

**FACTOR RELATED TO NOT WEARING DENTURE IN THE 30
BAHT HEALTH CARE PROGRAM AT BANGKOK AND
PERIMETER**

The background features a large, faint watermark of the Mahidol University logo. It is a circular emblem with a gold border. Inside the border, there is a blue circle containing a golden stupa-like structure with intricate carvings. Thai script is visible around the inner edge of the gold border.

JIRALUCK NONTALUCK

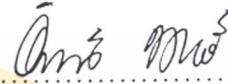
**A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENT FOR
THE DEGREE OF MASTER OF SCIENCE (PUBLIC HEALTH)
MAJOR IN INFECTIOUS DISEASES AND EPIDEMIOLOGY
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY
2006**

ISBN 974-04-7847-6

COPYRIGHT OF MAHIDOL UNIVERSITY

Thesis
Entitled

FACTOR RELATED TO NOT WEARING DENTURE IN THE 30-BAHT
HEALTH CARE PROGRAM AT BANGKOK AND PERIMETER



.....

Miss. Jiraluck Nontaluck
Candidate



.....

Dr. Suthi Jareinpituk,
Ph.D. (Dental public Health)
Major-Advisor



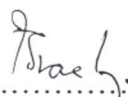
.....

Assoc. Prof. Dr. Chukiat Viwatwongkasem,
Ph.D. (Biostatistics)
Co-Advisor



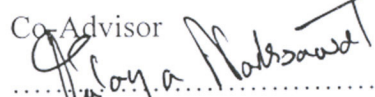
.....

Dr. Yoawaluk Ngenviwatkul,
Dr. PH. (Oral Epid)
Co-Advisor



.....

Prof. M.R. Jisnuson Svasti, Ph.D.
Dean
Faculty of Graduate Studies



.....

Assoc. Prof. Kulaya Narksawat,
M.P.H. (Urban Health)
Chair
Master of Science (Public Health)
Major in infectious diseases and
Epidemiology
Faculty of Public Health

Thesis
Entitled

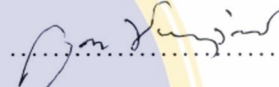
**FACTOR RELATED TO NOT WEARING DENTURE IN THE 30-BAHT
HEALTH CARE PROGRAM AT BANGKOK AND PERIMETER**

was submitted to the Faculty of Graduate Studies, Mahidol University
For the degree of Master of Science (Public Health)
Major in Infectious Diseases

On
26 October, 2006



Miss. Jiraluck Nontaluck
Candidate



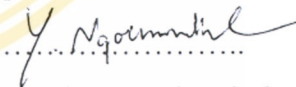
Dr. Kitsada Panchanuwat,
Cert. Prosthodontics
Chair



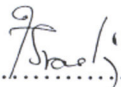
Dr. Suthi Jareinpituk,
Ph.D. (Dental public Health)
Member



Assoc. Prof. Dr. Chukiatt Viwatwongkasem,
Ph.D. (Biostatistics)
Member



Dr. Yoawaluk Ngenviwatkul,
Dr. PH. (Oral Epid)
Member



Prof. M.R. Jisnusun Svasti, Ph.D.
Dean
Faculty of Graduate Studies
Mahidol University



Assoc. Prof. Dr. Phitaya Charupoonphol,
D.V.M., M.D.
Dean
Faculty of Public Health
Mahidol University

ACKNOWLEDGEMENT

I would like to express my sincere and profound gratitude to following persons, who made this study materialized.

My major advisor, Dr. Suthi Jareinpituk who is invaluable supervision, guidance, kindness, constructive, criticism and tremendous assistance throughout my study.

I also express my appreciation and gratitude to my co-advisor, Dr.Chukiat Viwatwongkasem and Dr.Yoawalak Ngenviwatkul, for his thoughtful guidance, encouragement, invaluable suggestion, comment and corrections of this study for completion.

I wish to thank Dr. Kitsada Panchanuwat, for kindness in examining the research and suggestion for improvement, and who was the external examiner of thesis defense.

It is impossible to mention all the kindness and helpful of lecturers and staff of Epidemiology department, Faculty of Public Health, Mahidol University.

My special thanks to all staff of hospital and health centre for their cooperation and help during collected data. Thank you all staff in Ratchavithi hospital, King Monkut hospital, Nontaburi health centres.

I wish to thankful my Chief, Dr.Porapan Punyaratabandhu, Dr.Yoawarat Porapakkam and Dr.Stephen Lim for their kindness and helpful.

Finally, I am grateful to my family for their financial support, entirely care and love. Also, thank you all my friends for cheerful and helpful for this study. The usefulness of this thesis, I dedicate to my parent and my sister and all teachers who have taught me since I was young.

Jiraluck Nontaluck

FACTOR RELATED TO NOT WEARING DENTURE IN THE 30 BAHT HEALTH CARE PROGRAM AT BANGKOK AND PERIMETER

JIRALUCK NONTALUCK 4636823 PPH/M

M.Sc. (PUBLIC HEALTH) MAJOR IN INFECTIOUS DISEASE AND EPIDEMIOLOGY

THESIS ADVISORS: SUTHI JAREINPITUK, PhD. (Dental public health)
CHUKIAT VIWATWONGKASEM, PhD. (Biostatistics), YOAWALUK
NGENVIWATKUL, Dr.PH. (Oral Epid)

ABSTRACT

This is a cross-sectional study of factors related to not wearing dentures in the 30 baht scheme in 2003. Two hundred people participated in this study. They were interviewed by telephone interview and questionnaire. The aim of this study was to examine the proportion of those wearing dentures of the people who had denture made by the Nation Health Security Office and to study factors that are associated with not wearing dentures. Male constituted 42% and female 58%. The mean age was about 67. Most patients (77.5%) had been educated in primary school. For fifty-seven percent it was their first set of dentures. The proportion of the sample wearing denture was 62%. Fifty seven percent had suffered irritation from dentures and 65% of these had had this irritation alleviated. There were big dentures and small dentures that did not fit the face in about 14% and 6% of sample, respectively. In addition, dentists made appointment for patients for rechecking dentures in 75% and 55% of sample went to check them. Multivariate analysis found that there were four factors that were highly significant correlated with not wearing dentures: age, alleviation of irritation, having small dentures and good chewing ability. Also, there were no interaction effects between all variables.

The results from this study strongly suggest that dentures are important for the elderly. So the department concerned should examine functions and aesthetics of dentures and give more knowledge about denture for elderly.

KEY WORDS: DENTURE / 30 BAHT HEALTH-CARE / AESTHETICS

66 P. ISBN 974-04-7847-6

ปัจจัยที่มีความสัมพันธ์กับการไม่ใช้ฟันปลอม ในโครงการหลักประกันสุขภาพถ้วนหน้า เขต
กรุงเทพมหานครและปริมณฑล (FACTOR RELATED TO NOT WEARING DENTURE IN THE
30 BAHT HEALTH CARE PROGRAM AT BANGKOK AND PERIMETER)

จิราลักษณ์ นนทาร์ักษ์ 4636823 PPH/M

วท.ม. (สาธารณสุขศาสตร) สาขาวิชาเอกโรคติดเชื้อและวิทยาการระบาด

คณะกรรมการควบคุมวิทยานิพนธ์ : สุทธิ เจริญพิทักษ์ PhD. (Dental public health), ชูเกียรติ
วิวัฒน์วงศ์เกษม PhD. (Biostatistics), เขียวลักษณ์ เงินวิวัฒน์กุล, Dr.PH. (Oral Epid)

บทคัดย่อ

การศึกษาครั้งนี้เป็นแบบภาคตัดขวาง เพื่อศึกษาเกี่ยวกับปัจจัยที่เกี่ยวข้องกับการไม่ใช้ฟัน
ปลอมในโครงการหลักประกันสุขภาพถ้วนหน้า เขตกรุงเทพมหานคร และปริมณฑล ซึ่งมี
วัตถุประสงค์เพื่อศึกษาร้อยละการไม่ใช้ฟันปลอมในผู้ที่ทำฟันปลอมทั้งปากฐานพลาสติก และปัจจัย
ที่มีความสัมพันธ์กับการไม่ใช้ฟันปลอม ตามโครงการหลักประกันสุขภาพถ้วนหน้า ในด้านลักษณะ
ประชากร พฤติกรรมการใช้ฟันปลอม ด้านหน้าที่และความสวยงาม การสื่อสารระหว่างแพทย์และ
คนไข้ เป็นต้น โดยทำการสัมภาษณ์ทางโทรศัพท์ผู้ที่ทำฟันปลอม ระหว่างปี พ.ศ. 2546 ถึง 2548 ใน
เขตกรุงเทพมหานครและปริมณฑล เป็นจำนวน 200 คน

ผลการศึกษาพบว่า ผู้ทำฟันปลอมเป็นเพศหญิงร้อยละ 58 และชายร้อยละ 42 และมีอายุ
เฉลี่ย 67 ปี จบการศึกษาในระดับชั้นประถมศึกษาปีที่ 4 หรือต่ำกว่า ร้อยละ 77.5 และมีคนไข้ใช้ฟันปลอม
เป็นชุดแรกร้อยละ 57 และมีสัดส่วนการไม่ใช้ฟันปลอม ร้อยละ 38 ในเรื่องหน้าที่ของฟันปลอม
คนไข้ได้รับการระคายเคืองจากการใช้ฟันปลอม ร้อยละ 57.5 และได้รับการรักษาและหายแล้ว ร้อย
ละ 65.49 พอดีช่องปากทั้งใหญ่และเล็กเกินไปร้อยละ 14.5 และ 6.5 ตามลำดับ ในด้านความสัมพันธ์
ระหว่างทันตแพทย์และคนไข้ นั้น ทันตแพทย์นัดคนไข้ไปตรวจซ้ำร้อยละ 74.5 และคนไข้กลับไป
ตรวจร้อยละ 55 รวมถึงมีการแนะนำคนไข้เกี่ยวกับปัญหาการใส่ฟันปลอมด้วยร้อยละ 85
Multivariate analysis พบว่า มี 4 ปัจจัยที่มีผลกับการไม่ใส่ฟันปลอม คือ อายุ การรักษาบาดแผล
จากการระคายเคือง ฟันปลอมมีขนาดเล็กและการเคี้ยวอาหาร ทั้งสี่ปัจจัยนี้ไม่มี interactionต่อกัน
ข้อเสนอแนะจากงานวิจัย เนื่องจากการให้สิทธิในการทำฟันปลอมแก่ผู้สูงอายุ นั้น มีประโยชน์เป็น
อย่างมาก และหน่วยงานที่เกี่ยวข้องควรให้ความสนใจในเรื่องหน้าที่และความสวยงามของฟัน
ปลอม และรณรงค์ให้มีการทำฟันปลอมในผู้ที่ไม่มีฟันแท้เหลืออยู่

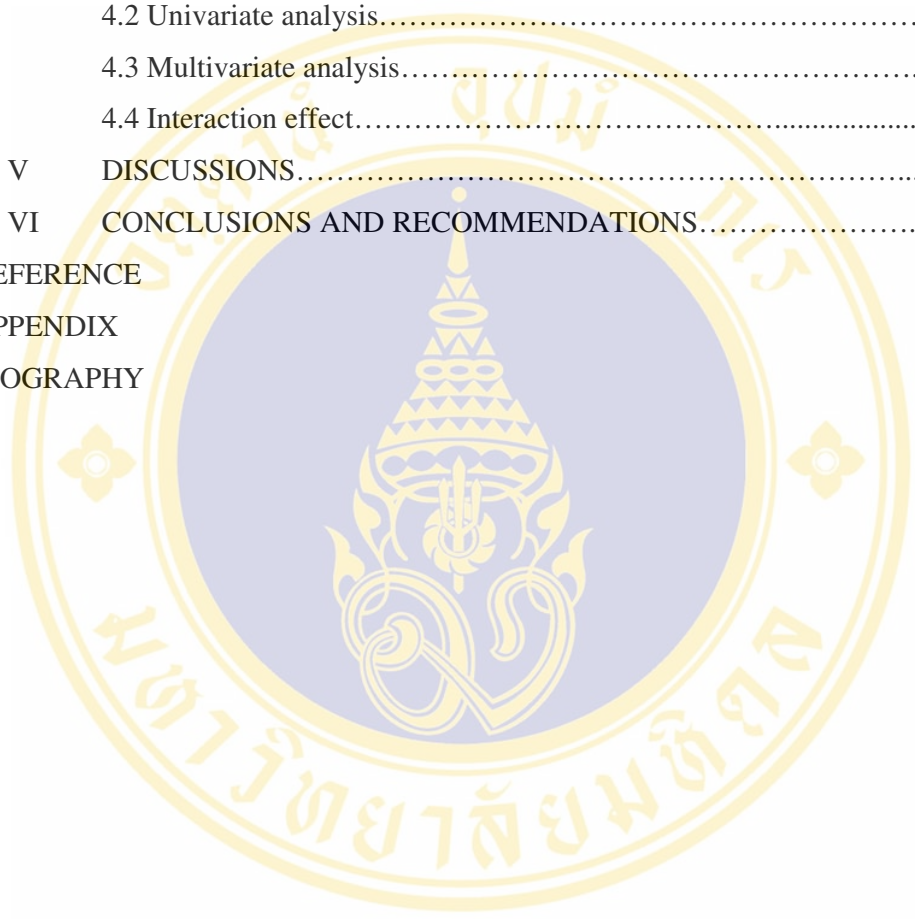
66 หน้า. ISBN 974-04-7847-6

CONTENTS

	Page
ACKNOWLEDGEMENTS.....	iii
ABSTRACT.....	iv
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER	
I INTRODUCTION.....	1
1.1 Background.....	1
1.2 Objectives.....	3
1.3 Hypothesis.....	3
1.4 Limitation of research.....	4
1.5 Variables.....	4
1.6 Operational definition.....	5
1.7 Usefulness / Benefit of this study.....	5
II LITERATURE REVIEW.....	6
2.1 Denture.....	8
2.2 Satisfaction of denture.....	12
2.3 Problem of denture.....	17
2.4 Factor related to not wearing denture.....	25
2.5 Conceptual framework.....	30
III MATERIAL AND METHODS	31
3.1 Research design	31
3.2 Study area.....	31
3.3 Study population and sample.....	31
3.4 Sample size.....	32
3.5 Sampling techniques.....	32
3.6 Research tool.....	33
3.7 Data collection	33
3.8 Data analysis	34

