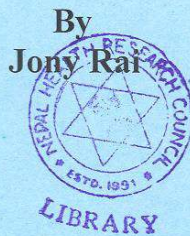


740

**Parent's Knowledge and Attitude towards Oral Hygiene  
among their Children Age between 5 Years to 14 Years  
attending in General Out Patient Department  
in Kanti Children Hospital**

NHRC Library  
Accession No. 164  
Call No. ....

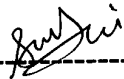


**A Research Report  
Submitted in Partial Fulfillment of the  
Requirement for the Bachelor Degree of Hospital Nursing**

in  
**Tribhuvan University,  
Institute of Medicine  
Nursing Campus  
Maharajgunj, Kathmandu  
Nepal  
2060(2003)**

## APPROVAL SHEET

Certified that this is Bonafide Work  
of  
**Ms. Jony Rai**  
Post-Basic Bachelor of Nursing Program  
in Hospital Nursing



-----  
**Jony Rai**  
Researcher





Advisor's Signature: -----  
Advisor's Name: **Ms. Renuka Devi Pradhanang**  
Designation: **Lecturer**  
**T.U.IOM, Nursing Campus, Maharajgunj**  
Date: **2060-07-14**



NHRC Library  
Accession No. **164**  
Call No. ....

### **Acknowledgement**

First of all, my sincere thanks goes to campus chief, Prof. Ms. Sarala Srestha of Maharajgunj Nursing Campus for allowing me to conduct this study.

I would like to extend my gratitude to Prof. Ms. K. Tuladhar (Asst. Dean), and Ms. Milan Lopchan (Lecturer) for conducting theory class in this research.

I would like to acknowledge Director and Matron of Kanti Children Hospital, Maharajgunj for granting me permission to collect the data.

I would like to express my gratitude to the research guide, Ms. Renuka Devi Pradhanang (Lecturer) of Maharajgunj Nursing Campus for her valuable suggestion and guidance.

I would like to express my gratitude to all Librarian staffs of Maharajgunj Nursing Campus, Hellis library Bir hospital for providing necessary materials.

I would like to express my thanks to Dr. Robert Yee (U.M.N. Nepal Oral Health Programme) for providing necessary data for this study.

I would like to express my thanks to Mr. Praveen Shrestha of TUTH for statistical analysis and correction.

I would like to acknowledge N.H.R.C. for approval of this study and granting financial support.

Finally I would like to express my thanks to all my colleagues and all respondents for giving necessary suggestions and information to carryout this study.

**Jony Rai**

NHRC Library

Accession No. 164

Call No. ....



## ABSTRACT

### Introduction

Oral health affect on child's quality of life and it depends on parent's knowledge and attitude towards oral hygiene. Since oral hygiene is most necessary part of human being, this study must be done.

**Title:** Parent's knowledge and attitude towards oral hygiene among their children age between 5 years to 14 years.

**Objective:** To explore the parent's knowledge and attitude towards oral hygiene among their children.

**Design:** A cross sectional analytical

**Setting:** General Out Patient Department in Kanti Children Hospital

**Sampling Technique:** Non-probability purposive sampling.

**Sample Size:** Fifty parents with their children age between 5yr. to 14yr.

### Result

The majority of 36(72%) respondents was from urban, among fifty respondents. Similarly, majority of 43(86%) respondents was literate. Regarding economic status, majority of 21(42%) respondents monthly income varies from Rs. 3000 to Rs. 6000 per month.

In relation to general appearance of oral health of children, majority of 45 (90%) children's oral health was clean. 100% children's gum condition was normal. Majority of 19(38%) children's teeth was normal.

Regarding Knowledge and attitude, majority of 46(92%) respondents answered oral hygiene means cleanliness of teeth, gum and tongue. Majority of 32(64%) answered child's mouth should be clean to keep oral cavity healthy. 100% respondents said that they are assisting their children for maintaining oral hygiene. Among them 29(58%) respondents were assisting to prevent oral problem. Majority of 28(56%) respondents were starting to maintain their children's oral hygiene at 3yr.to 5yr. Majority of 49(98%)respondent's children used tooth brush and toothpaste. Majority of 35(70%) respondents did not take their children to dentist for regular check-up. Only 15(30%) respondents were taking their children to dentist. 22% children preferred sweet containing food. Majority of 49 (98%) respondents changed their children's toothbrush, among them 26(52%) change after 2-4 months. Majority of 43(86%) respondents did not believe on wizard's treatment.

Regarding literate, urban and high economic status respondent's knowledge and attitude, majority of all illiterate and literate, rural and urban and low economic status respondents started to maintain their children's oral hygiene at 3yr. to 5yr. of age. But high economic status respondents maintained at 1yr. to 3yr. and at 3yr to 5yr of age in equal ratio i. e. 5(50%). Majority of all rural, urban, illiterate, literate, low and high economic status respondents children brush their teeth once a day, early in the morning. Majority of only high economic status7 (70%) respondents takes their children to dentist for dental check-up.

NHRC LIBRARY  
Accession No. **164**  
Call No. ....

## ABBREVIATIONS



BDJ	:	British Dental Journal
DMFT	:	Decayed Missing Filled Teeth
IOM	:	Institute of Medicine
KCH	:	Kanti Children Hospital
NHRC	:	Nepal Health Research Council
OPD	:	Out Patient Department
SEA	:	South East Asia
SEARO	:	South East Asia Regional Organization
TU	:	Tribhuvan University
WHO	:	World Health Organization



## TABLE OF CONTENTS

LIBRARY Page No.

S.N.	Contents	Page No.
	Acknowledgement.....	i
	Abstract.....	ii
	Abbreviation.....	iii
<b>CHAPTER -I</b>		<b>1-7</b>
1.	Introduction.....	1
1.1	Background of the study.....	1-3
1.2	Title of the study.....	3
1.3	Statement of the problem.....	3
1.4	Rational of the study.....	3
1.5	Significance of the study.....	4
1.6	Objective of the study.....	4
1.7	Hypothesis.....	4
1.8	Variables of the study.....	4
1.9	Operational definition.....	5-6
1.10	Limitation of the study.....	6
1.11	Conceptual Framework.....	6
<b>CHAPTER -II</b>		<b>7-14</b>
2.	Literature Review.....	7
2.1	Review of literature.....	7-13
2.2	Summary of literature.....	14
<b>CHAPTER -III</b>		<b>15-16</b>
3.	Research Methodology.....	15
3.1	Study Design.....	15
3.2	Study Population.....	15
3.3	Sample Size.....	15
3.4	Sampling Method.....	15
3.5	Area of The Study.....	15
3.6	Data Collection Instrumentation.....	15
3.7	Validity and Reliability.....	15



NHRC Library  
Accession No. 164  
Call No. ....

3.8 Pre- testing Instrument.....	LIBRARY	15
3.9 Ethical Consideration .....		15
3.10 Data Collection Procedure.....		16
3.11 Measure to Reduce Bias.....		16
3.12 Data Analysis.....		16

**CHAPTER -IV** **17-36**

4. Data Analysis and Interpretation.....		17
4.A. Demographic Information of Respondents.....		18
4.B.a. Observation of Children's Oral Cavity.....		19
4.B.b. Observation of Children's Oral Cavity According to geographical area, economic status and education status.....		28-29
4.C. Parent's Knowledge and Attitude towards oral hygiene.....		20-27
4.D. Literate, Urban and High economic status parents are more conscious towards oral hygiene .....		30-34
4.E. Dental Problem between excessive and less sweets/chocolate consuming children.....		34-35
4.F. Acceptance or Rejection of hypothesis.....		36

**CHAPTER -V** **37-42**

5. Research Findings, Discussion and Recommendation.....		37
5.1 Findings of the study .....		37-39
5.2 Comparison of the findings to literature review .....		39-40
5.3 Discussion .....		40
5.4 Conclusion.....		41
5.5 Implication of the study.....		41
5.6 Recommendation.....		41
5.7 Strength of the study.....		41
5.8 Difficulties faced during study.....		41
5.9 Learn from the study.....		41-42
5.10 Plan for dissemination.....		42



**Section A:**

Table No.1. Distribution of Respondent's Demographic Information..... 18

**Section B. a**

Table No.a.4.2.1. Distribution of observation of children's oral cavity..... 19  
Table No.a.4.2.2. Distribution of children's regarding condition of teeth..... 19  
Table No.a.4.2.3. Distribution of children's regarding condition of cheek and lip.. 19

**Section B. b:**

Table No.b.4.2.1. Distribution of Children's general appearance of oral health..... 28  
Table No.b.4.2.2. Condition of teeth according to geographical area, education status  
and economic status..... 28  
Table No.b.4.2.3. Condition of cheek and lip according to geographical area,  
education status and economic status..... 29

**Section C**

Table No.4.3.1. Meaning of oral hygiene..... 20  
Table No.4.3.2. Reason for keeping child's mouth clean..... 20  
Table No.4.3.3. Reason for maintaining oral hygiene..... 20  
Table No.4.3.4. Distribution of Respondent's starting age of oral hygiene among  
their children..... 21  
Table No.4.3.5. Time Schedule for brushing child's teeth..... 21  
Table No.4.3.6. Materials used for Toothbrush..... 21  
Table No.4.3.7. Distribution of type of paste/powder..... 21  
Table No.4.3.8. Distribution of respondent's regarding knowledge on oral  
problem..... 22  
Table No.4.3.9. Distribution of Respondent's opinion about causes on oral  
problem..... 22  
Table No.4.3.10. Time schedule for regular check-up with dentist..... 23  
Table No.4.3.11. Distribution of respondent's children used sweets/chocolate..... 25  
Table No.4.3.12. Distribution of time for cleaning mouth..... 25  
Table No.4.3.13. Distribution of respondents get information about oral hygiene.... 27



NHRC Library  
Accession No. 164  
Call No. ....



**Section D:**

Table No.D.4.1. Respondent started in maintaining their children's oral hygiene according to Education status.....30

Table No.D.4.2. Respondent started in maintaining their children's oral hygiene according to Geographical area.....30

Table No.D.4.3. Respondents started in maintaining their children's oral hygiene according to Economic status.....30

Table No.D.4.4. Time Schedule for tooth brushing according to Education status...31

Table No.D.4.5. Time Schedule for tooth brushing according to Geographical area...31

Table No.D.4.6. Time Schedule for tooth brushing according to Economic status...31

Table No.D.4.7. Check-up system with dentist according to Education status.....32

Table No.D.4.8. Check-up system with dentist according to Geographical area.....32

Table No.D.4.9. Check-up system with dentist according to Economic status..... 32

Table No.D.4.10. Distribution of respondents' advice for cleaning/rinsing mouth according to education status.....33

Table No.D.4.11. Distribution of respondents' advice for cleaning/rinsing mouth according to geographical area.....33

Table No.D.4.12. Distribution of respondents' advice for cleaning/ rinsing mouth according to economic status.....33

**Section E:**

Table No.E.4.1. Condition of teeth between excessive and less sweet consuming children.....35

**LIST OF FIGURES**

**Section C:**

Figure No.4.3.1. Causes of Oral Problem.....22

Figure No.4.3.2. Respondents on regular check-up with dentist to their children.....23

Figure No.4.3.3. Distribution of respondents guide their children for brushing technique.....24

Figure No.4.3.4. Types of food prefer by children.....24

Figure No.4.3.5. Advice for cleaning/ rinsing mouth after having meal.....25

Figure No.4.3.6. Distribution of changed the brush.....26

Figure No.4.3.7. Distribution of consult with dentist/wizard.....26

Figure No.4.3.8. Distribution of respondents believe that wizard's treatment.....27

Library  
Accession No. 464  
Call No. ....



**Section E:**

Figure No.E.4.1. General appearance of oral health in excessive and less sweet consuming children..... LIBRARY

Figure No.E.4.2. Condition of teeth between excessive and less sweet consuming children.....35

**Bibliography.....43-44**

**APPENDICES**

1. Research questionnaire
2. An information of oral hygiene (मुखको सरसफाई एक जानकारी)
3. Research work plan
4. Official letter

## CHAPTER – 1



### 1. INTRODUCTION

#### 1.1 Background of the study

##### 1.1.1 In Nepalese context

A small country Nepal is one of the least developed countries of the world with per capital income of US \$ 210 (World Bank Group 2000). Based on the latest census conducted in June 2001, Nepal has a population of 23,151,423 people (11,563,921 males and 11,587,502 females) of which 49% are under the age of 18 years old and 12% are under the age of 5 years (HMG Nepal, 2002). Nepal is urbanizing at rapid rate. Estimates range from 15% to 20% of the population living in urban centers by year 2001 (Sharma, 1982); to 30% of population living in urban centers by 2011 (Goldstein, 1983). Eighty percent of the people live in rural areas with limited access to health and educational facilities. Education is a major determinant of health, economic and social development in developing countries, in particular the education of females (Caldwell, 1997, Hobcraft, 1993, Schultz, 1993). Data from the 2001 National Demographic and Health Survey (Ministry of health, Nepal, New Era and ORC macro, 2002) show that men are twice as literate as women, 70% and 35% respectively,

Among the various organs of the human body, the mouth is an important part. The absence of proper care and treatment of any form of disease in the mouth can lead to a serious deterioration of health and even lead to death of the sufferer. The World Health Organization (WHO) states that good oral health is necessary for normal functioning of the body, mental well-being and social adjustment. Good oral health also means nutritional awareness and access to general health care. In Nepal, as in many other developing countries, oral health is a continuing problem.

Oral hygiene is improving in industrialized countries and deteriorating in developing countries. The oral health of children in many developing countries is worse than developed countries and former cannot afford appropriate resources to deal the disease. In Nepal, oral health education and scientific method of dental treatment has yet to be developed at large. There is no separate Oral Health Division in Ministry of Health and such it has yet to be developed and effective national level oral health plan.

##### 1.1.2 Global context of Oral Health

According to SEA-REGIONAL DEVELOPMENT OF ORAL HEALTH, (Draft-2, Dec, 13 – 1999), Oral health is becoming a prominent in developing countries, among others are due to lifestyle and the effect of increased confectioners consumption. The dental health status of the 12 years age group, which is measured by DMFT, in many SEAR member countries, is still exceeding the standard of WHO which is less than 3. The main oral disease categorized by WHO are: - dental caries, periodontal diseases and oral cancers.

Dental caries is a microbial disease of the calcified tissue of the teeth. Dietary factors seem to play significant role in the incidence of dental caries and there is a direct relationship the ingestion of carbohydrate and caries. Consumptions of sweet, soft and sticky food precipitates the incidence of dental caries.

In 1979, the World Health Assembly adopted a resolution calling for the attainment of the "Health For All" by the year 2000. With this in mind, the WHO Oral Health Unit, in conjunction with Federation Dentaire International (FDI), recommended the establishment of specific oral health goals. On the way to ultimate aim of complete oral health for all, with optimal function of teeth, jaws and associated structures, these goals propose attainable levels that represent appreciable strides towards the final target.

