

ความพึงพอใจของผู้สูงอายุหลังใส่ฟันเทียมทั้งปากในชากรรไกรบนและล่าง
อำเภอจตุรพักตรพิมาน จังหวัดร้อยเอ็ด ประเทศไทย



นางสาวจริญญา ชมใจ

ศูนย์วิทยทรัพยากร จุฬาลงกรณ์มหาวิทยาลัย

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาสาธารณสุขศาสตรมหาบัณฑิต

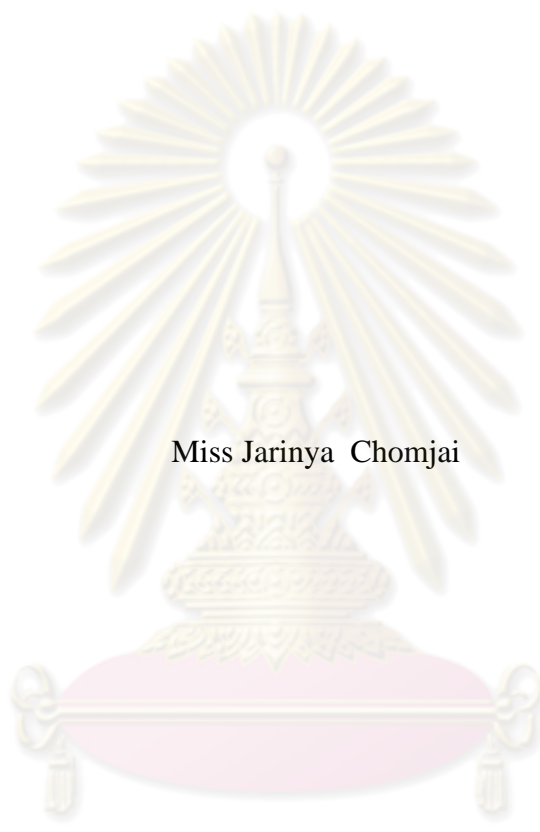
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SATISFACTION OF THE ELDERLY AFTER COMPLETE DENTURES
INSERTION ON UPPER AND LOWER ARCH AT JATURAPAKPIMAN
DISTRICT, ROI ET PROVINCE, THAILAND



Miss Jarinya Chomjai

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

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Thesis Advisor Robert Sedgwick Chapman, M.D.

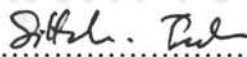
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in Partial Fulfillment of the Requirements for the Master's Degree


.....Dean of College of Public Health Sciences
(Professor Surasak Taneepanichskul, M.D.)

THESIS COMMITTEE


..... Chairman
(Professor Surasak Taneepanichskul, M.D.)


..... Thesis Advisor
(Robert Sedgwick Chapman, M.D.)


..... External Examiner
(Associate Professor Sittichai Tudsri, D.D.S., M.D., B.P.A., Dr.med.)

จริยญา ชมใจ: ความพึงพอใจของผู้สูงอายุหลังใส่ฟันเทียมทั้งปากในชากรรไกรบนและล่าง
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การศึกษาเชิงพรรณนาภาคตัดขวาง จากกลุ่มตัวอย่างผู้สูงอายุจำนวน 270 คน ที่ได้รับการใส่
ฟันเทียมทั้งปากจากโรงพยาบาลจตุรพักตรพิมาน ในโครงการฟันเทียมพระราชทาน โรงพยาบาลจตุร
พักตรพิมาน อำเภอจตุรพักตรพิมาน จังหวัดร้อยเอ็ด วัตถุประสงค์เพื่อ วัดความพึงพอใจในผู้สูงอายุ
หลังใส่ฟันเทียมทั้งปาก สัมพันธ์กับผลกระทบสุขภาพของปาก เพื่อประเมินพฤติกรรมสุขภาพของปาก
การดูแลฟันเทียมหลังจากการใส่ฟันเทียมทั้งปากและเพื่อจำแนกปัจจัยที่สัมพันธ์กับความพึงพอใจ
และผลกระทบสุขภาพของปากในผู้สูงอายุหลังใส่ฟันเทียม โดยทำการศึกษาระหว่างเดือนกุมภาพันธ์
และมีนาคม พ.ศ.2553 การศึกษาครั้งนี้พบว่า กลุ่มประชากรที่ศึกษามีอายุเฉลี่ย 71.55 ปี เป็นเพศ
ชาย 140 คนคิดเป็นร้อยละ51.9 เพศหญิง130 คนคิดเป็นร้อยละ42.1 สถานภาพสมรส 157 คนคิด
เป็นร้อยละ58.1 ส่วนใหญ่จบการศึกษาระดับประถมศึกษาปีที่6 ร้อยละ69.3 มีรายได้เฉลี่ยในครัวเรือน
ต่อเดือนน้อยกว่า1,000บาท/เดือนจำนวนร้อยละ 64.8 เคยใส่ฟันปลอมมาก่อนการใส่ฟันเทียมครั้งนี้
จำนวนร้อยละ45.9 ส่วนใหญ่เข้ามารับการใส่ฟันเทียมที่โรงพยาบาลจตุรพักตรพิมานเพราะเพื่อนบ้าน
บอกร้อยละ35.2 รู้ข้อมูลจากโรงพยาบาลร้อยละ31.2 และมาโรงพยาบาลโดยรถมอเตอร์ไซด์เป็นส่วน
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กาแฟร้อยละ76.3 ดื่มน้ำอัดลมร้อยละ68.1 ปัจจัยด้านการดูแลทำความสะอาดฟันเทียมพบว่า
ผู้สูงอายุที่ใช้น้ำเปล่าล้างทำความสะอาดฟันเทียมและใช้เม็ดฟูทำความสะอาดฟันเทียมมี
ความสัมพันธ์กับผลกระทบสุขภาพของปากและความพึงพอใจต่ำในฟันเทียมบนและล่างอย่างมี
นัยสำคัญทางสถิติที่ $P - value \leq 0.034$ สำหรับผู้ที่แปรงฟันปลอมเป็นประจำไม่มีความสัมพันธ์กับ
ผลกระทบสุขภาพของปากและความพึงพอใจในฟันเทียมบนและล่าง และในผู้สูงอายุที่ใส่ฟันปลอม
ขณะนอนหลับมีความสัมพันธ์กับผลกระทบสุขภาพของปากและมีความพึงพอใจสูงในฟันเทียมบน
และล่าง พบว่าผู้ที่เคยใส่ฟันเทียมมาก่อนมีความสัมพันธ์กับผลกระทบสุขภาพของปากและมีความพึง
พอใจสูงในฟันเทียมบนและล่าง

สาขาวิชา.....การพัฒนาระบบสาธารณสุข
ปีการศึกษา.....2552.....

ลายมือชื่อนิสิต.....

ลายมือชื่ออาจารย์ที่ปรึกษาวิทยานิพนธ์หลัก.....
Roberts S. Chapman

5179137053: MAJOR HEALTH SYSTEMS DEVELOPMENT

KEYWORDS: SATISFACTION/ COMPLETE DENTURES/ OHIP

JARINYA CHOMJAI: SATISFACTION OF THE ELDERLY AFTER COMPLETE DENTURES INSERTION ON UPPER AND LOWER ARCH AT JATURAPAKPIMAN DISTRICT, ROI ET PROVINCE, THAILAND. THESIS ADVISOR: ROBERT SEDGWICK CHAPMAN, M.D., 55 pp.


A cross-sectional descriptive study was conducted among 270 elderly patients who got complete dentures from Jaturapakpiman district hospital, Roi-et Province, Thailand. The study had 3 objectives: (1) To determine satisfaction of the elderly after complete denture insertion related to oral health impact profile (OHIP) and questions related to satisfaction of upper and lower denture; (2) To assess the oral hygiene behavior and denture care after the complete denture insertion; (3) To identify the factors associated with satisfaction and oral health impact after denture insertion. Dental nurses and interviewers were trained to administer the standardized questionnaire, Oral Health Impact Profile (OHIP) 14 questions and 14 questions related to satisfaction of upper and lower denture were use for measurement tool, Data collection was conducted in February and March 2010, by face-to-face questionnaire interviews. Frequencies, percentages, means and standard deviations were used to describe demographic data, oral hygienic behaviors and denture care. To assess associations between dependent and independent variables, Spearman correlation, Mann-Whitney U tests, and Kruskal-Wallis tests were used.

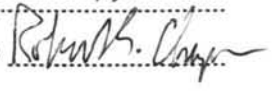
The average age was 71.55 years, 140 persons were male (51.9%). Married patients were 157 persons (58.1%). 69.3% were primary education. 80.0% of patients were in agriculture and their family income were less than 1,000 baht/month (64.8%), OHIP and satisfaction scores were positively and significantly correlated (Spearman rho = 0.669, $p < 0.001$). Gender and educational level were generally statistically significantly associated with OHIP and satisfaction scored ($P < 0.05$), but directions of these associations were not regular. Whisky drinking was generally associated with lower scores; the opposite was true for carbonated beverage drinking. Smoking was consistently and significantly associated with lower scores. Using water to clean dentures was associated with lower scores. Removing and soaking dentures in water showed different directions of association with different scores. Unexpectedly, not removing dentures at bedtime was associated with higher satisfaction scores. Previous use of dentures was associated with higher satisfaction scores. Further research is needed to explain why some observed associations were not regular, or showed unexpected directions.

Recommendation in tooth loss protection for the elderly, oral health promotion and prevention, oral hygiene instruction and oral health education. And methods of denture care; handle dentures with great care to avoid accidentally dropping them, brush and rinse dentures daily, clean with a denture cleaner.

Field of Study : Health Systems Development

Academic Year : 2009

Student's Signature 

Advisor's Signature 

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ศูนย์วิทยทรัพยากร
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LIST OF ABBREVIATIONS

OHIP	Oral Health Impact Profile
MoPH	Ministry of Public Health
WHO	World Health Organization
QOL	Quality Of Life
ADA	American Dental Association



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CHAPTER I

INTRODUCTION

1.1 Background and Rationale

Thailand, the proportion in the elderly increase at the rate from 10.0 percentages in year 2000 to 15.0 percentages in year 2025, while the childhood people (age 0-14 year) decrease from 30.1 percentages in year 2000 to left 24.2 percentages in year 2025. This information indicate that the structure of people changes from people childhood structure in the past is old age people or old people social will in the future. (Ministry of Information and Communication Technology, Bureau of National Statistical Office of Thailand. 2004)

The 6th dental national health status survey, 2008 showed that the elderly from 60 – 74 years of age has dental caries 95%, periodontitis 85% , root caries 20% and have <20 natural teeth for function was 47.7%, and there was tooth loss in 92%.

According to the above statistics, the elderly lost most of their natural teeth especially in the full mouth edentulous area. This can affect quality of life, body and mind, loss of dental function for eating or incomplete function for eating, can not speak clearly and smoothly, physical appearance (cosmetics), change of face shape, short & thin, can not hear from mandibular bone depression.

This can also have mental/emotional effects, because of which elderly will lose their confidence in their lifestyle and keep themselves away from the community.

Denture therapy can help these elderly, and sometimes even bring them back to their normal happy life with adequate confidence.

