral cleanliness can have varied and significantly different DMFT values. Further analysis into the background, education and reliability of the children's responses should be done.

KEY WORDS: DENTAL CARIES, MICROORGANISMS IN SALIVA,
ORAL HYGIENE (KAP), SOCIO-ECONOMIC STATUS

45 pp.