The goals are: -

Age (Year)	Goal
5-6	50% carries free
12	DMFT less than 3
18	85% retain all their teeth
35-44	50% reduction in number of person with no teeth (75% with 20 teeth)
65+	25% reduction in number of person with no teeth (50% with 20 teeth)

Sources: [http://www.who.int/ncd/rh/epi\\_od.htm](http://www.who.int/ncd/rh/epi_od.htm)

(Main oral diseases and global goals)

### 1.1.3 Regional Context of Oral Health

Over the past decades dental caries has significantly dropped in most of the developed countries. However majority of the developing countries including those in South East Asia Region faced graphical increases in the prevalence and severity of dental caries.

The following table shows the mean number of DMFT per person in 12 years old.

The mean number of DMFT per person in 12 years old in SEA countries is as follows:

DM in SEARO including FT for 12 years old

Country	Year	DMFT
Bangladesh	1979	1.8
	1978-91	1.7
Bhutan	1985	1.4
India	1967	1.2
	1985-91	1.2
	1985-91	0.9-4.5
Indonesia	1993	1.4-3.8
	1970	0.7
	1980	2.3
	1990	2.7
DPR Korea	1995	2.2
	1991	3.0
Maldives	1984	2.1
Mongolia	1976	1.4
	1990	2.6
Myanmar (Burma)	1977	0.8
	1990	1.1

	1993	1.1
Nepal	1984-86	0.5-2.1
	1994	1.2
Srilanka	1973	3.0
	1983-84	1.9
	1994-95	1.4
Thailand	1960	0.4
	1977	2.7
	1989	1.5
	1994	1.6

Source: <http://www.whocollab.odont.lu.se/searo.html>. WHO Oral Health

### **1.2 Title of the Study:**

Parent's knowledge and attitude towards oral hygiene among their children age between 5 years to 14 years attending in out patient department in Kanti Children Hospital.

### **1.3 Statement of the Problem:**

Mouth is one of the vital parts of the human being. Healthy mouth shows the men's personality. Oral health is most neglected problem in Nepal. The most prevalent oral and dental problem in Nepal today are due to periodontal disease and dental caries which is increasing at an alarming rate. But the majority of the rural population in the country is forced to turn to the dubious services of unqualified, traditional dental practitioners.

Dental caries and periodontal disease are highly preventable among school children because it is a major oral problem with different contributing factors (such as brushing teeth with proper technique, flossing, rinsing, dietary habit, etc) if dealt seriously can be well prevented. So, that I'm interested to choose this topic for research.

### **1.4 Rational of the Study:**

Oral health has been one of the most neglected problems in Nepal. Dental caries among rates among the highest of all the oral health problems, and yet the general population has so little concern for it. Since tolerance level of the people in the country is quite high, people may not take health services until the disease is quite severe and that stage it becomes virtually impossible for the health personnel to treat (Dr. Joshi H. and Bhattarai P. 1996).

In Nepal an epidemiological study on oral health has not been conducted at a national level. Only random survey on oral disease and fluoride ion content in drinking water has been carried out time to time. Nepal with the dentist population ration of 1:200000 has no school of training either for dental surgeon or dental auxiliaries. There is a total of about 80% qualified dental surgeon are concentrated in the capital or some other urban areas, whereas two third of total population belong to rural areas, for them dental awareness and treatment is far more treatment.

A series of cross sectional surveys conducted on school children by the United Mission to Nepal Oral Health Programme between the period of 1999 and 2000 in central and western Nepal shows that the Caries prevalence and mean dmft score of 5 - 6 year - olds (n=2177) was 67% and 3.2 while the caries prevalence and mean dmft score of 12 - 13 years - old (n=3323) was 41% and 1.1 (urban 35% 0.9; rural 54% 1.5). Another series of cross sectional surveys by Petersen, Mohr and Geddes reveals very similar data for 5 - 6 years - olds (dmft=3.3, prevalence of caries = 65%) and 12 - 13 years - old ( dmft=0.9,

prevalence of caries=33%). Analysis of data collected from cross sectional surveys over the last DMFT in Nepal is doubling almost every ten years since 1977 (Mc. Donald, M. Dental caries in Nepal A 10-year comparison, Journal of the Nepal Dental Association 1999 2(1) 1.5)

Record of Kanti Children Hospital total OPD patients in 2059 from Baishakh to Chaitra shows that total attending patients were 113,777 out of them 3476 patients have found dental problem.

Lack of awareness, poor oral hygiene and excessive intake of sweets contribute to the high prevalence and severity of poor oral health. The non-availability of appropriate dental service is an important contributing factor. Oral hygiene could be maintained by providing adequate health information. It is a major tool for preventing oral problems/diseases. Because mouth is an important organ of the human being, therefore oral hygiene is an important aspect of the human being. Parents' knowledge and attitude affects how effectively they maintain the oral hygiene of their children. Lack of knowledge and negative attitudes about oral hygiene was the most frequently cited barrier to good oral hygiene. So researcher wants to explore the knowledge and attitude of the parents' about oral hygiene.

### **1.5 Significance of the Study**

An emerging health problem amongst the child population in Nepal is dental caries. The number of dental problem among preschooler is tooth decay and the best method of preventive cure for the child is to develop good dental hygiene habits at an early age (The continuum of care 1998). Poor oral health and dental disease often continue into adulthood with the potential to affect speech, nutrition, economic productivity and quality of life (JAMA 2000; 284 (20)).

This small-scale study will identify the parent's knowledge and attitude towards oral hygiene and will help the parents to learn more knowledge about oral problem and their responsibilities are maintaining and preventing oral problem of their children, which are vital role of the parents.

### **1.6 Objectives of the study:**

#### **a. General Objective:**

To identify parent's knowledge and attitude towards oral hygiene among their children.

#### **b. Specific Objective:**

- To identify the oral health of their children
- To find out cleaning materials which they provide their children
- To find out food habit of their children
- To describe about oral hygiene to the parents as well as children through written information.

### **1.7 Hypothesis:**

- Literate, Urban, and High economic status parent will more conscious towards oral hygiene among their children.
- Dental problem will be seen in those children who have take excessive sweets.

### **1.8 Variables:**

#### **• Dependent Variables**

Parents' knowledge and attitude regarding oral hygiene among their children

• **Independent Variables**

- \* Education
- \* Occupation
- \* Economic Status
- \* Geographical area
- \* Multimedia

**1.9 Operational Definition:**

**Knowledge:**

In this study, knowledge refers exploration of parents' view about oral hygiene.

**Attitude:**

Attitude refers to the way of feeling or reaction of parents' about oral hygiene among their children.

**Parents:**

Either mother or father who attends in OPD in Kanti Children Hospital with their children.

**Oral hygiene:**

The proper care of mouth and teeth including tongue, lips and gum. Or, Condition or practice of maintaining the tissues and structure of the mouth.

**Sweets:**

It refers sugar-containing substances. e.g. Chocolate, ice-cream, etc.

**Clean mouth:**

Refers absence of crack lips, ulcers, and gum bleeding/swelling.

**Dirty mouth:**

Refers presence of any one of crack lips, ulcers gum bleeding/swelling.

**High economic status:**

Family who has an income of more than Rs.9000 p/m can meet their cost of living sufficiently.

**Low economic status:**

That family who has an income below Rs.3000 to Rs. 9000 per month cannot meet their cost of living adequately.

**Excessive sweet consume:**

Those children who take sweets two to four times per week or daily has more chance to cause dental caries.

**Less sweet consume:**

Those children who consumed sweets one to two times per week or occasionally has less chance to cause dental caries.

Parent's Knowledge And Attitude Towards Oral Hygiene Among Their Children

**More conscious:**

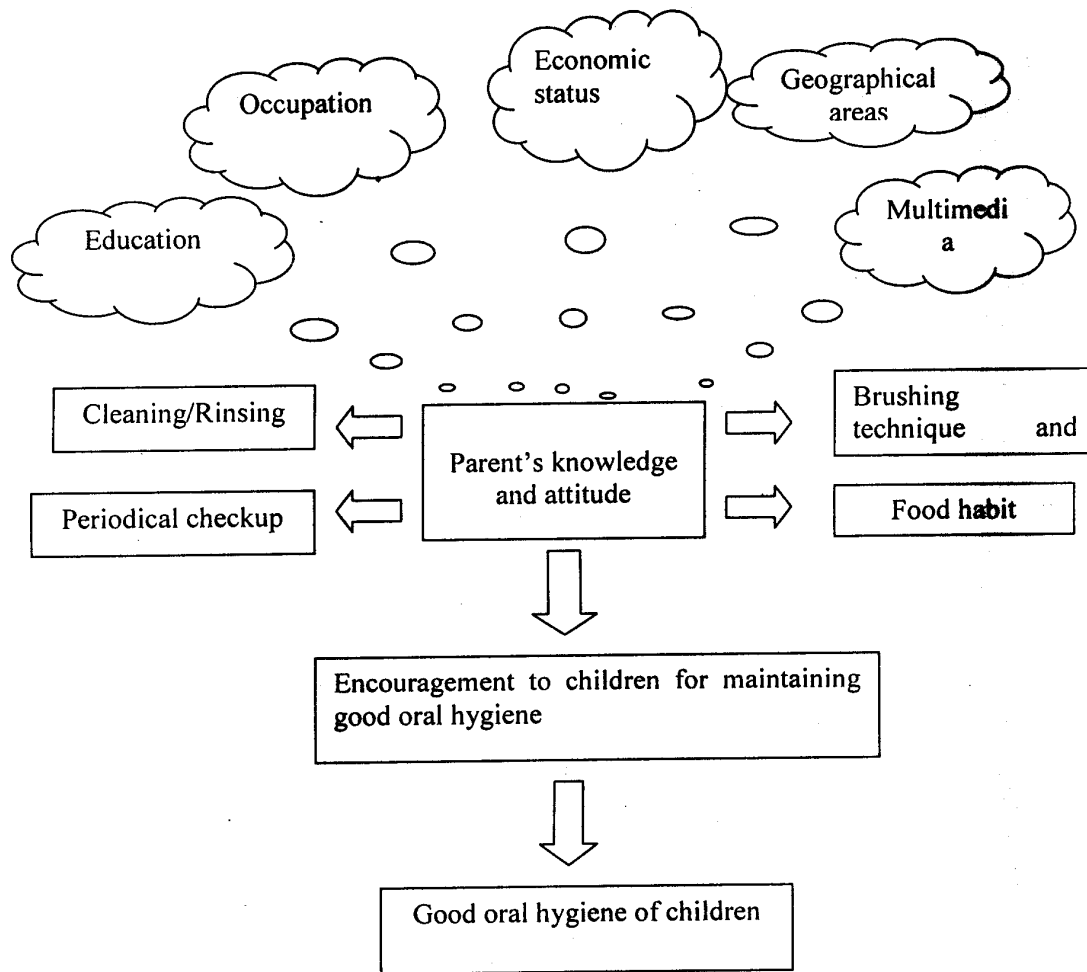
It refers age of starting in maintaining oral hygiene, time of brushing in a day, regular check-up system with dentist and cleaning/rinsing mouth of children after taking meal.

**1.10 Limitation of the Study**

- a) The study was limited to 50 parents with their 5-14 yrs children
- b) The study was limited to out patient dept. in Kanti Children Hospital
- c) Duration of data collection was limited only for 5 weeks
- d) Interview was carried out with parents who had given verbal consent for interview.

**1.11 Conceptual Framework:**

A conceptual framework is a theoretical model that the researcher has developed to show relationship between construct and or concept for that particular study. Here the conceptual framework is prepared to visualize the variables and their relationship, which affects the knowledge and attitude of parents' regarding maintenance of oral hygiene and prevention of oral problems among their children.





## CHAPTER - II

### 2. Literature Review

#### 2.1. Literature Review:

Review of literature is concerned with review of related literature which could be both in research and non-research area, books, article reports, journals, documents and some abstracts received from med line and internet search.

- a) **According to Andrew I, Rugg Gunn (1998)**, Dental health is intimately related to nutrition and diet and a through understanding of these relationship and the preservation of health is an integral part of dental practice, the focus of modern dentistry is shifting from the filling and extracting of teeth towards prevention of dental decay and disease.
- b) **According to Brunner and Suddharth (1988)**, Oral hygiene is an effective measure to prevent dental caries and periodontal disease. Client should be reminded to brush twice daily with a soft bristled toothbrush and floss after each brushing.
- c) **Christensen & Kockrow (1999)**, Oral hygiene helps maintain a healthy state of mouth, teeth, gums, and lips. Brushing the teeth removes food particles, plaque, and bacteria, massage the gums and relieves discomfort resulting from unpleasant odors and tastes. Complete oral hygiene gives a sense of well-being and thus can stimulate appetite. Proper care will prevent oral diseases such as gingivitis or periodontitis and tooth destruction. Certain people are at risk for oral disorders because of lack of knowledge about oral hygiene and inability to perform oral care, or an alteration in the integrity of teeth and mucous resulting from disease or treatments.
- d) **According to C.H. Chu, D. S. H. Fung and ECM Lo.(1999)**, 658 preschool children aged 4 to 6 years randomly selected kindergartens in Hong Kong to identify the dental caries status. As a result, caries experience as measured by the mean numbers of decayed, missing and filled primary teeth (DMFT) of the 4 – 5, and 6 years old children were found to be 0.9, 1.8 and 3.3 respectively. Overall, 61% of the children had zero DMFT score. Statistically significant correlations were found between the children's dental caries status and their oral health practice as well as their socio-economic background. Parent's education level, dental knowledge and attitude were also associated with the children's dental caries experience.
- e) **According to David Werner**, a healthy tooth is a living part of the body. It is connected by lifeline of blood and nerve to a person's heart and brain. To separate the tooth from the body, or even to interrupt those 'life-lines' means death to the tooth. It also means pain and injury to the body, to the person.
- f) **Eleanor Dumont Thompson**, Good dental health is essential to the growing child. Attractive healthy teeth promote self-esteem and contribute to physical well-being. Prevention of dental problem consists of good nutrition, proper brushing and flossing of the teeth, fluoridation of drinking water or fluoride supplement and regular dental care. Recent trends in the field of oral health suggest caring for the teeth as soon as they start to develop. Because the deciduous teeth are important for the proper formation of the permanent teeth and should not be neglected.

