

CHAPTER I

INTRODUCTION

1.1 Background

A country develops only when people are healthy. We know it is the 21st century and developed countries are in the very high pace in development. However, Nepal has so many problems such as poverty, population growth, child death rate, malnutrition, lack of healthy habit, poor knowledge and lack of awareness. Therefore, we are not able to reach our healthy destination. In fact, Complementary and alternative medicine is widely practiced in Nepal. Over the course of the last decade, disparities in health outcomes among poor people, ethnic minority and racial groups have become increasingly clear. Differences include access to care, screening, diagnostic and treatment interventions, and morbidity and mortality.

“Health is the state of complete physical, mental and social well being and not merely the absence of disease or infirmity” (WHO, 1947). Human civilization has got lots of transformation as they were conscious about their health. To achieve the quality of life, we need healthy people, healthy homes and healthy villages, healthy nation’s as well healthy global village for development and a happy life. The situation reveals that still we are feeling same pain related to health, over population growth, illiteracy, poverty, inequality, social isolation, environmental pollution, lack of safe drinking water, prevalence of communicable diseases, lack of health facilities, services, mal practices in food production, distribution and consumption system. The social, cultural, economic and political aspects of a nation highly influence health of citizen. Level of health is determined through human behavior. Especially behavior is shaped through lifestyle, culture, religion, education, family background and friendly circle and other multiple factors. Out of them lifestyle of the individual is one of the most important variables. "Life style" which denotes the way in which person or groups of people live and works may bring fluctuations in health. There is a close relationship between unhealthy life style and ill health. In fact, health is also determined by various factors such as modernization, traditional factors and different types of individual behaviors.

Human body has different health aspects. Among them, oral health is an aspect of human health. Oral diseases have a significant impact on the health through pain, morbidity and mortality and in overall, lost capacity to undertake school, social and economic activities. Among the oral disease, dental caries is the most common disease of childhood and adults. Oral cancer is one of the leading causes of mortality and morbidity; and is the most common form of cancer in male and the third most common cancer in females (Krieger, 2001).

Health, including oral health, is the outcome of a complex interaction of many different influences. These health determinants include biological, social, economic, cultural and environmental factors, knowledge and attitudes to health, learned behaviors', as well as access to and availability of health services and interventions.

Oral health is an important component of overall health and wellbeing. Poor oral health and untreated oral conditions have an adverse affect on quality of life, including the ability to eat nutritious foods, speech difficulties, lowered self esteem and systemic infections. (Northern Territory Gov, 2011)

Oral disease, like other preventable infections and chronic disease, is experienced at much higher rates by disadvantaged groups. The disproportionate level of disadvantage experienced by Aboriginal and Torres Strait Islander people is well documented, including data that indicates. Aboriginal people have significantly poorer oral health than their non-Aboriginal counterparts.

The impact of oral disease on people's everyday life is subtle and pervasive; it influences eating, sleep, work and social roles. The prevalence and the recurrence of these diseases represent a growing and silent epidemic. Dental caries is the second most costly diet-related disease in the world. The economic impact is comparable to heart disease and diabetes. Recent decades have seen an improvement in the oral health of Australians, particularly amongst children, although there is some evidence that the situation may be deteriorating. Dental caries is the single most common chronic disease of childhood. Around 50 per cent of pre-school aged children in Australia have already had some experience of tooth decay by the time they start

school. Furthermore, Aboriginal children now have, on average, twice as much dentals decay as their non-Aboriginal counterparts.

Oral hygiene is the practice of keeping the mouth, teeth, and gums clean and healthy to prevent dental problems by removing plaque and bacteria. It includes brushing the teeth, flossing, cleaning the tongue, and visiting the dentist regularly. Most people should visit the dentist twice a year, though those with an increased risk of oral diseases, such as tobacco users, should visit the dentist more often. It is very important for individuals to follow an oral health regimen at home between visits to the dentist (<http://www.wisegeek.org>).

Brushing the teeth helps to remove plaque and prevent the formation of tartar. Dental plaque is a sticky film that forms on the teeth and gums, and it contains bacteria that can damage the gums and tooth enamel, leading to gum disease, cavities, and gingivitis. If the plaque is allowed to harden on the teeth, it becomes tartar, which can only be removed by a professional tooth cleaning at the dentist. People should also brush the tongue along with the teeth, as it can harbor bacteria and fungi that can cause dental problems and bad breath.

Regular brushing is an essential part of oral hygiene, but it is not sufficient on its own, as there are areas of the mouth that a regular toothbrush cannot reach. Therefore, flossing is recommended to reach between the teeth and clean all areas of the teeth and gums. Interdentally brushes are an alternative to flossing, and some oral health specialists prefer this tool, as it is gentler on the gums. Flossing not only helps clean between the teeth, but also helps to strengthen the gums. In addition to flossing, gum massage with a toothbrush or rubber tip device can help maintain healthy gums.

Another tool that can be used as part of good oral hygiene is an oral irrigator, which uses a stream of water to clean the mouth. While typically used by those who cannot floss, such as people with braces, an oral irrigator can be a useful tool for nearly anyone. It is able to reach deeper under the gum line than either brushing or flossing. Mouthwash and dental chewing gums can also contribute to good hygiene.

Oral hygiene is also affected by lifestyle and diet choices. Smoking and chewing tobacco are both detrimental to oral health. Foods high in sugar, especially sucrose or table sugar, contribute to the formation of cavities, as do other carbohydrates to a lesser extent. Acidic foods such as fruit juices, soda, and vinegar can also damage the tooth enamel and contribute to cavity formation. Foods that are good for the teeth include dairy products, meat, eggs, fresh fruits and vegetables, green tea, and water.

Maintaining good mouth health has ramifications for the entire body. Problems in the mouth can lead to health problems including cardiovascular disease, bacterial pneumonia, osteoporosis, and complications of diabetes. Women with poor oral hygiene may have children with low birth weight.

1.2 Statement of the Problem

Oral health is an important part of total health and essential to quality of life. Nowadays, the WHO calls for a reorientation of oral health systems towards prevention and health promotion. The Oral Health Programme (OHP) of the WHO emphasizes the application of evidence-based strategies in oral health promotion and prevention as well as in the treatment of oral diseases worldwide (WHO, 2008).

As a consequence of unsuccessful oral health prevention, individuals often do not perform oral hygiene practices in an appropriate and efficient manner. In addition, the oral health of disadvantaged and poor population groups in developed and developing countries is generally poor (Knevel, 2005). As self-care practices are essential for the promotion of oral health, it is important to re-organize oral health prevention to better fit the needs and expectations of people in a particular culture or region. Due to differences in lifestyles and risk factors that arise from environmental, economic, social and behavioral causes, such as poor living conditions and low education, as well as differences in traditions with regard to oral self care, a so called one-size fits all approach for adequate oral hygiene behaviors will not be effective. Identification and the assessment of the psychosocial determinants of oral hygiene behavior within cultural subgroups or different regions are therefore of great importance for developing oral health care interventions that effectively targeting the determinants in

cultural different regions or cultural subgroups. Such interventions need to be embedded within oral health systems that are financially fair for poor population groups (Knevel, Neupane, Shressta , 2008).

Cultural factors in health and disease have engaged the attention of medical scientists and sociologists. Every culture has its own customs which may have significant influence on health and oral health. The increased incidence of lung cancer because smoking, cirrhosis because of alcoholism in many developed countries, the surge in the incidence of oral cancer in India due to pan chewing habits are some classical examples to demonstrate the influence of culture on health and oral health. It is now fairly established that the cultural factors are deeply involved in the whole way of life, like in the matters of nutrition, immunization, personal hygiene, family planning, child rearing, seeking early medical care, disposal of solid wastes and human excreta etc (Williston & park , 2012)

Modern medicine has often failed in conditions where behavioral, emotional, spiritual and cultural factors have an important causative role. However, given the strong association between poor oral health and socioeconomic variables described above, much of the research on parental beliefs and behaviors and the programs they inform seems misplaced. Researchers have generally neglected to place parents' understandings of oral health and their practices, such as feeding habits, into the context of adjustment to a new environment in the United States. For example, families often make a nutritional transition from a relatively uncariogenic diet in their home country to one heavy in refined foods. In addition, the structure and schedule of farm work, along with federal policies that promote affordability of infant formula, encourages immigrant mothers to shift from nursing to bottle feeding while leaving them unprepared for the oral health consequences (Horton & Barker, 2008).

An emerging health problem among the child population in Nepal is dental caries. A series of cross sectional surveys conducted on school children by the United Mission to Nepal Oral Health, programmed between the period of 1999 and 2000 in Central and Western Nepal shows that the caries occurrence score among 5 to 6 years old (UN 1999-2000).

Tooth decay that has a complex etiology linked to the provision of pacifying bottles of juice, milk, or formula, which allows the sugar contents to pool around the upper front

teeth, mix with cariogenic bacteria, and give rise to rapidly progressing destruction (USDHHS, 2000). The mechanism of interaction between socioeconomic status, stress, poor oral hygiene, and nutrition is evident, but remains largely unexplained (Willems, Vanobbergen, Martens, & Maeseneer, 2005).

Thus the study has following research questions.

-) What is the level of awareness about oral health among higher secondary students?
-) What types of oral health practice among the students?
-) Are the available health facilities are sufficient to maintain oral health among higher level school students?

1.3 Objectives of the Study

The main objective of this study is to study an oral hygiene practice higher secondary level students, and particularly emphasizes to the following specific objectives.

- I To identify the status of oral health of higher secondary level students.
- II To explore knowledge and awareness on oral hygiene practices among the students.

1.4 Significance of the Study

The main aim of this study is to assess the awareness of higher secondary level students. This age is very specific age due to many causes. In particular it is often called stormy age and the adolescent students develop some unhygienic food practice such as using tobacco, junk food, smoking that directly influence oral health. Thus the significance of the study is stated in the following ways.

-) The findings of the study will be a useful guide to improve the oral health status of the study area.
-) This study will show status of oral hygiene among students of public school.
-) The findings of this study will be beneficially to health development related programs.
-) The study will be valuable advantage point to different researchers, learners, NGOs and INGOs.

1.5 Limitation of the Study

This study is entirely based on information to be derived from the higher secondary schools of Pokhara Sub-metropolitan city. Only four public higher secondary schools in Pokhara Sub-metropolitan city have been included in the study without including the private higher secondary schools based on their different characteristics from the sample schools.

The study limitations are as follow;

-) The study was limited to public higher secondary schools of Pokhara only.
-) The respondents were only the students of higher secondary level including the boys and girls of selected schools
-) As the study covered small sample size, thus the results, cannot be generalized at national level.
-) Only class XII students were involved in the study.

1.6 Organization

The primary purpose of this study is to discuss the problems related to oral hygiene in the present context. In order to make the research organized, it has been divided into six different chapters along with their sub-titles. The first chapter of the research includes the background and the introduction of the study along with its objectives. The second chapter is the literature review of the research that compares public health with other aspects of life, art and literature. The same chapter also discusses the global scenario of public health in different section. Research methodologies have been discussed briefly in the third chapter which is a major part of the study. This chapter contains the methods of collecting and interpreting data. In the same manner, the collected data have been analyzed from multiple prospective of life in the two (four and five) chapters; finally, the sixth chapter is concerned with suggestions and recommendations. This chapter provides significant, suggestion i.e. the outcome of the study. The suggestion provided by this study will be important for improving the present condition of oral hygiene in our society.

