

ORAL HEALTH OF THE ELDERLY IN INSTI- TUTIONS: A Literature Review

Bachelor of Social Services and Health Care

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<p>Abstract:</p> <p>Aim: To explore ways on how oral health of the elderly living in institutions could be improved.</p> <p>Research questions were formulated to guide the research process in order to achieve the objective of the study as follows:</p> <ol style="list-style-type: none"> 1. What are the consequences of neglected oral health of the elderly in institutions 2. What interventions are needed to promote oral health of the elderly? <p>The theoretical framework used is Oral Health promotion theory comprising health promotion concepts developed during the OTTAWA Charter Conference in 1986 (WHO, 1986).</p> <p>Method: The study was a literature review and content analysis was the method used to analyse the articles. Eleven scientific and peer reviewed articles were analysed in order to get the results of the research study.</p> <p>Results showed that oral health for the elderly is still poor and neglected especially in institutions. This is due to caregivers' inadequate education and lack of continuous training, caregiver's negative attitudes and perceptions, lack of time, limited access to oral services including oral examinations and oral assessments, lack of cooperation and behavioral problems hence resulting in oral diseases, other related diseases, oral pains, malnutrition, disability and frailty. All these consequences impact negatively on quality of life of the elderly and their wellbeing. However strategic measures to promote oral health of the elderly were suggested. These included the need to educate caregivers in oral health issues, integration of oral health education in nursing schools, increase access to oral services, effective use of oral hygiene care practices and regular collaboration between caregivers and oral health professionals as well as enhance self-oral care management.</p> <p>Conclusion: Maintaining good oral health of the elderly in institutions is still a major challenge for caregivers mainly due to lack of oral health education. However it is important to enhance and promote oral health of the elderly through use of recommended strategic interventions so as to guarantee the elderly with good oral health and hence enhance their quality of life and wellbeing.</p>	
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FOREWORD

I would like to thank the Almighty God for the gift of life, wisdom, strength and perseverance, for it is because of his grace that has enabled me to walk this journey. Lord all the glory and honor is yours!!!

My sincere thanks go to the Department of Dentistry, Helsinki University for accepting to commission my Thesis. I would like to express my sincere and heartfelt gratitude to my supervisor Ms. Birgitta Dahl, you were the one who inspired me to write this thesis. The academic support, enthusiasm and constructive criticism have really paid off. For our former academic head Ms. Elisabeth Kajander, Thank you for giving me hope, support, encouragement and always being positive. All my teachers for all the years, i thank you for the academic knowledge you gave me.

I would like to thank all my friends who have encouraged and been there for me all these years, Linda, Henrietta and Purity. Special thanks to Maria (Mamarosebud) who accepted to take care of my daughter at the age of 4 months so that i could continue with my studies. May God bless you for your kind heart and for loving my daughter as thou she were yours.

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1 INTRODUCTION

The population is aging today at a fast rate than any other time in history both in developed and developing countries. Globally the fast growing age group comprises persons aged 80 years and over. This has been influenced by reduced fertility and increased life expectancy. It is estimated that by 2050 half of the world population will be aged 60 years or over. (Petersen et al. 2010). However this demographic change produces heavy challenges to health authorities and social planners due to the fast rate burden of chronic diseases including oral diseases among the elderly. (Petersen et al. 2010, Petersen & Yamamoto, 2005). Therefore, global healthcare systems have had to respond to the demographic drift by providing comprehensive services for the elderly.

Studies have shown that oral health of the elderly is very poor and among the global challenges especially for the marginalized people both in developed and developing countries hence leading to high prevalence rate of oral diseases. (Petersen, 2003). Poor oral health is characterized by tooth loss, dental caries experience, high prevalence rates of periodontal, xerostomia and oral pre-cancer. (Petersen & Yamamoto, 2005, De Visschere, 2006). There is firm indication that oral diseases have a relation with other diseases and these comprise periodontal and cardiovascular diseases as well as aspiration pneumonia. (Chalmers, 2003).

Poor oral health is viewed to be among the factors that can impact negatively on quality of life of the elderly socially including eating, swallowing, speech, discomfort, oral pains, shunning from smiling and appearance. All these factors have been reported to affect the lives of the elderly including their general health, oral health, communication abilities and social aspect of life. (Chalmers, 2003).