Complete dentures are the most common prescription offered to edentulous patients. It is estimated that 2 in 3 adults are edentulous. Over the next two decades, according to current predictions, The two major reasons why patients seek denture therapy are to improve aesthetics and to improve mastication. Around one quarter of patients are likely to be dissatisfied with their dentures. The high failure rate of complete dentures might be one of the reasons why practitioners often prefer to refer these patients for treatment elsewhere. Whilst alternatives, such as implants, can be offered, these might not be suitable for all patients, because of fear, or financial constraints among others.

In the year 2006, dental health division, Ministry of Public Health (MoPH) has started the project of prosthesis denture for the elderly to celebrate the 80th anniversary of His Majesty the King. This project is planned for three years & has a target to give denture therapy to 80,000 peoples from which 50% of the elderly will get artificial teeth which are suitable for them while eating.

According to all rationale and literature review accompany with the project of prosthesis denture for the elderly to celebrate 80th anniversary of His Majesty the King. The researcher intends to investigate the effect and quality of denture, oral health status and together with quality of life after the elderly get the denture insertion. The researcher would like to know the satisfaction of the elderly after they get complete denture insertion, and to investigate the factors associated with satisfaction and oral health impact after denture insertion.

1.2 Research questions

- 1.What is satisfaction of the elderly after denture insertion?
- 2.What is the oral health impact after they get denture insertion?
- 3.What factors are associated with satisfaction and oral health impact profile after denture insertion?

1.3 Objectives of study

- 1.To determine satisfaction of the elderly after complete denture insertion relate to oral health impact profile and questions related to satisfaction of upper and lower denture.
- 2.To assess the oral hygiene behavior and denture care after the complete denture insertion.
- 3.To identify the factors associated with satisfaction and oral health impact after denture insertion.

1.4 Operational Definitions :

1.Complete Denture means full mouth artificial teeth, composed of upper denture and lower denture

2.Elderly means old people who have 60 years old and over

3.Age referred to how old the elderly at the time of the interview

4.Gender referred as male and female

5.Marital status referred to the current marital status of the elderly. It is classified into married, single, widowed, and divorced/separated

6.Education referred to the highest year or education of the elderly. It was divided into no education, primary education, secondary education, graduate, master and higher, and others

7.Occupation referred to present job that the elderly relies on his/her survival. It was divided into no occupation, farmer/gardener, labour, shopkeeper, housewife, retired, and others

6.Family income referred to the amount of money that the elderly and the family members receive per month.

7.Past history of denture referred to how long have the elderly had old complete denture.

8.Sources of information referred to the process initiated the elderly to know complete denture treatment in hospital. It was divided into newspaper, television, radio, poster, friends, village public health volunteer, primary public health office, hospital, and others

9.Transport to hospital referred to the way led the elderly to treat denture therapy in hospital. It was divided into walking, bicycle, motorcycle, bus, own car, brought by family member, and others

10.Oral hygienic behavior referred to the oral habit induced to oral disease, it was divided into coffee/tea drinking, whisky drinking, carbonic drinking, smoking, areca nut chewing, and others

11.Denture care means method to clean denture and behavior to keep denture a long time for use, It was divided into brushing the denture everyday, brushing the denture more than two times per day, use detergent, use water, do not clean, use chemical tablets for denture cleaning, get it out before sleeping and keep it in water someday, et it out before sleeping and keep it in water everyday, sleeping with denture, and others

12.OHIP is Oral Health Impact Profile, referred to evaluation for oral health, measuring the frequency and severity of oral problems on functional and psycho-social well being, composed of 14 questions

1.5 Conceptual Framework

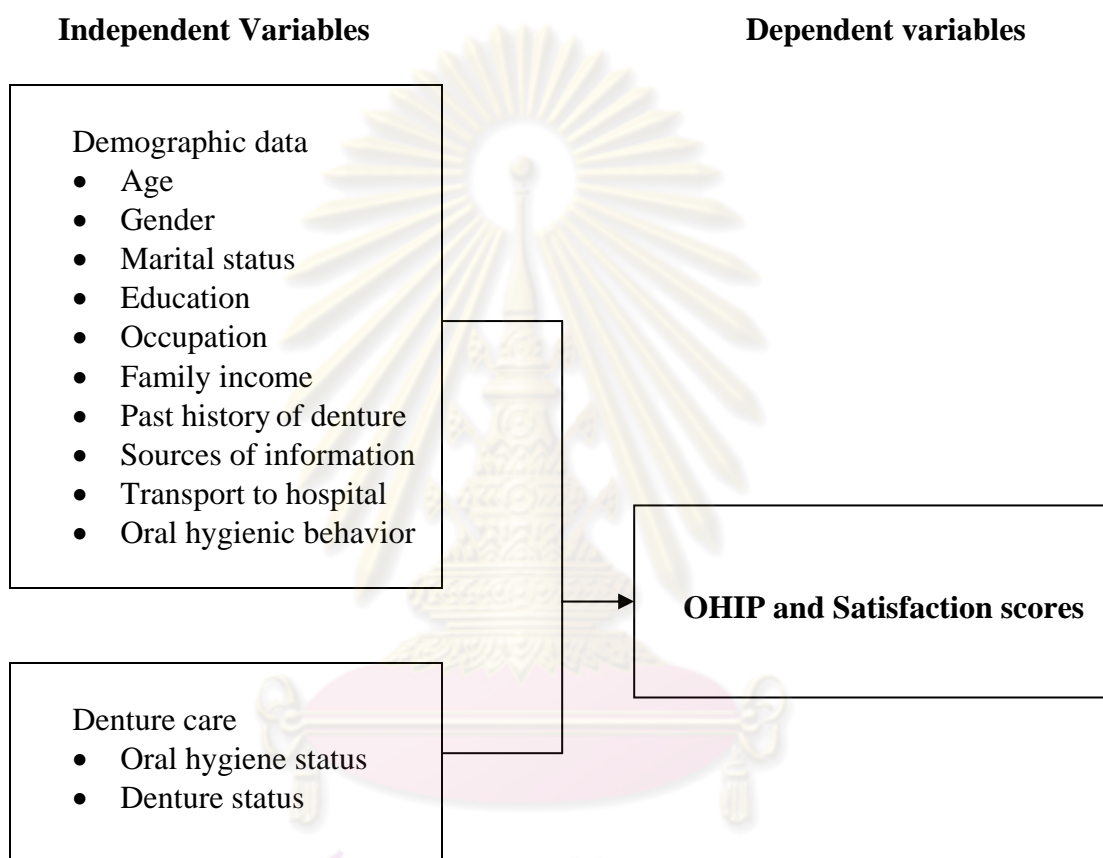


Fig.1: Conceptual framework

1.6 Expected Benefit

This thesis studied about the satisfaction of the elderly after complete denture insertion at Jaturapakpiman district, Roi et province. Thus, results is important for further program planning implementation, that improve and develop the treatment process of complete denture in the elderly at Jaturapakpiman district, Roi et province.

1.7 Ethical Consideration

- This study was approved by the Human Research Ethical Committee of Chulalongkorn university
- Participants were received interviewing, inform consent in this research.
- Researcher keep and completely hide the data of all participants.

1.8 Limitations

Because there was a limitation of time for the research and being a cross-sectional study, the researcher could not avoid the time of people migration to work in other province. Thus, the study population may not have been fully representative.

Some sample did not accept to answer and could not give information to interviewers because they thought this was sensitive data



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CHAPTER II

LITERATURE REVIEW

2.1 Causes of tooth loss

Elderly can become entirely edentulous (without teeth) due to many reasons, the most prevalent being removal because of dental disease typically relating to oral flora control, i.e. periodontal disease and tooth decay. Other reasons include tooth developmental defects caused by severe malnutrition, genetic defects such as Dentinogenesis imperfecta, trauma, or drug use

2.2 Dentures

Dentures are prosthetic devices constructed to replace missing teeth, and which are supported by surrounding soft and hard tissues of the oral cavity. Conventional dentures are removable, however there are many different denture designs, some which rely on bonding or clasping onto teeth or dental implants. There are two main categories of dentures, depending on whether they are used to replace missing teeth on the mandibular arch or the maxillary arch.

2.3 Types of dentures

Removable partial dentures

Removable partial dentures are for patients who are missing some of their teeth on a particular arch. Fixed partial dentures, better known as "crown and bridge", are made from crowns that are fitted on the remaining teeth to act as abutments and pontics made from materials to resemble the missing teeth. Fixed bridges are more expensive than removable appliances but are more stable.

Complete dentures

Conversely, complete dentures or full dentures are worn by patients who are missing all of the teeth in a single arch

Complete dentures can be either "conventional" or "immediate." Made after the teeth have been removed and the gum tissue has begun to heal, a conventional

denture is ready for placement in the mouth about 8 to 12 weeks after the teeth have been removed.

Unlike conventional dentures, immediate dentures are made in advance and can be positioned as soon as the teeth are removed. As a result, the wearer does not have to be without teeth during the healing period. However, bones and gums shrink over time, especially during the healing period following tooth removal. Therefore a disadvantage of immediate dentures compared with conventional dentures is that they require more adjustments to fit properly during the healing process and generally should only be considered a temporary solution until conventional dentures can be made.(Cawson, 2000)

2.4 Prosthodontic principles of dentures

Support

Support is the principle that describes how well the underlying mucosa (oral tissues, including gums and the vestibules) keeps the denture from moving vertically towards the arch in question, and thus being excessively depressed and moving deeper into the arch. For the mandibular arch, this function is provided by the gingiva (gums) and the buccal shelf (region extending laterally (beside) from the posterior (back) ridges), whereas in the maxillary arch, the palate joins in to help support the denture. The larger the denture flanges (part of the denture that extends into the vestibule), the better the support.

Stability

Stability is the principle that describes how well the denture base is prevented from moving in the horizontal plane, and thus from sliding side to side or front and back. The more the denture base (pink material) runs in smooth and continuous contact with the edentulous ridge (the hill upon which the teeth used to reside, but now consists of only residual alveolar bone with overlying mucosa), the better the stability. Of course, the higher and broader the ridge, the better the stability will be, but this is usually just a result of patient anatomy, barring surgical intervention (bone grafts, etc.).

Retention

Retention is the principle that describes how well the denture is prevented from moving vertically in the opposite direction of insertion. The better the topographical mimicry of the intaglio (interior) surface of the denture base to the surface of the underlying mucosa, the better the retention will be (in removable partial dentures, the clasps are a major provider of retention), as surface tension, suction and just plain old friction will aid in keeping the denture base from breaking intimate contact with the mucosal surface. It is important to note that the most critical element in the retentive design of a full maxillary denture is a complete and total border seal (complete peripheral seal) in order to achieve 'suction'. The border seal is composed of the edges of the anterior and lateral aspects and the posterior palatal seal. The posterior palatal seal design is accomplished by covering the entire hard palate and extending not beyond the soft palate and ending 1–2 mm from the vibrating line.