CHAPTER II

REVIEW OF LITERATURE

This chapter deals the literature related to the study which gives general guidelines to the researchers. The purpose of this chapter is to review the literature of different researchers and many other journals, some books were taken from Public Library Mahendrapool, center library of Prithivi Narayan Campus, Western Regional Hospital Dental Department, District Public Health Office Kaski, and some dental clinics. Generally, all of this record shows that oral health status in our country is very poor due to many causes like lack of education, nutritious diet and lack of knowledge on oral health. In this chapter, the researcher summarized the literature from the different thesis and research related to adolescent oral health status

2.1 Theoretical Review

Most importantly, there is a strong link between socio-economic status and health, and this is reflected in patterns of oral health and disease in Nepal. Economic deprivation, social exclusion and some cultural differences in beliefs and behaviors can all help to create an environment where oral health suffers.

The concept that oral health is influenced by environmental, cultural and social factors is relatively recent. These factors can be grouped as the determinants of oral health. Oral health determinants are factors that have an influence on oral health at an individual, community and population level. These factors explain trends in oral health and predict why some groups have better or worse oral health than others. Examples of the determinants of oral health include; culture, demographics, socio-economic characteristics, health literacy, oral health behaviors, bio-medical factors, life-course factors, genetics and inter-generational effects. (Northern Territory Gov, 2011)

Health models and health behavior theories have been applied to oral health care in several studies. On the basis of such a social cognitive theory, the Theory of Reasoned Action (TRA) (Ajzen, Fishbein, 1980.); one would expect that OHB is determined by the individual's attitude towards it and the perceived social norms of relevant others.

In line with this, Freeman and Linden⁹ found that tooth brushing and the use of additional cleaning aids were associated with a more positive attitude towards oral health, and with supportive norms of 'important others', such as the dentist, family, and friends. Moreover, it was shown that, in addition to the variables of the TRA, self-efficacy (i.e. self-control) for oral hygiene self-care did increase the explained variance in brushing and flossing behavior. Data on students in the context of a regimen of daily brushing and flossing showed the importance of perceived behavioral control, a variable similar to self-efficacy (McCaul, Sandgren, Neill , 1993).

However, there are profound OHB differences across regions, countries and within countries. These may relate to socioeconomic status, race or ethnicity, age, gender or general health status. These differences may influence the relationship between psychological factors on the one hand and OHB on the other. Cultural subgroups may differ in the psychological factors that determine OHB. For interventions to be effective, they must take these differences into account. The TPB includes besides attitude (i.e. a person's positive or negative feelings about a given behavior) and social norms (i.e. the belief that specific important persons think that one should or should not perform a given behavior), also perceived behavior control (i.e. a person's perception of his / her capabilities to perform a behavior) as an independent determinants of behavior. On the basis of this TPB model, one would expect that, overall, the more positive the attitude towards oral self-care practices, the stronger the social norms, and the higher the perceived behavior control, the more likely it is that an individual will perform adequate OHB. Aruba and Bonaire are part of the Netherlands Antilles. The population on the islands is mainly mixed Black, with the remaining group of being White, Amerindian and Asian background. About 75% of the population is Roman Catholic, and the surplus holds a membership in other religions. In 2005, on Bonaire the unemployment rate for the economically active population was almost 9 percentages, whereas on Aruba the unemployment rate was slightly above 6 percentages.

Health-related concerns are not the only motive for oral hygiene behaviors. For example, tooth brushing may be engaged in to look more attractive, which in turn may

influence one's social interactions, and for instance, in some cultures golden teeth are a trend or have become popular and are used as a status symbol (Oosterhaven, Westert & Schaub, 1989). In this study, therefore, the perceived social consequences of OHB, i.e. how one feels healthy teeth might affect one's interpersonal interactions (IPI) were also assessed. Finally, given the fact that in developing regions, knowledge about adequate OHB may be limited, and according to the TPB model, people make rational decisions based in part on their oral health knowledge (OHK), this variable was also included. People who have assimilated OHK and experienced some control over their personal oral health are more likely to adopt oral hygiene behavior (Freeman, Maizels & Wyllie, 1993). The present research examined the potential psychosocial determinants of OHB as assessed using a culturally adapted questionnaire, including a culturally adapted version of the OHB index in the Caribbean and in Nepal. When different determinants are associated with OHB in cultural different regions, this may have direct implications for the development of interventions promoting oral hygiene behavior in these regions.

2.1.1 Sociological Concept of Health

Medical sociology is the study of individual and group behaviors with respect to health and illness. In this regard, "medical" is a bit of a misnomer, because the focus is not on medical professionals or their behaviors, but on human behavioral responses to health and illness, which overlaps with the domain of nursing more than that of medicine. Medical sociology is concerned with individual and group responses directed toward assessing well-being, maintaining health, acting upon illness (whether real or perceived), interacting with health care systems, and maximizing health in the face of physiologic or functional derangement. Along with analyzing the ways in which our health is a result of the psychological conditions as a result of our environment.

(http://en.wikipedia.org/wiki/Medical_sociology)

Medical sociology is the sociological analysis of medical organizations and institutions; the production of knowledge and selection of methods, the actions and interactions of healthcare professionals, and the social or cultural (rather than clinical

or bodily) effects of medical practice. The field commonly interacts with the sociology of knowledge, science and technology studies, and social epistemology. Medical sociologists are also interested in the qualitative experiences of patients, often working at the boundaries of public health, social work, demography and gerontology to explore phenomena at the intersection of the social and clinical sciences. Health disparities commonly relate to typical categories such as class and race. Objective sociological research findings quickly become a normative and political issue (http://en.wikipedia.org/wiki/Medical_sociology).

Some have argued that medical sociology should be thought of as a loosely connected network of disparate subgroups rather than as a single discipline. Many medical sociologists tend to argue against certain axioms in the biomedical model of health and illness. They reject the reductionist approach of biomedicine, which claims that health and disease are natural phenomena that exist in the individual body rather than in the interaction of the individual and the social world; they reject the doctrine of specific etiology, the vision that disease can be induced by introducing a single specific factor into a healthy animal; and they reject biomedicine's claim to scientific neutrality. (<http://www.answers.com/topic/medical-sociology>)

Like sociology in general, subgroups within medical sociology vary according to dichotomies such as human agency versus social structure, conflict versus consensus, and idealism versus realism. Subgroups also vary according to subject matter, thus the sociology of medicine can be distinguished from the sociology of health and illness, the sociology of healers, and the sociology of the health care system. Medical sociologists also distinguish between the sociology of health, the study of health, illness, and health care to further sociological theory; and sociology in health, the use of sociological insights to complement biomedicine's objectives and priorities. There are four often interrelated areas of research in medical sociology: the social production of health and illness, the social construction of health and illness, postmodern perspectives on health and illness, and the study of the health care system and its constituent parts. (Coleman, 1994)

Some micro-level concerns when studying the health care system are entry into and experience with the health care system and patient-practitioner relationships, which have shifted focus from the provider's interest in compliance to a power-based perspective. Some argue that medicalization (providers defining needs) impinges on patient autonomy and acts as a form of social control directing deviance into controllable channels. Others explore the behaviors of providers, the management of uncertainty in practice, and implicit theories of professional knowledge. A prevailing theme at the meso-level, the interactional region between the face-to-face encounter and the wider social structure, is medical dominance, the power of medicine to define matters in its own interests, applied to the study of professions, occupations, hospitals, and medical schools, for example. Some have studied the adoption of a cloak of competence in the socialization of medical students. Finally, some macro-level concerns are the role of multinational pharmaceutical companies in shaping the nature of health care and the reasons for and historical development of health insurance. (<http://www.answers.com/topic/medical-sociology>)

2.1.2 Sociology in Public Health

Sociology as a discipline developed from theoretical writings of the nineteenth century and the first half of the twentieth century. The predominant theories stem from the work of Karl Marx, Emile Durkheim, Max Weber, Talcott Parsons, Robert Merton, and James Coleman. The influence of this rich theoretical foundation has manifested itself in major debates over the role of sociology as a science. European and American perspectives on sociology as a science differ, with the American perspective favoring sociology as a scientific discipline and emphasizing a more quantitative methodological approach than the European approach.

Several key concepts in sociology relate to its role in public health. Foremost is the emphasis on society rather than the individual. The individual is viewed as an actor within larger social processes. This distinguishes the field from psychology. The emphasis is on units of analysis at the collective level, such as the family, the group, the neighborhood, the city, the organization, the state, and the world. Of key importance is how the social fabric, or social structure, is maintained, and how social

processes, such as conflict and resolution, relate to the maintenance and change of social structures. A sociologist studies processes that create, maintain, and sustain a social system, such as a health care system in a particular country. The scientific component of this study would be the concern with the processes regulating and shaping the health care system. Sociology assumes that social structure and social processes are very complex. Therefore its methodology is appropriately complex and often, particularly in American sociology, dominated by multivariate statistical methods of analysis. The advent of the computer in the second half of the twentieth century presented the field with the opportunity to work with very large bodies of data and complex variables. (Cockerham, 2000)

Earlier social theorists, such as those noted above, did write on subjects of concern to medicine, health, and illness, but medical sociology, as a sub discipline of sociology, developed in the post-World War II period. Early debates in medical sociology were concerned with the role of sociology as it relates to medicine: Should the field be critical and analytical, concerning itself with the sociology of medicine (i.e., examining how medicine works); or should it be largely applied, focusing on sociology as a handmaiden for medicine? Like many such formative debates, there could be no conclusive answer. However, the field has developed into two groups: those (largely within academic settings) which focus on the sociology of medicine; and those (primarily in schools of public health and governmental institutions) which focus on the application of sociology to medicine. Later debates related to whether the focus should be on health sociology or medical sociology. This debate has moved the field to a broader, more ecological, view of medicine and health.

Public health has been and remains a much applied field. It is also characterized by a population-based approach to health, and statistical methods are deemed the appropriate underlying method for the field. It is viewed as a science that seeks to intervene, control, and prevent large-scale processes that negatively affect the public's health. By these criteria, there is a strong logical fit of sociological principles and practices within public health. Nonetheless, sociology has not been the key social science discipline in public health. That position has gone to psychology, where the emphasis on individual behavior resonates more with a biomedical model. Despite

this, many of the primary concerns of present-day public health, with large-scale variables such as social capital, social inequality, social status, and health care organization and financing, remain topics best suited to the sociological perspective and methodology. The emphasis in public health is thus shifting toward a sociological perspective (<http://www.answers.com/topic/sociology>).

Sociology in public health is reflected in the myriad of sociological concepts that pervade the practice of public health. More than any other social science, sociology has the discussion of socioeconomic status at its very core. Social-class variation within society is the key explanatory variable in sociology—for everything from variation in social structure to differential life experiences of health and illness. Indeed, there appears to be overwhelming evidence that Western industrialized societies that have little variation in social class experience have far better health outcomes than societies characterized by wide social-class dispersion.

2.1.3 Sociological Methods in Public Health

Methodological concerns are critical to sociological research. The great debate in sociology has been on the relative merits and role of quantitative versus qualitative approaches. Both approaches are widely used and play a critical role for public health. Sociology has long recognized that the social world comprises both an objective and a subjective reality. For example, the objective reality of having cancer is accompanied by the subjective reality of the experience of cancer by the patient, and the patient's family and friends. Both realities are relevant to the sociological approach. The subjective, qualitative approach is generally discussed in the theory and methods concerned with illness behavior, but qualitative approaches are equally applicable to the understanding of social policy, world systems, and areas of sociology where statistical measurement is difficult or less relevant.

Within public health, surveillance is seen as a key approach to describing the distribution and dynamics of disease. In sociological approaches to public health, the role of social and behavioral factors in health and illness is central. Survey

methodology has occupied a central place in sociological research since the middle of the twentieth century.

The concern has been with the collection, management, analysis, interpretation, and use of large quantities of data obtained by direct interview with respondents. Social surveys are characterized by large random samples, complicated questionnaires, and the use of multivariate statistics for analysis. By their very nature, most sociological variables are complex to measure and to analyze. For example, the assessment of socioeconomic status of an individual requires the accurate measurement of several variables that sit within a larger social context. Socioeconomic status (SES) is regarded as a product of several components, including income, residence, education, and occupation. Determining the relative weight of each of these components is a major analytical problem. Thus, when considering the role of socioeconomic status on health care outcomes, there is no easy answer to what mechanism actually works to determine the observed relationship between SES and health.