Stein and Henry (2009) stated that poor oral health of the elderly in institution is due to lack of caregiver's knowledge and education in oral health and increased inadequate oral hygiene practice. Other hindrances to good oral health are attributed to both caregivers and the clients. (Samson 2009). Providing good oral health to the elderly is still a public health problem due the high prevalence rate of oral diseases and the expenses needed to deliver good oral health care. (Petersen, 2003).

However, strategies to improve oral of the elderly need to be established. The major emphasis is for all countries to develop global policies and programmes in oral health promotion and oral disease prevention than can be incorporated into national and community health programmes. (Petersen, 2003) It is recommended that countries should implement strategic interventions for improving oral health care of the elderly. (Petersen & Yamamoto 2005). The global oral health programme is centered on the development of global policies which are centred on the approach of common risk factors and harmonized more with other public health programmes. (Petersen, 2009). They should be attributed to the ageing process, the social aspect of oral health, the established protocol and the inclusion of oral health in the organizational dimension (Mello et al., 2010).

Motivation

The author got motivation during the practical training period in an elderly institution. It was realized that provision of oral hygiene for the elderly was unattended too and if it was done it was not done adequately. It is unbelievable how someone can spend days, months to years without cleaning their teeth dentures, all the mouth in general; the feeling is unimaginable. Most of the elderly in institution are dependent on caregivers for most of their activities of daily living including oral hygiene. Unfortunately caregiver's neglect their oral hygiene and give other care needs all the attention. Poor oral health among the elderly can lead to serious and irreversible effects including tooth loss, oral diseases, malnutrition and other oral discomforts. All the mentioned effects impact negatively on quality of life and general health. Having witnessed this problem on numerous occasions, the author felt the need to address it through thesis writing.

2 AIM AND RESEARCH QUESTIONS

The aim of the study is to explore ways on how oral health of the elderly living in institutions could be improved. The target groups are caregivers, oral professionals and other healthcare professionals. This study will provide insight and context to answer the following two questions;

1. What are the consequences of neglected oral health of the elderly in institutions?
2. What interventions are needed to promote oral health of elderly in institutions?

3 BACKGROUND

In this chapter the author will present the concepts associated with oral health, describe oral diseases, investigate the barriers that lead to poor oral health and the consequences resulting from neglected oral health of the elderly living in institutions. Previous researches will be presented based on five research articles as follows:

1. Johnson, V. B. (2012). Oral hygiene care for functionally dependent and cognitively impaired older adults.
2. Maciel, S. M. (2013). Factors related to oral health-related quality of life of independent brazilian elderly. *International Journal of Dentistry*, 2013
3. Petersen, P. E., & Yamamoto, T. (2005). Improving the oral health of older people: The approach of the WHO global oral health programme. *Community Dentistry and Oral Epidemiology*, 33(2), 81-92.
4. Samson, H. (2009). *Oral Health and Institutionalised Elderly*, University of Bergen
5. Parsons, S. (2013). Collaborative oral health education for caregivers in an assisted-living facility. *Journal of Nursing Education & Practice*, 3(3)

Oral health is integral and essential to general health

Oral Health implies being free from chronic mouth and facial pain, oral pharyngeal cancer, oral sores, birth defects such as cleft lip and palate, periodontal disease, tooth decay and tooth loss, other diseases and disorders that affect oral cavity. Oral health is an important determinant of general health and quality of life. (Petersen, 2009).

Oral health vs general health

The interrelationship between oral and general health is scientifically proven. There is correlation between several oral diseases and noncommunicable chronic diseases as a result of the common risk factors. Many general diseases have oral signs that increase the risk of oral diseases which in turn is a risk factor for a number of general health complications. (Petersen, 2003).

3.1 Description of oral diseases

Tooth Loss (Edentulism)

This is widespread disease among the elderly globally though it has been described as a socio-economic factor. The elderly people with low social class, small income levels and uneducated are more prone to suffer from tooth loss than those who have a high social class, incomes and are educated. Smoking of tobacco for a long period is also noted to be among the risk factors in tooth loss. Tooth loss reduces the ability to chew and significantly influences the types of food that the elderly person want to eat. For instance elderly people without teeth prefer foods with high cholesterol, saturated fats and high consumption of sugar and tend to avoid foods rich in fiber and proteins. This has a negative impact on their health because they increase the risk of contracting heart diseases and obesity (Petersen & Yamamoto, 2005). Tooth loss has also been associated with loss of weight due to inability to chew some foods like meat, fruits and vegetables. This can lead to malnutrition and weakening of the immune system in the elderly.