As mentioned above, implant technology can vastly improve the patient's denture-wearing experience by increasing stability and saving his or her bone from wearing away. Implant can also help with the retention factor. Instead of merely placing the implants to serve as blocking mechanism against the denture pushing on the alveolar bone, small retentive appliances can be attached to the implants that can then snap into a modified denture base to allow for tremendously increased retention. Options available include a metal Hader bar or precision balls attachments, among other things. (Tanwir, 2008)

2.5 Advantages of complete dentures

Complete dentures can help patients in a number of ways:

1. Mastication - chewing ability is improved by replacing edentulous areas with denture teeth.

2. Aesthetics - the presence of teeth provide a natural facial appearance, and wearing a denture to replace missing teeth provides support for the lips and cheeks and corrects the collapsed appearance that occurs after losing teeth.

3. Phonetics - by replacing missing teeth, especially the anteriors, patients are better able to speak by improving pronunciation of those words containing sibilants or fricatives.

4. Self-Esteem - Patients feel better about themselves.

2.6 Complete denture procedures

The loss of all teeth may impact on functional activities. The most common way to treat full mouth edentulous area is still by means of a conventional full denture. Except for the dentist's skill, many other factors, depending entirely on the patient, are also very important in achieving optimum retention and stability of full dentures. These factors include adhesion and cohesion, viscosity and flow of saliva, the shape and degree of resorption of alveolar ridges, and the quality and quantity of alveolar bone as well as mineral density, resiliency of soft tissue, relationship between the upper and lower alveolar ridges, neuromuscular coordination, status of oral mucosa, depth of vestibular sulcus, and presence of hypertrophy of the tongue (John, 2004).

Construction of a good complete set of dentures depends on technical, biological, and physiological interactions between the patient and dentist. The great majority of patients are satisfied with their complete dentures. However, even if the dentures are constructed to all accepted criteria, some patients will still be dissatisfied with their prosthetic treatment and new dentures (Allen, 2003).

In a number of studies over the past 30 years, the proportion of full-denture patients who are dissatisfied with new and well-made prostheses are found to range between 10% and 15% (Elben, 2007). The degree of satisfaction appears to decrease rapidly during the first couple of years after insertion (Elham, 2009). In epidemiological studies on patients satisfaction with their dentures of varying ages and qualities, the proportion of unsatisfied patients is reported to range between 20% and 35% (Heydecke, 2002).

However, many elderly patients are satisfied in denture therapy, assessment of their original and replacement dentures on oral health related quality of life parameters (Andrew, 2005). They have adapted to their inadequate complete dentures. Patients evaluations of their prostheses sometimes neither correlate with the clinicians assessments nor with anatomic factors. Evaluation of patients' acceptance and satisfaction with their complete denture therapy is limited by the various methods

used in collecting and rating all the influential factors, such as number of corrections after insertion, psychological characteristics of patients, self-evaluation of affective state or quality of life, demographic and socioeconomic factors (e.g., age, gender, level of education, level of income, transcultural differences) (Fenlon, 2002), patient expectation of dentures, quality of denture construction, occlusal factors, factors that are connected with anatomic and physiologic characteristics of the patient (e.g., degree of alveolar ridge resorption, quality of saliva, tongue hypertrophy, status of oral mucosa, quality of denture-bearing area). These of factors are the most important in assessing patient satisfaction with complete denture therapy (Asja, 2003).

Specific dental interventions that have been associated with improved oral health-related quality of life include implant-retained dental prostheses conventional fixed prosthodontics, third molar removal, orthodontic treatment, orthognathic surgery, occlusal splints in therapy for temporomandibular disorder, and surgery for oral cancer. Socio-demographic and socio-economic factors related to oral health-related quality of life include age and cultural background, as well as gradients in oral conditions in relation to social status.

The oral health impact profile (OHIP) used to measure the elderly who get complete dentures in England and Scotland (Andrew, 2005), The Oral Health Impact Profile (OHIP) measures people's perceptions of the social impact of oral disorders on their well-being . The OHIP-49 contains 49 questions that capture seven conceptually formulated dimensions based on Locker's theoretical model of oral health adapted from the WHO framework used to classify impairments, disabilities and handicaps, and the OHIP-14 was developed as a shorter version of the OHIP for settings where the full battery of 49 questions is inappropriate. Many studies use quality of life for assess the satisfaction of the elderly in relation to prosthodontics (Dubravka, 2003). Health-related quality of life is a multidimensional concept that includes patient-driven measures such as perceptions and functional status. Oral health-related quality of life measures emerged out of the development of socio-dental indicators to capture non-clinical aspects of oral health that broadened the focus of oral epidemiological research.

Almost the study in Thailand use questionnaire from dental public health division, Ministry of Public Health (MoPH) for assess the satisfaction (Dental public health division, 2009). And these the study in Thailand show about 80% satisfaction of the elderly after denture insertion (Suchada, 2009).

2.7 Oral health impact profile

The Oral Health impact profile (OHIP-14) is a 14-items questionnaire designed to measure self reported functional limitation, discomfort and disability attributed to oral conditions. It is derived from an original extended version of 49-items based on theoretical model developed by World Health Organization (WHO) and adapted for oral health by Locker D., 1988. In this model the consequences of oral disease are hierarchically linked from a biological level (impairment) to behavioral level (functional limitation, discomfort and disability) and lastly to the social level (handicap). The OHIP-14, inspite of being a short-questionnaire, has been shown to be reliable, sensitive to changes and to have adequate cross-cultural consistency. (John, 2004).

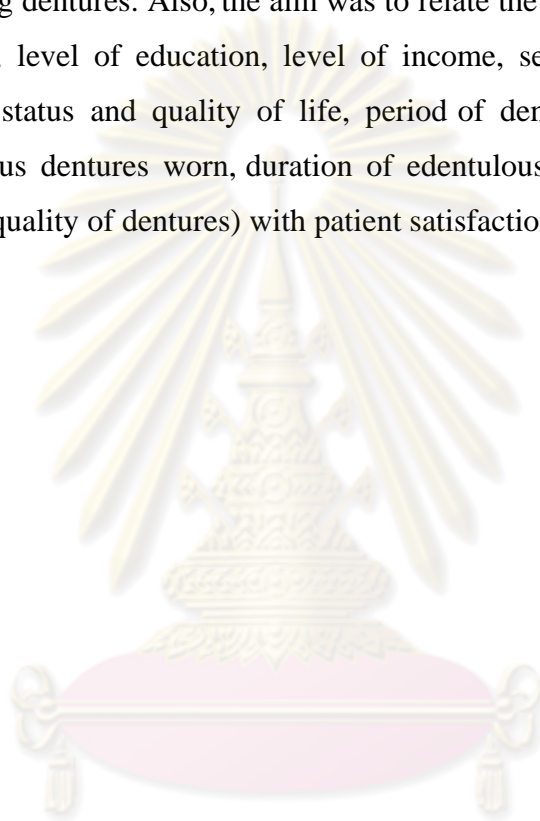
The OHIP-14 is one of the most internationally spread OHRQoL indicators, available in several languages (Chinese, Finish, French, German, Japanese, Malaysian, Swedish). The OHIP-14 is a questionnaire that focuses on seven dimensions of impact (functional limitation, pain, psychological discomfort, physical disability, psychological disability, social disability and handicap) with participants being asked to respond according to frequency of impact on a 5-point Likert scale coded never (score 0), hardly ever (score 1), occasionally (score 2), fairly (score 3) and very often (score 4). (Andrew, 2005).

2.8 Project of prosthetic denture for the elderly to celebrate the 80th anniversary of His Majesty the King.

In the year 2006, dental health division, Ministry of Public Health (MoPH) has started the project of prosthesis denture for the elderly to celebrate the 80th anniversary of His Majesty the King. This project is planned for three years and has a target to give denture therapy to 80,000 peoples from which 50% of the elderly will get artificial teeth which are suitable for them while eating. The aim of this project for

treatment on edentulous arch problem of the elderly by denture insertion, activated oral health promotion of the elderly for high quality of life in the future.

The aim of many studies are to evaluate patients overall satisfaction with their prosthesis, Study on the oral health impact profile, effective and quality as well as to evaluate their satisfaction with denture retention, speech, chewing ability, and the comfort of wearing dentures. Also, the aim was to relate the influence of some factors (e.g., age, gender, level of education, level of income, self-evaluation of affective status, economic status and quality of life, period of denture-wearing experience, number of previous dentures worn, duration of edentulousness, quality of denture-bearing area, and quality of dentures) with patient satisfaction (Fenlon, 2002).



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CHAPTER III

RESEARCH METHODOLOGY

3.1 Research design

The study design was a cross-sectional study. The objectives for study were to determine the satisfaction of the elderly (who have age 60 and over), to assess oral hygiene behavior and denture care and to identify factors associated with satisfaction and oral health impact profile, at Jaturapakpiman district, Roi-et Province, Thailand

3.2 Study Area

Jaturapakpiman hospital is community hospital, 30 bed size. The study location is about 26 kilometers from Roi-et municipality. The study area is 12 Tambols of Jaturapakpiman district, Roi-et Province, Thailand.

3.3 Study population

The population of this study was the elderly patients who got complete dentures from Jaturapakpiman hospital, Jaturapakpiman district, Roi-et province. The study population was both male and female of the elderly who have age 60 years and over, who got complete denture therapy both upper arch and lower arch from the project of prosthesis denture for oral health the elderly to celebrate 80th anniversary of His Majesty the King, in the year 2006-2009.

3.4 Exclusion criteria

The elderly who got only partial denture therapy were not included in the study. The elderly who got denture therapy from other district and other provinces were excluded from the study.

3.5 Study period

Data collection was done on February 18 – March 2, 2010.

3.6 Sample size

Sample size in this research was calculated by formula of population survey on Statistical program, follow by this

Population Survey or Descriptive Study

Population size (assumed to be large in order to maximize sample size) = 999,999

Expected Frequency of good quality of life: 80%

Confidence Level	Sample Size
-----	-----
80 %	105
90 %	173
95 %	246
99 %	424
99.9 %	692
99.99 %	968

Formula : Sample Size = $n / (1 - (n / \text{population}))$

$$n = Z * Z(P(1-P)) / (D * D)$$

Z = standard value for 95% confidence level = 1.96

D = error allowance = 0.05

P = the proportion of targeted population who have good satisfaction level = 80% referenced by Suchada Teekayuphan, who study on Satisfaction in Prosthesis denture campaign for the elderly to celebrate 80th anniversary His Majesty's the King in Roi-et Province, 2008

From formula, Sample size = 246 cases + 10% to account for incomplete data = $246 + 24.6 = 270$ cases

Reference : Kish & Leslie, Survey Sampling, John Wiley & Sons, NY, 1965

Therefore sample size in this study was the elderly patients who got complete denture insertion from Jaturapakpiman hospital amount 270 cases.

3.7 Sampling Method

Sampling method was non randomized convenience. Any subject who came to Jaturapakpiman hospital for the complete denture treatment, and who received such

treatment, during the study period, was selected for study. After denture insertion visit, researcher selected patients from OPD card, the subject who got complete dentures insertion was selected amount 270 persons.

3.8 Measurement Tools

In this study, Measurement tool is a questionnaire which was created by reviewing of literature and guide lines from Oral Health Impact Profile (OHIP-14)

Researcher and Advisor adjust a questionnaire from original questionnaire to be suitable for this study.