Because many sociological variables are at the so called macro level, there is limited opportunity to intervene rapidly, directly, or simply. For example, the SES of a group is affected by complex components, such as education and occupation that are part of the total life course of individuals within the group. Thus, to change the SES of a group would require significant redistribution of resources of the larger social structure. A significant period of time and concerted effort is needed to change such macro variables. This is, however, not dissimilar to many other challenges in public health, such as the long-term and time-consuming effort to change lifestyles and reduce behavioral risk factors related to chronic diseases. (<http://www.answers.com/topic/sociology>)

The chief role of sociology in public health remains its evaluation of those macro components of society that affect public health at the population level. Such evaluations provide an understanding of why inequalities in health exist, and they help elaborate upon the mechanisms and processes that sustain these inequalities. This relates to the long-standing theoretical concern with social structure among sociologists. Further, sociology reveals the mechanisms for long-term changes that may lead to a reduction in health inequalities. The product of sociological thinking in

public health is not immediate or easily understood by those who seek quick and easy solutions to the suffering of humanity. Nonetheless, the long-term role of sociology in public health is to change and improve the public health. (<http://www.answers.com/topic/sociology>)

2.2 Review of Previous Study

2.2.1 Global Scenario

In 2002, The Australian Dental Association, Victorian Branch (ADAVB) had launched dental awareness and oral health month. Over the past 20 years, the ADAVB has promoted a weeklong community health education campaign known as Dental Health and Awareness week. In 2002 the week has been extended to a month-long campaign, the theme of which is dental care and awareness for the ageing. This theme highlights the importance of adapting dental and gums to suit dental health needs at specific life stages. In 1998, 2.3 million people (12 % of the total population) were aged 65 years or over. The dental health and the knowledge of this group is an important and relevant issue. With 90% of older Australians having some degree of treatable dental disease, the ADAVB is alarmed at the number of older Australians who are ignoring their dental health and knowledge, to an extent that many are entering nursing homes with severe dental and oral diseases.

The ADAVB believes that it is the challenging and complex issue, but certainly an achieved goal. Good oral health care habits that will benefit people throughout their lives start at very early period. Parents and curers of infants and very young children need to be aware of nursing decay, which can affect babies' teeth extensively. Teeth most often affected are the top front teeth. Bottle and breast fed babies are both susceptible. Babies left with a bottle as a pacifier and those who are frequently nursed, especially at night, run the danger of bottle or nursing decay due to the prolonged exposure to milk or juice. Good dental care in young children is a key factor in good dental health in later life.

Early Childhood Caries has a relatively low prevalence and minimal morbidity among most populations of U.S., but epidemiological studies have long shown that Latino children suffer disproportionately, as do many American Indian and Alaskan Native communities in which the rate of ECC can be up to 400 percent higher than in other groups ((ADA), 2009). ECC in particular offers the opportunity to understand the long-term interaction between biology and social conditions. Because of its rapid destructive qualities, the effects of ECC remain visible throughout the life course and shape children's physiology and physiognomy, marking their class status (Horton & Barker, 2008). The literature on children's oral health has focused on two major variables, namely, family socioeconomic status (SES) and race/ ethnicity. Studies have shown an inverse relationship between SES and oral health in children (Medina, Maupomé, del, Pérez, Avila & Lamadrid-Figueroa, 2008). SES is associated with mediating factors that have a direct impact on dental health. The high cost of dental care and lack of dental insurance, coupled with limited income, directly impact the use of dental services (Gillcrist, Brumley, & Blackford, 2001). It is also less likely for children from lower SES backgrounds to receive preventive services such as sealants and/or fluoride supplements and varnishes, which protect teeth from decay. Both obesity and caries frequently occur in the same children, pointing to a common risk factor linked to low socioeconomic status (Marshall, Eichenberger-Gilmore, Broffitt, Warren, & Levy, 2007)

In addition, race or ethnicity is a risk factor for poor oral health worldwide, based on studies with minority populations (Locker, (2000)). This relationship stands even after adjusting for factors such as infant feeding practices and preventive oral health behavior (Willems, Vanobbergen, Martens, & Maeseneer, 2005), Within the Medicaid program, racial and ethnic differences are evident in time since last visit, to the detriment of Latino and African American children (Pourat & Finocchio, 2010). These studies, among others, suggest a similar pathway toward oral disease for groups experiencing social inequality, and allow us to see the distribution of disease as a biological expression of social relations (Krieger, 2001).

Early childhood caries (ECC) is a particularly damaging form of decay that has a complex etiology linked to the provision of pacifying bottles of juice, milk, or

formula, which allows the sugar contents to pool around the upper front teeth, mix with cariogenic bacteria, and give rise to rapidly progressing destruction. The mechanism of interaction between socioeconomic status, stress, poor oral hygiene, and nutrition is evident, but remains largely unexplained. The literature on children's oral health has focused on two major variables, namely, family socioeconomic status (SES) and race/ ethnicity. Studies have shown an inverse relationship between SES and oral health in children (Medina, Maupomé, del, Pérez, Avila & Lamadrid-Figueroa, 2008)

According to WHO, 90 percentage children of Fiji (country) are suffering from dental caries (Global Oral Data Bank, 1989-1990) and according to Anderson, Irish , Michelin and Ngan, (1994) the study taken at India, almost 20 percentage of Indian has oral problem, 10 percentage of people were killed due to oral cancer..

A study of Knowledge on gingivitis and oral hygiene practices among secondary school adolescents in rural and urban Morongo, Tanzania with to assess and compare knowledge on gingivitis and oral hygiene practices among rural and urban secondary school students. A cross-section descriptive study involving secondary school students aged between 13 and 17 years in Morongo rural and urban districts. Questionnaire was use to collect information about knowledge on causes, signs, symptoms, complications, treatment modalities and prevention of gingivitis, as well as on oral hygiene practices. 196 students participated in this study, of which 58.7 percentages were female, and 52 percentages were from urban schools. The responses were graded into three criteria namely 'Lack of knowledge', 'Partial knowledge' and 'Total or full knowledge'. There was a partial knowledge about gingivitis and full knowledge of the basic oral hygiene measures among secondary school teenagers. The difference between rural and urban residence on the level of understanding was statistically significant in relation to teeth brushing practices, necessity of using toothpaste, reasons for using toothpaste, signs and symptoms of gingivitis and treatment of gingivitis. However, there were no statistically significant differences in distribution of study participants, understanding of teeth brushing practices, reasons for teeth brushing, causes, prevention and complications of gingivitis. Secondary school teenagers have partial knowledge about gingivitis and a good knowledge of the basic oral hygiene measures necessary to maintain proper oral health. A small

difference on knowledge in specific areas was noted among rural and urban respondents.

A study of "Oral hygiene practices, dental knowledge, dietary habits and their relation to caries among male primary school children in Al Hassa, Saudi Arabia." Objectives: To assess the frequency of consumption of cariogenic foods, oral hygiene practices and dental health knowledge among Saudi male primary school children in relation to socio-demographics and to find the possible predictors for dental caries among them. The cross-sectional descriptive study included 1115 Saudi males selected by multistage random sample from 18 public primary schools. Subjects were interviewed by closed ended questionnaire gathering data regarding frequency consumption of some cariogenic foods, oral hygiene practices and dental health knowledge. Students were submitted to dental screening to detect the clinically evident caries lesion. The clinically decayed tooth was diagnosed in 68.9 percentages of the included children, more in urban and younger students. Caries affected the subjects consumed cariogenic foods at greater frequency compared with caries-free children. Only 24.5 of the percentage students brushing their teeth twice or more per day, and 29 percentages of them never received instructions regarding oral hygiene practices. Miswak as an alternative and/or additional method of dental cleaning was used by 44.6 percentage. Stepwise logistic regression analysis revealed that maternal working conditions, large family size and poor oral hygiene practices were the chief predictors for dental caries among the included schoolchildren. Conclusion: The poor oral hygiene practices, lack of parental guidance and appropriate dental health knowledge with frequent exposure to cariogenic foods in addition to socio-demographics are the main risk factors for dental decay among the surveyed students.

The greatest improvements in the oral health of Canadians will be achieved through health promotion, education and awareness activities involving the public, health professionals and policy makers. The key to good oral health is to enable and empower citizens to take control of, and responsibility for, their own oral health. To do this they need to have the personal skills, knowledge and desire to practice good oral health behavior plus easy access to professional care when required. This needs to be supplemented with social policy that creates healthy, supportive environments and strengthens community action. (Ron and Barry, 2005)

Oral health promotion will be most successful if it becomes an integral component of general health promotion strategies aimed at the reduction of common health risk factors. More than ever, there is a need for strategic alliances with other programs, providers and projects, and to focus on healthy living and healthy choices. Oral health will improve as a result of individuals practicing overall healthy life styles. Oral health professionals need to be participants in the health determinants landscape recognizing the impact such determinants have on the overall health of our community including oral health. We should be seeking opportunities for collaborative partnerships with agencies offering health promotion activities (such as diabetes programs, Heart and Stroke, child development programs, smoking cessation programs, community development programs, etc.), and other professional groups (such as physicians, nurses, dieticians, child caregivers and others) to get our messages across as a part of promoting good health in general. (Ron and Barry, 2005)

According to the Ron and Barry (2005), with certain segments of the population demonstrating higher disease rates and being at higher risk of disease than others. Although there can be high-risk individuals within any segment of society, there are particular groups that tend to be at higher risk than the general population. As stated by Watt and Sheiham¹²; “A reduction in oral health inequalities will only be achieved through the implementation of effective and appropriate health promotion policies which focus action on the underlying social, economic and environmental causes of dental disease (Ron and Barry, 2005)”.

Even though the importance of health and personal hygiene is widely acknowledged, especially in developing and underdeveloped countries it seems that health systems are not performing as well as they could and as they should (WHO, 2009).

2.2.2 Scenario of South Asia and Nepal

Nepal is a poor developing landlocked country situated in the Himalayas, and positioned between China and India in Western Asia. Nearly 85% of the population,

predominantly children, lives in villages, in remote terrain that is difficult to access. Under-nutrition is wide-spread, particularly among children, the growth rate is high, and the expectation of life is around 61 years. Hinduism is practiced by a greater majority of people, and Buddhism by a minority (WHO, 2009). Given the differences between both cultural regions, the psychosocial determinants of OHB may also differ. For example, people in the Caribbean have relatively easy access to a dentist for regular screening or dental problems, and a lack of adequate OHB may be merely a matter of one's individual attitudes. In contrast, for Nepalese there is limited availability of dental care, and therefore, Nepalese may generally experience more problems with their teeth, and may feel more unable to engage in adequate OHB. The summary is that the task of oral hygiene related behavior is influenced by environmental and cultural factors that may, in turn, influence the psychological determination of OHB.

Another study which was studied by Dental College Lukhnow (1998) there 90 to 95 percentage people were affected by periodontal diseases. This study was held on five economically poor districts between age groups 1-20 years on 400 people. In addition the main causes of this problem were due to the lack of oral hygiene knowledge

(Poudel and Baral, 2005), "A study of oral health problem and the way of using preventive measure", that study shows us to the real status of oral health in our society. Exactly there are more than 60 percentages of children who cannot use brush due to poverty, 40 percentage people are using brush and tooth paste but not in correct way. Almost of the people have their own problems for maintaining oral health, some people can afford the cost but they have a problem of knowledge. These days we have different types of food partials in the market and they are very easily available, some advertisements in the media attracts the children's interest which the children can easily follow that thing which is not good for our health, this type of problem is the main cause of decaying teeth and the causes of carcinoma. This study shows the real situation of our country. Different people like students and teachers said that awareness of oral hygiene in rural Nepal is low because that is the last priority when people are just trying to survive from day to day. Indeed, the government is not so much emphasizing on nutrition and diet in order to improve oral hygiene concerning

people’s health priority. We’ve neglected a well-functioning set of teeth where food is first processed.