CONTENTS (Continued)

	Page
IV RESULTS.....	35
4.1 Characteristics of study samples.....	35
4.2 Univariate analysis.....	41
4.3 Multivariate analysis.....	44
4.4 Interaction effect.....	48
V DISCUSSIONS.....	50
VI CONCLUSIONS AND RECOMMENDATIONS.....	54
REFERENCE	57
APPENDIX	61
BIOGRAPHY	66



LIST OF TABLES

Tables		Page
1.	Numbers of denture by hospitals in Bangkok and Nontaburi	31
2.	Samples size by using a proportional to size	33
3.	Characteristics of data collection	34
4.	Characteristics of people who wear denture from 30-baht health care program (Demographic and Behavior)	36
5.	Characteristics of people who wear denture from 30-baht health care program (Function)	37
6.	Characteristics of people who wear denture from 30-baht health care program (Aesthetics)	39
7.	Characteristics of people who wear denture from 30-baht health care program (Patient and dentist communication)	40
8.	Number and proportion of denture expectation	41
9.	Relation between variables and wearing denture	42
10.	Dummy table of variables that analyzed in Logistic regression	45
11.	Multivariate analysis by Logistic regression (First Model)	46
12.	Multivariate analysis by Logistic regression (Second Model)	47
13.	Multivariate analysis by Logistic regression (Third Model)	47
14.	Multivariate analysis by Logistic regression (Last Model)	48
15.	Interaction effects	48

LIST OF FIGURE

Figure	Page
1. Conceptual Framework	30



CHAPTER I

INTRODUCTION

1.1 Background

Dentures are false teeth built by the dentists to use instead of natural teeth to improve tooth function. It helps improve the characteristic of those using them. They can smile with confidence and chew food delicately. The stomach doesn't work as hard. The quality of elderly dental health will be better with improved dental health such as behaviors, cleaning, avoiding smoking and drinking alcohol, and receiving services for dental health. Society and environment are also important for dental health for example education, income, beliefs, attitudes and experience. The example of beliefs about dental health is the chewing of betel nuts to make teeth strong. However, teeth will be lost when they are elderly, because they never took care of their teeth well. From the oral health survey of Thai people by the Department of Health, Ministry of Public Health from 2000 to 2001, sampling in ages 61-74 years found the average remaining numbers of teeth in their mouths are 19.6 per person. The percentage of decay and loss of teeth is 95.6, and the percentage of uncured or remedial is 56.3. The percentage of root teeth decay due to periodontal diseases is 19%. The loss of teeth reduces from 16.2 to 8.2. The percentage of the necessity of using denture is 70.9 and the percentage of actually using dentures is 18. We can see most of the elderly don't have dentures to use, so they have some troubles in their food digestion. As a result, providing dentures, especially complete dentures will be helpful and can solve their digesting problem. It can make the quality of the elderly lives better and other health problems will be better, too.

For these reasons, the promotion of dental health among the elderly is important to change their ideas of the behavior of taking care of their dental health or going for dental service when it needed in order to have good dental health and the good quality of life. It will require the cooperation among the concern departments for

example dental staff or health security for the elderly to support in prevention, cure and remedy. The elderly can then use their mouths efficiently, without pain or infection in oral cavities both with real teeth and false teeth.

In the year 2001, the National Health Security Office the privilege and benefit of medical services for dental affairs as part of the 30-baht project, including complete denture, tooth extraction, remedy and treating plaque to support the elderly for the cure and remedy of the condition of oral cavity.

Nowadays, there are many people using this service in Bangkok and around the country and the service will be promoted in 2005. Normally, the cost of dental care is high, especially dentures. For one denture, a patient has to pay about 16,000 to 20,000 baht. If patients received and do not wear them. It will lose value each year. But wearing dentures or acceptance of denture does not only depend on the quality or skill of the dentist. It may also depend on satisfaction of the patient or problems with dentures, too.

Researchers have recently argued that treatment evaluation should be based on the patients' own ratings of treatment success, rather than on traditional clinical assessment. Patient-centered care is important that is health care which is closely congruent with and responsive to patients' wants, needs, and preference. The notion that medicine should be patient-centered has been a component of the patients' rights movement since the 1960s. Accordingly, evaluation of treatments should take into consideration the patient's opinion of the effectiveness of therapy. Weaver et al. stated that "Patient satisfaction with therapy is likely to be the distinguishing outcome of many treatments for chronic diseases for which living with treatment is more realistic objective than cure". Other previous research has shown that patients' evaluations of their prostheses correlate poorly with the clinicians' assessment. It has been recommended that researchers conduct more studies that use patient satisfaction as the primary outcome measure in treatment evaluation.

In some studies indicate that in most cases, no significant relationship was observed between patients' opinions of their dentures and clinical assessments. It can be concluded from several studies that 1) clinical assessments of prostheses are not valid predictors of patients' satisfaction and 2) when the patients are asked to express their opinions of their prostheses, they do not base their evaluations on the criteria

used by clinician. Research found that patient who are generally satisfied with the treatment result is therefore more of an attribute of human to human adaptation than to prosthodontic skill. And it found that patients rated the importance of most of the satisfaction factors significantly higher than did the clinicians.

Some studies, even if the denture has a high quality, patients are not satisfied and will not wear it. An assessment of denture between patient and dentist has a different way in evaluating in the function and satisfaction of denture. By the way of assessment of treatment, we cannot use the same indicator of efficiency of denture in dentist and patient, especially with relation to the satisfaction of the patient. In many studies, they found that an assessment of success in treatment more depend on patient than a dentist clinical assessment.

For this reason, this study will examine the wearing and not wearing dentures made from services at the Health security project to know about a percent of wearing and factors related to not wearing dentures. It is useful to know whether dentures which get budget from The National Health Security Offices are worthwhile and know what problems that patients have.

1.2 Objectives

1.2.1 Main objective - The aim of this study is to examine the proportion of denture wearing in people who received dentures at the National Health Security Office.

1.2.2 Specific objective

1. To study the percent of denture wearing in people who recieved dentures at the National Health Security Office.

2. To study factors associated with wearing and not wearing dentures in people who received dentures at the National Health Security Officer.

1.3 Hypotheses

A denture wearing is associated with age, gender, education, denture-wearing experience, function of denture, aesthetics of denture, relationship between dentists and patients and expectation of patients

1.4 Limitation of research

This research was conducted in Bangkok and its Perimeter and selected only public hospitals which include 2 hospitals in Bangkok and 4 hospitals in Nonthaburi. This makes it less than representative and implement for the total Thai population.

1.5 Variables

1.5.1 Dependent variables

- Wearing and not wearing a denture. (Binary outcomes)

1.5.2 Independent variables

1. Demographic data

- Gender
- Age
- Education
- Socioeconomic status
- History of illness

2. Wearing denture experience

- A Number of dentures
- Age of previous denture

3. Function of denture

- Chewing ability
- Retention and Looseness
- Pain

4. Aesthetics of denture

- Fit of denture
- Aesthetics

5. Relationship between dentists and patients

- Consultant with dentist
- Decision of making denture

6. Expectations of patients

1.6 Operational definition

1. Dentures are a removable replacement for missing teeth, made under the 30-baht project, and adjusted completely. Patients use them for about 1 month.
2. Patients are people who use a denture from the 30-baht project.
3. Elderly are people who are aged 60 years and over.
4. Denture wearing includes people who wear a denture during the study time, and they wear a denture about one month after insertion, or people who wear a denture sometimes such as when they go outside or chew food.
5. Non denture wearing includes people who don't wear a denture during the study time.
6. Retention is the maintenance of the denture in position by forces of atmospheric pressure, adhesion, cohesion, and in the lower, gravity, together with the action of the oral musculature including the tongue that is muscle control and patient tolerance.
7. Aesthetics is concerned only with the contour of a tooth, wrinkles in the lip, or white straight teeth lacks motivation in the essential or denture don't fit in a mouth.
8. Expectation of denture is patients who expected their dentures have no pain, no slackness, good chewing and good appearance.
9. Hospitals included are public hospital that located in Bangkok and Nontaburi.
10. The Perimeter province only includes Nontaburi.

1.7 Usefulness / Benefit of this research

1. Useful to improve the quality of dentures and know a patient's satisfaction in denture.
2. Useful to evaluate the benefits of paying the budget of the National Health Security Office further.

CHAPTER II

LITERATURE REVIEW

In this chapter, the theories, researches and knowledge about factors related to not wearing denture was reviewed as follows:

1. Denture

- 1.1 Types of denture
- 1.2 Quality of denture
- 1.3 Denture care
- 1.4 Usefulness of denture

2. Satisfaction of denture

- 2.1 Expectation of denture
- 2.2 Experience of denture wearer
- 2.3 Aesthetics and appearance
- 2.4 Dentist and patient communication
- 2.5 Patient's opinion

3. Problem of denture

- 3.1 Pain and soreness
- 3.2 Fit of denture
- 3.3 Retention and Looseness Food stagnation
- 3.4 Sensation and salivary gland
- 3.5 Inflammation and allergy
- 3.6 Occlusion and Mastication
- 3.7 Difficulty of wearing
- 3.8 Speech
- 3.9 Stability

4. Factor related to not wearing a denture

- 1. Demographic data
 - Gender

- Age
 - Education
 - Socioeconomic
 - History of illness
2. Wearing denture experience
 - A Number of dentures
 - Age of previous denture
 3. Function of denture
 - chewing ability
 - Retention and Looseness
 - Pain
 4. Esthetics of denture
 - Fit of denture
 - Esthetics
 5. Relationship between dentists and patients
 - Consultant with dentist
 - Decision of making denture
 6. Expectation of patients

1. Denture

A denture is a removable replacement for missing teeth. A denture is made of acrylic resin, sometimes in combination with various metals, and comes in two types; complete denture or partial denture. Complete dentures replace all the teeth, while a partial denture fills in the spaces created by missing teeth and prevents other teeth from changing position. (30)

1.1 Types of denture

1.1.1 Full denture

Complete dentures replace all of the natural teeth in the upper or lower jaw, or both, sitting on the soft (gum) tissue of the mouth that covers the bone ridge. A prosthodontist may use several different procedures to make sure the denture will fit the shape of the mouth, and provide the necessary support for the face. The design of the complete denture and position of the teeth will restore good speech and appearance.

A full denture, also called a complete denture, replaces natural teeth and provides support for cheeks and lips. Without support from the denture, facial muscles can sag, making a person look much older. There are the following types of complete dentures:

- *Conventional full denture*: after the patient's remaining teeth are removed and the gum tissues have healed, this kind of denture is made and placed inside the mouth. The process for tissue healing may take months.
- *Immediate full denture*: The denture wearer does not have to wait during the healing period because after teeth removal, this kind of denture is made and inserted into the patient's mouth.(40)

The base of the full denture is made of flesh-colored plastic. When the base of the upper denture rests over the gums and palate, a seal is created, which holds the denture in place. Cheek muscles and the tongue help hold the lower denture in place.

Full dentures resemble natural teeth very closely. There may be little change in a appearance and they even can improve the look of smile.(31,37)

1.1.2 Removable partial denture

Removable partial dentures usually have replacement teeth attached to gum-colored bases that are made of plastic. Metal framework is used to connect and make them fixed. Then dentures are attached to the patient's natural teeth with metal clasps or some other devices.

Removable partial dentures are used when there are still natural teeth left. The missing teeth are replaced by this type of denture in an effective and aesthetic design that uses both the soft tissue ridge and teeth to hold it securely in place. This tooth replacement is removable by the patient, which makes cleaning easier. The new teeth will look natural and are made from plastic or porcelain (ceramic) materials. The foundation of the partial denture can be plastic or a combination of plastic and metal. Because removable partial dentures use teeth and soft tissue for support, patients may be given the opportunity to choose a variety of treatment plans. Prosthodontists will discuss these options after a thorough examination of the patient's teeth, soft tissue (gums and cheeks), and remaining bone and surrounding anatomy. The examination should also include x-rays (radiographs) or impressions to make models of the mouth.

In terms of the removable dentures, recent studies have shown that the supporting teeth of a partial denture are at a substantially greater risk of being lost than if the patient had a permanent bridge. 92% of the adjacent teeth restored with a permanent bridge were intact and only 56% of adjacent teeth with a removable partial denture were intact. This could be because metal clasps tend to trap food, plaque and debris that could lead to damage and loss. (33)

1.2 Denture care

New dentures replace the teeth that have lost. To maintain a healthy condition, it is necessary that take great care to clean mouths as well as new dentures. Use a soft toothbrush to massage and clean mouths and use a mouthwash to give mouths fresher feeling.

The patient should be given verbal and written instructions by the dentist in the use and care of the prostheses. For the new complete denture wearer, the instruction should be given during the diagnostic visit and reinforced throughout the treatment

procedures. The patient must also be told what can be expected during the post insertion period, over and extended period of time, and the expected longevity of the prosthesis. (34, 35)

1.2.1 Daily cleaning

Daily cleaning of the denture is necessary to prevent build-up of plaque, food, calculus (tartar), and stain which can cause:

- problems with appearance or aesthetics
- mouth odor
- irritation to the tissues under the denture
- infections in the mouth

1.2.2 Gums cleaning

Gum cleaning is also important with people who wear denture so it needs to clean tissues under denture.

- The gums should be cleaned daily with a soft toothbrush or a washcloth. This removes the plaque and debris on the gums. It also massages and stimulates circulation of tissues.

1.2.3 Oral health care and denture

- Daily remove and brush the denture carefully with a brush and toothpaste, both specifically designed for denture cleaning.
- Avoid the use of harsh abrasive cleaners on dentures.
- Avoid cleaning and/or sterilizing denture in boiling water, or damage to the denture is likely to occur.
- If a partial denture is in place, remove it before brushing the natural teeth.
- Once removed, keep the denture in a safe place, out of the reach of children.
- Once removed, soak the denture in a proper cleansing solution or water. (32)

1.3 Usefulness of denture

1.3.1 Improved appearance

When teeth are lost, ongoing shrinkage of the jawbone occurs making the face look older. Dental implants can slow or stop this process. Dental implants are look and feel like own natural teeth.