Periodontal

The severity and high prevalence rates of periodontal are associated with poor oral hygiene and high amounts of plaque as a result of negative bacteria spreading to the surface of the tooth. Globally, this is one of the major oral diseases among the elderly with

natural teeth. The risk factors that lead to increased rates of periodontal diseases are low levels of education, no dental check-ups and smoking of tobacco which accounts for more than half of the periodontitis in older adults in industrialized countries. (Petersen & Yamamoto 2005 p84). Studies associate severe periodontal disease with pneumonia and cardiovascular diseases. (Johnson 2012).

Xerostomia

This disease is associated with drying of the mouth which can lead to extreme levels of dental caries to concentrate in the mouth. Mouth dryness causes serious oral problems and it is among the common reported complaint in elderly. Eating or swallowing difficulties and communication problems are likely to happen because the flow of saliva is not stimulated. In addition, xerostomia comes due to side effect of some of the medication given to the elderly. Elderly people in institutions consume different types of medications that affect the creation of saliva for example tricyclic antidepressants, antipsychotics, beta blockers and antihistamines are responsible for mouth dryness. This is common with people suffering from mental disorder, incontinence and hypertension. (Petersen & Yamamoto (2005).

Coronal dental caries and root surface caries

Worldwide this is another major oral disease among the elderly. It is mentioned that the incidence rates of this disease are high and closely related to social and behavioral factors which include irregular brushing of teeth, infrequent dental visits, high consumption of sugars, smoking and low income earners. (Petersen & Yamamoto 2005).

Denture-related conditions

Denture stomatitis is a common oral mucosal lesion of clinical importance in old age populations. Stomatitis is discovered when yeast settles to the fitting of the prosthesis and allergic reaction to the denture base material. The prevalence of denture stomatitis is related highly to denture hygiene or the amount of denture plaque. Laxity of soaking dentures at night and recurrent wearing of dentures can also cause denture stomatitis. (Petersen & Yamamoto 2005).

3.1.1 Barriers that lead to neglected oral health of the elderly

Poor oral health for the elderly is due to the functional decline that comes with old age, chronic diseases, memory disorders and other weakening conditions that impair an individual to pay attention to their personal oral hygiene given the fact that oral health care is the last thing a person can think of in critical situations. There are other barriers that lead to poor oral health from the caregiver's side and other multi-professionals which include lack of oral health education and its importance, staff attitudes, lack of interest and other demanding workloads. It is obvious that decline in good oral health may lead to serious and irreversible oral diseases and other health related conditions which can impact negatively on the general health of the elderly.

Samson (2009) study confirms that there are barriers in elderly institutions which prevent the promotion of oral health among the elderly and these barriers are attributed to both clients and caregivers. There is also a general sense that deterioration in health conditions such as physical capacity, mental capacity and impaired vision have been correlated with preventing and limiting the elderly in carrying out adequate oral hygiene independently. The frailty of the elderly prevents them from brushing their teeth and maintaining oral hygiene practices of their dentures. Johnsons (2012) says that the cause of neglected oral health among the elderly is due to cognitive impairment and functional reliance for example elderly with dementia, communication or behavioral problems may resist or lack cooperation during oral hygiene. (Petersen & Yamamoto 2005) argues that impaired vision also prevents the elderly from engaging in daily oral hygiene.

Samson's (2009) findings conclude with the revelation that caregiver related barriers towards oral health of the elderly starts originally from lack of knowledge and hands on skills experience in oral health education. It is argued further that due to lack of proper training therefore caregivers do not find it important to attend to the oral needs of the elderly. Caregivers perceive that carrying out oral hygiene of another person is like overpassing the psychological element. This is correlated to feelings of intimacy and 'intrusion' into another person's body. Johnson (2012) says that lack of caregivers' adequate training in oral hygiene may lead to feelings of fear to be injured especially to-

wards elderly with cognitive impairment and also perceiving it as a nasty task to do. (Johnson 2012).