- g) **English Oral Health Strategy States**, "Oral health is a standard of health of oral and related tissues which enables and individual to eat, speak and socialize without active disease, discomfort or embarrassment and which contributes to general well beings." The use of quality of life measures in oral health assessment is now being promoted by dental professionals". An example of an oral health quality of life measure is the SOHSI (Subjective Oral Health Status Indicators).
- h) **Fitzsimons D Dwyer JT, etals.** Good oral health care and nutrition during pregnancy, infancy, and childhood are essential but often overlooked after in the growth and development of the teeth and oral cavity. Pregnant women and parents and care givers of infant and children often receive little guidance about proper preventive dental and oral health care, including fluoride and dietary measures. Pregnant women can maintain their health through proper diet and good oral hygiene and appropriate use of fluoride. An adequate diet during gestation is important for optimal oral development of the fitters. To promote good oral health in infancy and care givers and need to provide the infant with appropriate amount of fluoride in addition to a healthful diet. As the teeth erupt into the mouth, the caregiver needs the clean teeth thoroughly on a daily basis. When solid foods are introduced in later infancy, it is also important to limit the frequency of caries promoting fermentable carbohydrates between meals. Good oral hygiene habits and dietary practices that emphasize minimum exposure to retentive balanced diet should continue through out to set the stage for optimal oral health for a lifetime.
- i) **According to Helen Phtiaka (1999)**, the parents of today's society have very important roles to carry out. Today the traditional family has given way to contemporary family and this has brought new changes that enforce the fact that parents must be better equipped for their role. The knowledge and skill, which were accomplished in the not too far off past, have today been put aside.
- j) **J. E. Park (1998)**, Dental Care or broadly speaking oral hygiene is an important aspect of personal health of an individual. Good Oral hygiene implies sound teeth and healthy gums with healthy surrounding tissues. The physical act of chewing food promotes saliva and gastric secretions and helps in digestion. The act of chewing and tasting is called mastication. It gives pleasurable and therefore emotional satisfaction of eating foods. Teeth are essential not only for mastication of food, but also for good appearance and clear speech. There is evidence that improvement of oral hygiene does improve the general health. The two most common dental ailments, through out the world, are dental caries (tooth decay) and periodontal disease (gum disease or pyorrhea). The term halitosis is used for bad breath. Halitosis is due to tonsillitis and infection of nose and throat. This condition is quite common in India, and often begins in early childhood. Dental diseases in children often continue into adult life.
- k) **According to Jennifer A. Schwartz**, Oral hygiene is the best means of prevention of cavities (dental caries), gingivitis, periodontitis and other dental disorders. It also helps to prevent bad breath (holitosis). Oral hygiene is necessary for all people to maintain the health of their teeth and mouth. Healthy teeth have fewer cavities. They are clean and have minimal or no plaque deposits. Healthy gums are pink and firm. Oral hygiene consists of both personal and professional care. Dental x-ray may be performed as part of routine professional examination.

**Personal Care:** Careful brushing and flossing help to prevent build-up of plaque and cal culets (tar tar). The teeth should be brushed at least twice daily and flossed at least once per day. For some people brushing and flossing may be recommended after every meal and at bedtime. Special appliance (but not to replace) tooth brushing and flossing. These include special toothpicks, toothbrushes, water irrigation or other devices. Fluoride containing or anti-plaque (tartar control) toothpastes or mouth rinses may be recommended by the dentist or dental hygienist.

**Professional Care:** Regular tooth cleaning by the dentist or dental hygienist is important to remove plaque that may develop even with careful brushing and flossing, especially in areas that are difficult for a patient to reach on his own at home. Professional cleaning includes scaling and polishing. This involves the use of various instruments or devices to loosen and remove deposits from the teeth. Many dentists recommend having the teeth professionally cleaned every 6 months. More frequent cleaning and examination may be necessary during the treatment of many of the dental/oral disorders. Routine examination of the teeth is recommended at least every year. This may include yearly, select dental X-rays.

**l) N.J. Williams et.als, (2002),**

The National Survey of children's dental health in 1995/96 found that the mean number of 3.3 to 1.6 between 1973 and 1983 but there was no change between 1983 and 1993. The distribution of caries has altered quite considerably overtime. An analysis of the factors associated with oral health and oral health related quality of life in the United States, unsurprisingly discovered that no one single factor could be said to represent oral health. Although ethnicity, education, age dental attendance and socio-demographic and economic variables were all related, it was only when multi-dimensional measures were used that oral health could be conceptualized.

**m) Peris Marry Hamilton (1978), Dental health**

Health of mouth and teeth is of utmost importance to the growing child. It affects his whole emotional, social, and physical well being. Like all other areas of health, prevention is of greater value than cure. Dental health can be promoted by good nutrition and eating habits, oral hygiene, fluoridation of the drinking water and topical application of fluoride to the teeth and regular dental examination and care. Oral hygiene is closely associated with eating habits. It includes all measures that will promote health in the mouth and teeth. Keeping the teeth clean and free from bacteria that would eat away the enamel is an important part of oral hygiene. Regular brushing of teeth and flossing between them should begin early in the child's experience successful hand brushing can be accomplished by using a circular, vigorous stroke. If the child is not able to do this for himself, the parents see that the teeth are brushed properly.

No matter how many teeth a child may or may not have, mouth care should not be ignored. Oral hygiene includes care of teeth gums, mucous cheek lining, tongue, and lips. It should be always be appropriate to the needs of the child.

**n) Prospectus People Dental College and Hospital (059),**

Since dental health is directly related to general health, good dental health enhances personality and confidence in social life where as poor dental condition is social life where as poor dental condition leads to bad health of productive people, who are the

main agents for uplifting the economic condition of the country. In Nepal, there are less than 20 post graduates and 200 BDS graduate doctors out of the total population of 28 million, that is, one dental graduate has to serve two hundred thousand people where as the international norm is one doctor for found thousand people.

**o) According to Ruth Freeman,**

**The concept of dental health career**

Dental health attitudes and behaviours develop and change with age and lifestyle as for any other aspect of health. Therefore a dental health careers also exists. In truth a dental health career, tracks the development of health attitudes from birth through adolescence to adulthood.

**The dental health career:**

These are three categories of socialization:

**Primary Socialization**

In childhood the most important influences upon dental health attitudes and behaviours are those gleaned from parents and family. The parent by caring for child's bodily and dental health shows and teaches the young child how to take care of herself. It is important to emphasize that small children do not necessarily want their faces washed or teeth cleaned and the parent must do this for them. Gradually as the child's manual dexterity develops the child will brush her teeth and wash her face as it was done previously be the parents.

**Secondary Socialization**

As time progresses the child will start school. At school other influences – teachers and friends and so forth – will shape the child's dental health attitude and behaviours. As the child makes attachments outside the family with parental substitutes such as teacher and their peers – another, similar process of emotional identification occurs.

**Tertiary Socialization**

In adulthood, psycho- social factors serve to sustain a pressure on individuals which affect their dental health. Tertiary Socialization does not necessarily occur, in the natural order of thing, but may be imposed upon the individual outside agencies.

**p) According to Salma S.**

The concept of Dental Health under the theme, "Health for all by 2000 A.D.", is a significant issue among human beings because 95% of all human beings have one or other dental problem at least once in their life. Among them a major proportion comes from the pediatric population. Approximately, 35% of pediatric population visit the dentist yearly, among whom most of them after the occurrence of any dental problem. "Prevention is better than cure". How far is it applicable in dental health? If we are conscious and knowledgeable about the dental health many of the problems can be prevented. Having healthy teeth with normal size, shape and color adds to the beauty of the individual.

**Care of teeth:**

Care start from the first sucking at the breast because it helps for the proper development of the gum. This continues during the eruption of first teeth. This can be done by wiping them gently with a clear soft cloth. By the time the child is 2 years old, begin to teach him proper use of tooth brush. The head of the tooth brush is placed along the outer surface of the upper and lower teeth, with the bristle tips at about 45 degree angle against gum – line. The brush is moved back and forth with

short or half a tooth brush wide strokes in a gentle scrubbing movement. The same method is used to cleanse the inside surface of the upper and lower teeth and the chewing surfaces. The most important time to brush the teeth is just before retiring to bed and soon after getting up, but if they are brushed also after each meal, it is still better.

Generally, children younger than 5 years of age do not have the manual dexterity necessary for brushing the teeth, therefore parents should supplement special attention be directed to the child's oral hygiene during the mixed dentition period. By the age of 7 years, the child is capable of assuming responsibility for dental care. Dental health should not be neglected during adolescence, although the rate of caries formation is not as great as it was in childhood.

**Prevention of oral/dental problems:**

- Brushing the teeth after each meal, soon after getting up and before retiring to bed.
- An adequate well balanced varied diet that promotes dental health. Liberal use of low cariogenic diet and limitations in the use of cariogenic diets.
- Tooth brushing or rinsing the mouth after taking sweetened medication.
- Supplemental fluoride should be used when the water supply does not contain fluoride. The recommended amount is 1.0 mg per day, for the child over 6 years of age, fluoride mouth wash once a day is used.
- Dental checkup at least twice a year
- The school system should incorporate a dental health educational program to the curriculum.
- Teacher should be well oriented about dental health.
- Incorporation of chewable item in the diet.

**q) According to Sheiham A, etal,**

Dental health status can affect diet, nutrition and health by changes in the type of food eaten. Tooth loss has been associated with changes in food preference and nutritional deficiency.

**r) S. Bresciano (003),**

Proper oral care is the key to healthy for the general well being of every one. Taking care of ones teeth and gums is a smart investment, moreover the natural dentition will always be the best "instrument" to chew, speak and smile. The major problem is the low level of social education to a proper oral hygiene and nutrition. In fact maintaining good dental health is surprisingly simple, cheap and every one can keep his teeth for a lifetime.

**s) Suiter and Crowley (1984),**

Frequent; through mouth care helps maintain the integrity of the oral tissue, partly because it helps to prevent complications such as parotitis (inflammation of parotid glands) by helping to maintain the normal functions of the salivary glands. If mouth care is carried out before, after, and between meals, its beneficial effects may result in more adequate food intake since eating will be more pleasurable.

**t) WHO Prevention of Oral disease (1987),**

Oral health problems arise mainly as a result of two oral disease: dental caries and periodontal disease is changing it means true that virtually every adult in the work has

experience of either dental caries or periodontal disease or both. Satisfactory oral health is difficult to achieve through the developing world not only because of the lack of preventive programs and complementary dental services and short age of manpower and other resources.

**u) Whalley and Wong (1985),\**

Oral hygiene should be start and maintain from childhood. The importance of oral hygiene is preserving the teeth and maintaining healthy gums cannot be over emphasized or begun to early. Dental cares begin as soon as the first tooth erupts by wiping its surface with a cloth.

**v) A situational analysis of Nepali school children's oral health showed,**

There is a paucity of available data on the epidemiology of oral diseases in Nepal. A National Pathfinder survey is planned for 2003/2004 to gather baseline information on oral health status; Oral health knowledge, attitude and health behavior, perceived needs, impact of oral disease on the quality of life for all index age groups.

**Dental Caries**

**Dental Caries in 5-6 year old school children:**

Statistics on 5 – year old dmft are scarce but suggest an epidemic of caries in young children. Most children age 6-7 years in Nepal have the equivalent dentition of 5-6 year olds in developed countries because of delayed eruption of the teeth due to malnutrition (Alvarez, etal, 1990; Alvarez, 1995)

A series of cross-sectional surveys at 10 sites in central and western Nepal revealed caries prevalence of 67% and mean dmft of 3.3 among 5-6 years old school children (n=2,177) (Yee and Mc. Donald, 2002). A lower dmft was observed in females (mean dmft of 2.9) compared to a mean dmft of 3.7 in males, which was statistically significant ( $P < 0.001$ ). The mean dmft of children in the urban and rural setting was 3.0 and 4.1 respectively, which was statistically significant ( $P < 0.001$ ). The unmet treatment needs, expressed as a ratio of the proportion of the mean decayed teeth (d) of the population to the mean dmft of population was virtually 100% which makes untreated dental caries in young children in Nepal more prevalent than malnutrition (53%) and Vitamin A deficiency (58%) (Ministry of Health, 2000).

A survey of 600 5-6 year old school children in the District of Sunsari in 2001 (Koirala, etal, 2003) showed caries prevalence and mean dmft score of 52% and 1.99. Since access to dental services is extremely limited most of the carious teeth were untreated. Thirty six percent of the treatment required could be met through one surface restorations, 33% through two or more surface restorations and 18% through extraction. The prevalence of dental caries in the 5-6 year old age group is higher than the WHO global goal of 50% caries free by the year 2000.

**Dental Caries in 12-13 year old school children:**

In 1994 a survey using WHO Pathfinder methodology, revealed that 36% Nepalese 12-years old were affected by dental caries and the 12-years old DMFT was 0.91(Milsom,etal, 1997).

A district-wide survey of 12-13 years old school children (n=600) in urban and rural school in Sunsari district revealed a low caries prevalence of 24% and mean DMFT score of 0.49 (Koirala, et al., 2003).

The unmet treatment needs of the population of 12-13 years old, expressed as a ratio of the proportion of the mean decayed teeth (D) of to the mean DMFT, is virtually 100% in Nepal. It has been estimated that 98% of the caries on the permanent dentition occur as occlusal caries (Yee, 1999, P.49).

#### **Risk factors for dental caries**

The high dmft's reported may be indicative of a trend towards higher caries in urban population due to increased sugar in the diet (Mc. Donald, 1996), lack of oral hygiene and lack of fluoridation.

After salt and cooking oil, sugar is the third most consumed food item (Micronutrient Initiative, South Asia Region, Nepal Program, 1998; 2000). Approximately 33% of children consume sugar at least 5 times a week. Another 17% of children consume sugar 1-4 times a week. 30% of pre-school children consume sugar. Average consumption is 27 grams per day of children.

Malnutrition also has an effect on oral health of children in Nepal. Maternal hyperthyroidism due to vitamin D deficiency (Purvis, 1973), low birth weight (Fearne, et al, 1990), foetal under nutrition, and limited breast feeding were significantly associated with the occurrence of enamel defects in children's teeth (Li, et al, 1995). Malnutrition of children can also delay tooth development and result in increased caries prevalence of both deciduous and permanent teeth later in life (Alvarez, et al, 1990; Alvarez, 1995).

#### **Dental caries and Oral Hygiene**

No national figures are available concerning the use of toothbrushes. The minimum cost of a good toothbrush is NRs. 5. When available most dwellers and many rural citizens use a toothbrush at least once a day, usually before breakfast. Hindus believe that body cleanliness and oral cleanliness is a necessity before early morning worship. Rinsing of the mouth after meals is customary.

Brushing of young children's teeth by mothers in villages is not a frequent habit. Parents often perceive the primary dentition of children to be unimportant since they will be replaced eventually by permanent teeth.

**Cross-sectional surveys** of mostly urban school children age 8 to 14 years (n=5974) reveals that 61% brush before breakfast only, 24% before breakfast and going to bed, 10% twice after meals, 4% once before bed and 1% did not brush (United Mission to Nepal Oral Health Program, unpublished report). Eighty one percent reported using a toothbrush, 14% the use of their fingers, 3% datiwani and 2% a brush only. With the fluoridation of 90% of the toothpaste sold in Nepal in 2002, currently 71% of the children surveyed reported using a fluoridated tooth paste, 12% use Dabar (red powder), 5% don't use a toothpaste and 8% use something else. Frequency of brushing and use of fluoridated toothpaste is expected to be less in the rural population.

## **2.2 Summary of Literature**

Oral Hygiene is an effective measure to prevent dental caries and periodontal disease, because children are the future citizens of the country. Oral hygiene helps maintain a healthy state of mouth, teeth, gums and relieves discomfort resulting from unpleasant odors and tastes.