A study of “Oral Hygiene Practices and its Effects on Dental Health among the Secondary Level Students of Waling Municipality” (Sapkota, 2055 (B S)) shows the very low level of oral health practice in students of secondary level students. This is one of the just established municipalities and most of the area lies in the hilly and undeveloped regions so, many people do not know the proper hygiene about all sectors. They do not know the all technique of maintaining their oral hygiene, and don not know the rule of taking hygienic food. This study shows very poor oral hygiene practices in that area, this study represent all our society.

In general above literature review has supported to the guidelines for this study.

2.3 Conceptual Framework

Based on above literature review the following conceptual framework has been conceived to analyze the determinants of oral hygiene among adolescents.

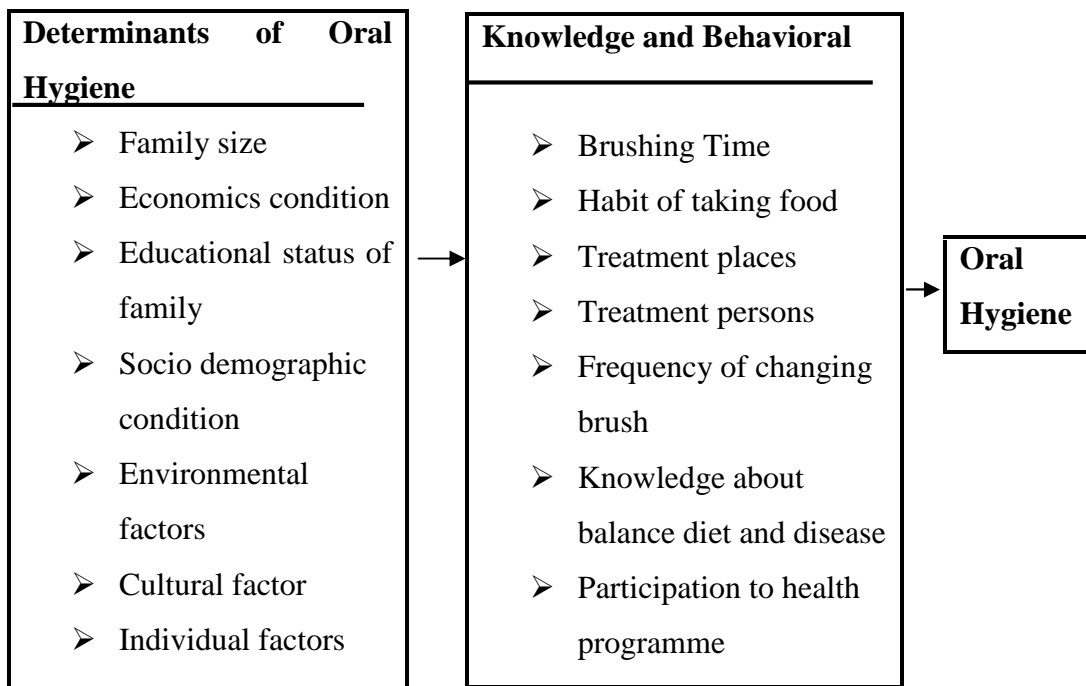


Figure 2.3: Conceptual Framework

CHAPTER III

RESEARCH METHODOLOGY

This section deals with a set of methods that was applied while conducting the research study in order to achieve the research objectives. More specifically research design, population of the study, and sources of data, sample size and sampling procedure, data collection procedure, methods of data analysis and interpretation was presented in this section.

3.1 Research Design

The present study was based on the descriptive types of survey methods, which is most commonly used for research. The study was mainly focus obtaining information on oral hygiene practices, dental knowledge and their relation to oral health and diseases among higher secondary level students in Pokhara. The heterogeneity character of population of Pokhara in terms of economic class and occupation is the rationale behind the selection of study area.

3.2 Nature and Source of Data

As per need of the study, both primary and secondary data were collected in this study. The priority was given to the collection of primary data. The primary data have both qualitative and quantitative. Questionnaire schedule was used to collect data. Secondary data were collected from different published and unpublished sources as per need.

3.3 Universe and Sample

According to district education office Kaski, among 43 higher secondary schools of Pokhara valley, out of them only 19 schools are public and 24 are private higher secondary schools. Only four schools were selected according to the convenience sampling and 40 students from each selected schools were taken using lottery method. As total, 160 students were the respondents of the study.

3.4 Data Collection Techniques

For the data collection, the researcher used questionnaire schedule. The major tools for field study were the structured and semi structured interview schedule. Furthermore observation and informal interview with some household head was the secondary tool for the collection of information.

3.5 Data Analysis and Interpretation

After collecting the necessary data and information for the study, were carefully checked and verified to reduce errors and was processed through SPSS 16 version. Simple statistical methods like frequency count and percentage distribution, charts was used.

CHAPTER IV

SOCIO-ECONOMIC BACKGROUND OF RESPONDENTS

This chapter is mainly concern with the analysis and interpretation of data. Necessary data for the study are collected from the public higher secondary schools of Pokhara valley. In this study collected data are tabulated, analyzed and interpreted. Data are presented on the basis of respondents and the observation taken during the conduction of health check up programme. The content analysis is another major tool to analyze and interpret the data. After the tabulation of the data, the responses are grouped under key heading. The analysis and interpretation of the data collected from the related field are presented below.

4.1 Characteristics of Respondent

4.1.1 Religion

Religion is not just a set of beliefs and accompanying rituals handed down from generation to generation; rather it is a complex combination of traditions, festivals, faiths and doctrines that have permeated every strata of Nepalese Society in such a way as to become the very heartbeat of the nation.

However, it is a complex and beautiful tapestry formed by the interweaving of Hinduism, Buddhism and other beliefs. Religious tolerance and harmony such as is found in Nepal, is perhaps a unique example to the world.

Religion to be followed depends up on individual interest even it can be influenced by family, society and friends as well as other section of social life. Religion is a component of culture. The religion also determines the daily habits as well as lifestyle of person. Religious rites have been declining now days how ever there are many people who belief upon religion and they do according to their religion.

Table 4.1: Religion about the respondents.

Religion	Number	percent
Hindu	100	62.5
Buddhist	41	25.62
Others	19	11.87
Total	160	100.0

Source: Field Survey, 2013

The table represents that about 100 out of 160 respondents were hindu.41 were Buddhist and 19 were followers of other religions (Christian, Muslim, etc). From the analysis, it can be drawn that the majority of the people were Hindu however it is not equal to national indicator, the analysis also presents that 62.5 percent were Hindu, 25.62 percent were Buddhist and 11.87 percent were other religion Muslim, Christian.

4.1.2 Caste

In the face of its size, there are different ethnic groups found in the country, which makes Nepal as culturally diverse as Europe although recent internal migration has blurred this somewhat. Considering the number of different groups and their respective differences, Nepal's ethnic and caste groups do display a fantastic level of mutual tolerance. Religious practices remain distinct and outside of the major cities intermarriage is still rare.

Table 4.2: Caste of Respondents family

Caste	Number	percentage
Brahman	47	29.4
Kshetri	22	13.8
Magar	21	13.1
Newar	24	15.0
Kami/Damai/Sarki/Sunar	10	6.2
Gurung	26	16.2
Others	10	6.2
Total	160	100.0

Source: Field Survey, 2013

Brahmans (Baahuns) belong to the highest rate of other caste above table shows that 47 family or 29.4 percentages represent and Kshetri were 22 families, Magar 21 or 13.1 percentages, Newar represent 24 families in total of 15 percentages. Likewise Gurungs were 26 families in the study. Other castes like Dalits there were so many combinations of castes like Kami, Damai, Sarki and so many others name. Dalits is the term used for the lowest caste in Nepal, also being unfairly referred to as 'untouchables' due to the lowly status of their caste and jobs but these days Nepali society changed and most of Dalit has been started to work taking higher position in job and so others. The table shows that Kami/ Damai/ Sarki/ Sunar and others who were not interested to declared their caste represents 20 families or 12.4 percentages,

4.1.3 Educational Status of the Respondent's Family

Education is one of the major factors for a person's knowledge that directly affects their society and culture. It is also very important for civilization of human being. Education affects human behavior; it plays the great role to correct unpractical and wrong activities, culture and other phenomenon in our life. It is responsible to continue good cultural practice also. It is also responsible to follow good behavior practice about health and their practice.

Table 4.3: Respondents family classified according to Educational Status

Educational level of family	Number	Percentage
Illiterate	40	25
Literate	56	35
Primary	16	10
Secondary	32	20
Higher level	16	10
Total	160	100

Source: Field Survey, 2013

From the study of education status among respondents family, it was found that most of the respondents were literate (35%) that was followed by illiterate (25%), primary level 10 percentage secondary levels 20 percentage and higher level was only 10 percentage From the analysis, it is found that major populations were literate and few only crossed Secondary and Higher level. Major population is always leading the society and cultural aspects. It means illiterate group in this society is feeding in most of the aspects.

4.1.4 Family Type

A family (from Latin: *familia*) is a group of people affiliated by consanguinity, affinity, or co-residence. In most societies it is the principal institution for the socialization of children. Anthropologists most generally classify family organization as matrilocal (a mother and her children); conjugal (a husband, his wife, and children; also called nuclear family); and consanguineal (also called an extended family) in which parents and children co-reside with other members of one parent's family.

There are also concepts of family that break with tradition within particular societies, or those that are transplanted via migration to flourish or else cease within their new societies. As a unit of socialization the family is the object of analysis for sociologists of the family. In science, the term "family" has come to be used as a means to classify groups of objects as being closely and exclusively related. In the study of animals it has been found that many species form groups that have similarities to human

"family"—often called "packs." Sexual relations among family members are regulated by rules concerning incest such as the incest taboo.

Extended from the human "family unit" by affinity and consanguinity are concepts of family that are physical and metaphorical, or that grow increasingly inclusive extending to community, village, city, region, nationhood, global village and humanism.

The different types of families occur in a wide variety of settings, and their specific functions and meanings depend largely on their relationship to other social institution. Family is a basic need for people. No one can feel easy to live without family. Family is a group of people living together under the same roof and they eat together in the same kitchen. They also share their feelings and experience and they stay together to fulfill their common goal. The types of family are nuclear and joint. The nuclear family consists of father, mother and their offspring only, while joint family consists of grandfather, grandmother, father, mother, their offspring and other blood related members.

Table 4.4: Types of family

Type of family	Number	Percentage
Joint	96	60
Single	64	40
Total	160	100

Source: Field Survey, 2013

From the analysis, it is found that 60 percent of the population had joint type of family and there are always difficulties to regulate the life in joint family, 64 or 40 percent people are single family. In the sense of family care there is little easy to single family.

4.1.5 Main Occupation of the Respondent's Family

Nepal is a country where predominated occupation is agriculture. The vast majority of Nepalese are engaged in agriculture sector but the gradual involvement of people in other sector is increasing nowadays. In this area various people cover migrated from different places so some of them are job holders and some are engaged in agriculture in Pokhara valley.

Table 4.5: Occupation of the Respondent's Family

Occupation of respondents family	Number	Percentage
Business	64	40
Farming	24	15
Services	40	25
Others	32	20
Total	160	100

Source: Field Survey. 2013

Occupation determines their status and income level. From the analysis, 40 percent people have been doing their business, 24 people or 15 percentage farming, 40 numbers of people or 25 percentages are in services 32 people or 20 percentages are others such as daily wages, worker . Mainly this area is covered by different social aspects and from migration by the different rural areas.