Poor oral health of the elderly is due to caregivers' lack of adequate education, knowledge and proper instruction in oral healthcare. (Johnson, 2012, Parson, 2013). Some institutions lack oral care policies which promote oral healthcare and the increase in the number of elderly people dependent on care, create a heavy workload for the caregivers hence leading to ranking of other tasks which are seen to be more urgent. (Samson 2009, Parson, 2013). In an environment where there is increased workload, oral health is not viewed as a priority. (Petersen & Yamamoto 2005).

3.1.2 Consequences of neglected oral health

Petersen & Yamamoto (2005) study states that the consequences of poor oral health for the elderly are particularly viewed in oral diseases and complications such as tooth loss, coronal dental and root surface caries, high prevalence rates of periodontal diseases, xerostomia and oral precancer/cancer. These oral diseases can affect chewing and swallowing ability of certain foods hence leading to weight loss, malnutrition, immune deficiency and other health related conditions that can affect health in general. Johnson (2012) continues to say the fundamental consequences of poor oral health in elderly with cognitive impairment is plaque accumulation on teeth, dentures and dental decay.

There is evidence that oral diseases and chronic diseases share the same risk factors that justify the connection between poor oral health and poor general health. For example periodontal disease is linked to diabetes mellitus, chronic respiratory diseases and ischemic heart diseases. Tooth loss is also associated with an increasing risk of ischemic stroke and poor mental health. (Samson 2009, Petersen & Yamamoto 2005). Chronic oral tissues inflammation increases the risk of cardiovascular disease thus leading to heart diseases, stroke and oral bacteria accumulation as well as food debris on teeth and dentures increases risk factors of aspiration pneumonia. (Johnson 2012). In another

study by Parsons (2013) it is strongly confirmed that increase in some health diseases like aspiration pneumonia and cardiovascular disease are correlated with poor oral health.

Poor oral health impacts negatively on quality of life of the elderly due to the effect of 'physical pain', 'psychological discomfort' and also influences the need for dental services. The chewing difficulties and speaking difficulties as well as interaction and relation with others are limited. (Maciel et al. 2013). Poor oral health can also affect people's daily lives, lead to loss of self-esteem and wellbeing due to dental abscesses, discolored or damaged teeth as well as resulting in eating and chewing problems . (Petersen & Yamamoto 2005). Impairment of the cognitive and physical function of the elderly is the reason why their oral health is neglected leading to compromising of their overall health, self-esteem and diminishing their quality of life. (Johnson 2012).

3.1.3 Strategies to promote oral health of the elderly

Several researchers have come up with different strategic measures that can be implemented to solve oral health problems of the elderly living in institutions. Oral health of the elderly has awakened the interest of researchers. (Maciel et al. 2013).

Petersen & Yamamoto (2005) stated that oral diseases can be prevented through shared public health approaches. It is urged that health policies and programmes need to be strengthened and integrated into national and community health programmes. Therefore planners and administrators of oral health should use the approach of common risk factors to integrate oral health interventions of the elderly into general health programmes. It is reported further that development of a community based oral healthcare programme both for the elderly and caregiver was found to be effective in improving the oral health status of the elderly. This program offers routine oral examination, dental treatment, oral hygiene instructions and expands caregiver's knowledge and attitudes towards oral health of the elderly.

In (Parsons 2013) study collective oral health training was undertaken by nurses and dental hygienists so as to assess its effectiveness in an assisted living facility. The results concluded that collaborative education was an effective strategy that could enhance the knowledge of caregivers in oral health needs of the elderly. It was further suggested that the educational programme should have a well packaged content including study on oral diseases, daily oral hygiene documentation forms, physiology of the mouth, preventive guidelines, drug adverse effects, oral examinations, pathology, impact of oral health on nutrition, assessment instruction and use of oral care appliances. In addition, the study further recommends that there should be cooperation between nursing and dental hygiene schools. This will facilitate provision of proper oral hygiene instructions to caregivers as well as improving their attitude towards oral hygiene of the elderly.