Questionnaire had 4 parts

Part I : Demographic data

Data showed general characteristic of individual patient such as age, gender, marital status, education, occupation, family income

Data showed about denture characteristic of individual patient such as past history of denture, sources of information, visit to hospital

Data showed about oral hygienic behaviors

Part II : Denture care

Data showed about denture cleaning and denture using

Part III : Oral health impact profile (OHIP) had 14 questions follow by this

1. Have you had trouble pronouncing and words because of problems with your mouth or dentures?
2. Have you felt that your sense of taste has worsened because of problems with your mouth or dentures?
3. Have you had painful aching in your mouth?
4. Have you found it uncomfortable for eat any food because of problems with your mouth or dentures?
5. Have you been self-conscious because of your mouth or dentures?
6. Have you felt tense because of problems with your mouth or dentures?
7. Has your diet been unsatisfactory because of problems with your mouth or dentures?

8. Have you had to interrupt meals because of problems with your mouth or dentures?

9. Have you found it difficult to relax because of problems with your mouth or dentures?

10. Have you been a bit embarrassed because of problems with your mouth or dentures?

11. Have you been a bit irritable with other people because of problems with your mouth or dentures?

12. Have you had difficulty doing your usual jobs because of problems with your mouth or dentures?

13. Have you felt that life in general was less satisfying because of problems with your mouth or dentures?

14. Have you been totally unable to function because of problems with your mouth or dentures?

Part IV: Questions related to the satisfaction of the upper and lower arch (Andrew H. Forgie, 2005), had 14 questions follow by this

1. How satisfied are you with your upper denture?

2. How secure is your upper denture?

3. How stable is your upper denture when eating or talking?

4. How comfortable is your upper dentures?

5. With respect to speaking, how satisfied are you with your upper denture?

6. With respect to eating how satisfied are you with your upper denture?

7. With respect to appearance, how satisfied are you with your upper denture?

8. How satisfied are you with your lower denture?

9. How secure is your lower denture?

10. How stable is your lower denture when eating or talking?

11. How comfortable is your lower dentures?

12. With respect to speaking, how satisfied are you with your lower denture?

13. With respect to eating how satisfied are you with your lower denture?

14. With respect to appearance, how satisfied are you with your lower denture?

Responses to parts III and IV used a 5-category Likert scale, ranging from 0 (most favourable) to 4 (least favourable). This direction was reversed for data analysis (please see below).

3.9 Variables

- Independent variables :

- age
- gender
- marital status
- education
- occupation
- family income
- past history of denture
- sources of information
- transportation method to hospital
- oral hygienic behaviors
 - coffee/tea drinking
 - whisky drinking
 - carbonic drinking
 - smoking
 - areca nut chewing
- used denture previously
- dentures care

- dependent variables :

- satisfaction
- oral health impact

3.10 Data collection

Data were collected by face to face interview to the elderly from this questionnaire, the researcher will contact with 5 dental nurses of Jaturapakpiman hospital to be interviewer. They will be trained for interview, the researcher comfort 5 dental nurses, provide suggestions and advice them.

A major responsibility of researcher for data collection is interviewer standardization. Researcher will be trainer of five dental nurses, they will be trained to understand the questionnaire, the way to interview in the same agreement of them. Interviewing follow the questionnaire paper, trainee have to interview the elderly by face to face, take the time for interview about 20 – 30 minutes per one subject. After interviewing one participant, trainee have to check the completeness of the questionnaire answers.

The interviewing location was in 12 subdistrict health offices in Jaturapakpiman district. Researcher make the plan to interview for data collection in 12 days, and the list of name of the elderly who will be collected also show in this plan. Interviewing have to do one day per one subdistrict health office, the elderly who are subjects, they know the date and the interviewing place from subdistrict health officer. The elderly have to come to their subdistrict health office to be data collected following the plan.

After interviewing, they check the items which required being answer completely. If missing data were found, dental nurse must repeat interview.

Data collection was done on February 18 – March 2, 2010.

3.11 Data Analysis

Data was coded and entered by using Microsoft Excel 2003 software. Then data analysis was done by using SPSS version 17 software.

Descriptive statistics: frequency, percentage, mean, standard deviation, median and range are calculated for the socio-demographic characteristics, Denture care and Oral Health Impact Profile (OHIP).

The relationships between the independent variables and dependent variables were presented by Spearman correlation, Mann-Whitney U tests, and Kruskal-Wallis tests:

- Reversing code was used before computing to OHIP score and satisfaction score. Hence higher OHIP score means better oral health and higher satisfaction score means higher satisfaction.

- OHIP-14 questions and questions related to satisfaction of upper and lower denture were computed to OHIP score, satisfaction score, upper denture score and lower denture score
- Association between OHIP score, satisfaction score, upper denture score and lower denture score was presented by Spearman correlation
- Association with OHIP and questions related to satisfaction of upper and lower denture was presented by Mann-Whitney U tests and Kruskal-Wallis tests.



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CHAPTER IV

RESEARCH RESULTS

This study was cross-sectional study about the satisfaction of the elderly after complete denture insertion, The objectives for study were to determine the satisfaction of the elderly, to assess oral hygiene behavior and denture care and to identify factors associated with satisfaction and oral health impact profile, at Jaturapakpiman district, Roi-et province, Thailand.

The data were computerized and analyzed by SPSS for Windows software. The result of this study presented into 4 sections.

1. Socio-demographic characteristics of study population.
2. Distribution of Denture care of study population.
3. Summary of Oral Health Impact Profile and questions related to satisfaction of the upper and lower denture.
4. Associations of independent variables with OHIP and questions related to satisfaction of upper and lower denture.

4.1 Socio-demographic characteristics of study population.

Among 270 patients, The average age (SD) was 71.55 (6.98) years old, minimum age was 61 years old, maximum was 87 years old. 140 persons were male (51.9%). 130 persons were female (48.1%). This study showed married patients were 157 persons (58.1%). Widowed patients were 113 persons (41.9%). Education level, the majority 187 persons (69.3%) of study population were primary education. No education 48 persons (17.8%). Almost of them 80.0 percent patients were agriculture and their family monthly income in average was 2,383.3 baht/month, minimum family monthly income was 500 bath/month, maximum family income was 30,000 bath/month. There were 124 persons (45.9%) used to have dentures before they would get this denture from this study, Sources of information, they knew the information to get dentures from friends 35.2 percent, hospital 31.2 percent, primary public health office 24.1 percent. Almost of patients from this study, they came to hospital by motorcycle 56.3 percent, bus 32.6 percent. (Table 1)

Table 1: Socio-demographic characteristics of study population. (1)

Demographic Characteristics	Number	Percentage
Age (Years, continuous)		
$\bar{X} = 71.55$, S.D. = 6.98		
Min. - Max. = 61 - 87		
Gender		
Male	140	51.9
Female	130	48.1
Marital status		
Married	157	58.1
Widowed	113	41.9
Education		
No Education	48	17.8
Primary Education	187	69.3
Secondary Education	35	13.0
Occupation		
Agriculture	216	80.0
Others	54	41.9
Family monthly income (Baht, continuous)		
$\bar{X} = 2,383.33$		
S.D. = 3.568.28		
Min. = 500		
Max = 30,000		
Past history of denture		
Ever got denture before	124	45.9
Sources of information		
Newspaper	42	15.6
Radio	47	17.4
Television	40	14.8
Friends	95	35.2
Primary public health	65	24.1
Hospital	85	31.5

Table 1: Socio-demographic characteristics of study population. (2)

Demographic Characteristics	Number	Percentage
Visit to hospital		
Bicycle	30	11.1
Motorcycle	152	56.3
Bus	88	32.6
Oral hygienic behaviors		
Coffee/tea drinking	206	76.3
Whisky drinking	122	45.2
Carbonic drinking	184	68.1
Smoking	73	27.0
Areca nut chewing	115	42.6
Others	15	5.6

Oral hygienic behavior, most of them showed they had coffee and tea drinking 76.3 percent, carbonic drinking 68.1 percent, whisky drinking 45.2 percent, areca nut chewing 42.6 percent, smoking 27.0 percent and other oral hygienic behaviors 5.6 percent. (Table 1)

4.2 Distribution of dentures care in the study population

This study showed many methods for dentures care and cleaning. There was 18.5 percent brushed their dentures one time per day in everyday, 66.7 percent brushed their dentures more than one time per day in everyday. 51.9 percent of them used detergent to clean dentures, 41.1 percent cleaned their dentures by rinsed the water. Having 8.1 percent do not clean their dentures. And the patients who used chemical tablets for clean their dentures 11.1 percent.

Before sleeping, most of them got dentures out and keep dentures in water everyday 54.4 percent, 29.3 percent of the patients who do not removing dentures at bedtime (sleep with dentures) and 4.8 percent of the patients have others method to clean dentures. (Table 2)

Table 2: Distribution of dentures care of study population.

Characteristics of dentures care	Number	Percentage
Brushing one time everyday	50	18.5
Brushing more than a time everyday	180	66.7
Use detergent	140	51.9
Use water	111	41.1
Do not clean	22	8.1
Use chemical tablets	30	11.1
Remove dentures and keep in water some days	7	2.6
Remove dentures and keep in water every day	147	54.4
Not removing dentures at bedtime	79	29.3
Others	13	4.8

4.3 Summary of Oral Health Impact Profile and questions related to satisfaction of the upper and lower denture.

Among 14 questions of Oral health impact profile (OHIP), use a record in one of five categories of a Likert scale, with a score of 0 representing to never response, a score of 1 representing to hardly ever response, a score of 2 representing to occasionally, a score of 3 representing to fairly often and a score of 4 representing to very often response. Almost all patients in this study choose 0 and 1 for answering of all OHIP questions. (favourable response, Table 3)

Table 3: Summary of Oral health impact profile of study population. (1)

OHIP Questions	0 Never	1 Hardly ever	2 Occas- ionally	3 Fairly often	4 Very often
OHIP1. Have you had trouble pronouncing and words because of problems with your mouth or dentures?	163 (60.4%)	41 (15.2%)	35 (13.0%)	24 (8.9%)	7 (2.6%)
OHIP2. Have you felt that your sense of taste has worsened because of problems with your mouth or dentures?	22 (8.1%)	217 (80.4%)	7 (2.6%)	24 (8.9%)	0 (0.0%)

Table 3: Summary of Oral health impact profile of study population. (2)