4.1.6 Gender of Respondents

A sex-determination system is a biological system that determines the development of sexual characteristics in an organism. Most sexual organisms have two sexes. Occasionally there are hermaphrodites in place of one or both sexes. There are also some species that are only one sex due to parthenogenesis, the act of a female reproducing without fertilization. In many cases, sex determination is genetic: males and females have different alleles or even different genes that specify their sexual morphology. In this study only male and female sex calculated.

Table 4.6: Gender of Respondents

Sex of Respondents	Number	Percentage
Male	85	53.1
Female	75	46.9
Total	160	100.0

Source: Field Survey, 2013

The above mention table shows that in the study there were 53.1 percentages of male and 46.9 percentages female respondents. But the national scenario is nearly opposite of this figure means female population are more than male. Due to the different research school somewhere female respondents were more and some where male respondents more, in average the researcher found male in the study area.

CHAPTER V

ORAL HYGIENE PRACTICE

Here are some explanations about the general information and their oral health status of the respondents. What is the basic status of their teeth and gums to the respondents and from where they gain (achieve) the treatment about oral health, their habit of brushing etc. are explained here in the basis of different varieties of questions.

5.1 Habit of Brushing

Brushing is the most important for cleaning and maintaining our oral health so everyone should care their time and duration in maintaining their health. Generally, how to keep teeth clean depends upon the behavior of individuals. The diagram below shows that the person caring his/her teeth or mouth in respective time or period.

Table 5.1: Brushing time

Time	Number	Percentage
After meal	110	68.25
Before meal	50	31.25
Total	160	100

Source: Field Survey, 2013

The above mentioned table shows that 110 respondents brushed their teeth after their meal, which is 68.75 percentages. Similarly, 31.25 percentages or 50 respondents brushed their teeth before meal.

5.2 Duration of Brushing

Teaching proper brushing habits in young children requires identifying the proper brushing technique an effective teaching method. Additionally, to teach young children to clean all teeth efficiently and thoroughly, a systematic brushing sequence

can help young children remember to brush all areas. Following are the status of brushing duration of the students.

Table 5.2: Duration of Brushing

Time	Number	Percentage
1 to 2 minutes	70	43.75
3 to 5 minutes	90	56.25
Total	160	100

Source: Field Survey, 2013

All over the world every dentist or health workers advise to take a proper time for maintaining their healthy teeth. If a person wants to keep healthy teeth then he /she must brush teeth at least 3 to 5 minutes each time per day. The above mentioned table shows the number of people brushing their teeth for 1 to 2 minutes is 43.75 percents and the duration of 3 to 5 minutes is 56.25 percents.

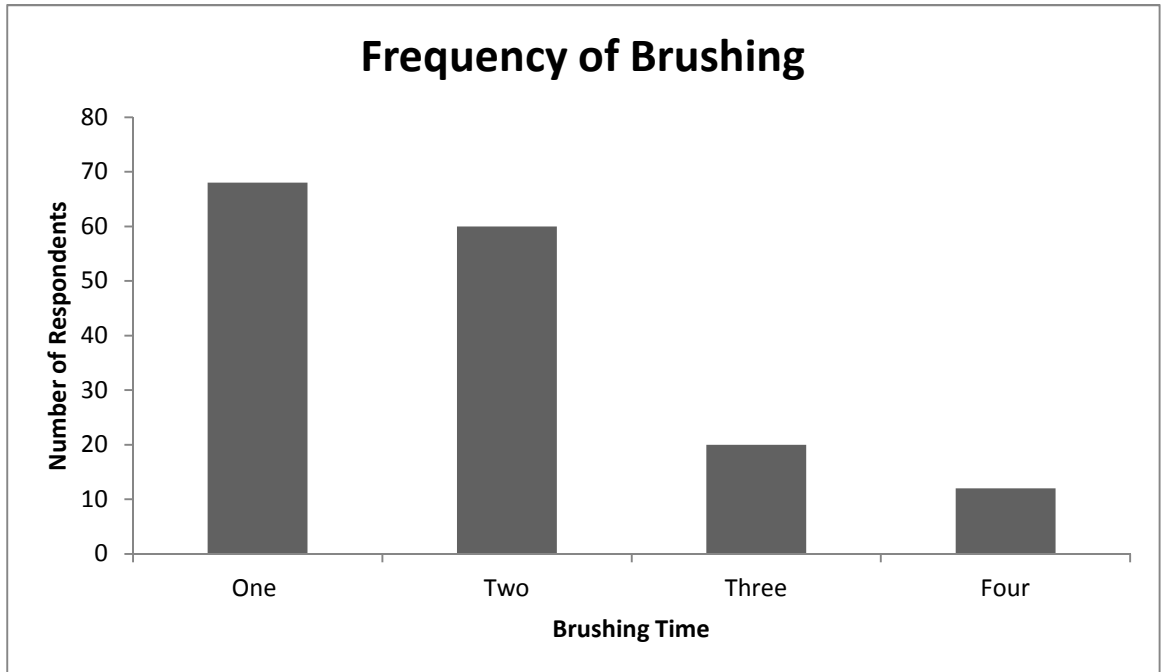
Proper brushing takes at least two minutes times that are right, 120 seconds! Most adults do not come close to brushing that long. Clean the outer surfaces of upper teeth then lower teeth. If anyone takes more time and not properly using the right technique then problem will not solving, so we must fallow the right way for proper management.

Most dental professionals agree that a soft-bristled brush is best for removing plaque and trash from teeth. Small-headed brushes are also preferable, since they can better reach all areas of the mouth, including hard-to-reach back teeth. For many, a powered toothbrush is a good alternative. It can do a better job of cleaning teeth, particularly for those who have difficulty brushing or who have limited manual dexterity.

5.3 Frequency of Brushing

Generally, the state of people who brush their teeth after their meal and their brushing (not fixed) time is mentioned here. Normally anyone who wants to keep healthy teeth must brush teeth after their meal in the morning and evening. So the time to brush has

to be twice in a day. The following table shows the real situation about the frequency of brushing of the respondents.



Source: Field Survey, 2013 **Figure 5.3: Frequency of Brushing**

The above figure shows 68 respondents brush their teeth only one time in a day, 70 respondents brush two times per day. Similarly, 20 respondents brush three times a day and very least number (i.e. just 12 people) brush their teeth four times per day. At least, everyone should brush their teeth twice a day but the above mentioned chart does not show that. I found less number of people brushing teeth twice a day. While brushing teeth people use different types of things or materials and time.

5.4 Brushing Equipment/ Instruments

The responses show that in our society we find people brushing their teeth as a fashion because of the lack of awareness and the right time to brush their teeth. Some of nonfood matters attached to our teeth harm our teeth and gums which must be immediately removed from our teeth and gums. If we do not remove them, they may cause different diseases of teeth and gums.

In ancient period people used to use herbal plant like Sangiban for brushing their teeth. Similarly coal and ashes were also used. The use of modern brushes also has increased. People use brush according to their income sources. The table below shows that, how people brush their teeth and whether they use brush, coal (koila), ashes (kharani) or any type of herbal plant:

Table 5.4: Brushing instruments

Tooth brush material	Number	Percentage
Brush	160	100
Coal (koila)/ Ashes (kharani)	0	0
Herbal plant	0	0
Total	160	100

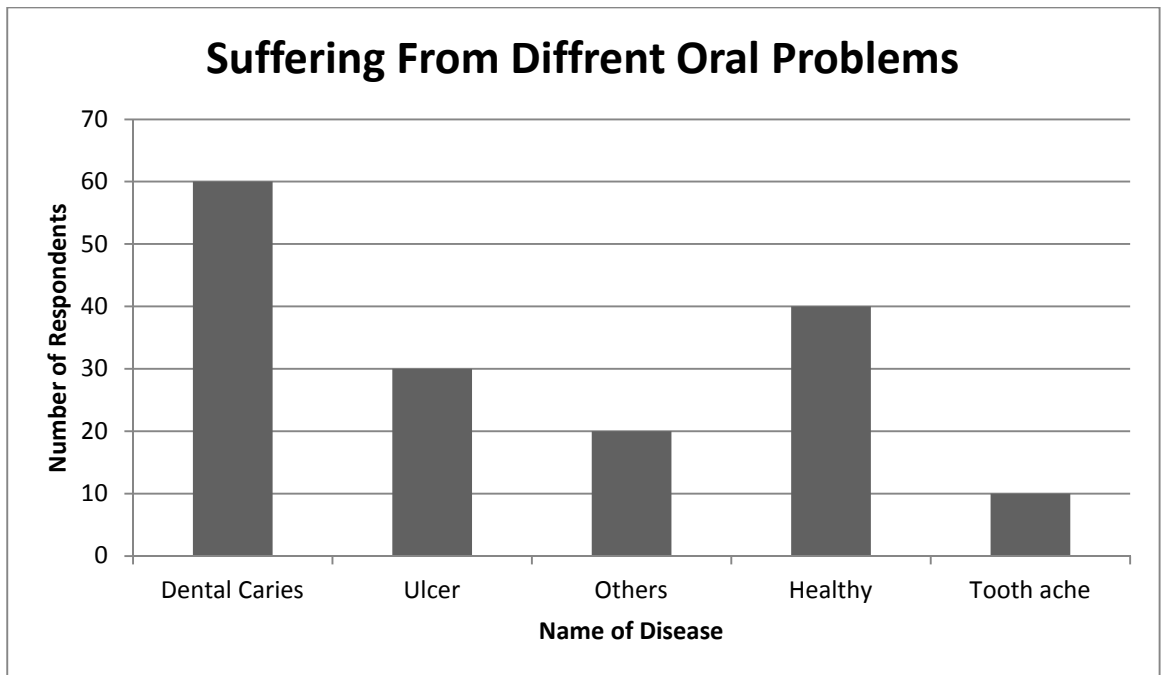
Source: Field Survey, 2013

The above mentioned table shows that all people brushed their teeth using brush. Therefore, we can observe that most of the people use brush. The number of people who use the herbal plants, koila/ ashes is not in the study; in general some of the old generation used such herbal plant and most of modern medicine also made by them.

5.5 Problem about their Teeth and Gums

Teeth are the beauty of a person. Teeth help to chew foods and make a clear speech (voice), so that it is our important duty to care for our teeth and gums. When we get the problem in our teeth and gums then it certainly affects our health. Initially it affects in our digestive system and finally it affects our whole body health. Hence when we are unable to care our teeth and gums we suffer a lot from various oral infections and problems.

The total number of teeth in a person is not only 1 or 2; there were e 28 to 32 teeth. Out of them any tooth can be affected. This research shows whether the teeth have problem or not, is shown in the below:



Source: Field Survey, 2013 **Figure 5.5: Number of Suffering from Different Diseases**

The above mentioned chart shows the total number affected by bacteria (virus) which are 60 respondents, the problem of oral ulcer is shown in the number of 30. The number of toothache is 10 and those having other problems are 20 and the students having not any problem are 40. This figure states that most of the respondents have their dental problem because of their sensitive age, and the main problem is the different kinds of foods found in the market, i.e. fast food and junk food etc.

5.6 Treatment Places

People are affected by different kinds of diseases. Dental improvement can't be achieved unless people know about how to solve the problems of different diseases. Nowadays people still take their different problems to the spell master or Dhami, Jhakri, and Jharfuk. Even in this 21st century, people use traditional methods and are affected by the different diseases. Still in our community, people are unable to get benefits from the modern treatment technique system.