1.3.2 Improved comfort

Dental implants eliminate the pain and discomfort of removable full or partial dentures. Since dentures sit on top of the jawbone and gums, continuous shrinkage of the jaw bone alters the fit of the denture resulting in slipping or rocking of the dentures. Exposed nerves and irritation of the gum tissue may add to the discomfort. Implant supported replacement teeth are like natural teeth because they are anchored securely to the jawbone. Gum irritation and the pain of exposed nerves associated with conventional full or partial dentures are eliminated.

1.3.3 Improved speech

With ill fitting dentures, the teeth slip and slide around the mouth. The facial muscles become tense in an attempt to hold the teeth in place. This often results in mumbling, slurred speech or clicking noises. Replacement teeth allow speaking with confidence in a relaxed and natural tone.

1.3.4 Eat better

The average denture patient with an excellent fitting denture eats at 15-20% efficiency when compared to a person with natural teeth. As the jawbone shrinks, your chewing efficiency is reduced even more, making it difficult to eat certain foods. Dental implants can restore chewing efficiency comparable to that of natural teeth. This allows eating favorite foods with confidence and without pain, enjoying what everyone is eating and not thinking twice about it. A full upper denture covers the palate of the mouth and reduces the ability to taste foods.

1.3.5 Protect remaining natural teeth

Dental implants are often more appropriate than a bridge for the replacement of one or more adjacent teeth. With conventional bridgework, the teeth surrounding missing teeth must be ground down. Dental implants often eliminate the need to modify these teeth, resulting in a conservative, yet aesthetic restoration.

1.3.6 Improved Self Esteem

Considering all other benefits, dental implants can improve self-esteem. Denture will make feel better about people who wear it. They can regain nearly all the capabilities that most people have with natural teeth, giving renewed confidence. (38)

2. Satisfaction of denture

2.1 Expectation of denture

Dental schools have traditionally taught excellence in complete dentures techniques, but complete dentures become important to and accepted by patients only through the emotional factors and expectations that the patients places on them. The general practitioner must constantly strive to match what the patients expect from complete dentures, through adequate patient communication, to what he can deliver. The general practitioner should, at the first diagnostic visit, attempt to ascertain whether the patient's expectations of prosthodontic treatment are realistic. If the patient's expectation is unrealistic it could lead to denture dissatisfaction or rejection of the prosthesis.

General, deep-seated patient attitudes to complete dentures and denture wearing have been elucidated in focus group sessions. These attitudes, rarely expressed to the dentist, are important to the overall success of prosthesis. These attitudes include: 1) most complete denture patients are secretive about their dentures, they do not want to know, especially relatives that they wear them.

2) Denture wearers equate complete dentures with growing old and old age, loss, and eventually death.

3) Dentures are considered ugly and unclean in a bathroom.

4) Most denture patients express good feeling about their dentist.

5) The denture patient does not associate the human relations factors which so often influence and modify the patient's expectation as part of the general practitioner's professional responsibility. It would be well for all dentists to treat their complete denture patients with TLC—tender loving care.

To discuss a few of the unrealistic expectations of a denture patient, it is necessary to assign the prosthodontic patient to one of three categories:

- Patient with a few remaining natural teeth who will receive their first complete denture. They have a treatment planned for extraction and the insertion of complete dentures, their removal is surrounded by loss in the patient's mind. Advancing age, possible loss of a job and income, death of loved one or dependence on others characterize these patients. When the general practitioner tells the patient that his teeth are hopeless, this maybe final straw which may send the patient into a deep depression. The menopausal women who equate a youthful denture smile with increased sexual attractiveness and after receiving her new complete denture dose not become so, may be deeply dissatisfied.
- Patient who has been edentulous for a long time and not worn complete dentures. The dentist must always ask the question "Why now?" if he has been functioning for this length of time without dentures, what or who prompted him to come for treatment at this time. Are the patient's expectations of the dentures matched o the desire to undergo treatment at this time? If not, the general practitioner can expect problems of denture dissatisfaction.
- The experienced complete wearer coming for replacement dentures. Beset by age, limited resources and dependence upon others, the dentist must not overindulge the patient but only provide the dental treatment the patient needs to meet his expectations.

In the final analysis, the success of complete denture is dependent in large measure upon both the general practitioner and patient sharing similar and realistic expectations and goals. Realistic expectations can be achieved only through careful and frank patient-dentist communication at the time of diagnosis and throughout treatment.

(6, 19)

2.2 The experience denture wearer

The most successful way to avoid difficult prosthetic problem is through careful diagnosis and treatment planning. The dentist must learn to ask the patient why they seeking new dentures, what specifically they disliked about their old dentures, and what problem they had adapting to their old dentures. After listening to the patient, a careful oral examination and an examination of the old dentures should confirm any legitimate complaints. Vague complaints and problems that can not be substantiated by the oral examination or denture examination are a clue that the patient's expectations may exceed prosthetic possibility. This type of patient, if not reeducated to what is realistically possible in terms of denture stability, retention, etc., will not accept or adapt to new dentures any more successfully than he did to previous one. (28)

2.3 Aesthetics

The patient's perception of the aesthetics of their new dentures can decide the success of that denture. The patient who does not care for the way their new denture looks will not make the commitment to meet the challenge of learning to wear them. This problem can be minimized by using a "diagnostic ear" when discussing a case with a new patient. The dentist should be suspicious of the patient with vague complaints about their previous dentist, or one with a jar of dentures which do not look or fit right for various reasons. These are indications of a patient who may have an unrealistic concept of esthetics. Asking the patient what they like and do not like about their present dentures will give some insight into their expectations. Few patients have a true idea of what their original teeth looked like or what an aesthetic appearance involves. Most equate good-looking teeth with what they have seen on television or with the "Hollywood movie star" look. This bright, white, "perfect"-looking style has led patients to desire this in their dentures. It is the dentist's responsibility, if he wants to deliver a truly natural-appearing prosthesis, to discuss this with the patient.

If the dentist's best efforts and patient preparation so not satisfy the patient, there is very little the dentist can do. The dentist should first try to ascertain if the complaint is related to the esthetics of the denture to or some other complaint that the patient is not verbalizing. If the complaint is truly related to the aesthetics of the denture, the dentist must find out exactly what the problem is. Complaints about shape

or length can be corrected with reshaping and grinding. Any other complaint, i.e., color, size, or location, can only be corrected by removing the teeth from the denture base and replacing them. (12)

2.4 Encounter with dentist

A willingness to instruct patients in the care and use of their dentures and an understanding of the patient's desires are essential to ensure a successful prognosis. Informed patients will realize when their denture require attention and will seek treatment before an ill-fitting denture damages the oral tissues.

What patients relate about denture use not always scientific. One of the primary objectives of denture is to preserve the supporting tissues within physiologic limitations. The preservative of the supporting tissues is essential to continuous successful use of dentures, and today's increasing life expectancy makes this requirement more important than ever. Therefore, patients should be educated to understand their responsibility in denture service.

The dentist must know human psychology because the ability to understand the patient's mental processes is frequently the different between the acceptance and the rejection of dentures. First of all, the dentist should find out why the patient wants dentures. Is the patient interested only in cosmetic factors or does the patient expect the dentures to restore the masticatory function of the natural teeth? Did the patient alone decide to seek dental care or did family members exert pressure?

The patient who seeks dentures as a result of pressure by others is rarely a successful denture patient unless they are educated during the treatment. The dentist must explain the nature of the procedures and must prepare the patient for this new experience. The success of the treatment will depend on the willingness of the patient to accept responsibility in the treatment, the use and care of the dentures, and the post-insertion procedures. (7, 9)

2.5 Patient's opinion and attitude

Most general practitioners recognize the importance of the patient's mental attitude in both the treatment phases of complete denture service and in the final acceptance of the prosthesis by the patient.

One of the first classifications of the patient's mental attitude was given by House in 1935 who classified patients as philosophical, exacting, indifferent, and hysterical. An additional classification by Anderson grouped patients' attitude as the quiet mind, the anxious patient, the suspicious patient, the aggressive patient, and the indifferent patient. Although dental patients cannot be readily classified into specific types based upon emotional and personality traits, broad grouping provide a useful basis for comparison and altering treatment method.

2.5.1 The philosophical (quiet mind) patient

The patient with the best mental attitude for complete denture acceptance is the philosophical (quiet mind). This normal patient who has lost teeth following satisfactory dental treatment usually is rational, intelligent, understanding, calm, and cooperation towards professional advice and treatment. When guide and properly educated, this patient readily accepts treatment, understands that complete denture service will maintain health and appearance, and for the general practitioner is a pleasure to treat.

2.5.2 The exacting (suspicious) patient

This patient, although he may possess all the good attributes of the philosophical patient, require extreme care in treatment by the general practitioner. Since this type of patient is very compulsive, precise, and accurate, he will place extreme demands on the general practitioner's time and patience. He may be reluctant to accept the general practitioner's advice, or lack confidence in him. These patient usually demand each treatment step to be outline in detail. The practitioner must prepare himself psychologically to cope with the increased demands placed on him by this type of patient.

2.5.3 The hysterical (aggressive) patient

This type of dental patient is emotionally unstable, uncooperative, antagonistic, excitable, and very apprehensive. They appear irritated and impatient, make impossible demands upon the general practitioner, react unfavorably to the prosthesis, and return frequently to the general practitioner for adjustments. A successful prognosis is usually

unfavorable and many times additional professional counseling (psychologist, psychiatrist) is indicated to place the patient's expectations within a scope of the ability of the general practitioner to provide professional complete denture service to the patient.

2.5.4 The indifferent patient

For both the general practitioner and the patient, treatment of the different patient usually presents a poor or unsuccessful prognosis. This type of patient is he young or old is apathetic, disinterested in treatment or only passively cooperative, non-persevering, does not follow the general practitioner's instructions, and places the blame for his dental condition on the dentist. Many times they readily accept the general practitioner's treatment plan, not because of their own choice, but on the insistence of a family member. If the patient's interest in dental treatment cannot be stimulated by the general practitioner through reeducation, dentist and patient frustration will ensue. It is best not to treat this type of patient until a reasonable level of patient commitment to treatment is achieved.

2.5.5 The anxious patient

In general, complete denture treatment is not painful but more unpleasant. To many dental patients any dental treatment leads to anxiety and excitement. For most of these patients, fears and anxiety can be calmed by a confident positive approach to dental treatment. In the adult edentulous patient stress induced anxiety is not so easily overcome in the anxious patient as it is in the philosophical. The patient is constantly over stimulated by adrenal cortical secretions leading to a hyperactive response to intra-oral stimulation and dental treatment. This type of patient usually cannot define the exact factors which cause anxiety. (12)

3. Problem of denture

3.1 Pain

Dental equipment such as dentures or partial dentures may irritate soft tissues in the mouth. If the irritation continues, the person may develop mouth sores. Sores

can be found on the upper jaw, lower jaw, under the tongue, or on the palate. They are usually red and a little swollen.

Some pain may develop under your new dentures. In this case ring, for an appointment to have the dentures adjusted. If the pain becomes severe, you are not able to come and see me leave the dentures out. However, it is necessary that you wear your denture (s), if you can for a few hours before your dental appointment as this will help me to locate the problem area and also freshen it up in your mind as to where and what the problem is. Do not adjust your dentures yourself.

Causes of denture sores include: • alcoholism • allergies • diseases, conditions, and infections that weaken the person's immune system • fungal infections, such as oral thrush • oral cancer • rubbing from dentures or partials • smoking and chewing tobacco use • uneven bite, known as occlusion • wearing dentures or partials all night. (5, 12)

3.2 Fit of denture

Before inserting the finished denture the fitting surface should be examined for any spots or pimples of acrylic. These, if present, should be removed. The dentures should then be seated in the mouth and the patient allowed keeping them in for a few minutes before any checking is undertaken as follows:

1) The peripheral is examined to reveal any over-extension or under extension in either denture. If a correct peripherally-trimmed impression has been taken there should be no gross discrepancies here, but some minor adjustment is occasionally necessary.

Under-extension can usually be seen on visual examination and must be suspected if the retention of the denture base is poor. Over – extension may cause displacement of the denture during facial movement and is revealed by soreness or ulceration when the denture has been worn for a short while.

At the time of fitting the denture, over – extension is most readily assessed by coating the peripheral in the suspected area with a thin layer of zinc oxide and eugenic impression material, or zinc oxide paste consisting of a mixture of zinc oxide and petroleum jelly. Functional movements are made and areas of over-extension show

where the material has been removed by the movement of the soft tissues. The areas can then be adjusted.

2) The patient is asked to close the jaws and the occlusion of the teeth is examined. It is not always possible to determine whether the dentures are in fact occluding satisfactorily, particularly in cases where there is absorbed ridge or where the supporting tissues are slightly mobile. In such cases the occlusion may be heavy on one side or cuspal interdigitation slightly incorrect, yet due to a small movement or lateral tipping; it may appear to be correct. There are several ways of checking on such a discrepancy.

Fitting a denture takes about one month and five appointments. The process required to have a denture fitted is more complex than people think and follow the following pattern. An initial diagnosis is made then an impression and a wax bite are made to determine vertical dimensions and proper jaw position. After the taking dimensions a "try-in" is placed to assure proper color, shape and fit. Only after these steps have been taken is the patient's final denture placed.

New denture wearers need time to get accustomed to their new teeth because even the best fitting dentures will feel awkward at first. While most people can begin to speak normally within a few hours, many people report discomfort with eating for several days to a few weeks after having dentures fitted. (12)

3.3 Retention

In addition to securing a model on which to build the denture, it must be remembered that at this stage the forces of retention should be developed to the maximum extent. Also, the best should be stable.

Retention is the maintenance of the denture in position by the forces of atmospheric pressure, adhesion, cohesion, and in the lower, gravity, together with the action of the oral musculature including the tongue that is muscle control and patient tolerance.

Atmospheric pressure depends on peripheral seal. To ensure this seal, denture borders should extend into, but not to the extent to damage, movable tissue.

Adhesion is the attraction of saliva to the denture.

Cohesion is the attraction of molecules of saliva to each other.

Muscle control and patient tolerance are often amazing influences. Dentures are often retained in the mouth appear to be satisfactory, not because of the accuracy of confirming to the support but because of the adaptability of the muscles of the lips, tongue, and cheeks and patient tolerance.