OHIP Questions	0 Never	1 Hardly ever	2 Occas- ionally	3 Fairly often	4 Very often
OHIP3. Have you had painful aching in your mouth?	173 (64.1%)	60 (22.2%)	13 (4.8%)	24 (14.1%)	0 (0.0%)
OHIP4. Have you found it uncomfortable for eat any food because of problems with your mouth or dentures?	25 (9.3%)	177 (65.6%)	30 (11.1%)	38 (14.1%)	0 (0.0%)
OHIP5. Have you been self-conscious because of your mouth or dentures?	193 (71.5%)	32 (11.9%)	1 (0.4%)	44 (16.3%)	0 (0.0%)
OHIP6. Have you felt tense because of problems with your mouth or dentures?	191 (70.7%)	33 (12.2%)	22 (8.1%)	24 (8.9%)	0 (0.0%)
OHIP7. Has your diet been unsatisfactory because of problems with your mouth or dentures?	129 (47.8%)	71 (26.3%)	14 (5.2%)	49 (18.1%)	7 (2.6%)
OHIP8. Have you had to interrupt meals because of problems with your mouth or dentures?	101 (37.4%)	79 (29.3%)	41 (15.2%)	42 (15.6%)	7 (2.6%)
OHIP9. Have you found it difficult to relax because of problems with your mouth or dentures?	84 (31.1%)	113 (41.9%)	42 (15.6%)	31 (11.5%)	0 (0.0%)
OHIP10. Have you been a bit embarrassed because of problems with your mouth or dentures?	179 (66.3)	67 (24.8%)	0 (0.0%)	24 (8.9%)	0 (0.0%)
OHIP11. Have you been a bit irritable with other people because of problems with your mouth or dentures?	81 (30.0%)	134 (49.6%)	31 (11.5%)	24 (8.9%)	0 (0.0%)
OHIP12. Have you had difficulty doing your usual jobs because of problems with your mouth or dentures?	101 (37.4%)	115 (42.6%)	30 (11.1%)	24 (8.9%)	0 (0.0%)
OHIP13. Have you felts that life in general was less satisfying because of problems with your mouth or dentures?	81 (30.0%)	128 (47.4%)	37 (13.7%)	24 (8.9%)	0 (0.0%)

Table 3: Summary of Oral health impact profile of study population. (3)

OHIP Questions	0 Never	1 Hardly ever	2 Occas- ionally	3 Fairly often	4 Very often
OHIP14. Have you been totally unable to function because of problems with your mouth or dentures?	105 (38.9%)	103 (38.1%)	31 (11.5%)	24 (8.9%)	7 (2,6%)

Among 14 questions related to satisfaction of the upper and lower denture, used a record in one of five categories of the same Likert scale as used for the OHIP-related-questions. There were 14 satisfaction-related questions, with a score of 0 representing the most favourable response, a score of 1 representing to more favourable response, a score of 2 representing to favourable response, a score of 3 representing to less favourable response and a score of 4 representing to least favourable response. Almost patients in this study choose 0 and 1 for answering of all questions. This study showed the summary of questions related to satisfaction of the upper and lower denture follow Table 4.

Table 4: Summary of questions related to satisfaction of the upper and lower denture. (1)

Questions related to satisfaction	0 Most favou- rable	1 More favou- rable	2 Favou- rable	3 Less favou- rable	4 Un favou- rable
1. How satisfied are you with your upper denture?	103 (38.1%)	105 (38.9%)	13 (4.8%)	49 (18.1%)	0 (0.0%)
2. How secure is your upper denture?	31 (11.5%)	190 (70.4%)	18 (6.7%)	31 (11.5%)	0 (0.0%)
3. How stable is your upper denture when eating or talking?	121 (44.8%)	100 (37.0%)	31 (11.5%)	18 (6.7%)	0 (0.0%)
4. How comfortable is your upper dentures?	74 (27.4%)	121 (44.8%)	26 (9.6%)	49 (18.1%)	0 (0.0%)
5. With respect to speaking, how satisfied are you with your upper denture?	63 (23.3%)	145 (53.7%)	38 (14.1%)	24 (8.9%)	0 (0.0%)

Table 4: Summary of questions related to satisfaction of the upper and lower denture. (2)

Questions related to satisfaction	0 Most favourable	1 More favourable	2 Favourable	3 Less favourable	4 Unfavourable
6. With respect to eating how satisfied are you with your upper denture?	71 (26.3%)	124 (45.9%)	33 (12.2%)	24 (8.9%)	18 (6.7%)
7. With respect to appearance, how satisfied are you with your upper denture?	17 (6.3%)	191 (70.7%)	31 (11.5%)	31 (11.5%)	0 (0.0%)
8. How satisfied are you with your lower denture?	61 (22.6%)	136 (51.4%)	49 (18.1%)	24 (8.9%)	0 (0.0%)
9. How secure is your lower denture?	36 (13.3%)	161 (59.6%)	49 (18.1%)	24 (8.9%)	0 (0.0%)
10. How stable is your lower denture when eating or talking?	54 (20.0%)	95 (35.2%)	73 (27.0%)	48 (17.8%)	0 (0.0%)
11. How comfortable is your lower dentures?	36 (13.3%)	96 (35.6%)	90 (33.3%)	48 (17.8%)	0 (0.0%)
12. With respect to speaking, how satisfied are you with your lower denture?	43 (15.9%)	71 (26.3%)	68 (25.2%)	88 (32.6%)	0 (0.0%)
13. With respect to eating how satisfied are you with your lower denture?	38 (14.1%)	92 (34.1%)	58 (21.5%)	82 (30.4%)	0 (0.0%)
14. With respect to appearance, how satisfied are you with your lower denture?	31 (11.5%)	77 (28.5%)	79 (29.3%)	83 (30.7%)	0 (0.0%)

Patients had the most favourable satisfaction with their upper denture 38.1 percent and patients had the most favourable satisfaction with their lower denture 22.6 percent.

Descriptive statistics presented summary of OHIP 14 questions, minimum score was 3, maximum score was 42, mean score was 12.63, S.D. = 11.008. Possible OHIP scores, minimum possible score was 0, maximum possible score was 56.

Summary of questions related to satisfaction of upper and lower denture showed minimum score was 4, maximum score was 42, mean was 18.54, S.D. = 11.059. Possible of satisfaction scores, minimum score was 0, maximum score was 56.

Summary of questions related to satisfaction of upper denture showed minimum score was 2, maximum score was 21, mean was 7.98, S.D. = 6.251. Possible of upper denture scores, minimum score was 0, maximum score was 28.

Summary of questions related to satisfaction of lower denture showed minimum score was 1, maximum score was 21, mean was 10.56, S.D. = 5.901. Possible of lower denture scores, minimum score was 0, maximum score was 28.

OHIP score was positively and significantly associated with overall satisfaction score (Spearman rho = 0.669, $p < 0.001$). Satisfaction scores for the upper and lower dentures were also positively and significantly correlated (Spearman rho = 0.585, $p < 0.001$).

4.4 Associations of independent variables with OHIP and questions related to satisfaction of upper and lower denture.

This study showed female had higher satisfaction score than male. Patients who were agriculture had higher OHIP score and satisfaction score with lower and upper dentures, patients who transport to hospital by motorcycle had higher OHIP score and satisfaction score with lower and upper dentures.

Regarding oral health behavior, patients who drink whisky had lower OHIP score and satisfaction score with lower and upper dentures. Patients who drink carbonated had higher OHIP score and satisfaction score than patients who don't drink carbonated. And patients who smoke had statistically significantly lower OHIP score and satisfaction score with lower and upper dentures ($P < 0.001$).

Patients who used denture before had higher OHIP score and satisfaction score with lower and upper dentures.

Regarding denture care, the patients who used water and chemical tablets to clean dentures had statistically significantly lower OHIP score and satisfaction score with lower and upper dentures ($P \leq 0.034$). No significance relation between brushing denture a time per day, brushing denture more than one time per day, use detergent

and do not clean the denture. Brushing denture was not consistently associated with OHIP or satisfaction with dentures. Not removing dentures at bedtime was associated with lower OHIP score and satisfaction score. (Table 5). **Note:** In table 5, higher OHIP score means better oral health and higher satisfaction score means higher satisfaction.

Table 5: Associations with OHIP and questions related to satisfaction of upper and lower denture: p-values and mean ranks of score. (1)

Variables	P-value and mean rank of score			
	Sum of All OHIP	Sum of All Satisfaction	Upper denture score	Lower denture score
Gender	p=0.091	p=0.002	p=0.006	p<0.001
Male	143.16	121.42	147.87	107.90
Female	127.25	150.66	122.18	165.23
Education	p<0.001	p<0.001	p=0.302	p<0.001
No education	99.81	87.66	125.05	75.89
Primary education	150.99	155.48	140.34	165.91
Secondary education	101.66	94.36	123.96	54.79
Occupation	p=0.001	p=0.270	p=0.756	p=0.121
Agriculture	143.26	138.11	136.23	139.16
Other	104.47	125.06	132.57	120.88
Transport to hospital				
Bicycle	p<0.001	p=0.017	p=0.022	p=0.119
- no	127.77	139.49	131.70	138.10
- yes	197.35	103.57	165.93	114.72
Motorcycle	p=0.479	p=0.316	p=0.727	p=0.003
- no	139.28	140.88	137.36	151.22
- yes	132.57	131.32	134.05	123.29
Bus	p=0.018	p=0.008	p=0.244	p<0.001
- no	143.24	126.75	139.31	121.88
- yes	119.48	153.60	127.62	163.67

Table 5: Associations with OHIP and questions related to satisfaction of upper and lower denture: p-values and mean ranks of score. (2)

Variables	P-value and mean rank of score			
	Sum of All OHIP	Sum of All Satisfaction	Upper denture score	Lower denture score
Oral hygienic behavior				
Coffee/tea drinking	p=0.925	p=0.001	p=0.495	p=0.448
- no	136.30	108.35	129.75	129.08
- yes	135.25	143.93	137.29	137.50
Whisky drinking	p=0.007	p=0.006	p=0.130	p=0.397
- no	147.03	147.26	141.96	139.13
- yes	121.52	121.23	127.66	131.10
Carbonic drinking	p<0.001	p=0.001	p<0.001	p=0.218
- no	93.91	111.69	104.27	127.01
- yes	154.94	146.63	150.10	139.47
Smoking	p<0.001	p<0.001	p<0.001	p<0.001
- no	149.10	157.07	146.24	153.59
- yes	98.79	77.30	106.53	86.67
Areca nut chewing	p=0.152	p=0.159	p<0.001	p<0.001
- no	141.31	129.75	153.64	117.58
- yes	127.67	143.24	111.05	159.65
Denture before	p=0.261	p=0.088	p=0.080	p=0.001
- no	128.68	128.05	127.92	121.57
- yes	143.52	144.27	144.42	151.90
Denture care				
Brushing denture a time per day	p=0.031	p=0.031	p=0.169	p=0.769
- no	130.66	140.37	132.42	136.16
- yes	156.78	114.08	149.07	132.60

Table 5: Associations with OHIP and questions related to satisfaction of upper and lower denture: p-values and mean ranks of score. (3)

Variables	P-value and mean rank of score			
	Sum of All OHIP	Sum of All Satisfaction	Upper denture score	Lower denture score
Areca nut chewing	p=0.152	p=0.159	p<0.001	p<0.001
- no	141.31	129.75	153.64	117.58
- yes	127.67	143.24	111.05	159.65
Denture before	p=0.261	p=0.088	p=0.080	p=0.001
- no	128.68	128.05	127.92	121.57
- yes	143.52	144.27	144.42	151.90
Denture care				
Brushing denture a time per day	p=0.031	p=0.031	p=0.169	p=0.769
- no	130.66	140.37	132.42	136.16
- yes	156.78	114.08	149.07	132.60
Brushing denture more than one time per day	p=0.074	p=0.114	p=0.476	p=0.096
- no	123.60	124.92	140.24	146.60
- yes	141.45	140.79	133.13	129.95
No brushing	p<0.001	p=0.793	p=0.576	p=0.011
- no	82.12	138.48	129.20	164.10
- yes	144.78	134.98	136.60	130.53
Use detergent	p=0.261	p<0.001	p=0.829	p<0.001
- no	130.01	164.60	134.45	172.80
- yes	140.60	108.48	136.48	100.86
Use water	p<0.001	p<0.001	p<0.001	p<0.001
- no	173.55	159.11	172.72	151.02
- yes	80.99	101.68	82.18	113.27
Do not clean	p=0.058	p<0.001	p<0.001	p<0.001
- no	138.16	128.12	129.11	128.42
- yes	105.55	218.64	207.50	215.32