If mouth care is carried out before, after and between meals, its beneficial effects may result in more adequate food intake since eating will be more pleasurable. Oral hygiene is necessary for all persons to maintain the health of their teeth and mouth. Dental health status can affect diet, nutrition and health by changes in the type of food eaten.



## CHAPTER –III

### 3. Research Methodology

#### 3.1 Study Design

The design of the study was cross sectional analytical to identify parent's knowledge and attitude towards oral hygiene among their children age between 5 years to 14 years.

#### 3.2 Study population

In this study the population was consist parent with their children age between 5 years 14 years attending in out patient department in Kanti Children hospital.

#### 3.3 Sample Size.

Total fifty parents were taken attending with their children age between 5 years to 14 years in general out patient department in Kanti children hospital.

#### 3.4 Sampling Method

The non-probability purposive sampling technique was taken in this study for data collection.

#### 3.5 Area of the Study

General Out Patient Department in Kanti Children Hospital, Maharajgunj, Kathmandu. This hospital is the center hospital of Nepal for children. Since all the people from rural and urban bring their children for check- up and treatment here , so it is the focus of the study site.

#### 3.6 Data collection Instrument

A semi- structured questionnaire was used for interview for collecting necessary information in this study.

#### 3.7 Validity and Reliability

- a. To maintain the validity and reliability of the tool , related literature was reviewed.
- b. Consultant teacher or advisor was checked the prepared instrument .
- c. The concerned teacher if necessary was modified questionnaire.
- d. To maintain the reliability and validity , pre-test of questionnaire was used.

#### 3.8 Pre-testing Instrument

Pre-test was done before actual data in the same hospital with five parents with their children age between 5 years to 14 years attending in out patient department . The main purpose of the pre-test is to test the clarity and feasibility of the tool, and the adequacy of measuring instruments. Some changes and modification was done in instruments.

#### 3.9 Ethical Consideration

- a. Before conducting the research ,permission was taken from the authority of institute (Kanti Children Hospital )
- b. Before starting interview greeting the parents and introducing each other was taken.
- c. Before starting interview , the respondents was briefed about the purpose of the study.
- d. Verbal consent of the respondents was taken before interview.
- e. They were assured that the information will be used for the study only.
- f. Privacy and confidentiality of all respondents was maintained.

### **3.10 Data Collection Procedure**

Data collection was done by face to face interview technique using Nepali version of questionnaire. Before data collection permission was taken from the authority and respondents. Brief explanation about the study was given to maintain the confidentiality of the respondents.

### **3.11 Measure to Reduce Bias**

To minimize biases instruments was prepared in orderly manner by avoiding clues. Subjects were included without any discrimination . Collected all data with a great care with minimize subject biases by the researcher herself.

### **3.12 Data Analysis**

All collected data was analyzed and categorized on the basis of research objectives and hypothesis by using simple statistical methods as table, graph and pie-charts.

## CHAPTER - IV

### 4. Data Analysis and Interpretation

This study was conducted in fifty parents attending with their children age between 5 years to 14 years in general out patient department in Kanti Children Hospital, Maharajgunj, to find out the knowledge and attitude towards oral hygiene among their children. They were asked several questions regarding demographic information and knowledge and attitude of oral hygiene among their children.

Data analysis and interpretation was done in relation to objectives and hypothesis of the study. After collecting data, they were arranged and analyzed through quantitative form. The quantitative data was expressed in number, percent and  $\chi^2$  test form. The results are presented in different tables, diagrams and pie-charts.

The data analysis consists of five main parts.

Section A : Demographic Information of Respondents (Parents)

Section B : Observation of Children's Oral Cavity

Section C : Parents Knowledge and Attitude towards Oral Hygiene Among Their Children

Section D : Literate, Urban and High economic status parents will be more conscious towards Oral hygiene among their children.

Section E : Dental Problem between excessive and low sweets/chocolate consuming children.

**Section A: 4. Demographic Information of Respondents**

**Table No.4.1** Distribution of respondent's According to Demographic Information

<b>Respondents</b>	<b>Number</b>	<b>Percent</b>
Father	18	36%
Mother	32	64%
Total	50	100%
<b>Address</b>		
Rural	14	28%
Urban	36	72%
Total	50	100%
<b>Caste</b>		
Brahmin	16	32%
Chhetri	12	24%
Newar	9	18%
Others	13	26%
Total	50	100%
<b>Religion</b>		
Hindu	45	90%
Buddhist	4	8%
Others	1	2%
Total	50	100%
<b>Family Structure</b>		
Single	28	56%
Joint	22	44%
Total	50	100%
<b>Education Status</b>		
Illiterate	7	14%
Literate: Primary Level	12	24%
: Lower Secondary	13	26%
: Secondary	9	18%
: Higher Secondary	9	18%
Total	50	100%
<b>Occupation</b>		
Agriculture	5	10%
Business	17	34%
Service	5	10%
Housewives	22	44%
Others	1	2%
Total	50	100%
<b>Economic Status</b>		
< Rs. 3000/month	10	20%
Rs. 3000-6000/month	21	42%
Rs. 6000-9000/month	9	18%
>Rs. 9000/month	10	20%
Total	50	100%

The above table shows that the majority of the respondents 32 (64%) were mother and 18 (36%) were father. Majority of respondents 36(72%) were come from urban where as 14( 28%) were from rural. Regarding caste , majority of respondents 16(32%) were Brahmin. Regarding religion, majority of respondents 45 (90%) were Hindu. Majority of 28 (56%) were from single and 22(44%) were from joint family. Regarding education status, majority of respondents 13 (26%) were from lower secondary. In relation to occupation, majority of respondents were housewives. Regarding economic status, majority of respondents 21 (42%) were earning Rs. 3000-6000/month.

**Section B .a: 4.2 Observation of Oral Cavity of Children**

**Table No. a. 4.2.1** Distribution of children's oral health

General appearance of oral health	Number	Percent
Clean	45	90%
Dirty	5	10%
Total	50	100%

The above table shows that majority 45(90%) of children's oral health were clean .

All children's gum condition were normal.

**Table No. a.4.2.2** Distribution of children's regarding condition of teeth on observation

Condition of teeth	Number	Percent
Normal	16	32%
Loose teeth	7	14%
Caries teeth	19	38%
Plaque	2	4%
Black	1	2%
Loose and caries	5	10%
Total	50	100%

The above table shows that the majority 19(38%)of children's teeth was caries and minority 1(2%)of teeth was black.

**Table No.a.4.2.3** Distribution of children's regarding condition of cheek and lip on observation

Condition of cheek and lip	Number	Percent
Normal	45	90%
Ulceration	4	8%
Crack	1	2%
Total	50	100%

The above table shows that majority of 45 (90%) children's cheek and lip conditions was normal.

**Section C : Parent's Knowledge and Attitude Towards Oral Hygiene Among their Children**

**4.3. Analysis of Data Related to Oral Hygiene**

**Table No. 4.3.1 Meaning of oral hygiene**

Responses	Number	Percent
Cleanliness of mouth	1	2%
Cleanliness of gum, teeth and tongue	46	92%
Cleanliness of face	2	4%
All of above	1	2%
Total	50	100%

The above table shows that majority 46 (92%) of respondents were answered oral hygiene means cleanliness of teeth, gum and tongue and minority 1 (2%) of respondent was answered all of above.

All of the respondents (100%) were thought that child's mouth should be kept clean.

**Table No.4.3.2 Reason for keeping child's mouth clean**

Responses of respondents	Number	Percent
To keep oral cavity healthy	32	64%
To feel fresh	2	4%
To look clean	8	16%
All of above	1	2%
To keep oral cavity healthy and look clean	7	14%
Total	50	100%

The above table shows that majority 32 (64%) of respondent's were gave reason for keeping mouth clean to keep oral cavity healthy.

All of respondents (100%) were assist their children for maintaining oral hygiene.

**Table No. 4.3.3 Reason for maintaining oral hygiene**

Responses of respondents	Number	Percent
To keep mouth, teeth, gum lean	20	40%
To prevent bad breathing	10	20%
To prevent oral problem	29	58%
All of above	1	2%
Total	50	100%

The above table shows that majority 29 (58%) of respondents were assisting their children for maintaining oral hygiene to prevent oral problem.

**Table No.4.3.4** Distribution of Respondent according to age of Starting Oral Hygiene of their children

Responses of respondents	Number	Percent
1 year to 3 years	17	34%
3 years to 5 years	28	56%
After 5 years	5	10%
Total	50	100%

The above table shows that majority 28 (56%) of respondents were started to maintain oral hygiene of their children at the age of 3 years to 5 years.

**Table No.4.3.5** Time schedule for brushing child's teeth

Responses	Number	Percent
Once a day, early in the morning	35	70%
Twice a day, early in the morning and before going to bed	13	26%
Irregular	2	4%
Total	50	100%

The above table shows that majority 35 (70%) of children are brushed their teeth once a day early in the morning.

**Table No. 4.3.6** Materials Used for Tooth Brush

Responses of respondents	Number	Percent
Tooth brush and tooth paste	49	98%
Ash, finger and man Jan	1	2%
Total	50	100%

The above table shows that majority 49(98%) of children were used tooth brush and tooth paste.

**Table No.4.3.7** Distribution of Type of Paste/Powder

Type of Paste/Powder	Number	Percent
Tooth paste	43	86%
Paste/Powder	4	8%
Ayurvedic tooth powder	2	4%
Powder/ash	1	2%
Total	50	100%

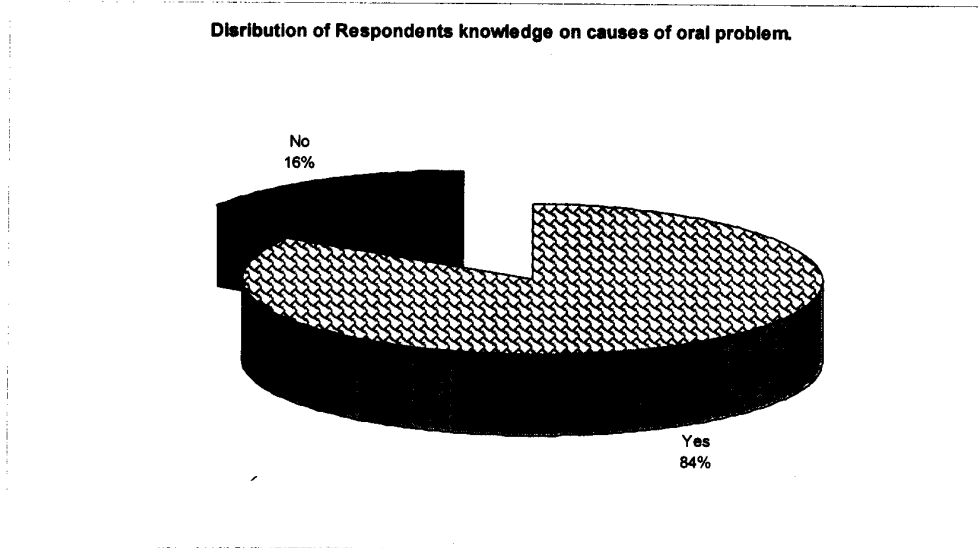
The above table shows the majority 43(86%) of children were used tooth paste.

**Table No.4.3.8** Distribution of Respondents regarding knowledge on oral problem

Responses of respondents	Number	Percent
Mouth stink	8	16%
Dental cries and gum bleeding	27	54%
Both	15	30%
Total	50	100%

The above table shows that the majority 27(54%) of respondents were said oral problem means dental caries and gum bleeding. It means they have proper knowledge about oral problem.

**Figure No 4.3.1**



The above pie chart shows that the majority 42(84%) of respondents know that the causes of oral problem.

**Table No.4.3.9** Distribution of Respondent's opinion about causes of oral problem

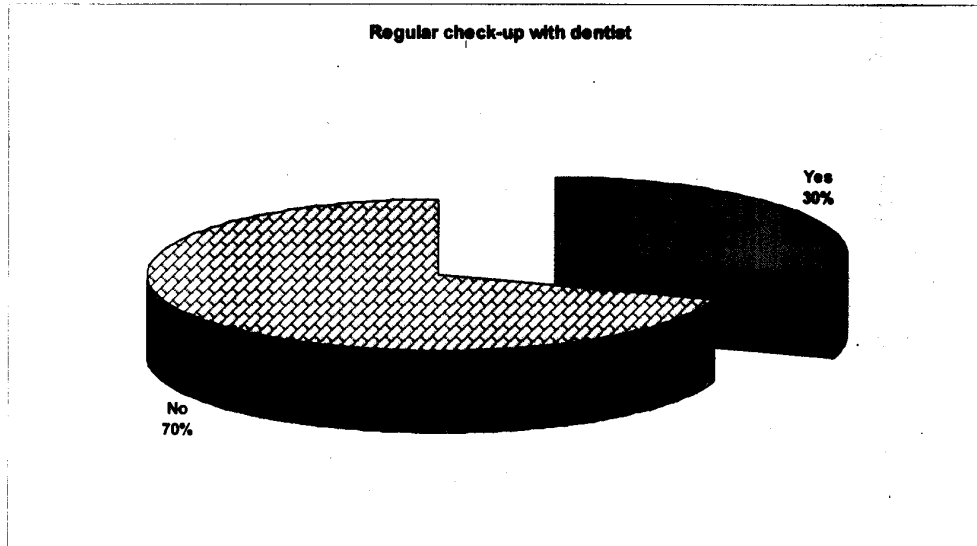
Respondent's opinion	Number	Percent
Having excessive sweet, ice-cream	20	47.6%
Brushing teeth and cleaning mouth carelessly	28	66.7%
Eating stale food	3	7.1%
Total #	51	121%

The above table shows that the majority of 28 (66.7%) respondents were said that the causes of oral problem is due to brushing teeth and cleaning mouth carelessly.

# There are multiple responses by respondents.



**Figure No.4.3.2**



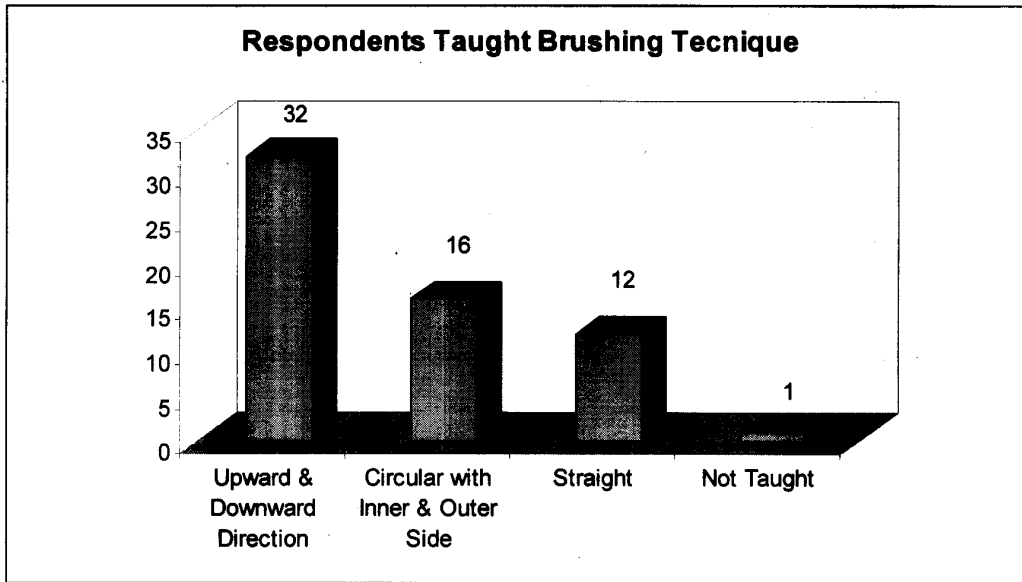
The above pie charts shows that the majority 35 (70%) of respondents **did not** take their children with dentist for regular dental check- up.