In removable partial denture, retention is a quality of it, which resists the forces of gravity, the adhesion of foods, and the forces associated with opening the jaws. The term retention refers to resistance to dislodgment of the prosthesis in an occlusion direction.

The need for retention varies greatly among patients. It appears that retention is most necessary for new dentures wearing and patients with adaptive capacity. Many satisfied long – term denture patients have prostheses that exhibit little or no more mechanical retention. The patients' neuromuscular control and adaptability provide all the retention that is necessary for acceptable denture function. (12)

3.4 Sensation and Salivary gland

The amount and consistency of saliva has a direct bearing on both the physical retention of dentures and the ability of the oral mucous membranes and the underlying muscles to act against the polished surfaces contours of the dentures. Saliva also acts as a cushioning film between oral mucous membrane and denture base to promote denture comfort. Optimal denture retention occurs when the film thickness of saliva between denture and alveolar mucosa is as thin as possible. If a well-constructed denture can resist the inward and outward flow of saliva from under denture, its retention will be optimal.

Excess saliva

- Complicates impression procedures.
- Diminishing denture retention, especially with a new prosthesis which acts as a foreign body which, in an event, increases salivary flow.

Diminished saliva

- Possibility of reduced denture retention.

- Lack of Lubricated tissues leads to mucosal alteration and abrasion by the dentures.
- Lack of saliva on the oral mucous membranes associated with the polished surfaces of the dentures cause these tissues to stick to the acrylic resin, making them uncomfortable and the patient less able to contour the dentures.

Salivary consistency

- Thick ropy saliva from the minor palatine glands can cause diminished retention of dentures by physically forcing the prosthesis into an incorrect position.
- Impression is difficult with thick ropy saliva because of void formation on the impression surface while the impression materials set.
- Physiologic gagging is produced when new dentures are inserted in patients with copious amounts of thick, ropy saliva.(12)

3.5 Inflammation and allergy

The most common pathologic finding in the edentulous patient who wears complete dentures is inflammation. Inflammation of the denture-supporting tissues, commonly referred to as denture stomatitis, occurs as a localized or generalized redness of the oral mucous membrane of the denture supporting tissues. Petechiae may be present; there is usually no associated pain or discomfort. The multifactorial nature of denture stomatitis has been report with *C. albicans* infection as an important factor in its etiology. The other main etiologic factors in the production of denture stomatitis include:

- 1) Denture trauma (e.g., unstable denture bases, unbalanced occlusion, and anterior hyper function)
- 2) Para-functional habits (e.g., bruxism, clenching)
- 3) Denture base hypersensitivity
- 4) Chronic poor oral hygiene
- 5) Continuous denture wearing

- 6) Lowered systemic resistance, vitamin, and nutritional deficiencies
- 7) Patient self-treatments with over-the-counter relining materials
- 8) Depression of the defense mechanisms by antibiotics, immunosuppressant, or radiation therapy.

Generally accepted prosthodontic therapy in the treatment of denture stomatitis may include a number of things, but chief among them are:

- 1) The determination of parasitism by *C. albicans* and prescription of the necessary antimycotic antibiotic therapy and disinfection of the offending denture, to be followed by.
- 2) Surgical correction of any tissue abnormalities (For example, papillary hyperplasia prior to prosthetic restoration)
- 3) The use of tissue-conditioning agents, tissue rest, and relining methods prior to institution of new complete denture.
- 4) Rehabilitation of nutritional and/or other systemic deficiencies to restore denture-bearing tissues to optimal health.
- 5) Elimination of artificial relief and suction chambers in maxillary complete denture.
- 6) Education of patients in the care and use of their dentures, with emphasis on the need for daily tissue rest, proper denture hygiene, avoidance of over-the-counter home relining materials, and proper professional examinations. (12)

3.6 Occlusion and Mastication

- 1) Complete denture Occlusion

Although general practitioners can provide patients with complete dentures which have both a functional denture tooth arrangement (articulation) and denture occlusion at a precise point in time, there are a multitude of factors which will influence and modify the denture occlusion over the useful life of the prosthesis. Many of these factors are anatomic in nature while others are related to functional intra-oral wear of the prosthesis. Several anatomic factors which alter the precise denture occlusion are:

- Progressive, irreversible changes in the residual ridges, morphologic face height, and maxillo-mandibular relation with time, this loss is three times as great on the average, in the mandible as compared to the maxilla.
- The migration and settling of the denture base.
- The sliding, uplifting, and tipping of the denture base during function.
- The retentiveness and stability of the complete denture bases.
- The lack of precise, uniform mandibular closure during mastication.

The mechanical factors are related to wear of the opposing denture teeth causing alterations in maxillo-mandibular relations, acrylic resin opposing porcelain showing the greatest wear of the acrylic resin, followed by acrylic resin opposing acrylic resin, and the least occlusal wear occurred in porcelain opposing porcelain denture teeth. Thus, because of these factors, there is a constant need to monitor prosthodontic patients on a recall basis to modify and the correct changes in the complete denture occlusion that always occurs during complete denture wearing.

2) Mastication

The masticatory force that an edentulous patient can bring to bear on a complete denture to crush food, as measured by dynamometer, is roughly 15-20 lb/in. The important factors limiting a patient from applying a greater crushing force is the fear of pain caused by trapping the thin, tender oral mucous membrane between an always imperfectly closed cortical plate and the rigid denture base.

The masticatory efficiency of complete dentures, based upon chewing tests, is roughly one-sixth that of the natural dentition. Raisin and co-workers, in similar peanut-chewing tests, found the masticatory performance of persons with natural dentition to be 90%, over denture patients 79%, and complete denture wearers 59%. They also marked an increase in chewing time which they speculated was due to patient awareness of how the food bolus was pulverized, a phenomenon which is absent in the complete denture wearer. This should alert the general practitioner to save or roots, especially to the mandibular arch, to preserve the sensory feedback loop which the mechanoreceptors of the periodontal ligament provide to the muscles of mastication to increase masticatory efficiency of complete dentures. However, there is no correlation

between the patient's report of masticatory ability and peanut-chewing tests in another study. Larger and co-workers also demonstrate that :

- Patient satisfaction is based upon the ability to cope with and control the mandibular denture.
- Porcelain vs. acrylic resin denture teeth was rated fairly equal in efficiency by patients.
- There was no correlation between the clinical retention and stability of the complete denture and patient satisfaction with prosthesis. (12)

3.7 Looseness

This problem can be related to one of four major problem any one of these can cause a denture become to loose during normal moderate function.

1) Occlusal prematurely

A faulty occlusion can dislodge the maxillary denture due to lateral thrusting and skidding. If the posterior teeth are porcelain, examine the teeth for bright burnished occlusal contacts. These will indicate prematurities. The safest way to check for minor prematurities is to place occlusal wax on the teeth. Gross prematurities should be corrected by remounting as described under the heading denture sore mouth.

2) Inadequate border seal

Faulty border seal is checked by lifting the lip away to prevent a false seal being from by the drape of the lip an applying a gentle dislodging force. The side with the border leak should drop first. To verify this, add a small amount of impression compound to the lingual side of the roll of the suspected flange and test again for retention. If the area is small, it can be added in cold cure acrylic resin, if not the denture should be relined.

3) Overextended borders

The muscles of facial expression do not have bony insertions and need the support of the teeth to maintain their normal contours. Sometime in an ill-founded attempt to restore an aging face the dentures, borders are overextended. The resulting denture will appear retentive on insertion, but the overextended borders will restrict

the active movements of the muscles of facial expression so that they will exert a dislodging force on the denture.

4) Inadequate posterior palatal seal (post dam)

A denture with an inadequate posterior palatal seal will exhibit generalized lack of retention. The purpose of the post dam is twofold; first, it accommodates shrinkage of the denture base during processing, second, it maintains the seal across the posterior border of the denture during function. The time taken before the denture is completed to properly determine the location, extent, and depth of the post dam is important. The dentist, rather than a dental laboratory technician who has never seen the patient, should scribe the post dam into the cast. This will prevent the loss of chair time later on to correct an insufficient post dam. Apply stick impression compound to the area of the posterior palatal seal. If the retention improves, this indicates that the post dam is at fault. If the decision is made to repair rather than remake the existing denture, several techniques are available. When the error is minimal, auto polymerizing acrylic resin may be applied directly to the existing post dam and the denture placed back in the mouth. Care must be taken to remove it as soon as the patient indicates the acrylic resin is getting warm. Denture fault is related to a common complaint in looseness (13) and 59 percent complained it. (25)

3.8 Speech

Patients often comment that their new dentures feel “too big” and that this distorts their speech. An excess of saliva may also contribute to their speech problem. Patients should be reassured that any small changes in denture contour and size are perceived by the mouth's bulk. New dentures may be slightly larger to compensate for residual ridge resorption that has taken place since their last dentures were constructed. In addition, new dentures, because of their unfamiliarity, act as a temporary stimulus for salivary production. Both the feeling of fullness and the excess saliva will disappear with habituation. The speech apparatus is very precise, yet very adaptive, and with a little practice the speech aberration will also disappear. The patient should be encouraged to read aloud while at home. Reading slowly, the patient's speech and removes his intense concentration on how he sounds. Do not have the patient pronounce the same sound repeatedly, as the impression of not speaking

correctly may become a mental obstacle. The level of education was a negatively correlated with satisfaction about speech, appearance and comfort. That is low level of education more satisfaction them than high level of education. (5)

3.9 Stability

Close adaptation to the undistorted mucosa is most important. Stability, or the resistance to horizontal movement, decreases with the loss of vertical height of the ridges or with the increase in flabby, movable tissue.

4. Factor that related to wearing a denture

4.1 Demographic data

1) Age

The patient's age was negatively correlated with their satisfaction of maxillary denture retention and positively correlated with mandibular dentures. (5) The age of existing dentures was positive correlated with general satisfaction, chewing, and retention of mandibular dentures and comfort of wearing mandibular dentures. But it was negatively correlated with aesthetics. (5)

The youngest group (under 60 years of age) appeared to have the least success with denture in all aspects. And the oldest group (70 years age older) seemed to be the most successful. However, patient's age increase and likelihood of owning additional sets of denture increases. (29)

2) Gender

There were no significant differences in satisfaction between men and women. (5)

3) Level of education

The level of education was a negatively correlated with satisfaction about speech, appearance and comfort. That is low level of education more satisfaction them than high level of education. (5)

4) Socioeconomic

Patients with lower ratings for self-percept economic status gave higher ratings to general satisfaction with dentures. That is economic status and general satisfactions with dentures were negatively correlated.

4.2 Wearing denture experience

1) Number of previous denture

D. Knezovic et.al, told that the number of previous dentures was negatively correlated with retention of maxillary dentures, and positively correlated with retention of mandibular dentures. That is a patient who had more than two previous dentures gave lower ratings to retention of their maxillary complete dentures and gave higher ratings to retention of mandibular complete denture. (5) But M.A.J van waas told that the experience denture wearing had negative correlation that is patients had several dentures were more dissatisfied than a fewer dentures. The factor affective patients' acceptance to a news dentures was a number of previous sets that is a patient have an experience in a dentures.(29) Patients receiving their first dentures consistently had more difficulties in all categories of function, comfort, and appearance than experienced denture wearer.(13)

4.3 Function of denture

1) Chewing ability

The problem in dentures involved to chewing and vertical dimension occlusion. (11) The common complaints in mastication is difficulty eating their food in 61 percent. (25) Mary smith told that the dissatisfaction with ability to eat is 16 percent in USA. (22) The quality of dentures in denture fault that associated with a type of complaints are mastication, looseness and pain (13) and the important factor that related to satisfaction is chewing and comfort and it can be predict the satisfaction and explained a variance of satisfaction.(23,7,4) The older dentures are more satisfy with a chewing than the younger dentures. (5) In dental fault are jaw relation, looseness and retention have a related to eating too. (25)

2) Retention

The loss of retention was complained in 65.4 percent of the mandibular dentures (7) and the problem in upper dentures is retention. (14) The best predictor of patient satisfaction with denture wearing was the patient's perception of retention and appearance (7, 23) and it is related to appreciation too. (31)

Retention of mandibular dentures was positively correlated with satisfied in older dentures and the period of edentulousness. But the period of edentulousness and patients' age was negatively correlated with the retention of maxillary dentures. (5)

In the study "Comparison of patient's view of their dentures and dentist's technical evaluations after complete denture treatment" It found that patients and dentists agree on assessment of denture retention. As could be expected on the basis of the comparison of patients' views and dentists' evaluation, there is a clear correlation between complaints about denture retention and the therapy proposal rebasing. (10,12). The stability is an important factor that influences appreciation especially a maxillary denture. (31) In the difference of treatment, patients have a different satisfaction about stability as the patient wear a mandibular implants over denture more satisfied than conventional denture. (15)

3) Pain

Most problems were related to perceived lack of retention which was often linked to pain. (11) And patients have a problem in denture bearing tissue such as ulceration or infection in either dental arch. It related to complaints of pain or mastication. (13, 25) and 75% of patient complained of problems relating to pain and discomfort. (25)

4.4 Aesthetics of denture

G.E. Carlsson et.al, told that the conception of patient regarding the aesthetic result most associated with the appreciation of complete dentures. Including the other peoples' view of the dentures. (31) The appearance and aesthetics had a correlation with a satisfaction of dentures. (22-23) and the best predictor of patient satisfaction with denture wearing was the patients' perception of appearance and retention. (7) The factor

that associated with an aesthetics is the age of existing dentures but it is a negative correlation.

4.5 Patient and dentist communication

1) Decision making

The patients who made the decision about the treatment themselves were more satisfied their communicative behavior than patients who did not decide themselves.