Table 5: Associations with OHIP and questions related to satisfaction of upper and lower denture: p-values and mean ranks of score. (4)

Variables	P-value and mean rank of score			
	Sum of All OHIP	Sum of All Satisfaction	Upper denture score	Lower denture score
Use chemical tablets	p=0.034	p<0.001	p<0.001	p=0.001
- no	139.03	142.15	143.24	140.82
- yes	107.25	82.32	73.57	92.90
Get denture out and keep in water everyday	p<0.001	p=0.007	p=0.048	p<0.001
- no	111.06	149.46	125.34	161.93
- yes	155.95	123.82	144.00	113.38
Not removing denture at bedtime	p=0.202	p<0.001	p=0.001	p<0.001
- no	131.64	110.47	125.36	105.53
- yes	144.83	196.03	160.01	207.96

In table 5, the association between socio-demographic characteristics (gender, education, occupation, transport to hospital, oral hygienic behaviors) denture care (brushing denture a time per day, brushing more than one time per day, no brushing, use detergent, use water, do not clean, use chemical tablets, get denture out and keep in water everyday, not removing denture at bedtime) associated with OHIP 14 questions and satisfaction questions by Mann-Whitney U test and Kruskal-Wallis tests showed the patients who used water and chemical tablets to clean dentures had statistically significantly lower OHIP score and satisfaction score with lower and upper dentures ($P \leq 0.034$). Patients who used denture before had higher OHIP score and satisfaction score with lower and upper dentures. And patients who smoke had statistically significantly lower OHIP score and satisfaction score with lower and upper dentures ($P < 0.001$).

CHAPTER V

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussion

This study was a cross-sectional study to determine the satisfaction of the elderly, to assess oral hygiene behavior and denture care and to identify factors associated with satisfaction and oral health impact profile, at Jaturapakpiman district, Roi-et province, Thailand.

In this study, Measurement tool was a questionnaire which is created by reviewing of literature and guide lines from Oral Health Impact Profile (OHIP-14), questionnaire consist of 4 parts. Part I demographic data, Part II dentures care, Part III OHIP questions, Part IV questions related to satisfaction of upper and lower denture.

Data collection from 270 patients who got complete denture from Jaturapakpiman hospital, Jaturapakpiman district, Roi-et province. The average age (SD) was 71.55 (6.98) years old, minimum age was 61 years old, maximum was 87 years old. 140 persons were male (51.9%). Similar with the study by Suchada, 2008 showed satisfaction of the elderly after dentures insertion in Roi-et province, Thailand have the average age of them 69.65 ± 6.25 years and no different between among male(50.6%) and female(49.4%) in the study by Suchada, 2008. In this study showed married patients were 157 persons (58.1%). Education level, the majority 69.3 percent of study population were primary education. Almost of them 80.0 percent patients were agriculture and their family income were less than 1,000 baht/month (64.8%), minimum family income was 500 bath/month, maximum family income was 30,000 bath/month. 45.9 percent used to have dentures, 54.1 percent never had dentures. Sources of information, they knew the information to get dentures from friends 35.2 percent, hospital 31.2 percent, primary public health office 24.1 percent. Most patients came to hospital by motorcycle 56.3 percent, bus 32.6 percent. Oral hygienic behavior, most of them showed they had coffee and tea drinking 76.3 percent, carbonic drinking 68.1 percent.

In this study showed dentures care and cleaning. There was 18.5 percent brushing dentures one time per day, 66.7 percent brushed their dentures everyday and

more than one time per day. 51.9 percent of them used detergent to clean dentures, 41.1 percent cleaned their dentures by rinsed the water. Having 8.1 percent do not clean their dentures. And the patients who used chemical tablets for clean their dentures 11.1 percent.

Before sleeping, most of them got dentures out and keep dentures in water everyday 54.4 percent, 29.3 percent of the patients who sleep with dentures and 4.8 percent of the patients have others method to clean dentures.

Compatible with the study by Suchada, 2008. About dentures cleaning showed 68.9 percent brushed their dentures everyday. And the patients who used chemical tablets for clean their dentures 1.9 percent.

There is much literature about satisfaction, OHIP, QOL. The oral health impact profile (OHIP) used to measure the elderly who get complete dentures in England and Scotland (Andrew, 2005), The Oral Health Impact Profile (OHIP) measures people's perceptions of the social impact of oral disorders on their well-being. In this study among 14 questions of Oral health impact profile(OHIP), use a record in one of five categories of a Likert scale, with a score of 0 representing to never response and a score of 4 representing the very often response. Almost all patients in this study choose 0 and 1 for all OHIP questions. Among 14 questions of questions related to satisfaction of the upper and lower denture, use a record in one of five categories of a Likert scale same with OHIP questions, with a score of 0 representing the most favourable response and a score of 4 representing the least favourable response. Patients who choose lower score had positive response better than higher score. Almost all patients in this study choose 0 and 1. This study showed the summary of questions related to satisfaction of the upper and lower denture. A score of 0 represented is the best level.

Summary of OHIP 14 questions showed minimum score was 3, maximum score was 42, mean score was 12.63, S.D. = 11.008.

Summary of questions related to satisfaction of upper and lower denture showed minimum score was 4, maximum score was 42, mean was 18.54, S.D. = 11.059.

Summary of questions related to satisfaction of upper denture showed minimum score was 2, maximum score was 21, mean was 7.98, S.D. = 6.251

Summary of questions related to satisfaction of lower denture showed minimum score was 1, maximum score was 21, mean was 10.56, S.D. = 5.901

Almost the study in Thailand use questionnaire from dental public health division, Ministry of Public Health (MoPH) for assess the satisfaction after denture insertion (Dental public health division, 2009). And these the study in Thailand show about 80% satisfaction of the elderly after denture insertion (Suchada, 2008) to similar with this study.

In this study used OHIP-14 questionnaires and questions related to satisfaction of upper and lower denture showed the association between demographic characteristics (gender, transport to hospital, oral hygienic behaviors) denture care (brushing denture a time per day, brushing more than one time per day, no brushing, use detergent, use water, do not clean, use chemical tablets, get denture out and keep in water everyday, sleeping with denture) by Spearman correlation, Mann-Whitney U tests, and Kruskal-Wallis tests were used, showed patients who used water and chemical tablets to clean dentures had statistically significantly lower OHIP score and satisfaction score with lower and upper dentures ($P \leq 0.034$). Brushing teeth was not consistently associated with OHIP or satisfaction with dentures. Not removing dentures at bedtime was associated with higher OHIP score and satisfaction score. (Higher OHIP score means better oral health. Higher satisfaction score means higher satisfaction).

And patients who smoke had statistically significantly lower OHIP score and satisfaction score with lower and upper dentures ($P < 0.001$). No significance relation between gender, education, occupation, visit to hospital, brushing denture a time per day, brushing denture more than one time per day, use detergent and do not clean the denture. Patients who used denture before had higher OHIP score and satisfaction score with lower and upper dentures.

5.2 Conclusions

This research was a cross-sectional study to determine the satisfaction of the elderly, to assess oral hygiene behavior and denture care and to identify factors associated with satisfaction and oral health impact profile, at Jaturapakpiman district, Roi-et province, Thailand.

The population of this study was 270 patients who got denture from Jaturapakpiman district for data collection follow appointment. Data collection was done on February 18 – March 2, 2010 in 12 Tambols, Jaturapakpiman district, Roi-et province. The simple random sampling technic was applied to choose patients. Inclusion criteria; The population of this study was the elderly patients who got complete dentures from Jaturapakpiman hospital, Jaturapakpiman district, Roi-et province. The study population was both male and female of the elderly who have age 60 years and over, who got complete denture therapy both upper arch and lower arch from the project of prosthesis denture for oral health the elderly to celebrate 80th anniversary of His Majesty the King, in the year 2006-2009.

This study showed dentures care and cleaning. There was 18.5 percent brushing dentures one time per day, 66.7 percent brushed their dentures everyday and more than one time per day. 51.9 percent of them used detergent to clean dentures, 41.1 percent cleaned their dentures by rinsed the water. Having 8.1 percent do not clean their dentures. And the patients who used chemical tablets for clean their dentures 11.1 percent. Before sleeping, most of them got dentures out and keep dentures in water everyday 54.4 percent, 29.3 percent of the patients who sleep with dentures and 4.8 percent of the patients have others method to clean dentures.

In this study showed the association between demographic characteristics (gender, visit to hospital, oral hygienic behaviors) denture care (brushing denture a time per day, brushing more than one time per day, no brushing, use detergent, use water, do not clean, use chemical tablets, get denture out and keep in water everyday, sleeping with denture) by Spearman correlation, Mann-Whitney U tests, and Kruskal-Wallis tests were used to showed patients who used water and chemical tablets to clean dentures had statistically significantly lower OHIP score and satisfaction score with lower and upper dentures ($P \leq 0.034$). Brushing teeth was not consistently associated with OHIP or satisfaction with dentures. Not removing dentures at bedtime was associated with higher OHIP score and satisfaction score. (Higher OHIP score means better oral health. Higher satisfaction score means higher satisfaction). Patients who used denture before had higher OHIP score and satisfaction score with lower and upper dentures.

No significant relation between gender, education, occupation, visit to hospital, brushing denture a time per day, brushing denture more than one time per day, use detergent and do not clean the denture.

5.3 Recommendation

Tooth loss protection

As for other age groups, use of fluoride is effective in prevention of dental caries in elderly. Topical application and mouthrinsing with fluorides are shown to reduce the number of root surface caries lesions, both in active old-age people. Rinsing with a chlorhexidine solution tends to reduce gingival inflammation, pocket depth, and incidence of denture stomatitis. Clinical studies suggest that oral health education for elderly patients is effective. A randomized clinical trial for older periodontal patients revealed that group-based behavior modification intervention helped patients improve their self-care skills such as brushing and flossing, and reduced gingival bleeding.