Johnson (2012) study suggested some intervention strategies that institutions could use to detect and prevent oral health problems among the elderly and these included carrying out oral health screening to check oral problems and assessing current oral health condition. These proposed strategies help to provide oral health situation of the elderly, development of oral hygiene care plan and oral hygiene treatment to be sought.

Samson (2009) stated that in order to promote oral health of the elderly, it is important for caregivers to understand the connection between oral health, general health and quality of life. Therefore oral health educational programmes should target at creating attitudes based on essential understanding of the reason behind this procedure. With this kind of knowledge, caregivers will be empowered to give priority to oral hygiene of the elderly like other care needs. In addition, collaboration between public dental services and municipal health should be established. This will strengthen prevention of tooth decay, malnutrition and influence good eating habits.

Systematic training is another identified strategy that could promote oral health of the elderly. Other health professionals should be involved and equipped with knowledge and skills in oral health education and promotion programmes of the elderly. This will enhance oral service utilization, personal self-care capacity, nutrition and health diet

among the elderly. More still involving several disciplinary approaches in the dental educational curriculum of dental students is also recommended. For example sociological and behavioral factors of aging because geriatric dentistry only focuses on biomedical and clinical aspects of care. *“Yet understanding the economic and psychosocial dimensions of poor oral health and the negative effects it creates on quality of life can be a foundation for provision of quality oral health care, communication, health education and organisations of public health programmes for improved health of the elderly”* (Petersen & Yamamoto 2005). Having examined previous researches, the next subsection will consist of the theoretical framework.

3.2 Theoretical framework

Health Promotion is the theoretical framework used for this research study. Fitzpatrick & Wallace (2006) stated that a group of statements composed of concepts and related to form an overall view of a phenomenon is called theoretical framework. An overview of health promotion definition and its description as well as health promotion concepts designed by WHO will be presented. There was no alteration of information contained in the concepts because they are designed comprehensive approaches used in all health promotion programmes.

Health is defined as ‘a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity’. Health is a positive concept that emphasizes social and personal resources, as well as physical capacities. It is a resource for everyday life and not the objective of living. The ability to; identify and realize aspirations, satisfying needs as well as coping in a changing environment are essential keys for one to be healthy. Health promotion is defined as the process of enabling people to increase control over, and to improve their health. (WHO, 1986).

Health promotion is a process directed towards enabling people to take action. Thus it is something that is not done on or to people; it is done by, with and for people either as individuals or as groups. The purpose of health promotion activity is to increase the skills and capabilities of individuals to work together to exert control over the determinants of health and attain positive change. It suggests that people and communities can

bring about positive changes in the health and well-being. It is stated that health promotion differentiates between those factors which are more within the control of individuals like individual health related services and those factors which are outside the control of individuals including social, economic and environmental and the provision of health services. (Linsley P, 2011).

Based on the mentioned factors, the Ottawa Charter for health promotion was developed as a response to growing expectations for a new public health movement around the world. (WHO, 1986). In the Ottawa Charter for Health Promotion (1986), the WHO designed a comprehensive approach to health promotion with five strategies described below.

Build Healthy Public Policy

Health promotion moves beyond health care. Health is put on the agenda of policymakers in all sectors and at all levels, directing them to be aware of the health consequences of their decisions and to accept their responsibilities for health. Health promotion policy merges diverse but complementary approaches comprising legislation, fiscal measures, taxation and organizational change. It is a harmonised action that leads to health, income and social policies that foster greater equity. Collaborative action supports ensuring safer and healthier goods and services, healthier public services, and cleaner, more enjoyable environments. Health promotion policy involves the identification of obstacles to the adoption of healthy public policies in non-health sectors, and ways of removing them. The aim must be to make the healthier choice the easier choice for policy makers as well. (WHO, 1986).

Create Supportive Environments

Our societies are complex and interconnected. Health cannot be removed from other goals. The inextricable connection between people and their environment constitutes the basis for a socioecological approach to health. The overall guiding principle for the world, nations, regions and communities alike, is the need to encourage reciprocal maintenance - to take care of each other, our communities and our natural environment. The conservation of natural resources throughout the world should be emphasized as a global responsibility.