(9)

2) Consultant

Albert D. Guckes et.al was examined counseling and related factors influencing satisfaction with dentures. He told that no significant different in patient denture satisfaction between the counseled and no counseled groups. But after we gave consult they more satisfaction. (23)

3) Encounter with dentist

B.C Schouten et.al who presented that patients' satisfaction was mainly influenced by the communicative behavior of the dentist. (9)

A. Koper said the new complete denture patient who had opportunity to adapt to a complete denture should allows the dentist to evaluate his patient physically and emotional before fabrication of the final complete denture.(14)

4.6 Expectation in denture

P.W. Smith et.al, studied about what do patient expect from complete dentures? This study told that the essential in dentures are no pain, absence of slackness and good bite. And patients had high expectations for ease of chewing, speech and good appearance. (2) Expectation of denture has a relation with a satisfaction. M.A.J van waas told that they have a correlation between dissatisfaction and the expectation toward new denture. (19) Other research indicated that patients' expectations of dentures before treatment were unrealistically high. (24) And the quality of dentures is directly related to the fulfillment of the patients' expectation of comfort and ability to masticate. (26)

Conceptual framework

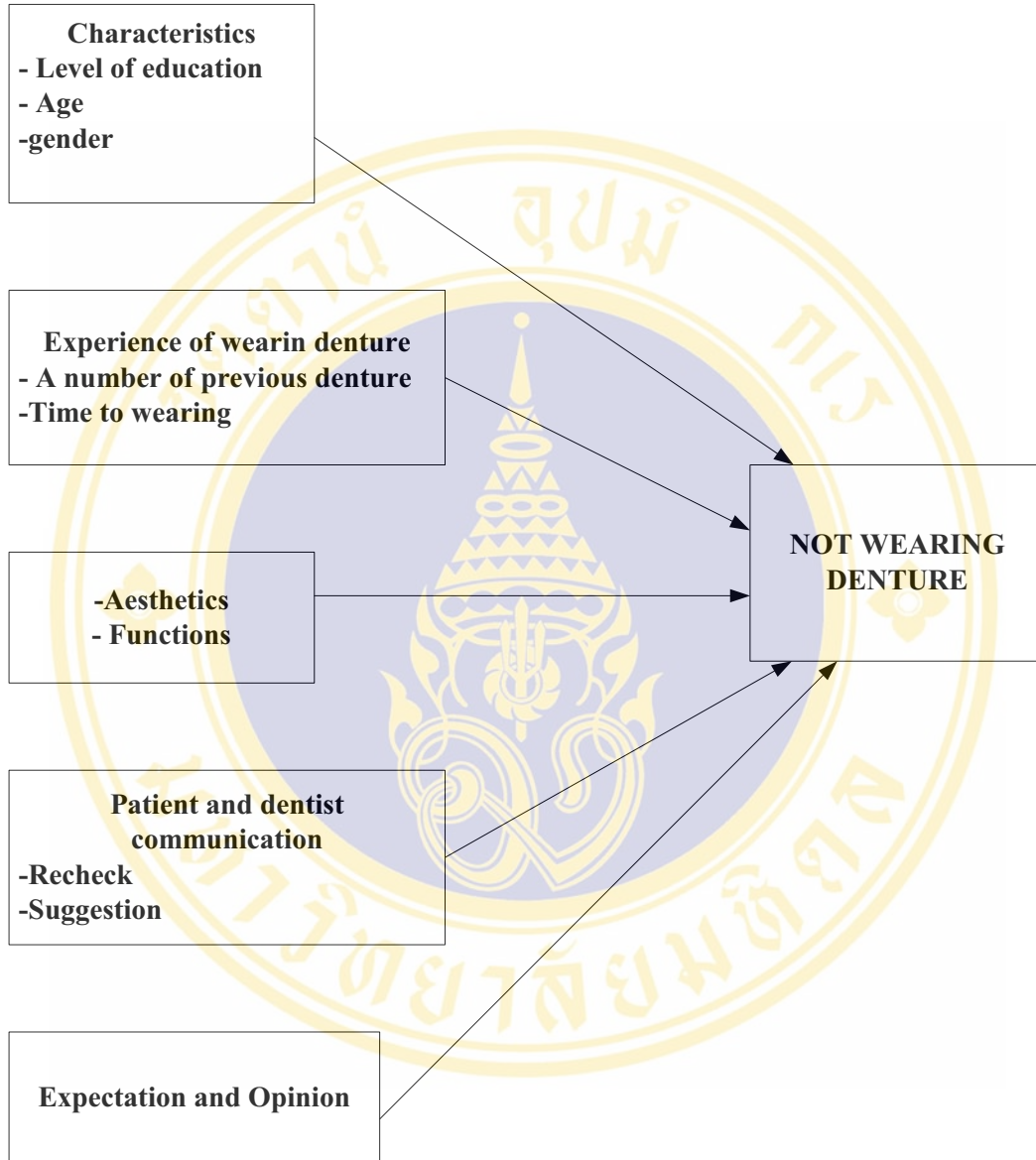


Figure 1: Conceptual framework of factors that related to not wearing denture

CHAPTER III

MATERIALS AND METHODS

1. Research design

This analytic cross – sectional study was designed to examine the percentage of wearing and no wearing denture and factors that associate with it.

2. Study area

The study area is carried out from hospitals in Bangkok and perimeter where made a denture follow a policy of National Health Security Office.

3. Study population and Sample

- 1) The populations are people who received dentures form hospital under the conduct of the 30-baht health care scheme in Bangkok and Nontaburi. Bangkok and Nontaburi have hospitals which made dentures in 30-baht scheme in 16 hospitals. We contacted 6 hospitals in Bangkok, also 6 hospitals in Nontaburi. There were 2 hospitals and 3 hospitals in Bangkok and Nontaburi that participated in this study. So there were 5 hospitals that we collected data. As table 1 shown numbers of denture that made from hospitals which participated in this study.

Table1: Numbers of denture by hospitals in Bangkok and Nontaburi

Hospitals	No. of dentures
1.PMK	83
2.Ratchavithi	115
3.Bangyai	133
4.Sai Noi	90
5.Pra nung koa	44
Total	465

PMK = Pramongkutkoa hospital

2) Samples are patient who received completely adjusted denture and were selected from hospitals under the network of Health security office between 2003 and 2005.

4. Sample size estimation

$$n = \frac{(Z^2_{\alpha/2}) \times N \times P \times Q}{Z^2_{\alpha/2} PQ + N(d)^2}$$

n = sample size

N = number of population who made denture

$Z_{\alpha/2}$ = percentile at $100(1 - \alpha/2)$ % of standard normal curve

P = Proportion or rate of wearing denture (from previous study, references sources)

Q = 1 - P

d = maximum allowable error

α = Probability of error estimated from population

Calculate sample size by determine

P = Rate of wearing denture in Thailand from the oral health survey of Thai people by Department of health ,Ministry of Public Health from 2000 to 2001. (0.35)

d = Maximum allowable error 5%

From this calculation we get a sample size is 200 cases

5. Sampling Techniques

The method of sampling the population is simple random sampling for sampling population. This type of sampling works well in many cases and easy to use and to understand. It is the type of sampling that most laypersons assume when they hear the term sample. In simple random sampling, objects are selected “at random” in the sense that the choice of objects sampled is controlled by some random mechanism. In this study, there were two steps of sampling random sampling.

- Collected all cases in hospitals that were participated and using a proportional to size for a number of cases in each hospital.

- Simple random sampling in patients who answered the questionnaire.

As table2 showed numbers of denture in each hospitals by using proportional to size

Table2: Samples size by using a proportional to size

Hospitals	No. of dentures	Proportional to size
1.PMK	83	36
2.Ratchavithi	115	50
3.Bangyai	133	58
4.Sai Noi	90	38
5.Pra nung koa	44	18
Total	465	200

PMK = Pramongkutkoa hospital

6. Research tool

- This study we build up a questionnaire which verified from academic professional and test of reliability and validity before collect data.

There are parts in questionnaire that are

- Part 1 - Demographic data
- Part 2 - Wearing denture experience
- Part 3 - Function of denture
- Part 4 - Esthetics of denture
- Part 5 - Relationship between dentists and patients
- Part 6 - Expectation of patients

- There was pilot study in 30 cases to test questionnaire and ask about topics that related to not wearing dentures. Then we updated the questionnaire.

7. Data collection

Collect data by interview patients from a questionnaire by telephone interview. First, we will send a letter to the patient's house for introduce about the study. And then, we will call them to interview about wearing and not wearing denture and factor

that related to not wearing denture. We will call them when they have a free time and willingly to answer the question. We spent 15 minutes for asking information in questionnaires and if it did not complete we called them back in next day.

However, the patient's information did not complete in telephone number and address so we attempted to collect the data in all patients. There was a drop out rate 57% in terms of cannot contact, death and no telephone number. As table3, we got the data by telephone and letter (43%). Besides, we cannot collect the data because of cannot contact (29%), death (1%) and no telephone number (28%).

Table3: Characteristics of data collection

Data collection	Number of dentures	Percent (%)
Telephone	175	38%
Letter	25	5%
Cannot contact	136	29%
Death	4	1%
No telephone number	130	28%
Total	465	100%

8. Data analysis

1) Descriptive analysis for proportion, mean, median and Standard deviation for patient data and characteristic of study sample

2) Statistical Analysis to analyze a factor related to wearing and not wearing a denture

2.1 Pearson's chi – square test to analyze an association between factor and outcome.

2.2 Fisher's exact test when expected values less than 5.

2.3 T-test for two independents variable

2.4 Binary logistic regression to predict the patients wear a denture

CHAPTER IV

RESULT

In this cross-sectional study, the study population was all patients who received dentures from hospitals in Bangkok and the perimeter between the years of 2003 to 2005. There were 5 hospitals from Bangkok and the perimeter where were included and 200 cases, using the 30 baht scheme at hospitals, were selected by simple random sampling. Results were divided into four parts, as follows

1. Characteristics of people who made dentures from the 30 baht scheme.
2. Factors those are associated with wearing and not wearing dentures by chi-square test and odds ratio.
3. Univariate analysis of the relationship between demographic factors, behavioral factors, function of dentures, aesthetic of dentures, patients and dentist communication about not wearing dentures by Logistic regression analysis.
4. Multivariate analysis of the relationship between demographic factors, behavioral factors, function of dentures, aesthetic of dentures, patient and dentist communication about not wearing dentures, by Logistic regression analysis.

1. Characteristics of people who made dentures from 30 baht scheme

From 2003 to 2005, 200 cases were selected by simple random sampling. They were male and female by 42% and 58%, respectively. The mean age was 67.4 (SD 7.9). Most patients had received a primary school education (77.5%). There were 12 percent of people had two sets of dentures in the present. The most common time periods that people had been wearing dentures were less than 6 months (48.0%) and between 1 to 2 years (23.0%). 57.0% had a first set of dentures. The proportion of wearing dentures was 62.0%. (Table 4)

Table 4: Characteristics of people who wear denture from 30-baht health care program (Demographic and Behavior)

Characteristics	Number	Percentage (%)
Sex		
male	84	42.0
female	116	58.0
Age group		
40-49 years	4	2.0
50-59 years	25	12.5
60-69 years	86	43.0
70-79 years	74	37.0
80-89 years	11	5.5
Education		
Pratom 1-6	155	77.5
Mattayom 1-3	4	2.0
M. 4-6/vocational	13	6.5
Bachelor	12	6.0
other	16	8.0
Marital status		
single	31	15.5
married	162	81.0
divorced	3	1.5
widow	4	2.0
Past medical history		
No	86	43.0
Yes	114	57.0
Number of denture sets		
one set	176	88.0
two sets	24	12.0

Table 4: Characteristics of people who wear denture from 30-baht health care program (Demographic and Behavior) (Continued)

Characteristics	Number	Percentage (%)
Time period of wearing dentures		
<6 month	96	48.0
6month-1years	41	20.5
1-2 years	46	23.0
3-4 years	17	8.5
Wearing denture from health scheme		
No	76	38.0
yes	124	62.0
Number of dentures ever had		
1 set	114	57.0
2 sets	69	34.5
3 sets	3	1.5
4 sets	4	2.0
>5 sets	10	5.0

In terms of function of dentures, 57.5% were used to irritation from wear dentures and 65.5% were cured. 23.5% usually had retention from denture and 46.5% never retention dentures. There was the most annoyance from retention by 38.3%. There were about 30.0% of patients that had modesties chewing. (Table 5)

Table 5: Characteristics of people who wear denture from 30-baht health care program (Function)

Characteristics	Number	Percentage (%)
Irritation from wear dentures		
No	85	42.5
Yes	115	57.5
Cure irritated from dentures		
No	39	34.5
Yes	76	65.5

Table 5: Characteristics of people who wear denture from 30-baht health care program (Function) (Continued)

Characteristics	Number	Percentage (%)
Retention for chewing		
Usually	47	23.5
Sometime	60	30.0
Never	93	46.5
Annoyed from retention		
lowest	19	17.8
lower	14	13.1
moderate	22	20.6
higher	11	10.3
highest	41	38.3
Comfort for chewing		
lowest	40	20.0
lower	32	16.0
moderate	64	32.0
higher	43	21.5
highest	21	10.5
Good for chewing		
lowest	42	21.0
lower	39	19.5
moderate	58	29.0
higher	40	20.0
highest	21	10.0

In terms of aesthetics of denture, there were big and small dentures that were not fit for the patients face in 14.5% and 6.5%, respectively. (Table 6) Over half of them had moderated beautiful and facial satisfaction in 50 and 56 percent, respectively.