Oral health programs have been designed to improve the oral health status of the elderly. For example, an oral health care program established for residents of nursing homes, the program demonstrated a reduction in the number of teeth with decay and periodontal treatment need, reduced prevalence of denture stomatitis, and improved denture hygiene. Some programs focused on education of care givers for improved oral health status of elderly, and tried to break down practical, informational, and psychological barriers to caregivers' provision of oral care for residents. The program aimed at empowerment and self-care capacity building of older people and enhanced their attitudes, knowledge and oral hygiene practices, and in addition increased their use of dental health services. In many developed countries today, It is essential to increase the involvement of other health professionals and caregivers in oral health education and promotion programs for older people in order to overcome the barriers in oral health service utilization, to improve self-care capacity in oral health and provide for a healthy diet and nutrition amongst the elderly. The WHO Oral Health Program encourages national oral health planners to strengthen the implementation of systematic oral health programs oriented towards better oral health and quality of life for older people. (Petersen and Yamamoto, 2005)

WHO's role and responsibilities in health research are underpinned by several principles. These include a commitment to using knowledge gained from appropriate review of existing research that may contribute to improving health, generating essential tools, and evaluating the quality and usefulness of interventions, methodologies, and programs; to strengthening the role and functioning of co-sponsored research programs, in areas that are of particular significance to developing countries and for which coordinated global action is required. (Petersen, 2009)

To strengthen the formulation or adjustment of policies and strategies for oral health and its integration in national and community health programs, particular emphasis should be laid on the elements, for example, promotion of oral health among older people, aiming at advancing oral health, general health and well-being into old age through a life-course perspective in health promotion, integrated disease prevention and emphasis on age-friendly primary health care. The Sixtieth World Health Assembly (WHA60.17) emphasize the need to incorporate programs for promotion of oral health and prevention oral disease into programs for the integrated prevention and treatment of non-communicable disease, which has been highlighted in the Eleventh General Program of Work 2006-2015. (Petersen, 2008)

Effective evidence-base preventive approaches are needed to address oral health problem. The Ottawa Charter was published to provide a set of guiding principles for health promotion. Health Promotion Action are outlined:

Denture care

Proper denture care is important for both the health of dentures and mouth. Here are caring denture.

- Handle dentures with great care. To avoid accidentally dropping them, stand over a folded towel or a full sink of water when handling dentures.

- Brush and rinse your dentures daily. Like natural teeth, dentures must be brushed daily to remove food and plaque. Brushing also helps prevent the development of permanent stains on the dentures. Use a brush with soft bristles that is specifically designed for cleaning dentures. Avoid using a hard-bristled brush as it can damage or wear down dentures. Gently brush all surfaces of the denture and be careful not to damage the plastic or bend attachments. In between brushings, rinse your dentures after every meal.

- Clean with a denture cleaner. Hand soap or mild dishwashing liquid can be used for cleaning dentures. Household cleansers and many toothpastes may be too abrasive for your dentures and should not be used. Also, avoid using bleach, as this may whiten the pink portion of the denture. Ultrasonic cleaners can be used to care for dentures. These cleaners are small bathtub-like devices that contain a cleaning solution. The denture is immersed in the tub and then sound waves create a wave motion that dislodges the undesirable deposits. Use of an ultrasonic cleaner, however, does not replace a thorough daily brushing. Products with the American Dental Association (ADA) Seal of Acceptance are recommended since they have been evaluated for safety and effectiveness.

- Denture care when not being worn. Dentures need to be kept moist when not being worn so they do not dry out or lose their shape. When not worn, dentures should be placed in a denture cleanser soaking solution or in water. However, if your denture has metal attachments, the attachments could tarnish if placed in a soaking solution. Your dentist can recommend the best methods for caring for your particular denture. Dentures should never be placed in hot water, as it can cause them to warp.

- One or more follow-up appointments are generally needed soon after you receive your dentures so that your oral health care provider can make any necessary adjustments. Never attempt to adjust or repair your dentures yourself. Never bend any part of the clasp or metal attachments yourself; doing so can weaken the metal structure. "Do-it-yourself" repair kits can permanently damage your dentures and over-the-counter glues may contain harmful chemicals. Dentures that don't fit properly can cause irritation and sores in your mouth and on your gums. Be sure to contact your oral health care provider if your denture breaks, cracks, chips or if one of the teeth becomes loose. Oftentimes, he or she can make the necessary adjustment or repair on the same day. For some complicated repairs, your denture may have to be sent to a special dental laboratory.

Developed Dentist Skills

Many elderly patients are satisfied in denture therapy, assessment of their original and replacement dentures on oral health related quality of life parameters (Andrew, 2005). They have adapted to their inadequate complete dentures. Complete dentures of their prostheses sometimes neither correlate with the clinicians

assessments nor with anatomic factors. Evaluation of patients acceptance and satisfaction with their complete denture therapy is limited by the various methods used in collecting and rating all the influential factors, such as number of corrections after insertion, psychological characteristics of patients, self-evaluation of affective state or quality of life, demographic and socioeconomic factors (e.g., age, gender, level of education, level of income, transcultural differences) and skill of dentists, patient expectation of dentures, quality of denture construction, occlusal factors.(Witchavut, 2007)

Skill of dentists to designed and evaluated for complete dentures insertion, this is one of factors which important in assessing patient satisfaction with complete denture therapy. The dentist who have many experiences or the dentists who be prosthetic dentists specialist can make the elderly feel satisfied with their dentures.



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APPENDICES

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APPENDIX A

Questionnaire form (English)

Questionnaire on “Satisfaction of the elderly after complete denture insertion”: Study on Campaign for oral health of the elderly to celebrate 80th anniversary of His Majesty the King In Jaturapakpiman hospital

Questionnaires are separated into 4 parts

Part I: Demographic data

Part II: Denture care

Part III: Oral Health Impact Profile(OHIP)

Part IV: Questions related to the satisfaction of the upper and lower denture

Part I: Demographic data

Instruction: The following questions are about your demographic information. Please mark X in the and please also write down in the blank space where provided.

- 1) Name.....
- 2) Age.....years
- 3) Gender

<input type="checkbox"/> Male	<input type="checkbox"/> Female
-------------------------------	---------------------------------
- 4) Marital status

<input type="checkbox"/> Single	<input type="checkbox"/> Married
<input type="checkbox"/> Widowed	<input type="checkbox"/> Divorced
<input type="checkbox"/> Separated	
- 5) Education

<input type="checkbox"/> No Education	<input type="checkbox"/> Primary Education
<input type="checkbox"/> Secondary Education	<input type="checkbox"/> Graduate
<input type="checkbox"/> Master and Higher	<input type="checkbox"/> Others (please specify).....
- 6) Occupation

<input type="checkbox"/> No Occupation	<input type="checkbox"/> Farmer / Gardener
<input type="checkbox"/> Labour	<input type="checkbox"/> Shopkeeper
<input type="checkbox"/> Housewife	<input type="checkbox"/> Retired
<input type="checkbox"/> Others (please specify).....	
- 7) Family income.....Baht
- 8) Past history of denture
 - 8.1 Did you get denture before this? Yes No
(If No please skip question no.8.2)
 - 8.2 How long did you use that denture.....years
- 9) Sources of information for denture insertion project (Can choose more than 1)

<input type="checkbox"/> Newspaper	<input type="checkbox"/> Radio
<input type="checkbox"/> Television	<input type="checkbox"/> Poster
<input type="checkbox"/> Friends	<input type="checkbox"/> Public health volunteer
<input type="checkbox"/> Primary public health office	<input type="checkbox"/> Hospital
<input type="checkbox"/> Others (please specify).....	
- 10) Visit to hospital by

<input type="checkbox"/> Walking	<input type="checkbox"/> Bicycle
----------------------------------	----------------------------------

- Motorcycle Bus
 Own car Brought by someone
 Others (please specify).....

11) Oral hygienic behaviors (Can choose more than 1)

- Coffee/tea drinking Whisky drinking
 Carbonic drinking Smoking
 Areca nut chewing Others (please specify).....

Part II: Denture care

1) How do you clean and care your denture? (Can choose more than 1)

- Brushing the denture everyday
 Brushing the denture more than two times per day
 Use detergent
 Use water
 Don't Clean
 Use chemical tablets for denture cleaning
 Get it out before sleeping and keep it in water someday
 Get it out before sleeping and keep it in water everyday
 Sleeping with denture
 Others (please specify).....

2) How often do you use this denture?

- Don't use, because of.....
 Use sometime
 Always use

Part III: Oral Health Impact Profile(OHIP)

Instruction: The following questions ask how you feel about your current dentures.

Please choose the answer that appears most appropriate. (Choose only one)

Questions	Never	Hardly ever	Occasionally	Fairly often	Very often
1. Have you had trouble pronouncing and words because of problems with your mouth or dentures?					
2. Have you felt that your sense of taste has worsened because of problems with your mouth or dentures?					
3. Have you had painful aching in your mouth?					
4. Have you found it uncomfortable for eat any food because of problems with your mouth or dentures?					
5. Have you been self-conscious because of your mouth or dentures?					
6. Have you felt tense because of problems with your mouth or dentures?					
7. Has your diet been unsatisfactory because of problems with your mouth or dentures?					

Questions	Never	Hardly ever	Occasionally	Fairly often	Very often
8. Have you had to interrupt meals because of problems with your mouth or dentures?					
9. Have you found it difficult to relax because of problems with your mouth or dentures?					
10. Have you been a bit embarrassed because of problems with your mouth or dentures?					
11. Have you been a bit irritable with other people because of problems with your mouth or dentures?					
12. Have you had difficulty doing your usual jobs because of problems with your mouth or dentures?					
13. Have you felt that life in general was less satisfying because of problems with your mouth or dentures?					
14. Have you been totally unable to function because of problems with your mouth or dentures?					

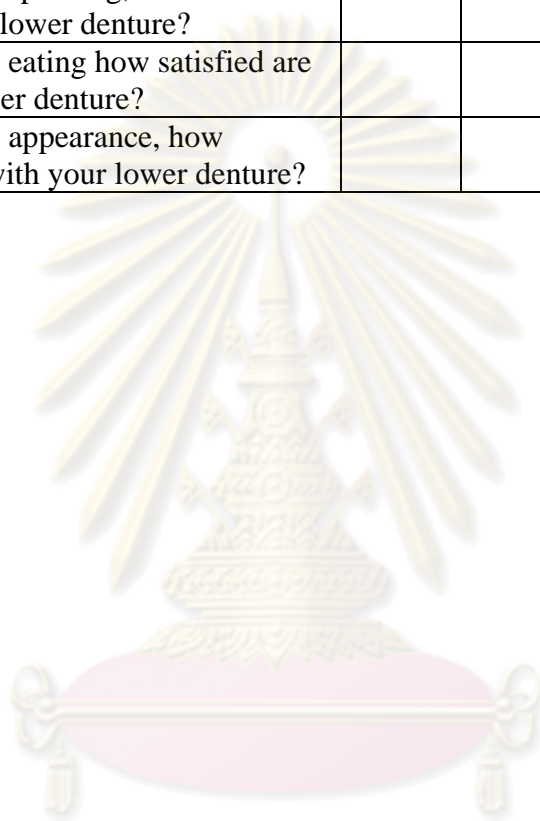
Part IV: Questions related to the satisfaction of the upper and lower denture

Instruction: The following questions ask how you feel about your current dentures.

Please choose the answer that appears most appropriate. (Choose only one)

Questions	Most favourable	More favourable	Favourable	Less favourable	Unfavourable
1. How satisfied are you with your upper denture?					
2. How secure is your upper denture?					
3. How stable is your upper denture when eating or talking?					
4. How comfortable is your upper dentures?					
5. With respect to speaking, how satisfied are you with your upper denture?					
6. With respect to eating how satisfied are you with your upper denture?					
7. With respect to appearance, how satisfied are you with your upper denture?					
8. How satisfied are you with your lower denture?					
9. How secure is your lower denture?					