The shifting patterns of life, work and leisure have an important impact on health. The basis for work and leisure should be a source of health for people. The manner in which society arranges work should support creation of a healthy society. Health promotion creates living and working environments that are safe, stimulating, satisfying and enjoyable. Assessing of the health impact systematically of a fast changing environment specifically in areas of technology, work, energy production and urbanization is very vital and should be followed by action to ensure positive benefit to the health of the public. Health promotion strategies must address the protection of natural and built environments as well as conservation of natural resources. (WHO, 1986).

Strengthen Community Actions

Health promotion works through concrete and effective community action to set up priorities, creating decisions, arranging strategies and implementing them to achieve better health. At the heart of this process is the empowerment of communities their ownership and control of their own endeavors and destinies. Community development should draw on existing human and material resources in the community to improve self-help and enhance social support, and to acquire flexible systems for strengthening participation of the public in and offering guidance in health issues. This strategy needs maximum and continued access to information, health learning opportunities and financial support through funding. (WHO, 1986).

Develop Personal Skills

Health promotion encourages personal and social development through information provision, health education, and developing life skills. This is seen to expand the opportunities available to people to practice more control over their own health and their environments as well as making choices conducive to health. Enabling people to learn, throughout life, preparing them for all of life stages and to cope with chronic illness and injuries is very crucial. This intervention must be facilitated in school, home, work and community settings. Action could be achieved through educational, professional, commercial and voluntary bodies, and within the institutions themselves. (WHO, 1986).

Reorient Health Services

The responsibility for health promotion in health services is shared among individuals, community groups, health professionals, health service institutions and governments. They must work together towards a health care system, which contributes, to the pursuit of health. The role of the health sector must move increasingly in a health promotion direction, beyond its responsibility for providing clinical and curative services. Health services need to embrace an expanded mandate, which is sensitive, and respects cultural needs. This mandate should support the needs of individuals and communities for a healthier life, and open channels between the health sector and broader social, political, economic and physical environmental components. (WHO, 1986).

According to mentioned concepts on health promotion in relation to the suggested approaches towards oral health of the elderly, it is encouraged that policy makers and healthcare professionals should integrate these concepts into their programmes to enable development of proper strategic interventions that will enhance oral health condition of the elderly. The concept of developing personal skills supports health education this strategy could be applied in institutions to develop caregiver's skills and knowledge in oral health issues. Another call is information sharing therefore oral health professionals could design oral health information for dissemination purposes as well as educating communities in oral health issues. (WHO, 1986, Petersen & Yamamoto 2005). Lastly the author is confident to state that health promotion is a befitting theory for this study since its concepts and goals are intended to benefit the whole population and its communities.

4 METHODOLOGY

The author will use qualitative methodological approach which is commonly used in health and social care that assists to provide a more comprehensive understanding of a phenomenon. Content analysis method will be used to analyse previous researches on oral health of the elderly. Major themes will be developed from the research questions for the study. Categories and sub-categories will be drawn from the relevant content in the articles that answers the research questions and then grouped to the corresponding theme(s) accordingly. According to Krippendorff (2004) Content analysis is a technique

used to analyse data for the use of information in interest or with the hope to discover or clarify a subject, and answer a research question.

4.1 Literature review

The author used literature review so as to get an in-depth knowledge and information for the study. Literature review is not only about gaining knowledge regarding what past studies have contributed to a particular topic of study (Neuman, 2005), but it should help to establish the theoretical roots of the study, clarify the idea and develop research methodology. (Kumar 2011).

4.1.1 Data collection

The author collected data through Nelli Portal within Arcada campus and from home through remote access to Nelli under the social service field. The electronic academic search elite EBSCO, Google scholar and SAGE were the databases searched to collect data for the study. The articles were retrieved with the use of key search terms in the aim and other terms related to the study topic. The search terms were Oral health, Oral hygiene, Elderly, Older people, Institution, Nursing homes and promotion.

4.1.2 Data Search process

The first search criteria were done directly with main keys words like Oral health ‘AND’ Elderly ‘AND’ Institution. The second search criteria that yielded good articles was used with related words to the study such as Oral hygiene ‘AND’ Older people ‘AND’ Nursing homes and Oral health ‘AND’ Elderly ‘AND’ Nursing homes and Oral health AND Elderly AND Promotion, In Google scholar the study topic was written directly as Oral health for elderly in institutions.