Table 6: Characteristics of people who wear dentures from 30-baht health care program (Aesthetics)

Characteristics	Number	Percentage (%)
Too big denture		
No	171	85.5
Yes	29	14.5
Too small denture		
No	181	90.5
Yes	19	6.5
Aesthetics of denture		
lowest	9	4.5
lower	21	10.5
moderate	100	50.0
higher	45	22.5
highest	25	12.5
Beauty improvement		
lowest	3	1.0
lower	9	4.5
moderate	112	56.0
higher	42	21.0
highest	34	17.0

In addition, dentists made appointment to recheck dentures in 74.5% and 55.0% of patients went to recheck them. Dentists suggested solutions for problems in about 85.0% of patients. Patients went to hospital when they had a problem (90.0%). Most patients had intended to wear denture (97.0%). (Table 7)

Table 7: Characteristics of people who wear denture from 30-baht health care program (Patient and dentist communication)

Characteristics	Number	Percentage (%)
Dentist made appoint to recheck denture		
No	51	25.5
Yes	149	74.5
Patient go to check denture		
No	90	45.0
Yes	110	55.0
Dentist suggested in dentures		
No	30	15.0
Yes	170	85.0
How many time patient go hospitals		
3 months	2	1.0
6 months	6	3.0
1 years	9	4.5
other	183	91.5
Patient intend to wear dentures		
No	6	3.0
Yes	194	97.0
Enforced to wear dentures by relatives		
No	194	97.0
Yes	6	3.0

The last factor was denture expectation. The most important expectation was improve chewing (65.63%) whereas beauty improvement was the least important (51.58%). (Table 8)

Table 8: Number and proportion of denture expectation

Variables	Fit	Pain	Retention	Chewing	Speaking	Facing
Most important	17 (8.95)	11 (5.73)	7 (3.68)	126 (65.63)	9 (4.74)	24 (12.63)
Important	29 (15.26)	28 (14.58)	36 (18.95)	37 (19.27)	44 (23.16)	18 (9.47)
Moderate	39 (20.53)	38 (19.79)	39 (20.53)	12 (6.25)	44 (23.16)	18 (9.47)
Mild	52 (27.37)	40 (20.83)	45 (23.68)	5 (2.60)	35 (18.42)	13 (6.84)
Less important	29 (15.26)	49 (25.52)	35 (18.42)	8 (4.17)	48 (25.26)	19 (10.00)
Least important	24 (12.63)	26 (13.54)	28 (14.74)	4 (2.08)	10 (5.26)	98 (51.58)

2. The association between wearing and no wearing dentures by univariate analysis

From table 9, there were variables associated with not wearing dentures in each group of factor. This study found that age group, function of denture, esthetics of denture and patient-dentist communication had a significant relationship with not wearing denture. In terms of functions, chewing and comfort of chewing had a significant relationship with not wearing dentures ($p < 0.05$) and had a high odds ratio of 4.1 and 7.2, respectively. Aesthetics were significant in terms of beautiful satisfaction, dentures that were not fit for mouth (too small or too big) ($p < 0.05$). Finally, patient and dentist communication had three variables that were significant. These were dentists made appointments patients to check denture (recheck), patients actually went to check it (go to check) and also, dentists made suggestion about how to wear it (suggest) ($p < 0.05$). Age was negatively correlated with not wearing dentures which was older age group wear dentures lower than younger age group. Cured from irritation was positively correlated to not wearing dentures which was if they had cured their mouth sores and no pain when wear dentures, they would use dentures or wear it. Also, comforts for chewing and good chewing were positively related with

not wearing denture if patients had not good crunch on food or comfort to chew they would not wear them. In addition to aesthetic of denture, denture not fit to mouth which was too small and too big dentures were associated with not wearing denture. Patients wear denture which too small or too big would not satisfy in denture and not wear them absolutely. Besides that dentist made appoint to recheck dentures and patient went to recheck them were positively correlated to not wearing denture. It means that dentist did not make appoint to recheck and patients did not go to recheck, they were not wear denture.

Table 9: Relation between variables and wearing denture

Variables	Wearing		No wearing		Odds ratio	[95% Conf. Interval]	p-value
	No.	%	No.	%			
Characteristic:							
Age group							
>=70 years	56	65.88	29	34.12	0.165	0.078- 0.499	0.001*
60-69 years	60	69.77	26	30.23	0.197	0.065- 0.421	0.000*
<=59 years	8	27.59	21	72.41	1		
Gender							
Male	53	63.1	31	36.9	0.923	0.495-1.713	0.786
Female	71	61.21	45	38.79			
Education							
Primary school	97	62.58	58	37.42	0.897	0.433-1.891	0.754
> Primary school	27	60	18	40			
Function :							
Irritation from wear denture							
Yes	65	56.52	50	43.48	1.746	0.930-3.301	0.063
No	59	69.41	26	30.59			
Cure from irritated							
No	12	30.77	27	69.23	4.99	2.001-12.686	0.000*
Yes	53	68.92	23	30.77			
Retention from chewing							
Usually	63	67.74	30	32.26	3.705	1.774- 7.743	0.000*
Sometime	44	73.33	16	26.67	0.763	0.372- 1.566	0.462
never	17	36.17	30	63.83	1		
Annoy from retention							
Yes	39	52.7	35	47.3	1.571	0.627-4.033	0.293
No	21	63.64	12	36.36			

Table 9: Relation between variables and wearing denture (Continued)

Variables	Wearing		No wearing		Odds ratio	[95% Conf. Interval]	p-value
	No.	%	No.	%			
Comfort for Chewing							
Low	71	53.79	61	46.21	4.14	1.910-9.527	0.000*
High	53	82.81	11	11.19			
Good chewing							
Low	70	51.85	65	48.15	7.163	2.938-19.836	0.000*
High	54	88.52	7	11.48			
Aesthetics: Too big denture							
Yes	11	44	14	56	2.479	0.971-6.423	0.032*
No	113	66.08	58	33.92			
Too small denture							
Yes	3	23.08	10	76.92	6.722	1.634-38.995	0.002*
No	121	66.85	60	31.15			
Aesthetics of denture							
Low	72	55.38	47	43.93	2.618	1.302-5.420	0.004*
High	52	76.47	29	31.18			
Beauty improvement							
Low	74	59.68	50	40.32	1.877	0.942-3.821	0.055
High	50	73.53	18	26.47			
Patient dentist communication: Dentist appoint to recheck							
No	22	44.9	27	55.1	2.663	1.305-5.443	0.003*
Yes	102	68.46	47	31.54			
Patient go to check denture							
No	45	56.25	35	43.75	1.982	1.033-3.802	0.026*
Yes	79	71.82	31	28.18			
Dentist's suggestion							
No	9	32.14	19	67.86	4.414	1.753-11.745	0.000*
Yes	115	67.65	55	32.35			
Patient intend to wear denture							
No	2	33.33	4	66.67	3.486	0.482-39.191	0.1413
Yes	122	63.54	70	36.46			

Table 9: Relation between variables and wearing denture (Continued)

Variables	Wearing		No wearing		Odds ratio	[95% Conf. Interval]	p-value
	No.	%	No.	%			
How many time patient go hospitals							
Yes	113	63.13	66	36.87	1.071		
No	11	64.71	6	35.29		0.344-3.695	0.897
Experience for denture: Time to wear							
Less 1 yrs	85	62.04	52	37.96	0.994		
More 1 yrs	39	61.9	24	38.1		0.516-1.935	0.985
Number of dentures ever had							
2 sets	11	45.83	13	54.17	2.12		
1 set	113	64.2	63	35.8		0.819-5.543	0.082
Number of dentures set							
1 set	67	58.77	47	41.23	1.379		
more 1 set	57	66.28	29	33.72		0.741-2.580	0.279

p-value test significant at α 0.05

3. Multivariate analysis of the relationship between demographic factors, behavioral factors, function of denture, esthetic of denture, patients and dentist communication with not wearing denture by Logistic regression analysis.

Regression analysis is a straightforward method to describe the relationship between variables, by looking for an equation to predict the values of a dependent variable as well as possible with the help of one or more independent variables. In this study, we used logistic regression analysis to predict the outcome (dependent variable). There were 19 variables that we suspected correlated with denture wearing so we put them into the equation. From table 10, this is dummy table that shown dummy coding (indicators) of variables which were put into the equation. All of variables were dichotomous variables whereas age was continuous variable.

Table10: Dummy table of variables that analyzed in Logistic regression

Variables	Dummy table	Variables	Dummy table
	Continuous variable		
1. Age		11. Aesthetic of denture	
2. Gender		Low	1
Male	1	High	0
Female	0	12. Beauty improvement	
3. Education		Low	1
Primary school	1	High	0
> Primary school	0	13. Dentist appoint to recheck	
4. Irritation from wearing denture		No	1
Yes	1	Yes	0
No	0	14. Patient go to check	
5. Cure from irritated		No	1
No	1	Yes	0
Yes	0	15. Dentist's suggestion	
6. Retention for chewing		No	1
Usually	1	Yes	0
Sometime + Never	0	16. Intention to wear denture	
7. Comfort for chewing		No	1
Low	1	Yes	0
High	0	17. Time to wear	
8. Good chewing		Less 1 yrs	1
Low	1	More 1 yrs	0
High	0	18. Denture ever had	
9. Too big denture		2 sets	1
Yes	1	1 set	0
No	0	19. Number of dentures set	
10. Too small denture		more 1 sets	1
Yes	1	1 set	0
No	0		

From table 11, we used backward method for run logistic regression. The full model included all variables that we wanted to test in our hypothesis. There were five variables that had significant that were age, cure from irritation, too small denture,

aesthetic of dentures and number of denture that ever had and number of denture in the present. These were associated with not wearing denture.

Also, there was minor significance in some variables, recheck, facial satisfaction and good chewing. The R-squared value is an indicator of a model's explanatory power. There was 31.22 percent of explanatory power for this model. All of the significant variables were then put into a new model to analyze for the best fit model.

Table 11: Multivariate analysis by Logistic regression

Logistic regression		Number of obs =		200		
		LR chi2(19) =		82.93		
		Prob > chi2 =		0.0000		
Log likelihood = -91.349285		Pseudo R2 =		0.3122		
Variables	Odds Ratio	Std. Err.	z	P>z	[95% Conf.	Interval]
Age	0.902	0.027	-3.420	0.001	0.851	0.957
Gender	0.671	0.273	-0.980	0.328	0.302	1.491
Cure from irritation	4.036	2.136	2.640	0.008	1.430	11.390
Too big denture	1.277	0.755	0.410	0.679	0.401	4.067
Too small denture	6.396	5.326	2.230	0.026	1.251	32.712
Dentist recheck	2.825	1.659	1.770	0.077	0.894	8.928
Patient go to check	0.629	0.313	-0.930	0.352	0.237	1.669
Dentist's suggestion	1.091	0.693	0.140	0.891	0.314	3.786
Intention	3.894	4.503	1.180	0.240	0.404	37.552
Education	1.581	0.804	0.900	0.367	0.584	4.282
Time to wear	0.783	0.364	-0.530	0.598	0.315	1.946
Denture number	2.740	1.360	2.030	0.042	1.036	7.248
Retention	0.896	0.383	-0.260	0.798	0.388	2.072
Aesthetic of denture	4.162	2.781	2.130	0.033	1.123	15.418
Beauty improvement	0.333	0.207	-1.770	0.077	0.098	1.126
Go hospital	1.756	1.307	0.760	0.449	0.409	7.549
Number of denture	3.660	2.360	2.010	0.044	1.034	12.955
Comfort Chewing	1.636	1.115	0.720	0.471	0.430	6.223
Good chewing	3.453	2.412	1.770	0.076	0.878	13.576

From table 12, there were 6 variables that were significant, age, cure from irritation, small denture, good chewing, beautiful satisfaction and number of dentures at present. The percentage of explanatory of power was 28.96 percent. The power of model decreased from 31.22 to 28.96. Same as with the first model, these were put

into a new equation to find a model which would make the best prediction of the outcome.

Table 12: Multivariate analysis by Logistic regression

Logistic regression		Number of obs = 200				
		LR chi2(9) = 76.92				
		Prob > chi2 = 0.0000				
Log likelihood = -94.350932		Pseudo R2 = 0.2896				
Variables	Odds Ratio	Std. Err.	z	P>z	[95% Conf.	Interval]
Age	0.906	0.025	-3.600	0.000	0.858	0.956
Cure from irritation	4.874	2.347	3.290	0.001	1.897	12.524
Too small denture	5.490	4.339	2.150	0.031	1.166	25.840
Dentist recheck	1.750	0.743	1.320	0.188	0.761	4.020
Denture number	2.045	0.904	1.620	0.106	0.859	4.864
Aesthetic of denture	3.584	2.149	2.130	0.033	1.107	11.607
Beauty improvement	0.357	0.206	-1.780	0.075	0.115	1.109
Number of denture	3.522	2.222	2.000	0.046	1.023	12.129
Good chewing	4.196	1.953	3.080	0.002	1.685	10.448

In table 13, there was one variable that wasn't significant, number of dentures at present. The R-squared has decreased from 28.96 to 26.03 and also, the log likelihood has decreased from -94.35 to -98.24.

Table 13: Multivariate analysis by Logistic regression

Logistic regression		Number of obs = 200				
		LR chi2(6) = 69.14				
		Prob > chi2 = 0.0000				
Log likelihood = -98.240844		Pseudo R2 = 0.2603				
Variables	Odds Ratio	Std. Err.	z	P>z	[95% Conf.	Interval]
Age	0.903	0.024	-3.860	0.000	0.858	0.951
Cure from irritation	5.132	2.402	3.490	0.000	2.050	12.844
Too small denture	6.671	5.047	2.510	0.012	1.514	29.388
Aesthetic of denture	1.530	0.604	1.080	0.281	0.706	3.319
Number of denture	2.074	1.106	1.370	0.171	0.729	5.900
Good chewing	4.111	1.868	3.110	0.002	1.688	10.016

In table 14, all variables were significant and the R-squared decreased a bit from 26.03 to 25.01. In addition, the Log likelihood slightly decreased from -98.24 to -99.59.

Table 14: Multivariate analysis by Logistic regression

Logistic regression		Number of obs =		200		
		LR chi2(4) =		66.44		
		Prob > chi2 =		0.0000		
Log likelihood = -99.593302		Pseudo R2 =		0.2501		
Variables	Odds Ratio	Std. Err.	z	P>z	[95% Conf.	Interval]
Age	0.904	0.024	-3.850	<0.001	0.859	0.952
Cure from irritation	5.041	2.295	3.550	<0.001	2.065	12.304
Too small denture	6.956	5.407	2.500	0.013	1.516	31.915
Good chewing	4.804	2.118	3.560	<0.001	2.025	11.400

We selected this model to predict not wearing denture in the elderly group. There were four factors that could explain not wearing denture. Next, an interaction effect between variables that may be has correlated or effect together needed to be analyzed.

4. Interaction effects

For the interaction effects, we combined four factors together using combination. Both the combination between cure & small face and small face & chewing had no observations so we weren't put into the model.