**Table No. 4.3.10** Time schedule for regular check-up with dentist

Time	Number	Percent
Once a year	1	6.7%
Twice a year	1	6.7%
As necessary	13	86%
Total	15	100%

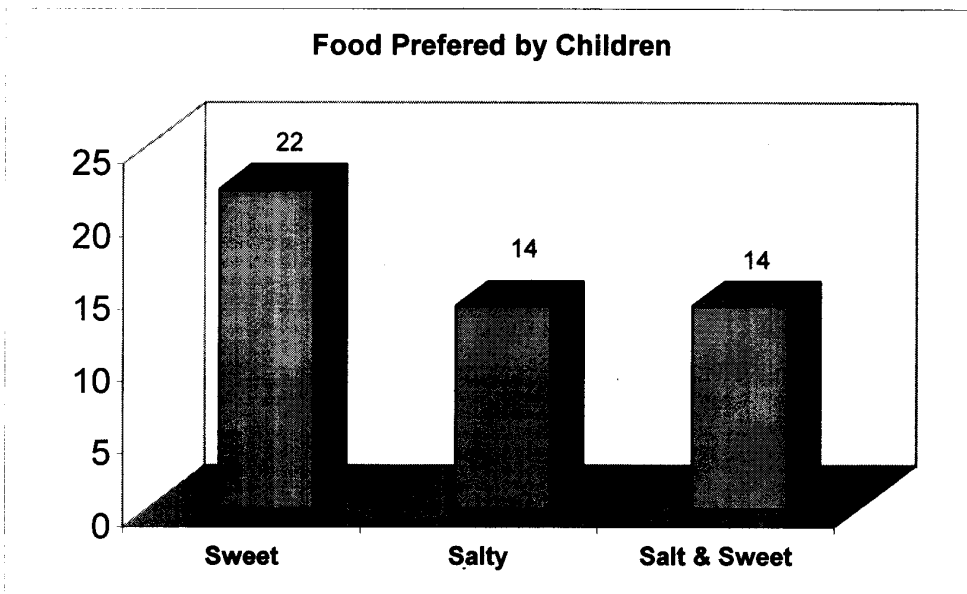
The above table shows that majority 13(86%) of respondents were took **their** children with dentist for regular dental check-up among 15 respondents. That means they **don't** have proper attitude towards oral hygiene

**FigureNo.4.3.3**



The above figure shows that the majority 32 (64%) of respondents were taught brushing technique upward and downward direction to their children.

**FigureNo.4.3.4**



The above figure shows that the majority 22 (44%) of children were prefer sweet containing food.

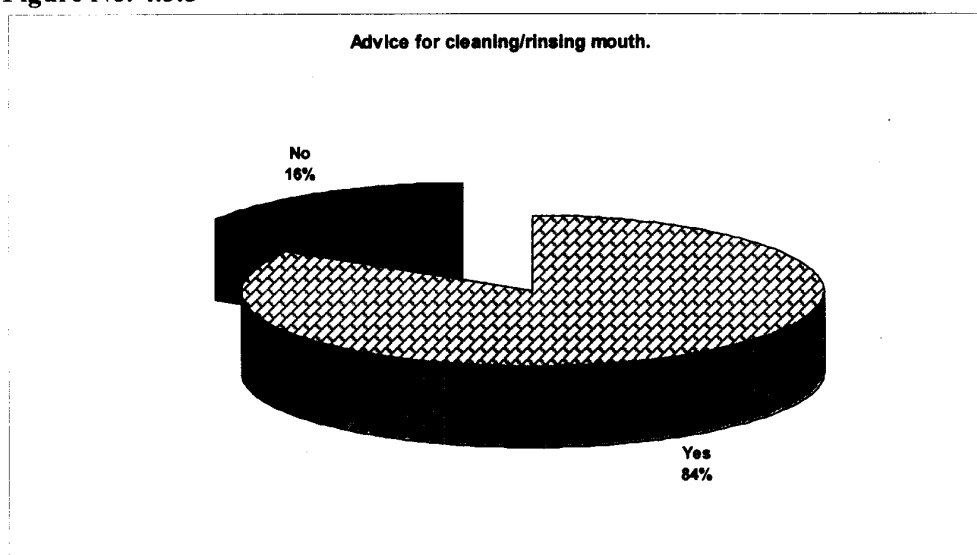
Most of children were took sweets/chocolates.

**Table No. 4.3.11** Distribution of respondent's children used sweets/ chocolate

Used sweets/ chocolate per week	Number	Percent
One to two times a week	5	10%
Three to four times a week	6	12%
Daily	15	30%
Occasionally	24	48%
Total	50	100%

The above table shows that the majority 24(48%) of children were took sweets/chocolate occasionally.

**Figure No. 4.3.5**



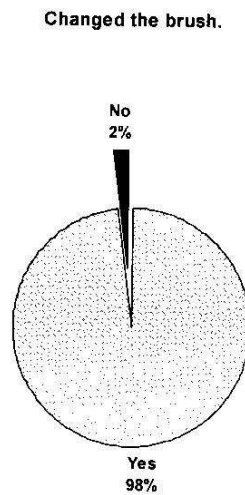
The above table shows that the majority 42(84%) of respondents advice their children for cleaning/rinsing their mouth after having meal.

**Table No. 4.3.12** Distribution of time for cleaning mouth

Responses	Number	Percent
After having each meal	14	33.3%
After taking lunch and dinner	27	64.3%
After taking each meal, sweets/chocolate	1	2.1%
Total	42	100%

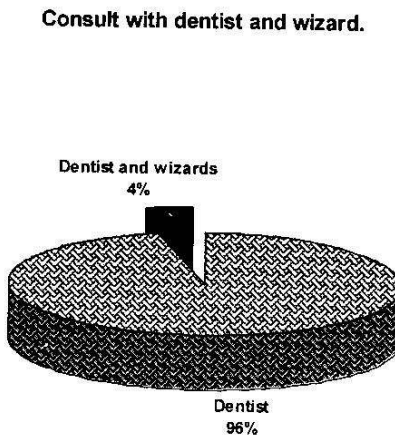
The above table shows that the majority 27(64.3%) of children were cleaning/rinsing their mouth after taking lunch and dinner among 42 respondents.

**Figure No.4.3.6**



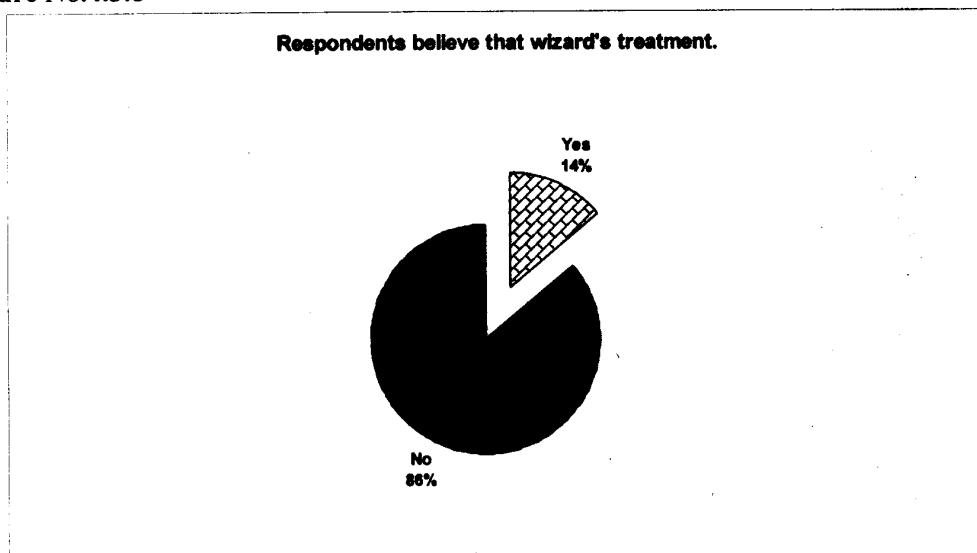
The above pie chart shows that the majority of 26 (52%) respondent's children were changed the brush after 2 month to 4 months.

**Figure No.4.3.7**



The above pie-chart shows that the majority 48(96%) of respondents were consult their children with dentist.

**Figure No.4.3.8**



The above figure shows that the majority 43 (86%) of did not believe that wizard's treatment.

**Table No.4.3.13** Distribution of respondents get information about oral hygiene

Respondents get Information	Number	Percent
Parents/senior	19	38%
Teacher	11	22%
Friends	2	4%
Radio/Television	16	32%
Health Institution/health personnel	5	10%
Self	7	14%
Total #	60#	120%#

The above table shows that the majority 19(38%) respondents got information through their parents/senior and minority 2(4%) got through friends.

# Multiple responses by respondents.

**Section: B.4.2.b Observation of children's Oral Cavity According to Geographical area, Education status and Economic status**

**Table No.b.4.2.1 Distribution of Children's general appearance of oral health**

Oral health of children	Address		$\chi^2$ Test	Education status		$\chi^2$ Test	Economic status		$\chi^2$ Test	
	Rural (n=14)	Urban (n=36)		Illiterate (n=7)	Literate (n=43)		Low (n=40)	High (n=10)		
	No. (%)	No. (%)		No. (%)	No. (%)		No. (%)	No. (%)		
Clean	13 (92.9%)	32 (88.9%)	P=1	7(100%)	38 (88.4%)	P=1	36(90%)	9(90%)	P=1	
Dirty	1(7.1%)	4 (11.1%)			5(11.6%)			4(10%)		1(10%)
Total	14 (100%)	36 (100%)			7(100%)		43 (100%)			40 (100%)

The above table shows that the majority of rural 13(92.9%), urban 32 (88.9%), illiterate 7 (100%), literate 38 (88.4%), low economic status 36 (90%), and high economic status 9(90%) children's oral health was clean. There is statistically not significance between those children's oral health

**Table No.b.4.2.2 Condition of teeth according to geographical area, education status and economic status**

Condition of teeth	Address		$\chi^2$ Test	Education Status		$\chi^2$ Test	Economic status		$\chi^2$ Test		
	Rural (n=14)	Urban (n=36)		Illiterate (n=7)	Literate (n=43)		Low (n=40)	High (n=10)			
	No. (%)	No. (%)		No. (%)	No. (%)		No. (%)	No. (%)			
Normal	5 (35.7%)	11 (30.6%)	P= .586	3 (42.9%)	13 (30.2%)	P= .952	14(35%)	2 (20%)	P= .607		
Loose teeth	2 (14.3%)	5(13.9%)			1 (14.3%)		6(14%)			4(10%)	3 (30%)
Caries teeth	4 (28.6%)	15 (41.7%)			2 (28.6%)		17 (39.5%)			15 (37.5%)	4 (40%)
Plaque	1(7.1%)	1(2.8%)					2(4.7%)			2(5%)	
Black	1(7.1%)						1(2.3%)			1(2.5%)	
Loose teeth and caries teeth	1(7.1%)	4 (11.1%)			1(14.3%)		4(9.3%)			4(10%)	1 (10%)
Total	14 (100%)	36 (100%)			7(100%)		43 (100%)			40 (100%)	10 (100%)

The above table shows that the majority of the rural 5(35.7%) and illiterate 3(42.9%) respondent's children's condition of teeth was normal where as majority of urban 15(41.7%), literate 17(39.5%), low 15(37.7%) and high 4(40%) economic respondent's children's conditions of teeth were caries. There is not significant between rural and urban, illiterate and literate, and low and high economic status respondents.

**Table No.b.4.2.3 Condition of cheek and lip According to Geographical area, Education status and Economic status**

Condition of cheek and lip	Address		$\chi^2$ Test	Education Status		$\chi^2$ Test	Economic Status		$\chi^2$ Test	
	Rural (n=14)	Urban (n=36)		Illiterate (n=7)	Literate (n=43)		Low (n=40)	High (n=10)		
	No. (%)	No. (%)		No. (%)	No. (%)		No. (%)	No. (%)		
Normal	13 (92.9%)	32 (88.9%)	P=.809	7(100%)	38 (88.4%)	P=.636	37 (92.5%)	8(80%)	P=.122	
Ulceration	1(7.1%)	3(8.3%)			4(9.3%)			3(7.5%)		1(10%)
Crack		1(2.8%)			1(2.3%)					1(10%)
Total	14 (100%)	36 (100%)		7(100%)	4(100%)		4(100%)	10(100%)		

The above table shows that the majority of rural 13(92.9%), urban 32(88.9%), illiterate 7(100%), literate 38(88.4%) and low economic status 37(92.5%) and high economic status 8(80%) of respondent's children's condition of cheek and lip were normal. There is not significant between rural and urban, illiterate and literate, and low and high economic status.

**Section: D Literate, Urban and High economic status Parents are more conscious towards Oral Hygiene of their children**

**Table No.D.4.1 Respondent started in maintaining their children's Oral hygiene according to Education status**

Age of started maintaining oral hygiene	Education Status		$\chi^2$ Test
	Illiterate(n=7)	Literate(n=43)	
	No. (%)	No. (%)	P=0.209
1 year to 3 year	2 (28.6%)	15 (34.9%)	
3 year to 5 year	3(42.9%)	25(58.1%)	
After 5 year	2(28.6%)	3(7.0%)	
Total	7(100%)	43(100%)	

The above table shows that the majority of illiterate 3(42.9%) and literate 25(58.1%) respondents were started to maintain their children's oral hygiene at 3 years to 5 years of age. According to literature review proper age of maintaining oral hygiene is as soon as teeth start to erupt. There is not significant between literate and illiterate parents in maintaining oral hygiene. Here P value is 0.209.

**Table No.D.4.2 Respondent started in maintaining their children's Oral hygiene according to Geographical area**

Age of started maintaining oral hygiene	Address		$\chi^2$ Test
	Rural (n=14)	Urban(n=36)	
	No. (%)	No. (%)	P=0.767
1 year to 3 year	4(28.6%)	13 (36.1%)	
3 year to 5 year	8(57.1%)	20(55.6%)	
After 5 year	2(14.3%)	3(8.3%)	
Total	14(100%)	36(100%)	

The above table shows that the majority of rural 8 (57.1%) and urban 20 (55.6%) respondents were started to maintain their children's oral hygiene at 3 years to 5 years of age. There is not significance between rural and urban parents in maintaining oral hygiene. Here P value is 0.767.