4.1.3 Inclusion and Exclusion

Thesis writing in any professional field must be accompanied with certain guidelines that need to be followed and in this particular study the ‘Arcada guidelines for thesis writing’ were followed. The author used articles that were scientifically written, peer reviewed, fully texted, written in English and freely accessible. Another important consideration was to select the articles that were relevant to the research study. However the articles that did not meet the mentioned criteria were excluded. Table 1 demonstrates the databases where articles were retrieved and the search terms used to generate materials.

Table 1: demonstrating data search process, databases, keywords, number of articles

Database search	keywords	hits	retrieved articles	chosen articles
EBSCO host	Oral health AND elderly AND institutions	12,834	10	2
EBSO host	Oral hygiene AND older people AND nursing homes	5070	7	2
EBSCO host	Oral health AND elderly AND Pro-motion	5403	3	2
Google scholar	Oral health for elderly in institutions	17,500	20	4
SAGE	Oral health AND Elderly and nursing homes	145	3	1

4.1.4 Description of materials

The author selected 11 articles for the study that had an international background. The studies originated from Australia, Canada, Sweden, Norway, Germany, USA and Finland therefore recommendations from these studies can be used on international standards. The articles were published between the year(s) 2004 – 2012. 8 of the articles provided answers for the two research questions whilst 3 answered either one of the research questions. A summarized table of the articles, authors, publication years, titles, the aims and the results are presented in table 2 below.

Authors	Titles	Aim of the research	Result of the studies
Bissetts & Preshaw 2011 Article 1	Guide to providing mouth care to the elderly	The importance of oral health and how poor oral health can affect nutritional status and quality of life	Oral health education is needed to provide hands on advice to caregivers
Chalmers J. & Pearson A. (2005) Article 2	Oral hygiene care for residents with dementia	Review oral hygiene care for adult with dementia in residential aged facilities including prevalence, incidence, experiences and increments of oral diseases, evaluate residents oral health through use of assessment tools, preventive oral hygiene care strategies and provision of dental treatment.	Observation of poor oral health in older residents with dementia was confirmed and possible risk factors were also identified. A comprehensive, reliable and validated oral assessment screening tool was published. Expert opinion indicated that oral assessment screening by staff and a dentist would be ideal at admission and after. Researchers also suggested that oral hygiene care strategies were effective in preventing oral diseases for residents with Dementia.
Fried et al (2004) Article 3	Untangling the Concepts of Disability, Frailty, and Comorbidity: Implications for Improved Targeting and Care	Provide a basis for distinguishing between three important clinical conditions in older adults, disability, comorbidity and frailty and lead to improved strategies for diagnosis, care, research and medical education.	Future research needs to build on this evolving ability to distinguish disability, frailty and comorbidity and to refine their definitions and criteria so as to develop standardised approaches to screening and risk assessment.
Gately et al., (2011). Article 4	Denture hygiene care for residents in nursing homes in North Wales.	To investigate the provision of one aspect of oral care, denture hygiene.	Denture hygiene care for elderly residents was still far from ideal due to lack of training and poor understanding of the importance of denture hygiene. Carers keen to have training.

Authors	Titles	Aim of the research	Result of the studies
Gil-Montoya et al., (2006). Article 5	Oral health protocol for the dependent institutionalised elderly.	Develop an oral care protocol for elderly patients admitted to an acute care hospital after analysing their oral health status and level of cooperation and studying existing dental practices.	The protocol should include regular collaboration with dental professionals and provide a program of continuous training for nursing staff on oral health issues.
Griffin et al., 2012 Article 6	Burden of oral diseases among older adults and implications for public health priorities	Developing an integrated approach to healthy aging	Public health priorities were suggested including integration of oral health into medical care, implementing community programs to promote healthy behaviors and improve access to preventive services and development of a complex strategy to address the oral health needs of the elderly.
Kullberg et al., (2010) Article 7	Dental hygiene education for nursing staff in a nursing home for older people.	Study to evaluate the effect of a repeated education programme for nursing staff.	Forty one residents were available for evaluation after a repeated dental hygiene education. There was a reduction in gingival bleeding and plaque scores.
MacEntee (2006) Article 8	Missing links in oral health care for frail elderly people	Developing a national interdisciplinary strategy to address oral care needs of frail elderly in long term care facilities	Effective and widely accepted strategies for assisting residents with daily oral hygiene are still lacking. Cooperative efforts will be needed to provide these missing links in health services.