Table 15: Interaction effects

Logistic regression		Number of obs =		191		
		LR chi2 (8) =		55.08		
		Prob > chi2 =		0.0000		
Log likelihood = -96.213667		Pseudo R2 =		0.2225		
Variables	Odds Ratio	Std. Err.	z	P>z	[95% Conf.	Interval]
Age	0.929	0.057	-1.210	0.227	0.823	1.047
Cure from irritation	0.002	0.013	-1.140	0.256	0.000	77.238
Too small denture	5.55E+09	1.88E+11	0.66	0.508	8.31-20	3.70+38

Table 15: Interaction effects (Continued)

Variables	Odds Ratio	Std. Err.	z	P>z	[95% Conf. Interval]
Good chewing	107.01	492.70	1.010	0.310	888289.10
Age*cure	1.120	0.080	1.580	0.114	1.289
Age*face	0.759	0.333	-0.630	0.530	1.795
Age*chew	0.956	0.067	-0.640	0.525	1.097
Cure*chew	0.611	0.756	-0.400	0.690	6.910

From table 15, there was no significance to the interaction terms, so we conclude that was not an interaction effect between age, curation from retention, small face and chewing. Therefore, the best prediction of wearing denture was age, curation from irritation, small face and chewing. The R-squared was 25.01 percent and the log likelihood was -99.59.

Put factors and beta-coefficient into an equation:-

$$\text{logit } p_x = b_0 + b_1 (\text{age}) + b_2 (\text{cure}) + b_3 (\text{face}) + b_4 (\text{chewing})$$

$$P (\text{not wearing denture}) = 4.603 + 0.904 (\text{age}) + 5.041 (\text{cure}) + 6.956 (\text{face}) + 4.804 (\text{chewing})$$

From this equation, it means that older age was wearing more than younger age in 0.904 times. Patients who not cured from irritation has 5.04 times that not wearing denture and patients who has small denture that made their face smaller has 7 times that not wearing. In addition, a patient who not good chewing when using denture has 4.8 times that not wearing denture.

CHAPTER V

DISCUSSION

This research was study in factors that are associated with wearing dentures from 30 baht scheme in 2003. There were 200 people who participated in this study and received dentures from hospitals in Bangkok and the perimeter. Patients were asked by telephone interview by using questionnaires which was considered to valid and reliable information for data analysis. Also, there was high response rate in data collection (98%)

We separated factors into groups which were demographic, behavior's patient, and functions of denture, aesthetics of denture and patient and dentist communication.

The limitation of study

This study had conducted in Bangkok and Nontaburi and they was not random sampling in hospital or province so this result could not represent the whole country. Expanding study or survey for covering the whole area was recommended.

Results

1. Univariate analysis

For the univariate analysis, there were important factors that had significant.

Age

Age was negatively correlated with not wearing dentures which was older age group wearing dentures higher than younger age group. It's as same as other study that the youngest group (under 60 years of age) appeared to have the least success with dentures in all aspects. And the oldest group (70 years age older) seemed to be the most successful with wearing denture. (29) Because of elderly may concern in function especially in good chewing. Also, they may concern in beauty face because they go outside or party.

Pain, Retention and Ability to chew

Pain is the most important factors that influenced to wearing dentures. Patients who pain from lack of retention and they were not cure and got ulcer or infected they would suffer for wearing dentures. (11) In this study, cure from irritation was positively correlated to not wearing dentures which was if they've cured their mouth sores and no pain when wear dentures, they would use dentures or wear it. But if they were not cured their mouths, they wouldn't wear them. Because of the most important functions of denture is crush on food that was related to pain. Patients who pain from chewing food and not comfort to chew, they were less success to wear dentures.

In addition, the best predictors of patient's satisfaction with wearing dentures were patient's perception of retention (7, 23) and it's related to appreciate for denture. (31) For this study, it found that the result was as same as in other study people who were usually loose when they wear dentures or had ever got retention. They wouldn't wear them. For this reason, dentures that loose or not fit to mouth related to loss function of dentures especially in terms of chewing.

Furthermore, chewing ability is the most important functions of dentures. If patient had some problem with chewing such as difficult to eat food or not comfort, they would complain and lower satisfaction. (23, 7, 4) So chewing is one factor that related to dentures satisfaction and wearing dentures. It's similar to this study that ability and comfort to chew were significant and related to wear them. If they're comfortable to eat they would wear dentures but they're not they wouldn't. In addition, if patients are good chewing when they wear them and could crush a harden food so they would satisfy to use and wear them.

Aesthetic of dentures

Denture that not fit for mouth was making annoy or not good appearance. Big dentures would make big face and no good appearance as same as small dentures. These factors were affected to wear dentures. Both of them had significant for not wearing denture. For this study, patients who are concerned in beauty or appearance so they would pay attend in face and beauty of dentures.

Besides that the most association with appreciation of complete denture was aesthetic of denture. The appearance and aesthetics had correlated with satisfaction of dentures. (22, 23) Also, they correlated to not wear dentures. Satisfaction is one factor

that can predict denture wearing. In this study, people had low satisfaction, they wouldn't wear denture. Nevertheless, patient's satisfaction was mainly influenced by communicative behavior with dentists. (9)

Patients and dentists communication

Communication between patients and dentists are important factors for wearing dentures because patients who had good communicate with dentists or come to consult with dentures, they were more satisfied to wear dentures than people who were not communicate with dentists. For the study, dentist who made an appointment for check or adjust dentures, then patients were use dentures more than dentists who were not. Even though, dentists made an appointment but patient were not come to meet doctor then they wouldn't wear dentures. In addition, suggestion problems of dentures are important. When dentists suggest problems about retention, looseness or chewing, so patients were more understand to nature of dentures and know how to familiar with them. Also, they were still wearing them and know how to maintain them. Another reason, patients and dentists were think different in terms of function and aesthetics. Most patients pay attends into aesthetics whereas dentist concern with functions so if they were not talk together, they would misunderstand.

1.2 Multivariate analysis

For the multivariate analysis, we used logistic regression to describe relationship variables and to predict the values of dependent variables. Firstly, we put all variables that we interested into the model and interpret result. In first model, they were good that all variables came from all groups that we interested because it's mean that this model would good prediction. There were 8 variables that had correlated with wearing dentures. After that, we checked this model again to analyze best fit model by running regression model. For second model, variable from patient and dentist group wasn't significant including rechecking which was dentist made an appointment to recheck denture and they went to hospitals. This factor were important for patient to decide for wearing dentures because if they have good communication with dentist who explain about how to wear dentures or problems of dentures, they would understand more about them. In addition, aesthetic of dentures is one factor that wasn't significant although they were important as same as patient dentist

communication. In this model, the log likelihood decreased from -91.35 to -94.35 and also, the R-squared decreased from 31.22 to 28.96 because both of them were changed by number of observation and variables. In the third model, there were four variables which were strong prediction of denture wearing. Wearing dentures relevant with age, function of denture and aesthetic of denture especially cure from irritation which were good predictor. In the last model, we repetitively run regression model by using variables that were significant from the previous model. They were all significant in all variables. We decided to selected this model because all variables were significant and the power of explanatory (R^2) was quite high. After we selected the model we could write an equation by:-

$$\text{logit } p = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4$$

Put factors into an equation:-

$$P(\text{not wearing denture}) = 4.603 + 0.904(\text{age}) + 5.041(\text{cure}) + 6.956(\text{face}) + 4.804(\text{chewing})$$

All of variables were important to wear dentures. Because even though dentures are high quality but patients don't like or pain from them, they would not wear that one. In addition, chewing is one factor that patient would decide to wear denture if they comfort or good crush on food they will more easily to wear. In many studies, irritation and pain were good predictors and they concern with curation as same as this study. However, we should look for interaction effects between factors which maybe had correlated together in model. First, all variables in equation were combined and calculated interaction terms, after that put them into new model. We found that all variables hadn't interaction effects because it wasn't significant and R^2 was decreased than the last model from 25.01 to 22.25. Therefore, it means that they weren't different between no interaction and interaction. So the best predictions for denture wearing were age, relieved from irritation, too small denture and chewing. From the model, age was negative correlated to no wearing denture which was older age wear denture less than younger age. On the other hand, other predictors were positive correlated with no wearing denture as same as previous study. Beside that patient and dentist communication is important for not wearing denture even though it was not significant with dentures. Because of it may correlate with interaction between factors or multi-co linearity, also.

CHAPTER VI

CONCLUSION AND RECOMMENDATIONS

Conclusion

The majority of patients were female (58%) and most patients had finish education in primary school (grade 4 or lower) (77.5 percent). Most patients were in the age group 60-69 years and the mean age was 67.41 (SD 7.92). The proportion of wearing dentures was 62 percent.

57.5% of patients were used to irritation from dentures and over 60 percent were cured. There were about 70 percent that had good chewing and comfortable chewing (69.5% and 68%). In terms of aesthetic and satisfaction, patients had dentures unfit for their face in 10 percent. There were over 60 percent with low satisfaction in the beauty of denture and their face.

In addition, dentists made appointments to check dentures in almost 80 percent and patients went to recheck about 55 percent. They usually went to hospital when they had some problem of denture (90 percent). Nevertheless, 97% of patients intended to wear their dentures. The most common expectation of dentures was improved chewing whereas beauty improvement was the least important. (65.63% and 51.58% respectively)

The association between factors and not wearing dentures was analyzed by univariate analysis. Variables included were age, curation from irritation, retention, good chewing and comfortable chewing, denture that were not fit for mouth, beautiful satisfaction, dentists made appointment to check denture (recheck), patients go to check it (go to check) and also, dentists suggest how to wear it (suggest) all of which were significant with not wearing dentures.

The Multivariate analysis was used to present adjusted odds ratios and identity significant predictors. There were four factors that were highly significantly correlated with not wearing dentures and were significant predictors: age, curation from

irritation, small denture and good chewing. Also, there were not interaction effects between all variables.

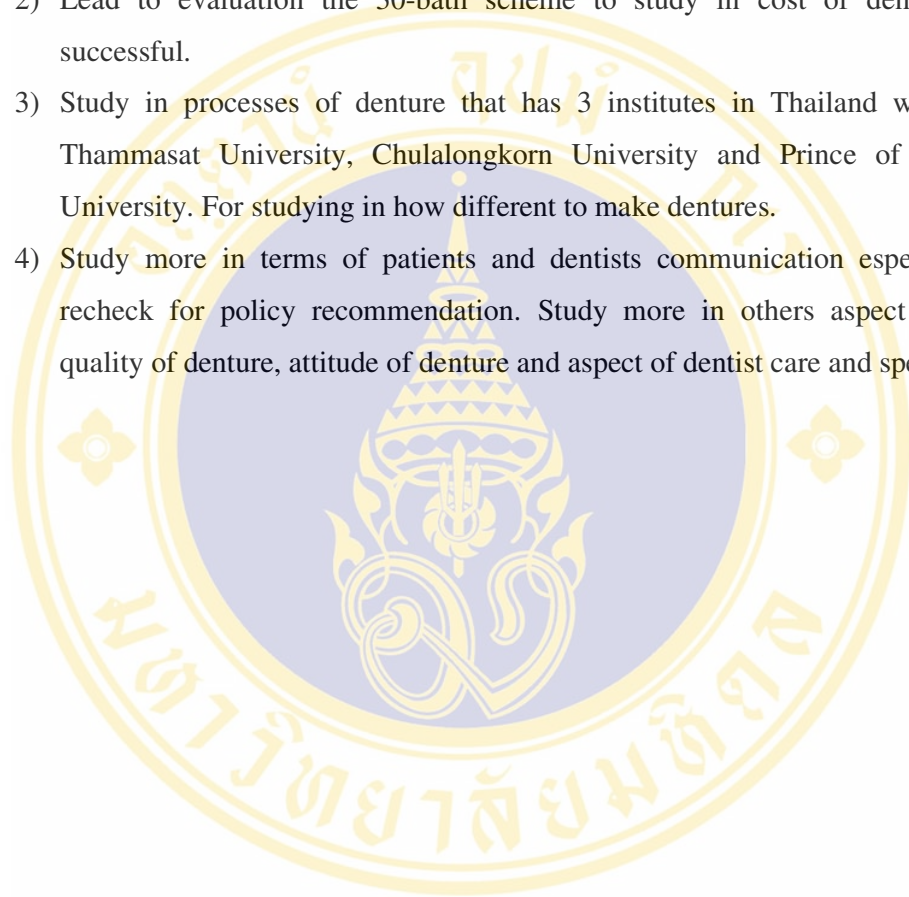
Recommendations

On the basis of finding in this study, the common factors that related to not wearing dentures were loss functions and not satisfied with aesthetics of dentures which were most important terms of acceptance dentures, generally. So dental staff should concern in these topics because of dental staffs and patients are opposite concern in functions and beauty. Furthermore, experience of wearing denture was considered especially in younger age group who not much more experience in wearing dentures. For this reason, dentists should be considered in patient and dentist communication even though this factor was not significantly associated with not wearing dentures. Because of communication between dentists and patients may increase an acceptance for wearing denture and more successful in the future especially in terms of chewing and appearance of denture. So, we can increase the number wearing dentures by explain to the patient about the nature of dentures, including:

- 1) The explanation of how to use dentures especially for chewing.
- 2) The general problems of denture which may happen when after long use such as retention and looseness or problem with chewing especially for new patients who use them for the first time.
- 3) There were some people who adjusted their denture, so dentists should explain more about problems after adjustment by themselves and make more understanding about adjusting dentures by dentists.
- 4) How to maintain dentures for better oral health care and more long-term use , and how to take care of their mouths to avoid pain or lesions that may be from looseness or retention.

Recommendations for the further study

- 1) From this finding, the information about the number wearing dentures could be applied for the cost-effectiveness of dentures to know more about benefits resulting from the budget of the 30-baht scheme in full denture.
- 2) Lead to evaluation the 30-baht scheme to study in cost of denture and successful.
- 3) Study in processes of denture that has 3 institutes in Thailand which are Thammasat University, Chulalongkorn University and Prince of Songkla University. For studying in how different to make dentures.
- 4) Study more in terms of patients and dentists communication especially in recheck for policy recommendation. Study more in others aspect such as quality of denture, attitude of denture and aspect of dentist care and speech.