**Table No.D.4.3 Respondent started in maintaining their children's Oral hygiene according to Economic status**

Age of started maintaining oral hygiene	Economic Status		$\chi^2$ Test
	Low (n=40)	High (n=10)	
	No. (%)	No. (%)	P=0.321
1 year to 3 year	12 (30%)	5 (50%)	
3 year to 5 year	23(57.5%)	5(50%)	
After 5 year	5(12.5%)	0	
Total	40(100%)	10(100%)	

The above table shows that the majority of 23 (57.5%) low economic status respondents were started to maintain their children's oral hygiene at 3 years to 5 years of age. But, in high



economic status respondents started in equal proportion i.e. 5(50%). There is not significant between low and high economic status parents. Here P value is 0.321.

**Table No. D.4.4 Time Schedule for Tooth brushing in a day according to Education Status**

Respondent's responses	Education Status		$\chi^2$ Test
	Illiterate(n=7)	Literate(n=43)	
	No. (%)	No. (%)	
Once a day, early in the morning	5(71.4%)	30(69.8%)	P=0.275
Twice a day, early in the morning and before going to bed	1(14.3%)	12(27.9%)	
Irregular	1(14.3%)	1(2.3%)	
Total	7(100%)	43(100%)	

The above table shows that the majority of illiterate 5(71.4%) and literate 30(69.8%) respondent's children brush their teeth once a day, early in the morning. According to literature review, teeth should be brushed at least twice a day. Here is not significant between literate and illiterate respondents' attitude.

**Table No. D.4.5 Time Schedule for Tooth brushing in a day according to Geographical area**

Respondent's responses	Address		$\chi^2$ Test
	Rural (n=14)	Urban(n=36)	
	No. (%)	No. (%)	
Once a day, early in the morning	12(85.7%)	23(63.9%)	P=0.288
Twice a day, early in the morning and before going to bed	2(14.3%)	11(30.6%)	
Irregular		2(5.6%)	
Total	14(100%)	36(100%)	

The above table shows that the majority of rural 12(85.7%) and urban 23(63.9%) respondent's children were brush their teeth once a day, early in the morning. There is not significance between rural and urban respondent's attitude towards tooth brushing. Here P value is 0.288.

**Table No. D.4.6 Time Schedule for Tooth brushing in a day according to Economic Status**

Respondent's responses	Economic Status		$\chi^2$ Test
	Low(n=40)	High (n=10)	
	No. (%)	No. (%)	
Once a day, early in the morning	27(67.5%)	8(80%)	P= 0.653
Twice a day, early in the morning and before going to bed	11(27.5%)	2(20%)	
Irregular	2(5%)		
Total	40(100%)	10(100%)	

The above table shows that the majority of low economic status 27(67.5%) and high economic status 8(80%) respondent's children were brush their teeth once a day, early in the morning.

There is not significant between low and high economic status respondent towards tooth brushing. Here P value is 0.653.

**Table No.D.4.7 Check-up system (Regular check-up) with dentist according to Education Status**

Responses of Respondents	Education Status		$\chi^2$ Test
	Illiterate(n=7)	Literate (n=43)	
	No. (%)	No. (%)	P=1
Yes	2(28.6%)	13(30.2%)	
No	5(71.4%)	30(69.8%)	
Total	7(100%)	43(100%)	

The above table shows that the majority of illiterate 5(71.4%) and literate 30(69.8%) respondents do not take their children to dentist for regular dental check-up. This table indicates there is not significant between illiterate and literate respondents. Here, P value is 1.

**Table No.D.4.8 Check-up system (Regular check-up) with dentist according to Geographical area**

Responses of Respondents	Address		$\chi^2$ Test
	Rural (n=14)	Urban(n=36)	
	No. (%)	No. (%)	P=0.004
Yes		15(41.7%)	
No	14(100%)	21(58.3%)	
Total	14(100%)	36(100%)	

The above table shows that the 14(100%) rural and 21 (58.3%) urban respondents were not take their children to dentist for regular dental check-up, only 15 (41.7%) urban respondents were take their children for dental check-up. This table indicates there is significant between rural and urban respondents. Here, P value is 0.004.

**Table No.D.4.9 Check-up system (Regular check-up) with dentist according to Economic Status**

Responses of Respondents	Economic Status		$\chi^2$ Test
	Low (n=40)	High (n=10)	
	No. (%)	No. (%)	P=0.004
Yes	8(20%)	7(70%)	
No	32(80%)	3(30%)	
Total	40(100%)	10(100%)	

The above table shows that the majority of low economic status 32 (80%) of respondents were not take their children to dentist for regular dental check-up. Whereas, majority of high economic status 7(70%) respondents were take their children for dental check-up. This table indicates there is significant between low and high economic status respondents. Here, P value is 0.004.

**Table No.D.4.10 Distribution of respondents advice for cleaning/rinsing mouth to their children according to Education Status**

Respondent's advice their children	Education Status		$\chi^2$ Test
	Illiterate(n=7)	Literate(n=43)	
	No. (%)	No. (%)	
After having each meal		14(36.8%)	P=0.293
After taking lunch and dinner	4(100%)	23(60%)	
After taking each meal, sweets/chocolate		1(2.6%)	
Total	4(100%)	38(100%)	

The above table shows that the majority of literate 23 (60%) and illiterate 4 (100%) respondents advised their children for cleaning/ rinsing mouth after taking lunch and dinner. Minority of literate 14(36.8%) advised after having each meal and remaining 1(2.6%) advised after taking each meal, sweets. There is not significant between literate and illiterate respondents about cleaning mouth, here P value is 0 .293

**Table No.D.4.11 Distribution of respondents advice for cleaning/rinsing mouth to their children according to Geographical area**

Respondent's advice their children	Address		$\chi^2$ Test
	Rural(n=14)	Urban(n=36)	
	No. (%)	No. (%)	
After having each meal	4(33.3%)	10(33.3%)	P=0.813
After taking lunch and dinner	8(66.7%)	19(63.3%)	
After taking each meal, sweets/chocolate		1(3.3%)	
Total	12(100%)	30(100%)	

The above table shows that the majority of urban 19(63.3%) and rural 8(66.7%) respondents advised their children after taking lunch and dinner. Minority of urban 10(33.3%) and rural 4(33.3%) advised each meal remaining 1(3.3%) of urban advised after taking each meal, sweets. There is not significant between rural and urban respondents about cleaning mouth.

**Table No.D.4.12 Distribution of respondents advice for cleaning/rinsing mouth to their children according to Economic Status**

Respondent's advice their children	Economic Status		$\chi^2$ Test
	Low(n=40)	High (n=10)	
	No. (%)	No. (%)	
After having meal	10(29.4 %)	4(50%)	P=0.046
After taking lunch and dinner	24(70%)	3(37.5%)	
After taking each meal, sweets/chocolate		1(12.5%)	
Total	34(100%)	8(100%)	

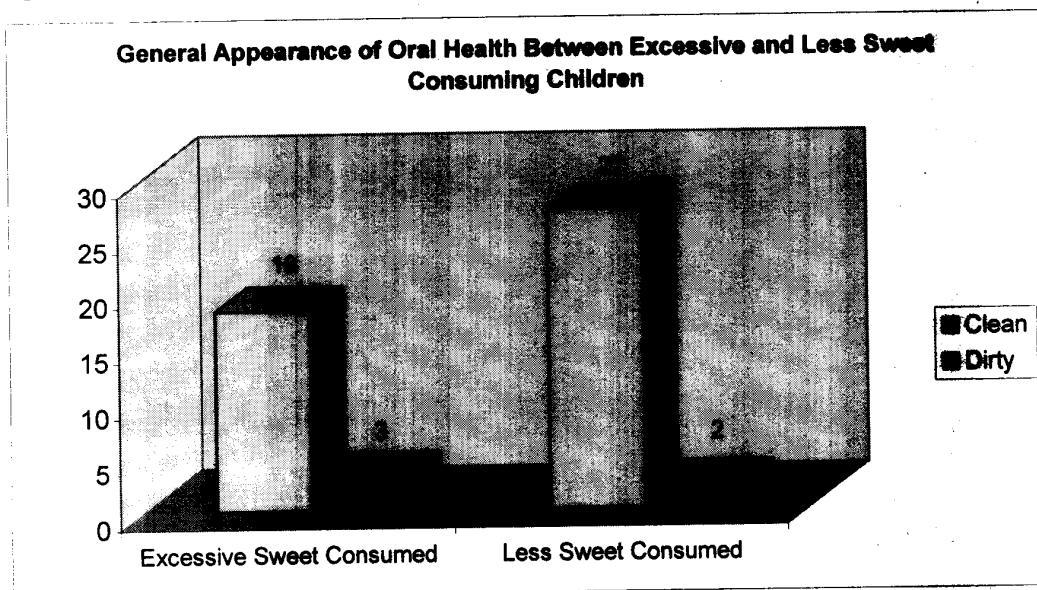
The above table shows that the majority of high economic status 4(50%) and minority of low economic status 10(29.4%) respondents advised their children for cleaning mouth after having each meal. Where as, majority of low eco. 24(70%) and minority of high eco. 3(37.5%) advised after taking lunch and dinner and remaining 1 (12.5%) of high eco. advised after taking each

Parent's Knowledge And Attitude Towards Oral Hygiene Among Their Children

meal, sweets. There is statistically significant between low and high economic status respondents about cleaning mouth. Here ,P value is 0.046.

**E. Dental Problem between excessive and less sweet consuming children**

**Figure No.E.4.1**



**P Value is 0.638.**

The above figure shows that the majority of excessive sweet consuming (18) and less sweet consuming (27) children's oral health was clean among (21) and (29) children. Statistically there is not significant between excessive and less sweet consuming of children's oral health. Here, P value is 0.638.

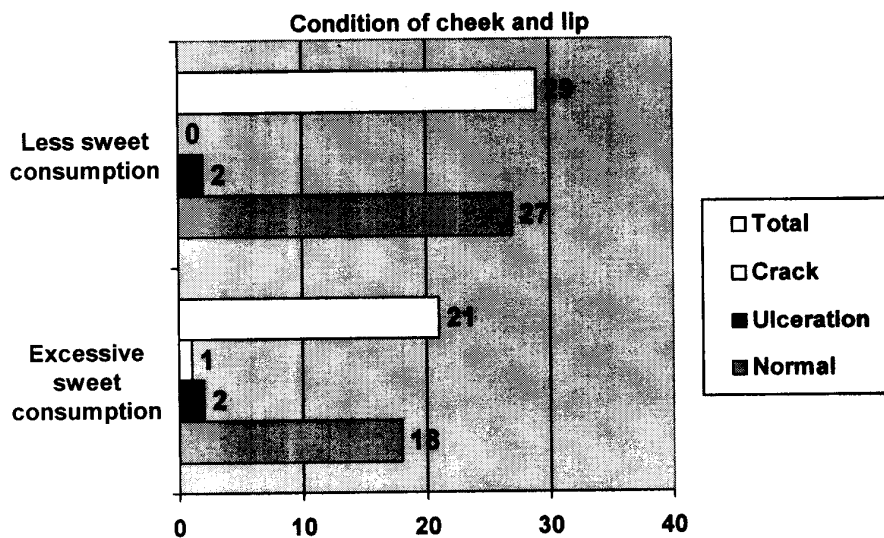
Both of excessive and less sweet consuming of children's gum was normal condition.

**No.E.4.1 Condition of teeth between excessive and less sweet consuming children**

Condition of teeth	Sweet consumption		$\chi^2$ Test
	Excessive sweet	Less sweet	
	No. (%)	No. (%)	<b>P=0.886</b>
Normal	8(38.1%)	8(27.6%)	
Loose teeth	2(9.5%)	5(17.2%)	
Caries teeth	8(38.1%)	11(37.9%)	
Plaque	1(4.8%)	1(3.4%)	
Black	0	1(3.4%)	
Loose and caries teeth	2(9.5%)	3(10.3%)	
Total	21(100%)	29(100%)	

The above table shows that the majority 11(37.9%) of less sweet consuming children have caries teeth where as there is equal ratio 8 (38.1%) of normal and caries teeth in excessive sweet consuming children. This means that there is not significance between excessive and less sweet consuming children's teeth condition. Here, P value is 0.886.

**Figure No.E.4.2 Condition of cheek and lip between excessive and less sweet consuming children**



Here, P value =0.396.

The above figure shows that the majority of excessive (18) and less (27) sweet consuming children's condition of cheek and lip was normal. There is not significant between excessive and less sweet consuming children here, P value is .396.

#### **F.4. Acceptance or rejection of hypothesis**

Data analysis and interpretation was done on objectives and hypothesis. According to data analysis, the hypothesis is mainly focused on consciousness regarding literate, urban and high economic status parents towards their children's oral hygiene. All hypotheses are not accepted. Table No. D.4.8, Table no.D.4.9 and Tableno.D.4.12. are accepted.

**Table No. D.4.8** shows that 14(100%) rural and 21(58.3%) respondents do not take their children to dentist for regular check-up. But, urban 15(41.7%) respondents take their children to dentist.

**Table No.D.4.9** shows that majority of low economic 32(80%) respondents do not take their children to dentist for dental check-up where as majority of high economic status 7(70%) respondents do take their children to dentist for dental check-up.

**Table No.D.4.12** Shows that the majority of high economic status 4(50%) and minority of low economic status 10 (29.4%) respondents advised their children for cleaning mouth after having each meal. Similarly, majority of low economic status 24 (70%) and minority of high economic status 3(37.5%) advised after taking lunch and dinner. It indicates that hypotheses were accepted as it was stated "Urban and high economic status parents are more conscious towards oral hygiene".

## CHAPTER -V

### 5. Research Finding, Discussion, Conclusion and Recommendation

#### 5.1 Finding of the Study

The main purpose of the study was to explore the knowledge and attitude of parents regarding oral hygiene among their children age between 5 years to 14 years. A semi- structured questionnaire was used to collect data.

##### 5.1.1 Findings of Demographic Information of Respondents

The majority 32(64%) of respondents was mother.  
The majority 36(72%) of respondents was from urban.  
Higher proportion 16(32%) of respondents was Brahmin caste group.  
Higher proportion 45(90%) of respondents was Hindu religion.  
The majority 43(86%) of respondents was literate.  
Regarding occupation, majority 22(44%) of respondents were housewives.  
Regarding economic status, majority 21(42%) of respondents have earned Rs. 3000-6000/ month.

##### 5.1.2.A. Finding of Observation of children's oral cavity

Overall, findings on observation of children's oral health has found during data collection were as follows:

- In relation to general appearance of oral health of children, majority 45(90%) of children's oral health was clean.
- All (100%) children's gum condition was normal.
- Majority 19(38%) of children's teeth was normal.
- Majority 45(90%) of children's cheek and lip's condition was normal.