Most of the people couldn't identify their health problems themselves. Some of them go to the doctor. Only a few can identify themselves and some are identified by their relatives and parents. The condition to identify their dental problems is as follows;

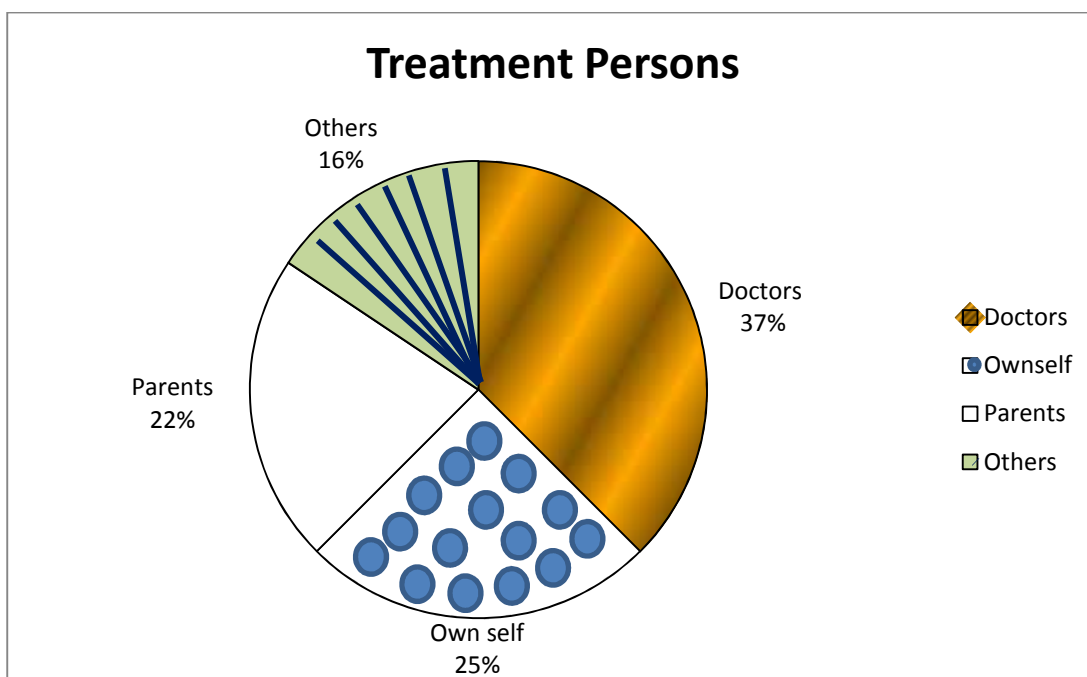


Figure 5.6 Treatment Places

Source: Field Survey, 2013

Above figure clarifies that, the total number of respondents identifies their dental problem by the doctor which is 60 respondents. Similarly, to identify dental problems by own self is 40 respondents. The students who identify their problem by their parents are 35 respondents. Similarly, those who identified their problems by others like friends etc. are 25 respondents. Thus the chart clarifies that the people have lack awareness of oral health and disease.

5.7 Information taken from Doctor

Oral health problem is one of the complex health problems which affect our oral parts so we must consult by well experience medical person is called doctor which can solved the oral health problem and provide proper advice to maintain health mouth. The information taken from the dentist about the condition of teeth and their problem is presented below:

Table 5.7: Information taken from the dentist

Visited the dentist	Number	Percentage
Yes	90	56.25
No	70	43.75
Total	160	100

Source: Field Survey, 2013

The table mentioned above shows that very few respondents take their problems to doctors. It is likely to occur that there may be the cause of not having any problems on their teeth too. But the table shows the maximum number of respondents is having the problem of teeth and gums, and 56.25 percentage respondents check their oral health.

5.8 Periodic check up of their Gums and Teeth

Most children and adults should see their dentist for a regular cleaning and check up every six months. People at a greater risk for oral diseases should have dental checkups more than twice a year. Tobacco and alcohol use, diabetes, pregnancy, periodontal and gum disease, poor oral hygiene and certain medical conditions are some of the many factors that dentist takes into consideration when deciding how often need dental cleaning and check up. Few people took good care of their teeth. There were no guidelines for how often you should see a dentist. Regular visits allow your dentist to find early signs of disease. Problems can be treated at a manageable stage. On average, seeing a dentist twice a year works well for most people. A few people can get away with fewer visits. Others may need more frequent visits. People with very little risk of cavities or gum disease can do fine seeing their dentist just once a year. People with a high risk of dental disease might need to visit every three or four months, or more.

The schedule for any person may change during a lifetime. In times of stress or illness, you may need to see the dentist more often than usual. The dentist may help people to fight off a temporary infection or treat changes in people mouth. The relation to minimize the problem and the regular visits of the respondents to check up their teeth to the dentist is given below:

Table 5.8: Periodic checks up in a year

Visited time to the dentist	Number	Percentage
One time	40	25
Two times	30	18.75
Three times	20	12.5
Not visited	45	28.12
Frequently	25	15.62
Total	160	100

Source: Field Survey, 2013

The above table shows that the respondents who went to the dentist to checked their teeth and take information for one time, two times and frequently are maximum time. The total numbers who do not go to the dentist is 45 and who went are 115. This number of respondents depends up on their problem and who was the frequently visited doctor they have chronic oral health problem.

5.9 Dental Problem in the Family

During the study we have already explained about the problems of students (respondents). Here we are taking information about the oral health and disease of the respondent's family. It is clear whether the respondents' family have oral problem or not and explains how much they care about their health. If the oral health is good in a family, it helps to change their behavior of all the members. In a family if teeth health is damaged (destroyed/ bad) but he/ she shows and takes suggestion time to time from the dentists, or he follows the process of treatment for the solution of the problem, that type of family can't be unhealthy.

We found out such family who do not care of the teeth health and do not try to solve the problems also. This type of family doesn't check their teeth problem because either of their poverty or illiteracy. They may not check because of the lack of equipments, hospitals or experts (dentist). This type of family automatically follows unhealthy behaviors. Whether the family has health problem or not can be cleared by the table below:

Table 5.9: Dental Problems in the Family

Knowledge.	Number	Percentage
Yes	135	84.37
No	25	15.63
Total	160	100

Source: Field Survey, 2013

The above table explains that the maximum number have their oral health problem. In the study out of the total participants 135 respondents or 84.37 percentages families are affected by oral health problem and the least or 25 families have no any problems. This table shows that the real situation in all family and respondents, and made easy to know the reality about the consciousness of their oral health problem.

5.10 Oral Health Knowledge and awareness on oral hygiene practices of Respondents

Here are some explanations about the knowledge of oral health of the respondents. What knowledge in relation to the problem of teeth and gums to the respondents and from where they gain (achieve) the knowledge about teeth health etc. are explained here in the basis of different varieties of questions.

5.10.1: Knowledge about Dental Problem and Dental Disease

Teeth health problem and the reference of the identification of disease and respondents' knowledge are shown in the table below:

Table 5.10.1: Knowledge about oral disease

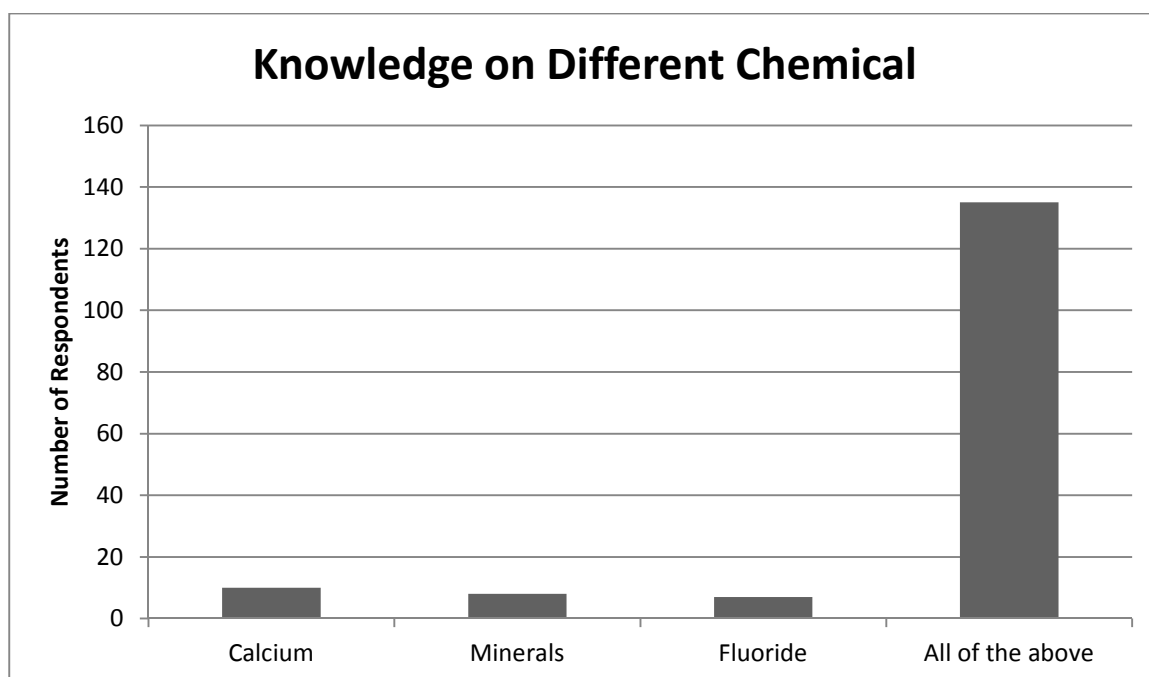
Knowledge about oral disease	Number	Percentage
Yes	120	75
No	40	25
Total	160	100

Source: Field Survey, 2013

The above mentioned table shows that 120 respondents or 75 percentages know how to identify their oral health problem themselves. Similarly 40 respondents or 25 percentages can't identify their oral health problems and disease themselves. The base of the identification of teeth problem and disease may be the cause of bad breathing or having pain, gums swelling etc. are the problem. Almost of the respondents know about oral diseases which directly affect oral health so researcher knows about their knowledge about the diseases.

5.10.2 Knowledge about helpful Chemical/Material

For the teeth growth, development or to keep the teeth healthy we need all these three elements; calcium, fluoride and minerals. The combination of calcium, fluoride and minerals build our teeth and the three elements to keep them healthy. All these three elements (chemicals) i.e. calcium, fluoride and minerals are very important and beneficial for the growth of teeth and gums. In the reference of essential element to keep our teeth & gum healthy the particular condition of the respondents' knowledge is as follows:



Source: Field Survey, 2013 **Figure 5.10.2: Knowledge on Different Chemical**

From the above analysis, nearly 135 respondents explained about all these three chemicals/ materials calcium, fluoride and minerals which do well to teeth and very essential thing for teeth and gums. Similarly, 10 respondents take calcium, 8 people takes fluoride and very least number 7 respondents take minerals and explained as requirements. Comparatively it focused for the requirement of all the chemicals rather than anything else.

5.10.3 Daily used but harmful food for Teeth Health.

Especially, daily used foods (meals) which are used for taste and pleasure are attached in our teeth and destroy slowly. Thus how are the respondents using meals like chocolates, cold drinks, ice-cream and other can be shown in the following table.

Table 5.10.3: Daily uses food particulars

Eating food	Number	Percentage
Chocolate	12	7.5
Ice-cream	20	12.5
Cold-drinks	25	15.62
All of above	103	64.37
Total	160	100

Source: Field Survey, 2013

The table mentioned above shows that most of the participants explained all these three things chocolate, ice- cream, cold drinks which are harmful for our health. Out of 160 participants 103(64.37 percent) takes all these three things (chocolate, ice-cream, cold drinks) as harmful food (things) whereas, 25(15.62 percent) takes cold drinks as harmful. Similarly, 20 persons (12.5 percent) take ice- cream and 12 (7.5 percent) takes chocolate as harmful thing (food).