REFERENCES

1. Brunello, D.L. (1998). Construction faults, age, gender, and relative medical health. *The journal of prosthetic dentistry*, 79(5).
2. Carsson, G.E. Patient factors in appreciation of complete denture. *The journal of prosthetic dentistry*, 17(4).
3. Colman McGrant, R.B. (2001). Can dentures improve quality of life of those who have experience? *Journal of dentistry*, 243-246.
4. D.D.S, R.p.R.(1943). *Complete dentures, a guide for patient treatment* USA: Masson publishing
5. Dervis, E. Clinical assessment of common patient complaint. *Eur. J. Prosthodont Rest dent*, 10(3), 113-117.
6. E.L. Davis, J.E.A. (1986). Expectation and satisfaction of denture patients in a university clinic. *The journal of prosthetic dentistry*, 55, 59-63.
7. Eijkman, C.S.a.M.A.J. (2003). Dentist and patients' communication behavior. *Com dent health*, 20, 11-15.
8. Fenlon, M.R. (1999). Comparison of patients' appreciation. *Eur. J. Prosthodont Rest dent*, 7(1), 11-14.
9. Guckes, A.D. (1978). Counseling and related factors influencing satisfaction with dentures. *The journal of prosthetic dentistry*, 39(3).
10. J. Mark, J.P.L. (2003). Patient satisfaction with mandibles implant. *The international journal of prosthetic*, 16(5), 467-473.
11. John, M.T. (2004). Demographic factors, denture status and oral health related quality of health. *Com dent oral epid*, 32, 125-132.
12. Jr, A.O.R.a.C.M.H. (1993). *Textbook of complete dentures* London
13. JR, E.R.a.J. (1997). A comparison of patient satisfaction and dentist evaluation of complete denture therapy. *Com Dent Oral Epid*, 25, 223-227.

14. Kalk W, B.C.d. (1991). Comparison of patient views. *Com dent oral epid*, 19, 213-216.
15. Knezovic, D. (2003). Factor related to patient satisfaction with complete denture therapy. *Journal of gerontology*(series A), 948-953.
16. Koper, A. (1987). The maxillary CD opposing natural teeth, Problem? *The journal of prosthetic dentistry*, 57(6).
17. Lenchner, S.K.a. (1995). Complete denture solving: a survey. *Australia dental journal*, 40(6), 377-380.
18. Mack, A. (1971). *Full denture, the treatment of edentulous patient* Bristol: John Wright and son LTD
19. Mccord, P.W.S.a.J.F. (2004). What do patients expect from complete denture? *Journal of dentistry*, 3-7.
20. Pietrokovski, J. (1995). Oral finding. *The journal of prosthetic dentistry*, 73.
21. R.E.G Jonkman, M.A.J.v.w. (1997). An analysis of satisfaction with complete immediate (over)dentures. *Journal of dentistry*, 25, 107-111.
22. Sherriff, M.R.F.a.M. (2004). Investigation of new complete denture quality and patient satisfaction. *Journal of dentistry*, 32, 327-333.
23. Smith, M. (1976). Measurement of personality trait and their relation to patient satisfaction with complete denture. *The journal of prosthetic dentistry*, 35(5), 492-503.
24. Steele, J.G. (2004). How do age and tooth loss affect oral health impacts and quality of life? *Com dent oral epid*, 32, 107-114.
25. Waas, M.A.J.V. (1990a). Determinants of dissatisfaction with dentures: A multiple regression analysis. *The journal of prosthetic dentistry*, 64, 569-572.
26. Waas, M.A.J.V. (1990b). The influence of clinical variables on patients' satisfaction with complete denture. *The journal of prosthetic dentistry*, 63, 307-310.
27. Waas, M.A.J.V. (1990c). The influence of psychologic factors on patients' satisfaction with complete denture. *The journal of prosthetic dentistry*, 90, 545-548.
28. Weinstein, M. (1988). Age and denture experience as determinants in patient denture satisfaction. *Journal of prosthetic dentistry*, 59.

29. Yoshizumi, D.T. (1964). An evaluation of factors pertinent to the success of complete denture services. *The journal of prosthetic dentistry*, 14(5).
30. Denture.[Online] 2004; Available from
URL:<http://www.dentalfind.com/glossary/denture> (accessed 8 June 2004)
31. Immediate denture.[Online] 2004; Available from URL:
http://www.Healthsystem.virginia.edu/uvahealth_oralhealth/denture.cfm (accessed 8 June 2004)
32. Denture cleaner.[Online] 2004; Available from URL:
www.dentalhealth.ie/dentalhealth/text_index.tmpl (accessed 8 June 2004)
33. Removable denture. [Online] 2004; Available from URL: [www.Prosthodontics.org/cf-dbm/fagslc-fags.cfm?](http://www.Prosthodontics.org/cf-dbm/fagslc-fags.cfm) (Accessed 8 June 2004)
34. Denture care.[Online] 2004; Available from
URL:www.umanitoba.ca/outreach/wisdomtooth/denture.htm (accessed 8 June 2004)
35. Denture cleaning and care. [Online] 2004; Available from URL: www.users.tpg.com.au/chills/fulldenture.htm (accessed 8 June 2004)
36. Denture problem. [Online] 2004; Available from URL: www.discoveryhealth.com (Accessed 8 June 2004)
37. ชนิดของฟันปลอม. [Online] 2004; Available from
URL:www.thaiclinic.com/dentprosthesis.html (accessed 19 April 2004)
38. ประโยชน์ของฟันปลอม. [Online] 2004; Available from
URL:www.siamdental.com/denture.htm (accessed 19 April 2004)
39. ชนิดของฟันปลอม. [Online] 2004; Available from URL: www.elib-online.com/doctors3/dent_dentures03.htm (accessed 19 April 2004)
40. Type of dentures. [Online] 2004; Available from
URL:www.dentalpath.com/dp/dp_tc.htm (accessed 19 April 2004)

41. ค่าใช้จ่ายในการทำฟัน. [Online] 2004; Available from
URL:www.siamdental.com/price.htm (accessed 19 April 2004)
42. มุมมองสุขภาพด้านทันตกรรม. กองทันตสาธารณสุข สำนักอนามัย กรุงเทพมหานคร
43. Efficiency of denture. [Online] 2004; Available from
URL:www.math.usf.edu/mug/a149.htm (accessed 6 June 2004)
44. การสำรวจสถานการณ์การเกิดโรคในช่องปากของคนไทย. กองทันตสาธารณสุข กรมอนามัย กระทรวงสาธารณสุขปี พ.ศ 2543 ถึง พ.ศ 2544.
45. โครงการ 30 บาท ผู้สูงอายุใส่ฟันปลอม-ผ่าตัดกระจกฟรี.
[Online] 2004; Available from
URL:<http://manager.co.th/qol/viewbrowse.asp?browsenewsid=8507>



แบบสัมภาษณ์

เรื่อง ปัจจัยที่เกี่ยวข้องกับการไม่ใช้ฟันปลอม

ในผู้ทำฟันปลอมจากโครงการหลักประกันสุขภาพถ้วนหน้า เขตกรุงเทพมหานคร

โดย แบบสัมภาษณ์ แบ่งเป็น 6 ส่วน คือ

ส่วนที่ 1 ข้อมูลทั่วไป

ส่วนที่ 2 ประสิทธิภาพการใช้ฟันปลอม

ส่วนที่ 3 Function of denture

ส่วนที่ 4 Esthetics of denture

ส่วนที่ 5 การสื่อสารระหว่างทันตแพทย์และคนไข้

ส่วนที่ 6 ความคาดหวัง และ ความคิดเห็นต่อการไม่ใช้ฟันปลอม

ส่วนที่ 1 ข้อมูลทั่วไป

1. รหัส

2. เพศ

 ชาย หญิง

3. อายุ.....ปี

4. อาชีพ.....

5. การศึกษา

1. ประถมศึกษา (ป.1-ป.6)2. มัธยมศึกษาตอนต้น (ม.1-3)3. มัธยมศึกษาตอนปลาย (ม.4-6)4. ปริญญาตรี5. อื่นๆ ระบุ.....

6. รายได้ต่อเดือน..... (บาท/เดือน)

7. สถานภาพสมรส

 โสด สมรส หย่า หม้าย

8. ท่านมีโรคประจำตัวหรือไม่

 ไม่มี มี ระบุ.....

ส่วนที่ 2 ประสิทธิภาพการใช้ฟันปลอม

1. ปัจจุบันท่านมีฟันปลอมทั้งหมดกี่ชุด
 - 1 ชุด
 - 2ชุด
 - มากกว่า 2 ชุด ระบุ.....
2. ฟันปลอมที่ท่านมีอยู่ มีที่ได้มาจากการใช้สิทธิ 30 บาทรักษาทุกโรคหรือไม่
 - มี
 - ไม่มี (ข้ามไปข้อ 4)
3. ท่านใช้ฟันปลอมชุดที่ทำจากโครงการ 30 บาทมากี่ปีแล้ว
 - น้อยกว่า 6 เดือน
 - 6 เดือน-1ปี
 - 1-2 ปี
 - 3-4 ปี
 - มากกว่า 4 ปี
4. ท่านใส่ฟันปลอมที่ได้ทำมาจากการใช้สิทธิ 30 บาทรักษาทุกโรค หรือไม่
 - ไม่ใส่ (ตอบข้อ 5)
 - ใส่ (ตอบข้อ 6)
5. ท่านเลิกใช้ฟันปลอมที่ทำจากโครงการ 30 บาท เมื่อใช้ฟันปลอมไปนานเท่าไร ระบุ...
6. ท่านใช้ฟันปลอมเมื่อใด
 - ขณะรับประทานอาหาร
 - เมื่อไปทำธุระข้างนอกบ้าน หรือพบปะผู้คนในงานสังคมต่างๆ
 - ใส่ตลอดทั้งวัน ก่อนนอนถึงจะถอด
 - ไม่ใส่
 - อื่นๆ ระบุ.....
7. ฟันปลอมที่ท่านใช้ปัจจุบันเป็นฟันปลอมชุดที่เท่าไร
 - ชุดที่ 1
 - ชุดที่ 2
 - ชุดที่ 3
 - ชุดที่ 4
 - มากกว่าชุดที่ 4
8. อายุเมื่อท่านเริ่มใช้ฟันปลอมทั้งปากครั้งแรก คือ.....ปี

ส่วนที่ 3 Function of denture

1. เคยมีอาการอักเสบ เจ็บ อากากระคายเคืองช่องปาก หรือแผล จากการใช้ฟันปลอมหรือไม่
 - เคย
 - ไม่เคย
 - 1.1 ถ้าเคย ได้รับการแก้ไขให้หายเจ็บแล้วหรือยัง
 - ยัง
 - หายแล้ว
2. ฟันปลอมเคลื่อนที่จากสันเหงือก หรือเพดานหรือไม่ ขณะเคี้ยวอาหารหรือพูด
 - ประจำ
 - บางครั้ง
 - ไม่เคย (ข้ามไปข้อ 3)
 - 2.1 สร้างความรำคาญ เวลามันเคลื่อนขณะใช้งาน

- น้อยที่สุด น้อย ปานกลาง มาก มากที่สุด
3. ท่านเคี้ยวอาหารได้สะดวก หรือถนัดดี
- น้อยที่สุด น้อย ปานกลาง มาก มากที่สุด
4. ท่านเคี้ยวอาหารได้ละเอียดดี
- น้อยที่สุด น้อย ปานกลาง มาก มากที่สุด

ส่วนที่ 4 Esthetics of denture

1. ฟันปลอมที่ท่านใส่ใหญ่เกินไป ทำให้หน้าอูมหรือไม่
- ใช่ ไม่ใช่
2. ฟันปลอม เล็กเกินไป ทำให้หน้าตอมนหรือไม่
- ใช่ ไม่ใช่
3. ท่านพอใจกับความสวยงามของตัวฟันปลอมที่ได้รับมา เช่น จัดแต่งสวยงาม สีของฟันสวย ขนาดของฟันปลอมพอดี
- น้อยที่สุด น้อย ปานกลาง มาก มากที่สุด
4. ท่านพอใจกับรูปหน้าเมื่อใส่ฟันปลอม
- น้อยที่สุด น้อย ปานกลาง มาก มากที่สุด

ส่วนที่ 5 การสื่อสารระหว่างหมอฟันและคนไข้

1. หลังจากใส่ฟันปลอมครั้งแรกแล้ว หมอฟันได้นัดท่านกลับไปตรวจและแก้ไขฟันปลอมหรือไม่
- นัด ไม่นัด
2. ท่านได้ไปตรวจและแก้ไขตามนัดหรือไม่
- ไป ไม่ไป
3. หมอฟันได้ให้คำแนะนำเกี่ยวกับ ปัญหาที่อาจจะเกิดขึ้นได้จากการใส่ฟันปลอม เช่น ในฟันปลอมล่างอาจจะหลวมหลุดง่ายกว่าฟันปลอมบน
- ให้ ไม่ให้
4. ท่านไปพบหมอฟันทุกกี่เดือน หลังจากใช้ฟันปลอม
- 3 เดือน 6 เดือน
- 1 ปี อื่นๆ ระบุ.....

5. ท่านตั้งใจมาทำฟันปลอมด้วยตัวเองหรือไม่

ใช่

ไม่ใช่

ระบุ.....

5.1 ญาติหรือลูกหลานเคยยื่นข้อเสนอให้มาทำหรือไม่

ใช่

ไม่ใช่

ส่วนที่ 6 ความคาดหวัง และ ความคิดเห็นต่อการใช้ฟันปลอม

1. เรื่องใด ที่ท่านคิดว่าสำคัญมากที่สุด

(เรียงลำดับจากมาก ไป น้อย)

มีความพอดีกับช่องปาก

ไม่ทำให้เจ็บ

ยึดติดอยู่กับที่

เคี้ยวอาหารได้สะดวก

สามารถพูดได้ชัดเจน

รูปร่างสวยงาม

อื่นๆ ระบุ.....

BIOGRAPHY

NAME	Jiraluck Nontaluck
DATE OF BIRTH	4 February, 1982
PLACE OF BIRTH	Bangkok, Thailand
INSTITUTIONS ATTENDED	Thammasat University, 2002 Bachelor of Science Major in Health Science Mahidol University, 2005 Master of Science Major in Infectious disease and Epidemiology
POSITION AND OFFICE	Setting Priorities using information on Cost-Effectiveness (SPICE): Informing Policy Choices and Health System Reform in Thailand, An International Collaborative Research Project between the Ministry of Public health, Thailand and the school of Population Health, The University of Queensland, Australia Position: Research Assistant Tel. (08)9993-6777 E-mail: jiraluck_n@yahoo.com