##### 5.1.2.B. Findings of Observation of Children's Oral Cavity According to Geographical area, Education status, and Economical status

- Majority of rural 13(92.9%) among 14, urban 32(88.9%) among 36, illiterate 7 (100%), literate 38 (88.4%) among 43, low economic status 36(90%) among 40, and high economic status 9 (90%) among 10 respondents children's oral health was clean.
- Regarding condition of teeth, majority of rural 5 (35.7%), illiterate 3 (42.9%) among seven respondent's children's condition of teeth was normal. But majority of urban 15(41.7%), literate 17(39.5%), low economic status 15(37.5%), and high economic status 4 (40%) respondent's children's teeth were caries.
- Regarding condition of cheek and lip, majority of rural 13(92.9%), urban 32(88.9%), literate 7 (100%), illiterate 38 (88.4%) and low economic status 37(92.4%) and high economic status 8(80%) respondents children's cheek and lip's condition was normal.

### **5.1.C. Findings of Parent's Knowledge and Attitude towards Oral Hygiene among their children**

- Majority 46(92%) of respondents answered that oral hygiene means cleanliness of teeth, gum and tongue.
- All (100%) respondents said that child's mouth should be keep clean.
- Majority 32(64%) of respondents were gave reason for keeping child's mouth clean to keep oral cavity healthy.
- All (100%) of respondents said that they were assisting their children for maintaining oral hygiene.
- Majority 29(58%) of respondents were assisting their children for maintaining oral hygiene to prevent oral problem.
- All (100%) respondents said that oral hygiene is necessary.
- Majority 28(56%) of respondents said that they started to maintain their children's oral hygiene from 3 years to 5 years.
- Majority 49(98%) of respondent's children were used tooth brush and tooth paste.
- Majority of respondents said that oral problem means dental caries and gum bleeding.
- Majority 28(66.7%) said that oral problem arise if brushing teeth and cleaning mouth carelessly.
- Majority 35(70%) of respondents were not taking their children with dentist for dental check-up.
- Among 15 respondents, majority 13(86%) of respondents was taking their children with dentist as necessary.
- Majority 32(64%) of respondents said that they taught brushing technique upward and downward direction.
- Majority 22(44%) of children preferred sweet containing food.
- Majority 24(48%) of children were taking sweet/ chocolate occasionally/week.
- Majority 42(84%)of respondents were advised their children for cleaning/ rinsing mouth after having meal, and majority 27(64.3%) of respondents were advised after taking lunch and dinner among 42(84%) respondents.
- Majority 49(98%) of respondents said that they changed their children's brush, and majority 26(52%) of respondents was changed brush after 2 –4 months.
- Majority 48(96%)respondents said that they consult their children with dentist if oral problem arise.
- Majority 43(86%) of respondents said that they did not believe that wizard's treatment.
- Majority 19(38%) of respondents said that they got information about oral hygiene from their parent's/senior.

### **5.1.D Findings on more conscious of literate, urban and high economic status parents towards oral hygiene**

- Majority of illiterate3 (42.9%) and literate 25(58.1%) of respondents were started to maintain their children's oral hygiene at 3years to 5years of age.
- Majority of rural8 (57.1%) and urban 20(55.6%) of respondents were started to maintain their children's oral hygiene at 3years to 5years of age.
- Majority of low economic status 23(57.1%)were started to maintain their children's oral hygiene at 3years to 5years of age. Where as, high economic status respondents were start in equal ratio i.e. 5(50%).



- Majority of illiterate 5 (71.4%) and literate 30(69.8%) respondents children were brush their teeth once a day, early in the morning.
- Majority of rural 12(85.7%) and urban 23(63.9%) respondent's children were brush their teeth once a day, early in the morning.
- Majority of low economic status 27(67.5%) and high economic status 8(80%) respondents children were brush their teeth once a day, early in the morning.
- Majority of illiterate 5 (71.4%) and literate 30 (69.8%) respondents did not taking their children for dental check-up.
- Hundred percent of rural and majority of urban 21(58.3%) respondents did not taking their children for dental check-up.
- Majority of low economic status 32 (80%) respondents did not taking their children for dental check-up but majority of high economic status 7(70%) respondents was taking their children for dental check-up.
- Majority of literate 23 (60%) and illiterate 4(100%) respondents advised for cleaning/rinsing mouth to their children after taking lunch and dinner.
- Majority of urban 19(63.3%) and rural 8(66.7%) respondents advised for cleaning /rinsing mouth to their children after taking lunch and dinner.
- Majority of low economic status 24(70%) respondents advised for cleaning/rinsing mouth to their children after taking lunch and dinner. Where as, majority of high economic status 4(50%) respondents advised for cleaning/rinsing mouth to their children after taking lunch and dinner.

#### **5.1.E Findings of Dental/oral problem between excessive and less sweet consuming children**

- Majority of excessive 18 (85.7%) and less 27 (93.1%) sweet consuming children's oral health was normal.
- Majority of less sweet consuming 11(37.9%) children's teeth were caries, where as in equal ratio 8 (38.1%) of excessive consumption children's teeth were normal and caries.
- Majority of excessive 18 (85.7%) and less 27 (93.1%) sweet consuming children's condition of cheek and lip was normal.

#### **5.2 Comparison of finding to literature review**

According to objectives of the study, a finding of this study was compared with literature review although I could not found proper literature in the same topic. Comparison is carryout based on change in knowledge and attitude of parents towards oral hygiene.

According to **Newa G. study**, only 72% parent have positive attitude towards oral hygiene. Both urban and rural parents have knowledge of oral hygiene but urban parents are more aware towards oral hygiene (Parental awareness towards oral hygiene among their children from 1-5 years) (2045).

**In my research study**, majority of all parent's have adequate knowledge towards oral hygiene. It is similar to (Newa G., 2045) literature stated both urban and rural parent have knowledge of oral hygiene.

**Table No.4.3.1** Shows that 92% of respondents well known about meaning of oral Hygiene. It is similar to C.H.Chu.D. S. H.Fung and ECM Lo was stated parent's education level, dental knowledge and attitude are also associated with the children's dental caries experience.

**Table No.4.3.4** Shows that the most of the parents started tooth brushing of their children at 3years to 5years of age. It is not similar to literature reviews, Eleanor Dumont Thompson stated, in the past, dental care has been advocated at about the age of 2years. Recent trends in the field of oral health suggest caring for the teeth as soon as they erupt.

**Table No.4.2.2** Shows that dental caries of children was 19(38%)of 5years to 14years children (n=50). Literature review shows that a series of cross-sectional survey at ten sites in central and western Nepal revealed caries prevalence of 67%of school children (n=2177)(Yee and Mc. Donald 2002). Similarly, A survey of 600(5-6year old school children in District of Sunsari in 2001(Koirala, etal, 2003) showed carries prevalence of 52%.

A district-wide survey of 12-13years old school children (n=600) in urban and rural school in Sunsari district revealed a low caries prevalence of 24%(Koirala and etal, 2003). **In my research study**, 5-14years old children (n=50) in rural (n=14) 28.6%, urban (n=36) 15%have dental caries.

Literature review showed, **A cross sectional survey** of mostly urban school children age 8-14years (n=5974) reveals that 61%brush before breakfast and going to bed, 10%twice after meals, 4%once before bed and 1% didnot brush. Eighty one percent reported using toothbrush, 14%use their fingers 3% datiwanand 2%only brush. Seventy one percent of children surveyed reported using fluoridated toothpaste, 12%useDabur (Red powder), 5%do not use toothpaste and 18%use something (United Mission to Nepal Oral Health Program Unpublished Report). **In my research study**, urban children (n=36) 23 (63.9%) brush once a day, early in the morning, 11(30.6%) twice a day early in the morning and before going to bed and 2(5.6%) brush irregular. Most of urban 100% Children used toothbrush and 31(86.1%) used toothpaste only and 4(11.1%) used both paste/powder.

Literature review showed, Approximately 33%of children consume sugar at least 5times a week. Another17% of childrenconsume1-4 times a week (Micronutrient Initiative, South Asia Region, Nepal Program, 1998, 2000). **In my research study**, 30% consumed sweets/chocolate daily, 10%consumed1-2times a week, 12%3-4times a week and 48%consume occasionally.

### **5.3.Discussion**

The study revealed that the majority of children's oral health was clean and condition of gum, cheek, and lip was normal, but 38%children's teeth were caries.

The overall parent's knowledge was average. Most of parents were gave right answer of meaning of oral hygiene and said oral hygiene is necessary. Regarding attitude, majority of 56%parents were started in maintaining their children's oral hygiene at 3years to 5years of age and majority of 70%of their children brush their teeth once a day, early in the morning. Ninety percent of children used toothbrush and majority of 64%rspondents taught brushing technique in upward/downward technique. Fifty four percent respondents know that oral problem means dental caries and gum bleeding. Only 30%respondents takes their children for dental visit and majority of respondents take as necessary. Majority of children 44% prefer sweet contains food. Majority of parents 64% advice their children about cleaning/rinsing mouth after having lunch and dinner. Majority of respondents 52% changed their children's brush after 2-4 months. Majority of respondents 96%said that they consult with dentist while oral problem.

#### **5.4. Conclusion**

Based on the findings and discussion of the study the conclusion was drawn, most of the children's oral health was clean and 38% children's teeth were caries it may be due to taking excessive sweets/ chocolate and improper brushing technique. Most of parent's have knowledge on oral hygiene. But they don't guide their children proper method for maintaining oral hygiene( e.g. cleaning/rinsing mouth after each meal, brushing teeth twice a day, taking children regular visit with dentist, etc). Therefore, parents need health education about oral hygiene in general.

#### **5.5. Implication of the study**

- The finding of the study helps to plan further health education program on oral hygiene to improve public awareness regarding oral hygiene.
- The finding helps to policy maker to plan and develop educational package for nurses and other public.
- The finding helps to curriculum develop to modify the content of oral hygiene.
- This study helps to provide background to other researcher related to this topic and further study.
- This study helps to parents to learn more knowledge about oral problem and their responsibilities are maintaining and preventing main oral problem.

#### **5.6 Recommendation**

- A similar type of study could be conducted in large number of samples to draw generalization.
- A comparative study could be conducted between illiterate and literate in large scale.
- In order to prevent oral problem at different level, Health Planning Authorities should plan and organize health education programs on oral hygiene, preventive aspects and treatment of oral problem.

#### **5.7 Strength of the study**

- This study helps to measure the depth of knowledge and attitude among parents regarding oral hygiene among their children.
- The researcher got an opportunity to observe children's oral health.
- The researcher has gained confidence to do large-scale study from this study.
- The study is focused on protecting the rights of respondents by maintaining anonymity and confidentiality.

#### **5.8 Difficulties faced during the study**

- The investigator did not get sufficient literature on the research topic.
- The investigator faced some difficulties during instrument development, data analysis and interpretation due to lack of experience.
- Some of the respondents hesitated to give information even though they were explained about purpose of study.

### **5.9 Learned from the study**

- Gained knowledge and experience on literature review.
- Gained knowledge on conduct research study.
- Gained more experience in instrument development
- Gained more experience in data collection and interpretation.
- Gained more confidence in research report writing.

### **5.10 Plan for dissemination**

After completing research study, the researcher has plan to disseminated the findings to the following:

- Advisor, Mrs. Renuka Devi Pradhanang, of this research study.
- Library of Nursing Campus Maharajgunj
- N. H. R. C.

## BIBLIOGRAPHY

### Books

- 1) Andrew I, Rugg Gunn. Nutrition, diet and oral health. An unriavelled selection of testbooks and reference works for the student and practitioner dentistry, London Mitchel 1<sup>st</sup> Ed. 1998.
- 2) Brunner Lilian Soltis and Suddarth Dories Smith. Text Book of Medical-Surgical Nursing. J.B. Lippincott co. Philidelphia. 6<sup>th</sup> Ed. 1986. pp – 849-850.
- 3) Christensen Kockrow. Foundation of Nursing. Mos by co. St. Louis Philadelphia, 3<sup>rd</sup> Ed. 1999. pp – 282-284.
- 4) Dickson Murray. Where there is no dentist. With an introduction by David Werner (Author of where there is no doctor), the Hesperian Foundation USA, 1<sup>st</sup> Ed. 1983.
- 5) Eleanor Dumont Thompson. Introduction to Maternity and Pediatric Nursing W. B. Saunders co. Philadelphia, 2<sup>nd</sup> Ed. 1995. pp – 456 -457.
- 6) J.E. Parlc. Essential of Community Health Nursing. Ms. Bangryda Bhanot 1<sup>st</sup> Ed. 1998, pp – 42-43.
- 7) Peris Marry Hamilton. Basic Paediatric Nursing. Mosby co. st. Louis, 3<sup>rd</sup> Ed. 1885, pp – 304 - -305.
- 8) Suitar and Crowley. Nutrition. Principle and application in Health promotion. J.B. Lippincott Philadelphia, 2<sup>nd</sup> Ed. 1984, pp – 385.
- 9) Whalley and Wong. Essential of Paediatric Nursing. C.B. Mosby co. 2<sup>nd</sup> Ed. 1985, pp – 304 – 305.

### Journals

- 10) Brief Information on Nepal Oral Health Society, Kantipath, P.B. 729, Kathmandu Nepal, 1984.
- 11) Bajracharya M.R, Shrestha B.K. etails, Oral Health Status in Nepal. Journal of the continuity Dental Education Program FDI World Dental Federation Nepal Oral Health Society sep. 11 – 12 – 1997, pp – 21.
- 12) C.H. Chu, D.S.H. fund and ELM Lo. Dental Caries Status of Preschool Children of Hong Kong. British Dental Journal 187(11) 1999.
- 13) English oral Health strategy. W. Richard and I. Ammen the import of attendance pattern on oral health in general dental practice. British dental journal 193(12) Dec. 22 – 2002.
- 14) Health situation in South – East Asia Region. 1994, pp- 17 – 172.
- 15) Joshi H. and Bhattarai P. Preventive approach in Dentistry. Journal of Nepal Dental Association. 1<sup>st</sup> National Dental Conference (1) Sep. 1998.
- 16) Joshi H.D. Bhattarai P. Dental Health Statues in Higher Secondary School in Pokhara. Journal of IOM 1.8(2,3), 54, AP, June, Sep. 1996, pp. 80-81.
- 17) Mishar P. and Yee R. A situational analysis of Nepali School Children's Oral Health. Printed on 30<sup>th</sup> June 2003.
- 18) N.J. Williams and etails, The relationship between socio. Demography Characteristic and dental health knowledge and attended of parents with young children British Dental Journal, 193(11) Dec. 7.2002.