5.10.4 Problem Solving Places

Respondents have the lack of knowledge about where and who to check the dental problem. Today also in our society most of the affected people believe or superstition and go to priest and spell master for their treatment of teeth and oral problems. They have superstitious feeling to take out the dental caries. In this way people spend their

time believing on their superstition and they may be affected by the other diseases and the condition of bad health may also arise. Here the reference of the place to identify health problem and their solution is mentioned below:

Table 5.10.4: Treatment places

Places	Number	Percentage
Hospital	106	66.25
Family	34	21.25
Others	20	12.5
Total	160	100

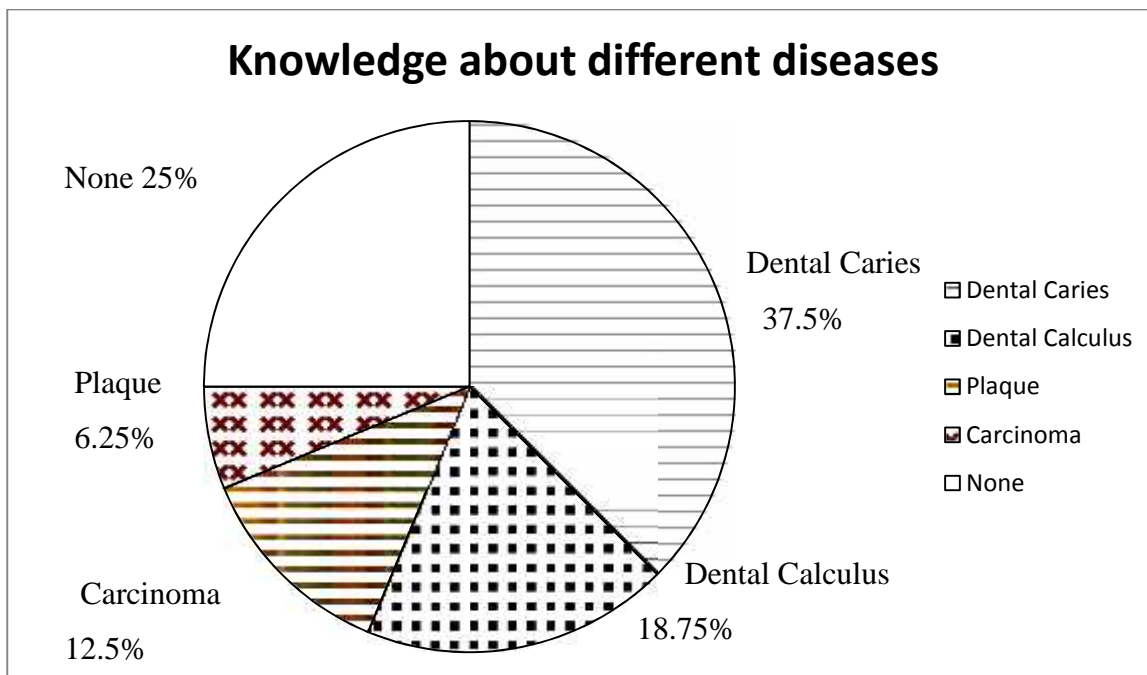
Source: Field Survey, 2013

Most of the people go to hospital for the identification and treatment of their disease. Out of 160 (66.25 percent) persons uses hospital. Some of them do not use hospital because of the lack of economy (money) or not having any problems.

5.10.5 Knowledge about Oral Disease and Oral Problems

Respondents have some problems of bad breathing, yellow teeth, as well as stain on their teeth plaque, calculus most of the respondents have lack of the knowledge to identification of their teeth problems so they overlap their problems with other problems. Because of various teeth have cavity and slowly the food stays in the cavity of teeth and destroys and becomes bad smell which makes people uneasy (difficult). Similarly, plague or calculus stays in the teeth and makes the bad breathing. Many problems can be seen in the teeth which.

All participants in this study who have the knowledge about general or oral disease or which are known to oral disease are understood by the diagram below:



Source: Field Survey, 2013

Figure 5.10.5: Knowledge about Diseases

There was a short briefing about different diseases to the participating students in this study. From which the students were able to understand and explain about their diseases and problems on the basis of their knowledge mentioned above out of 160 participants the knowledge having dental caries are 60. Similarly we find 30 persons having knowledge of dental calculus 20 people know about dental plaque. 10 people know about oral cancer or carcinoma and 40 persons don't have knowledge about no any disease or problems.

5.10.6 Source of Knowledge about Oral Disease

From where the respondents know about the teeth disease are shown below. They knew from health workers, booklets, newspapers, parents, teachers, friends or from other sources, among them which is the best way to get knowledge are as follows.

Table 5.10.6: Source of knowledge about oral disease

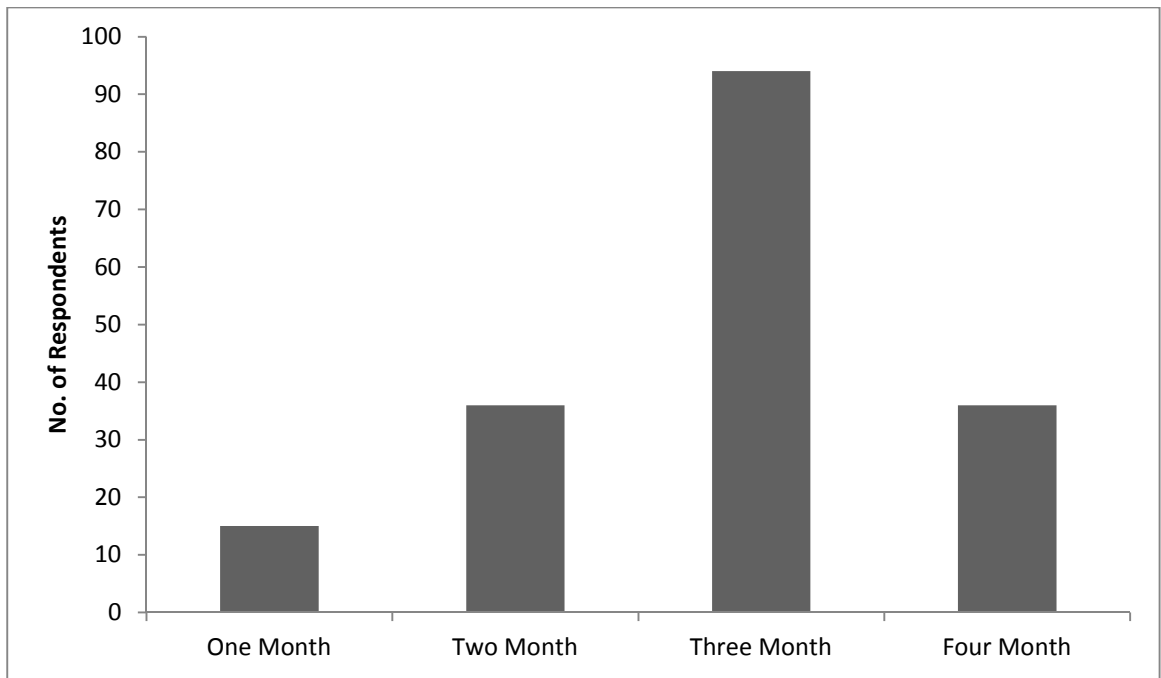
Knowledge provider	Number	Percentage
From doctors	104	65
From booklets	105	65.63
Parents	70	43.75
Teachers	160	100
Friends	16	10
Others	48	30
Multiple response		

Source: Field Survey, 2013

The above table shows that most of the respondents participated in this study got knowledge from many sectors. Specially 100 percents students know about the disease by their teachers in the process of learning in their classroom. Similarly, participated 104 or 65 percents know the disease by the doctor. In study 70 person or 43.75 percents knew from their parents. 105 or 65.62 percents knew from booklets where as the least number of people know from their friends, only 48 respondents or 30 percents knew from different media, journal and others.

5.10.7: Tooth Brush Changing Time

Generally, people do not change their tooth brush for long time. They don't know about the use of brush i.e. whether a brush can clean teeth properly or not. The teeth cannot be properly cleaned because of the lack of proper brushing on dental plaque, calculus, stain. So it is not only the cause of brush but also it is the lack of knowledge of the proper use of brush, proper changing time of brush and the lack of knowledge about proper method of its use. Too many people change their brush normally 2/3 months and some people changed when the brush become bristle and these days' people easily get medicated brush which have indicator and that indicate when to change brush. When the appropriate time to change tooth brush, is mentioned below:



Source: Field Survey, 2013

Figure 5.10.7: Tooth Brush Changing Time

The figure mentioned above shows about 94 people changes their brush after three month. The least numbers 15 respondents changes their brush after one month and same as other 15 people changes their brush after four months. Out of 160 participations total 36 respondents change their brush after 4 months.

5.10.8 Participated on Educational Health Programme

The condition of the students besides their study whether they participated or not in different health programme is mentioned here. Especially the respondents can get knowledge, attitude and positive change on their behavior participating in different health related programme. The conditions of the students participated or not attend in different health related programme organized by different organization or government like Red-cross, school, DPHO (district public health office), different NGO and INGO, different health related programme, different political parties etc. organized is as follows.

Table 5.10.8: Participation on Educational Health Programme

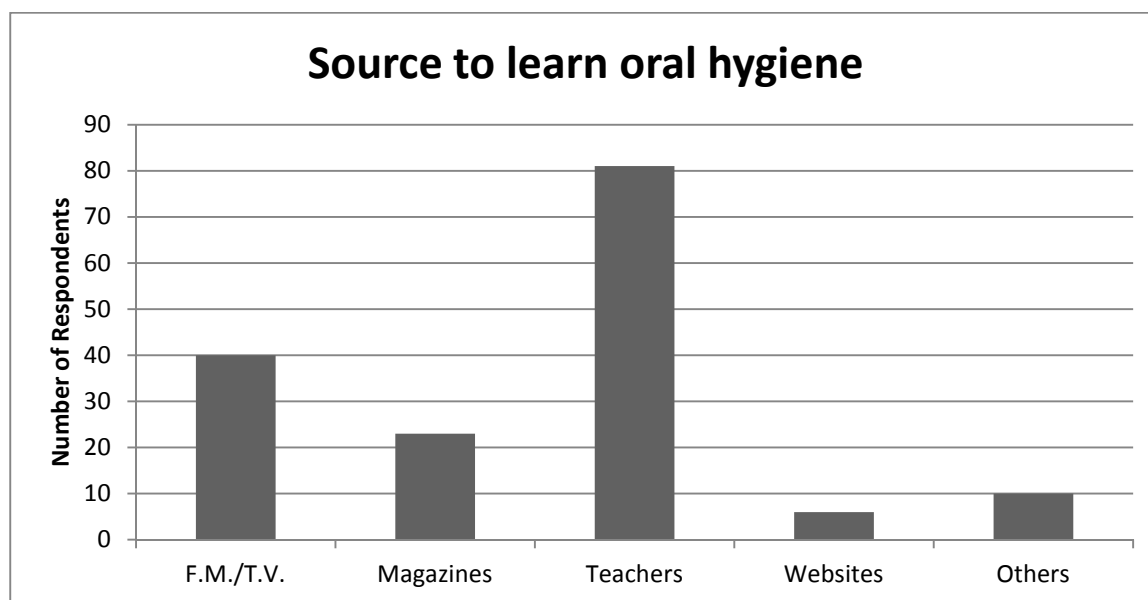
Participated	Number	Percentage
Participated	90	56.25
Not participated	70	43.75
Total	160	100

Source: Field Survey, 2013

By the table above we found that the total number of respondents who participated in different health related training, workshop, programme etc. is 90 or 56.25 percents and those who did not participate in any programme is 70 or 43.75 percents.

5.10.9 Source to Learn Oral Hygiene

Different people learn knowledge through different sources, In order to understand major sources of providing knowledge about it, the students were asked about different source of information.