Questions	Most favourable	More favourable	Favourable	Less favourable	Unfavourable
10.How stable is your lower denture when eating or talking?					
11.How comfortable is your lower dentures?					
12.With respect to speaking, how satisfied are you with your lower denture?					
13.With respect to eating how satisfied are you with your lower denture?					
14.With respect to appearance, how satisfied are you with your lower denture?					



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APPENDIX B

Questionnaire form (Thai)

แบบสอบถามความพึงพอใจของผู้สูงอายุหลังใส่ฟันเทียมทั้งปากในขากรรไกรบนและล่าง

ศึกษาภายใต้โครงการฟันเทียมพระราชทาน ของโรงพยาบาลจตุรพักตรพิมาน จ.ร้อยเอ็ด ประเทศไทย

แบบสอบถามประกอบด้วย 4 ส่วนดังนี้ (กรุณาตอบทุกข้อ)

ส่วนที่ 1 ข้อมูลส่วนบุคคล

ส่วนที่ 2 แบบประเมินสุขอนามัยช่องปาก

ส่วนที่ 3 แบบวัดผลกระทบสุขภาพช่องปาก

ส่วนที่ 4 แบบวัดความพึงพอใจของฟันเทียมขึ้นบนและขึ้นล่าง

คำชี้แจง โปรดกรอกรายละเอียดลงในช่องที่เว้นไว้ และทำเครื่องหมาย ✓ ลงในช่อง ตามความเป็นจริง

ส่วนที่ 1 ข้อมูลส่วนบุคคล

1)ชื่อ.....

2)อายุ.....ปี

3)เพศ ชาย หญิง

4)สถานภาพสมรส โสด สมรส

หม้าย

หย่า

แยกกันอยู่

อื่นๆ (โปรดระบุ).....

5)ระดับการศึกษาสูงสุด ไม่ได้เรียนหนังสือ ประถมศึกษา

มัธยมศึกษา

ปริญญาตรี

ปริญญาโทหรือสูงกว่า

อื่นๆ (โปรดระบุ).....

6)อาชีพ ไม่ได้ทำงาน ทำนา/ทำไร่

รับจ้าง

ค้าขาย

แม่บ้าน

เกษียณจากงาน

อื่นๆ (โปรดระบุ).....

7)เงินได้รายเดือนของครัวเรือน(รวมรายได้อื่นๆเช่น จากกลุ่มสมรส ธุรกิจส่วนตัว).....บาท

8)ประวัติการใส่ฟันเทียม

8.1 ท่านเคยใส่ฟันเทียมมาก่อนฟันเทียมชุดนี้หรือไม่ เคย ไม่เคย

8.2 ท่านใส่ฟันเทียมชุดก่อนมานานกี่ปี.....ปี

9)ท่านได้รับข้อมูลข่าวสารจากแหล่งใดในการเข้ารับบริการใส่ฟันเทียมพระราชทานครั้งนี้(ตอบได้มากกว่า1ข้อ)

หนังสือพิมพ์

วิทยุ

โทรทัศน์

แผ่นป้ายประกาศ/โปสเตอร์

- เพื่อนหรือญาติบอก อสม.
 สถานีอนามัย โรงพยาบาล
 อื่นๆ (โปรดระบุ).....

10)การเดินทางมารับบริการใส่ฟันเทียม(ตอบได้มากกว่า1ข้อ)

- เดิน จักรยาน
 มอเตอร์ไซค์ รถโดยสารประจำทาง
 รถยนต์ส่วนตัว ญาติหรือผู้อื่นพามา
 อื่นๆ (โปรดระบุ).....

11)พฤติกรรมที่ส่งผลต่อสุขภาพช่องปาก(ตอบได้มากกว่า1ข้อ)

- ดื่มน้ำชา/กาแฟ ดื่มเหล้า
 ดื่มน้ำอัดลม สูบบุหรี่
 กินหมาก อื่นๆ(โปรดระบุ).....

ส่วนที่ 2 แบบประเมินสุขอนามัยช่องปาก

1.คุณดูแลทำความสะอาดช่องปากและฟันเทียมอย่างไร(ตอบได้มากกว่า1ข้อ)

- แปรงฟันเทียมเป็นประจำทุกวัน วันละ 1 ครั้ง
 แปรงฟันเทียมเป็นประจำทุกวัน วันละ 2 ครั้ง หรือมากกว่า
 ล้างฟันเทียมด้วยน้ำสบู่
 ล้างฟันเทียมด้วยน้ำเปล่า
 ไม่ได้ใช้แปรงทำความสะอาดฟันเทียมเลย
 แช่ฟันเทียมด้วยเม็ดฟูสำหรับทำความสะอาดฟันเทียม
 ก่อนนอนถอดฟันเทียมออกและแช่น้ำสะอาดไว้ เป็นบางวัน
 ก่อนนอนถอดฟันเทียมออกและแช่น้ำสะอาดไว้ เป็นประจำทุกวัน
 ไม่เคยถอดฟันเทียมออกขณะนอนหลับเลย
 วิธีอื่นๆ (โปรดระบุ).....

2.คุณใส่ใส่ฟันเทียมชนิดนี้เป็นประจำหรือไม่(ตอบได้มากกว่า1ข้อ)

- ไม่ได้ใส่เลย สาเหตุที่ไม่ใส่เพราะ.....
 ใส่เป็นบางวัน
 ใส่เป็นประจำทุกวัน

ส่วนที่ 3 แบบวัดผลกระทบสุขภาพช่องปาก

คำชี้แจง โปรดทำเครื่องหมาย ✓ ลงในช่องที่ตรงกับความเห็นของท่านมากที่สุด(เลือกเพียง 1 ช่อง)

คำถาม	ไม่เคยเลย	น้อยครั้ง	บางครั้ง	บ่อย	บ่อยมาก
1.คุณมีปัญหาในการออกเสียงคำพูดเนื่องมาจากช่องปากของคุณหรือฟันเทียมใช้หรือไม่					
2.คุณรู้สึกว่าการรับประทานอาหารของคุณแย่ลงเนื่องมาจากช่องปากของคุณหรือฟันเทียมใช้หรือไม่					
3.คุณมีอาการเจ็บปวดในช่องปากของคุณเนื่องมาจากฟันเทียมใช้หรือไม่					
4.คุณรู้สึกไม่สบายใจเวลารับประทานอาหารเนื่องมาจากช่องปากของคุณหรือฟันเทียมใช้หรือไม่					
5.คุณรู้สึกรำคาญภายในช่องปากของคุณเนื่องมาจากฟันเทียมใช้หรือไม่					
6.คุณรู้สึกอึดอัดในช่องปากของคุณเนื่องมาจากฟันเทียมใช้หรือไม่					
7.คุณรู้สึกไม่พอใจในการรับประทานอาหารเนื่องมาจากช่องปากของคุณหรือฟันเทียมใช้หรือไม่					
8.คุณต้องหยุดชั่วคราวระหว่างรับประทานทานอาหารเนื่องมาจากปัญหาช่องปากของคุณหรือฟันเทียมใช้หรือไม่					
9.คุณพบว่ามันยากที่จะผ่อนคลายเนื่องมาจากปัญหาช่องปากของคุณหรือฟันเทียมใช้หรือไม่					
10.คุณรู้สึกอายเนื่องมาจากปัญหาช่องปากของคุณหรือฟันเทียมใช้หรือไม่					
11.คุณรู้สึกหงุดหงิดง่ายกับผู้อื่นเนื่องมาจากปัญหาช่องปากของคุณหรือฟันเทียมใช้หรือไม่					
12.คุณมีความยุ่งยากขณะทำงานเนื่องมาจากปัญหาช่องปากของคุณหรือฟันเทียมใช้หรือไม่					
13.คุณรู้สึกไม่พึงพอใจในการดำรงชีวิตประจำวันเนื่องมาจากปัญหาช่องปากของคุณหรือฟันเทียมใช้หรือไม่					
14.คุณไม่สามารถบดเคี้ยวอาหารได้เนื่องมาจากปัญหาช่องปากของคุณหรือฟันเทียมใช้หรือไม่					

ส่วนที่ 4 แบบวัดความพึงพอใจของพนักงานชั้นบนและชั้นล่าง

คำชี้แจง โปรดทำเครื่องหมาย ✓ ลงในช่องที่ตรงกับความเห็นของท่านมากที่สุด(เลือกเพียง 1 ช่อง)

คำถาม	มากที่สุด	มาก	ปานกลาง	น้อย	ไม่เลย
1.คุณมีความพึงพอใจในพนักงานชั้นบน					
2.คุณรู้สึกมั่นใจในพนักงานชั้นบน					
3.คุณรู้สึกว่าพนักงานชั้นบนมีการยึดอยู่ไม่หลุดออกมา ขณะรับประทานอาหาร					
4.คุณรู้สึกสะดวกสบายขณะใช้พนักงานชั้นบน					
5.คุณพึงพอใจในการพูด ขณะใช้พนักงานชั้นบน					
6.คุณรู้สึกทานอาหารได้ดี ขณะใช้พนักงานชั้นบน					
7.คุณมีความพึงพอใจขณะใช้งานพนักงานชั้นบน					
8.คุณมีความพึงพอใจในพนักงานชั้นล่าง					
9.คุณรู้สึกมั่นใจในพนักงานชั้นล่าง					
10.คุณรู้สึกว่าพนักงานชั้นล่างมีการยึดอยู่ไม่หลุดออกมา ขณะรับประทานอาหาร					
11.คุณรู้สึกสะดวกสบายขณะใช้พนักงานชั้นล่าง					
12.คุณพึงพอใจในการพูด ขณะใช้พนักงานชั้นล่าง					
13.คุณรู้สึกทานอาหารได้ดี ขณะใช้พนักงานชั้นล่าง					
14.คุณมีความพึงพอใจขณะใช้งานพนักงานชั้นล่าง					

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APPENDIX C

Administration & Time Schedule

Detail	First month	Second month	Third month	Fourth month
Research planning	✓			
Project summary for the budget	✓			
Research methodology - questionnaire making - data collection	✓	✓		
Data analysis		✓		
Conclusion			✓	
Writing and present				✓


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 จุฬาลงกรณ์มหาวิทยาลัย

APPENDIX D**Budget**

1. Documentary for project summary	1,000 baths
2. Questionnaire	2,000 baths
- interviewer	3,000 baths
- data collection	1,500 baths
3. Data analysis and full paper	3,000 baths
4. Travelling cost	4,000 baths
5. Printing cost	3,000 baths
6. Other cost	2,500 baths

Total budget 20,000 baths



ศูนย์วิทยุทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

VITAE

Name : Miss Jarinya Chomjai
Age : 30 years old
Date of Birth : 17 August 1979
Place of Birth : Phitsanuloke, Thailand
Education : Bachelor degree of Dentistry, Srinakarinvirote University
Current Office : Jaturapakpiman Hospital, Roi-et Province, Thailand
Position : Dentist
Telephone : 089-9118040
E-mail : rojjunghoo4575@hotmail.com



ศูนย์วิทยุทันตวิทยา
จุฬาลงกรณ์มหาวิทยาลัย