- 19) Prospects Peoples Dental College and Hospital. The first dental college in Nepal 2059.
- 20) Ruth Freeman, The determinants of dental health attitudes and behaviours. British Dental Journal 187(1). July 10 1999, pp – 15 – 18.
- 21) Salma S. Dentition and Dental Health, The Nursing Journal of India, 1(5) May 2000. pp-102-104.
- 22) SEA – REGIONAL DEVELOPMENT ON ORAL HEALTH. DRAFT2, Dec. 13 – 1999.
- 23) Sheiham A. etails “The relationship between Oral Health status and body Mass”. British Dental Journal 192(12) June.29.2002.
- 24) WHO offset S. Dwyre J.T. etails prevention of oral diseases. Pub. No 103(1987).

#### Internet Search

- 25) Fitzsimans D. Dwyer J.T, etails, Nutrition and Oral Health Guideline for pregnant, Infant and children.  
[http://www.ncbi.nlm.nih.gov/entrez/quiryfogi\(MD=text and DB=pubmed.\)](http://www.ncbi.nlm.nih.gov/entrez/quiryfogi(MD=text and DB=pubmed.))
- 26) Helen Phtiaka, Parental education in Cyprus. International studies in Sociology of education 9(1), 1999.
- 27) Jennifer A. Schwartz, Oral Hygiene.
- 28) Silvia Bresciano. Oral hygiene and prevention file://:  
my%20Documents\health\smile %20project %20 20 oral % hygiene % 20 an  
....314/03. Article

# APPENDICES

**Tribhuvan University**  
**Institute of Medicine**  
**Post-Basic Bachelor of Nursing Programme**  
**Maharajgunj Nursing Campus**

**Interview Questionnaire for Data Collection**

Title: Parent's Knowledge and Attitude Towards Oral Hygiene Among Their Children  
Age Between 5 years to 14 years.

Date of Data Collection: \_\_\_\_\_

Place of Data Collection: \_\_\_\_\_

S.N. \_\_\_\_\_

**A. Biodemographic Data:**

1. Name of Respondents:
  - a. Father
  - b. Mother
2. Address:
  - a. Rural
  - b. Urban
3. Caste group
  - a. Brahmin
  - b. Chhetri
  - c. Newar
  - d. Others
4. Religion
  - a. Hindu
  - b. Buddhist
  - c. Muslim
  - d. Others
5. Type of Family
  - a. Single
  - b. Joint
6. Education Status
  - a. Literate 
    - Primary Level (1-5 Standard)
    - Lower Secondary Level (6-8 Standard)
    - Secondary Level (9-10 Standard)
    - Higher Secondary Level (10 + Standard)
  - b. Illiterate
7. Occupation
  - a. Agriculture
  - b. Business
  - c. Service
  - d. Housewife
  - e. Others
8. Economic Status
  - a. Below Rs. 3,000/month
  - b. Below Rs. 6,000/month
  - c. Below Rs. 9,000/month
  - d. Above Rs. 9,000/month

**B. Observation of Oral Cavity of children**

1. General appearance of oral health
  - a. Clean
  - b. Dirty
2. Condition of gum



- |                               |                 |                          |                |                          |
|-------------------------------|-----------------|--------------------------|----------------|--------------------------|
|                               | a. Normal       | <input type="checkbox"/> | b. Bleeding    | <input type="checkbox"/> |
|                               | c. Swelling     | <input type="checkbox"/> |                |                          |
| 3. Condition of teeth         |                 |                          |                |                          |
|                               | a. Normal       | <input type="checkbox"/> | b. Loose teeth | <input type="checkbox"/> |
|                               | c. Caries teeth | <input type="checkbox"/> | d. Plaque      | <input type="checkbox"/> |
| 4. Condition of cheek and lip |                 |                          |                |                          |
|                               | a. Normal       | <input type="checkbox"/> | b. Ulceration  | <input type="checkbox"/> |

**C. Question related to knowledge and attitude of parents towards oral hygiene among their children**

1. What do you mean by oral hygiene?
  - a. Cleanliness of mouth
  - b. Cleanliness of teeth, gum and tongue
  - c. Cleanliness of face
2. Do you think that child's mouth should be kept clean?
  - a. Yes
  - b. No
3. If yes, why?
  - a. To keep oral cavity healthy
  - b. To feel fresh
  - c. To look clean
4. Do you assist your children in maintaining their oral hygiene?
  - a. Yes
  - b. No
5. If yes, why?
  - a. To keep mouth, teeth and gum clean
  - b. To prevent bad breathing
  - c. To prevent oral problems
6. Is oral hygiene necessary?
  - a. Yes
  - b. No
7. From what age of your children you've started maintaining their oral hygiene?
  - a. Before 1 year
  - b. 1 year to 3 years
  - c. 3 years to 5 years
  - d. After 5 years
8. How many times does your child brush their teeth in a day?
  - a. Once a day, early in the morning
  - b. Once a day, before going to bed
  - c. Twice a day, early in the morning & before going to bed
  - d. After having sweets
9. What materials do you provide your child for tooth brushing?
  - a. Tooth brush and tooth paste
  - b. Datiwan
  - c. Oil and salt
  - d. Ash and finger
10. Which tooth paste do you provide your child for tooth brushing?

-----

11. What are the oral problems that you know?

- a. Mouth stink
- b. Dental caries and gum bleeding
- c. Both
12. Do you know what are the main causes of oral/dental problem?  
 a. Yes  b. No
13. If yes, give your opinion.  
 a. Having excessive sweets, ice-cream   
 b. Brushing teeth and cleaning mouth carelessly   
 c. Eating stale food
14. Do you take your child to the dentist for regular checkup?  
 a. Yes  b. No
15. If yes, when?  
 a. Once a year  b. Twice a year   
 c. As necessary
16. How do you guide your children to brush their teeth?  
 a. Upward and downward direction   
 b. Circular with inner and outer side   
 c. Straight   
 d. Not taught
17. What types of food your children prefer?  
 a. Sweet  b. Salty   
 c. Salt & sweet
18. Does your children take sweet/chocolate?  
 a. Yes  b. No
19. If yes, how often a week?  
 a. One to two times a week   
 b. Three to four times a week   
 c. Daily   
 d. Occasionally
20. Do you advice your children for cleaning/rinsing their mouth after having meal?  
 a. Yes  b. No
21. If yes, when?  
 a. After having meal   
 b. After taking lunch and dinner   
 c. After taking sweets and chocolates
22. Should the brush be changed?  
 a. Yes  b. No
23. How often do you change?  
 a. After 2-4 months   
 b. After 6 months   
 c. When the brush is lost   
 d. When it becomes useless
24. Where do you take your children when they have oral/dental problem?  
 a. Wizard  b. Dentists
25. Do you believe that wizards can cure the oral/dental problems?  
 a. Yes  b. No

26. Where did you get information about oral hygiene ?

- |   |                          |                     |                          |
|---|--------------------------|---------------------|--------------------------|
| a. Parents/ senior                      | <input type="checkbox"/> | b. Teacher          | <input type="checkbox"/> |
| c. Friends                              | <input type="checkbox"/> | d. Radio/Television | <input type="checkbox"/> |
| e. Health Institution /Health Personnel | <input type="checkbox"/> | f. Self             | <input type="checkbox"/> |
| g. Others                               | <input type="checkbox"/> |                     |                          |

**Thank you**

# मुखको सरसफाई

## एक जानकारी

### मुखको सरसफाई भनेको के हो ?

मुखको साथसाथै दाँत, जिब्रो, गिजा र ओठको राम्रो हेरविचार गर्नु नै मुखको सरसफाई हो। मुखको सरसफाई गर्न अति आवश्यक छ किन भने मुखको सरसफाई गर्नाले मुखमा हुने समस्याहरु बाट वचन सकिन्छ। मुखको सरसफाई गर्नु भन्नु नै दाँत राम्रो सँग ब्रस गर्नु साथै कुनै पनि खानेकुरा खानासाथ राम्रो सँग मुख कुल्ला गर्नु हो। दाँत राम्रो सँग ब्रस गर्नाले दाँतमा रहेका फोहोर, दन्तलेउ लाई निकालेर मुखबाट आउने नराम्रो गन्धलाई हटाउँछ। मुखको पुर्ण हेरविचार गर्नाले मुखको समस्याबाट (जस्तै:- दाँतमा किरा लाग्नु, दाँत दुख्नु, दन्तहर्सा) सजिलैसँग वचन सकिन्छ।

### के-के कारणले गर्दा मुखको समस्या हुनसक्छ ?

मुखको समस्या विभिन्न कारणले हुनसक्छ, तर पनि मुख्य कारणहरु-

- ★ धेरै मात्रामा गुलियो खानेकुरा खाएमा
- ★ मुख राम्रोसँग सफा नराखेमा

- ★ दाँत ब्रस गर्दा सहि तरिका नअपनाएमा
- ★ पान, सुर्ति, चुरोट इत्यादि खाएमा

### मुख स्वस्थ नराख्नाले-

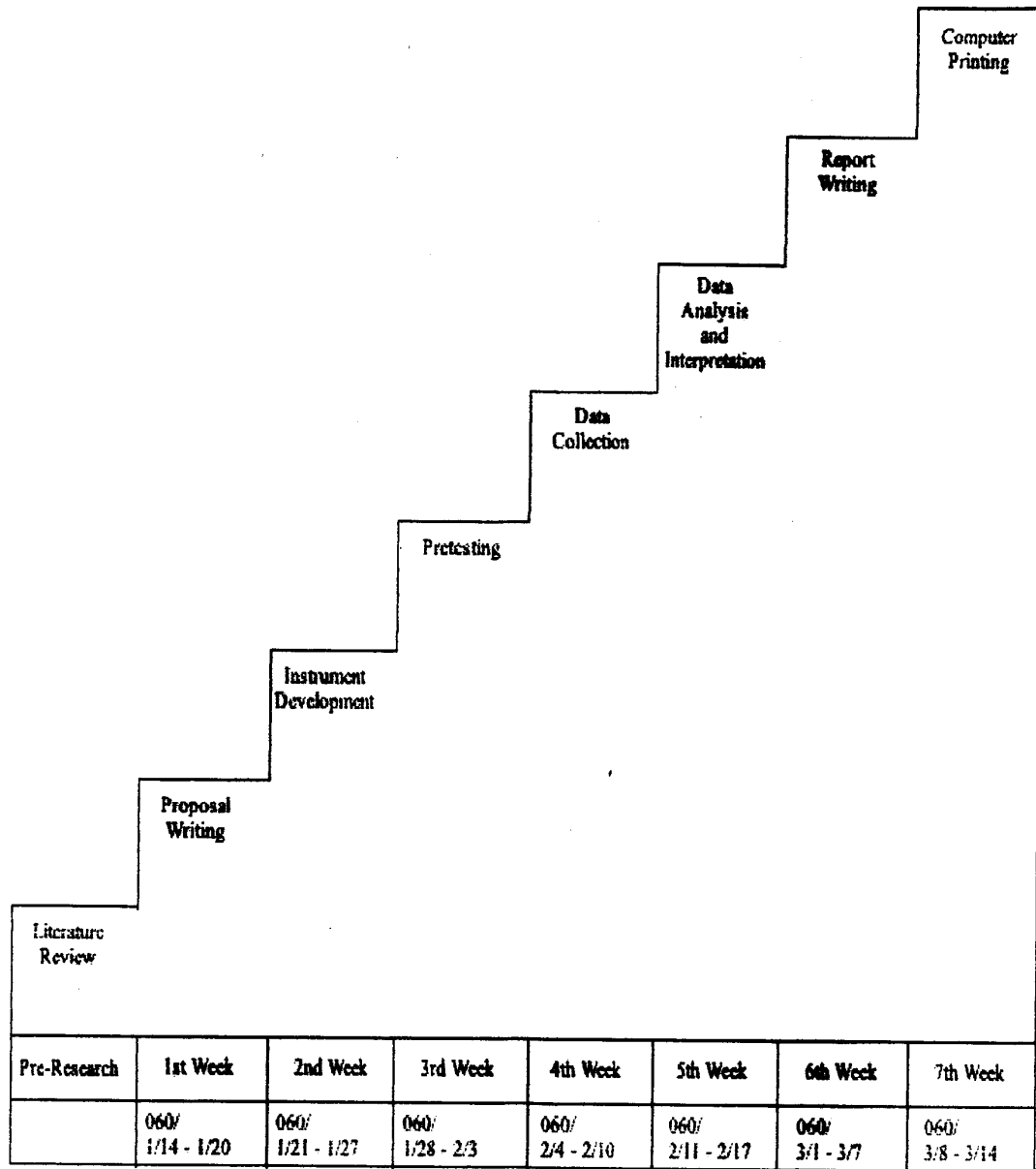
- ★ दाँत र गिजाका रोगले सधै दुःख दिईरहन्छ।
- ★ अस्वस्थ दाँत र गिजामा हुने किटाणु विरुद्ध शरिरले सधै शक्ति खर्च गर्नु पर्ने हुन्छ।
- ★ यि किटाणुहरुले शरिरको अन्य भागमा जस्तै कान, मस्तिष्कमा रोग फैलाउन सक्छन्।
- ★ दाँत र गिजामा रोग लागेमा दाँतले खानेकुरा राम्ररी चपाउन सक्दैन।
- ★ मुख सफा नराखे मुख गन्हाउने हुन्छ।

### मुख स्वस्थ राख्ने

#### उपायहरु :

- ★ हामिले कम्तिमा पनि दिनको एक पटक सानो उमेर देखि नै तीन देखि पाँच मिनेट सम्म सही तरिकाले ब्रस गर्नुपर्छ। सुत्ने बेलामा ब्रस गर्नु एकदम राम्रो हुन्छ।

## Work Plan



**Note:**

**# Literature review is done continuously till the end of research.**

**# Summer Vacation 2060/2/18 – 2060/2/31**



त्रिभुवन विश्वविद्यालय  
चिकित्सा शास्त्र अध्ययन संस्थान

नर्सिङ क्याम्पस

क्याम्पस प्रमुखको कार्यालय

चिकित्सा शास्त्र अध्ययन संस्थान  
नर्सिङ क्याम्पस, महाराजगंज  
सं : २०२९

पो.ब.नं:

महाराजगंज

काठमाडौं, नेपाल ।

फोन नं: ४१९२६६, ४११७२३

पत्र संख्या — च नं. ६६११२४७७०६

मिति: ०६०११९४

विषय: आवश्यक सहयोग गरी दिने बारे ।

श्रीमान निर्देशकज्यू,  
कान्ति बाल अस्पताल,  
महाराजगंज ।

यस क्याम्पसको स्नातक तह दोश्रो वर्षमा अध्ययनरत श्री जोनी राई अनुसन्धानको लागि तथ्यांक संकलन गर्न त्यस अस्पतालको जनरल ओ.पि.डि.मा मिति ०६०११९४ देखि ५ हप्ताको लागि आउनु हुने भएकोले निज विद्यार्थीलाई आवश्यक सहयोग गरी दिनु हुन अनुरोध गर्दछु ।

बोधार्थ :

श्री मेदोनज्यू,  
कान्ती बाल अस्पताल,  
महाराजगंज ।

.....  
श्रीमती नानी मैया प्रधान  
उपाध्यक्ष

२/९