Source: Field Survey, 2013 **Figure 5.10.9: Source to Learn Oral Hygiene**

Above figure shows that, more than half of the respondents (80) had learned from teachers. Similarly one fourth respondents 40 respondents had learned from T.V. /FM. 23 respondents learned from magazine, newspapers and 6 persons had learned from

websites, but 11 respondents had learned from various sources. On the basis of above mentioned data teachers were the major sources to provide knowledge about oral hygiene and disease.

CHAPTER VI

SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATION

6.1 Summary of Findings

Oral health, in fact, is taken as a complex process than other health conditions. Both internal and external beauty is important for human beings for their success. Beautiness determines the personality therefore, maintaining oral health helps to maintain whole health conditions of body.

The students of higher secondary level are careless in food habit therefore; they may have silent oral problems. The present study entitled “Oral Hygiene Practice among Higher Secondary Level Students in Pokhara” is based on primary data collected from field survey. The main objective of this study was to find out the status of oral health of higher secondary level students of Pokhara. The study followed the sampling method, so all the 160 students who studied in class XI were the population of the study. To carry out the study a questionnaire was given to the students to understand their status of oral health.

Majority of the students that responded us were suffering from various oral problems. According to them, the causes of such problems were their unhygienic daily activities. Many of them were undergoing the problem of dental caries, oral ulcer, dental plaque; Calculus etc. urgent change in the day to day activities of these students can be one of the best solutions to overcome these problems.

From this study, it can be concluded that both cultural and economical practices are the major factors for the poor oral health condition of these students. Economic factors like lack of proper food and diet, lack of necessary hygienic material such as brush, toothpaste play an important role to spread these problems. In the same way cultural practices like influence of modern technology, disbelief in our good practices are also fueling these problems. Adolescents are easily attractive to something that is attractive externally but don't pay any attention towards its conditions. Thus adolescents give more priority to the external beauty but they are more careless in internal beauty.

After the study or analyzing and interpreting the data, the following findings are derived:

- The majority of the respondents were from Hindu 62.5 percentages religion and 25.62 percentages were Buddhist and 11.87 percentages were other religion.
- It was found that only 10 percentages respondents family's education level was Higher Level and 37 percentages were literate.
- Almost of the 65 or 40.62 percentages respondents' family were doing business.
- One-fourth or 25 percentages respondents brushed their teeth early in the morning before meal and 43.75 percentages brushed their teeth after meal.
- It was found that 96.25 percentages respondents brushed their teeth brush with tooth paste. Only 1.25 percentages brushed koila/ ashes.
- Third-fourth 75 percentages respondents were suffered from teeth/ gum problem.
- 60 respondents were suffered from dental caries and 25 percentages were healthy.
- Only 37.5 percents respondents treated their problem by the doctor.
- More respondents 56.25 percentages visited doctor but 37.5 percents were treated their oral problem.
- Only 15.62 percents respondent's family had oral health problem.
- It was found that more than 85 percentage families of our respondent had oral health problems.
- It was found that 75 percentages respondents were known about dental problem and dental disease
- Only 84.37 percentages respondents known about the helpful chemical for their teeth and gum.
- Majority of respondents were known that about the harmful food for our teeth and gum.
- All most of them 66.25 percentages know about the problem solving places.

- It was found that 37.5 percentages respondents known about different diseases like dental caries and 25 percentages don't know any disease.
- The number of participated in health programme is near about 56.25 percentages
- The major sources to learn oral hygiene was teachers which were 50.62 percentages and the fewer sources was website 3.75 percentages one-fourth or 25 percentages sources were television/ F.M.

6.2 Conclusions

On the basis of research findings the following conclusions are drawn: teeth eruption process is one of the complex systems which takes normally six months to 24 years, so many problems occurred in that eruption time. Normally dental caries, stain, plaque seen most of all respondents, due to diversity of different services, different level of economics status their found so many oral diseases. Highly economic level and local people who were in this region they don't have difficulties to solve oral health problem, they can easily found where to go for consult their oral problems. Some migrant peoples were difficulties to manage their logging, fooding and many other desires, so they have less time to consult their problems so they may face major oral health problem and can't treated properly. Higher schools children normally conscious to their health so they are trying to maintain their oral health by using different techniques like brushing, taking knowledge about oral health and disease. In the research period researcher found that normally teen agers female respondents feeling shy and unable to checked their oral health.

The Government of Nepal unable to provide normal facilities for all people their nominal health problem so people couldn't properly manage good oral health. Oral health facilities are more expensive and normally out of affordable so people were unhealthy.

6.3 Recommendation

Oral health status of the higher secondary level students in Pokhara is still below the satisfactory level. There is a need to decrease dependency on oral health personnel

and encourage students to take responsibilities for their oral health. The school may serve as the best platform for promotion of oral health education programme and should be intensified to promote oral health care a lifelong practice. After analysis the findings, the researcher would like to present the following recommendations.

- The information about the proper oral health education should be broad casted through media and made familiar through different kinds of teaching aids.
- The knowledge about oral health and disease in high school students seems in complete. Thus, they should be given more education in this subject.

6.3.1 Recommendation for further study

- Similar study can be done in large scale so that the generalization will have wider application.

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Questionnaire

- 1) Name of respondents.....
- 2) Age (in years)
- 3) Sex
 - a) Male
 - b) Female
- 4) Address:
 - a) Permanent:.....
 - b) Temporary:.....
- 5) Caste
 - a) Brahmin
 - b) Kshetri
 - c) Magar
 - d) Newar
 - e) Kami/ Damai/Sarki/ Sunar
 - f) Others
- 6) Religion
 - a) Hindu
 - b) Buddha
 - c) Islam
 - d) Christian
 - e) Muslim
 - f) Others
- 7) Marital Status of respondents
 - a) Married
 - b) Unmarried
- 8) What is the major occupation of your family?
 - a) Agriculture
 - b) Wage Laboring
 - c) Business
 - d) Foreign Employment
 - e) Service
 - f) Others

(Specify).....
- 9) What is your supportive other occupations of your family? (Multiple)
 - a).....
 - b).....
 - c).....
 - d).....
- 10) Do you have difficulties paying for health care services of your family member at the time of illness?
 - a) Yes
 - b) No

11) Family Information and Description

S.N	Relation with Respondents	Sex	Age	Educational Level	Occupation	Income/monthly
1						
2						
3						
4						
5						
6						
7						
8						
9						

- 12) How many times a day does you brush your teeth?
 a) More than 2 a day b) 2 times a day
 c) 1 times a day d) Never
- 13) When did you begin tooth brushing?
 a) At 2 years old age/less b) At 3-6 years old age
 c) at 6-8 years old age d) I don't know
- 14) What kind of tooth brush do you use?
 a) Hard b) medium c) soft d) I don't know
- 15) How often do you replace your tooth brush?
 a) Every 4 months b) every 6 months
 c) Every 12 months d) When tooth brush bristle loses natural form
- 16) How many minutes do your tooth brushing last?
 a) Less than 2 minutes b) 2-4 minutes
 c) 4-5 minutes d) 5 minutes more
- 17) Do your tooth brush contact with other family members' toothbrushes?
 a) Yes b) No
- 18) You know about dental floss?
 a) Yes b) No
- 19) When do you use dental floss?
 a) After meal b) after tooth brushing
 c) Nights before sleeps d) Never

- 20) When do you use wood stick?
- a) Nights before sleeping b) After lunch
c) When there is no tooth brush d) Never
- 21) How many cups of cola do you drink in a week?
- a) b) Never
- 22) How many cups of tea do you drink in a day?
- a)..... b) Never
- 23) How many cups of milk / milk group do you take in a day?
- a)..... Cups b) Never
- 24) Which of the following groups do you often take between meals?
- a) Sweets b) Nuts c) Fruits/Vegetables d) All of them
- 25) Do you clean your teeth after eating sweets?
- a) Yes b) No c) If it is possible
- 26) Do you visit a dentist without a dental problem (just for check up)?
- a) Yes b) No
- 27) Do you suffer from mouth odor?
- a) Yes b) No c) Sometime d) Never
- 28) How many times a day should be brushed?
- a) 1 times b) 2 times c) Never
- 29) When should tooth brushing be begun?
- a) With eruption of the first primary teeth
b) With eruption of permanent teeth
c) After complete eruption of primary teeth
d) With eruption of the first permanent teeth.
e) I don't know.
- 30) Which statement is correct about efficiency of tooth?
- a) Tooth brushing not enough, use dental floss.
b) Tooth brushes not enough, hardly use dental floss.
c) Tooth brush 1 time / day and not use dental floss.
- 31) Do you know any factors which cause dental caries?
- a) Yes b) No c) Few
- 32) Which statement is correct about dental caries?

- a) Dental caries is a hereditary disease
 - b) Dental caries is a contagious disease
 - c) I don't know
- 32) Usage of which group is harmful for teeth and gum?
- a) Meat /beans b) Fruits
 - c) Milk / milk group d) Sweets e) I don't know
- 33) What should be done after eating sweets?
- a) Nothing b) Eating fruits
 - c) Tooth brushing d) I don't know
- 34) Do cola have adverse effects on dental and oral health?
- a) Yes b) No c) I don't know
- 35) What is the cause of mouth odor?
- a) Dental caries b) Gingival disease c) Gastrointestinal disease
 - d) ENT (ear, nose, throat) infections e) I don't know
- 36) It is necessary to visit dentist before a dental problem/ gingival problem?
- a) Yes b) No
- 37) If you need oral health care service, how easy would it be for you to obtain such service?
- a) Very easy b) easy c) Difficult d) I don't know
- 38) If you need oral care service, would your parents be able to afford these services?
- a) Yes b) No
- 39) How often is the regularly check up for prevention of oral hygiene necessary?
- a) Every six months b) Once a year
 - c) Every 2 years d) I don't know
- 40) How often is the regular check up for prevention of oral diseases necessary?
- a) Every 6 months b) Once a year
 - c) Every 2 years d) I don't know
- 41) Do you know any harmful effects of smoking?

- a) Yes b) No
- 42) Do you recall having received oral health education in your study period?
a) Yes b) No
- 43) Do you having received oral hygiene instruction in your class?
a) Yes b) No
- 44) How important are books as a source of oral health information?
a) Very important b) Important
c) Unimportant d) I don't know
- 45) How important is TV/ Radio as a source of oral health information?
a) Important b) Very important
c) Unimportant d) I don't know
- 46) Do you often use mask?
a) Yes b) No
- 47) Do any other member of your family suffering from oral health problem?
a) Yes b) No
- 48) In case of oral health problem do you apply traditional method of treatment?
a) Yes b) No
- 49) What food items as Tiffin do you use as Tiffin in school?
a) Noodles b) Chocolate c) Homemade d) Cakes
- 50) What are you usual food items that you take in lunch and dinner?
a)..... b)..... c)..... d).....
- 51) Do you take part in any health activities?
a) Yes b) No
- 52) Have you used tobacco?
a) Yes b) No
- 53) How important was teacher in school as a source of oral health information?
a) Important b) Unimportant c) I don't know
- 54) How important is parents as a source of oral health information?
a) Important b) Unimportant c) I don't know

- 55) Tooth decay is caused by sugar foods?
a) Yes b) No
- 56) A cause of tooth decay is mainly irregular tooth brushing?
a) Correct b) Incorrect
- 57) Vitamins do not prevent gum disease?
a) Correct b) Incorrect
- 58) Fluoride can prevent tooth decay?
a) Correct b) Incorrect
- 59) What is your opinion to providing OHE is waste of time?
a) Agree b) Disagree c) Totally disagree
- 60) Students have the right to get oral health education?
a) Agree b) Disagree c) I don't know
- 61) Providing OHE in school is important to prevent oral disease?
a) Agree b) Disagree c) I don't know