<p>Nitschke et al., (2010) Article 9</p>	<p>Dental care of frail older people and those caring for them.</p>	<p>To describe oral health utilisation patterns of frail older people and contrast these with attitudes and utilisation patterns of nursing staff who are caring for them.</p>	<p>Pattern of oral health services attendance differ between staff and clients. 55.3% staff members attach the same importance to their own oral health compared to that of clients and 35.7% regard their own oral health as more important.</p>
<p>Soini et al., (2006) Article 10</p>	<p>Oral and nutritional status -is the MNA a useful tool for dental clinics.</p>	<p>Determine the oral status of elderly residents in nursing homes and long term care wards and to describe association between oral status and nutritional status among institutionalised elderly residents</p>	<p>The study revealed that there are profound and complex interactions between nutrition and oral health. Oral problems are common among older adults especially in institutions. Daily oral care is crucial in preserving good oral health</p>
<p>Zuluanga et al., 2012 Article 11</p>	<p>Oral health in industrialised elderly people in Oslo</p>	<p>Investigating oral health in industrialised elderly people in Oslo, Norway and its relationship with dependence and cognitive impairment</p>	<p>Significant differences were found between nurses or residents doing the tooth cleaning. A high percentage of residents whose teeth were cleaned by nurses had poor oral hygiene and worst for uncooperative residents.</p>

4.2 Content Analysis

The analysis process involved a series of critical steps that needed to be followed. After choosing the relevant articles, the author perused through the articles once again and numbered them from 1-11. Reading of the articles was done repetitively to help the author get full understanding of information contained in the articles. Short summaries were written behind each article to remind the author where to find what. The next step was to read the articles one by one carefully and thoroughly with the research questions in mind. Two markers Orange and green were used to mark the relevant information that answered the research questions. An orange marker was used to highlight information for question 1 and green marker was used for question 2.

Hsieh and Shannon (2005) define content analysis as a research method for the subjective interpretation of the content of text data through systematic classification process of coding and identifying theme or patterns. In order to do content analysis, the author read and understood the information contained in the articles very well. Themes, categories and subcategories to describe the results were developed. The research questions were used as major themes and key content from the articles were used to form categories and subcategories.

4.2.1 Validity and reliability

Validity is referred to appropriateness, quality and accuracy of the procedures adopted for finding answers to the research questions. (Kumar 2011). The author believes this research study is valid and accurate since the results are adopted from peer reviewed and scientific sources. Reliability in qualitative research is defined as how the set of meanings developed from several interpreters correspond to each other. (LeCompte & Goetz 1982). The aim of the study, research questions and the findings correlate very well, this justifies the consistency of the study.

4.2.2 Ethical consideration

Thesis writing involves a series of procedures and steps to be followed. In healthcare field, ethics is among the elements to put into consideration because it involves human lives who belong to different cultures with different values, norms and styles. The author first read and followed the Arcada guidelines for thesis writing throughout the whole process. A short plan was developed for presentation to the school administration for their initial approval. The short plan was then forwarded to the commissioning board for the final approval. Writing of the thesis started after the commissioning of the short plan. The study is derived from scientific articles and all the quotations and citations are written properly according to Arcada guidelines.

5 RESULTS

In this chapter the author will present the results of the research study whose major aim is to explore ways on how oral health of the elderly living in institutions could be improved. The results will be presented in two major themes resulting from the research questions which are ‘Consequences’ and ‘Promotion’. Categories and subcategories will be developed based on the information derived from the 11 articles.

5.1 What are the consequences of neglected oral health of the elderly?

This sub-section will examine the consequences of neglected oral health of the elderly living in institutions. However, before the author engages to answer the question, it is deemed necessary to first give readers an overview of the barriers that lead to poor or neglected oral health of the elderly. The category section will explore these barriers whilst the sub category section will present the consequences that result from neglected oral health of the elderly. Figure 1 shows how the barriers and consequences were grouped under categories and sub-categories accordingly.

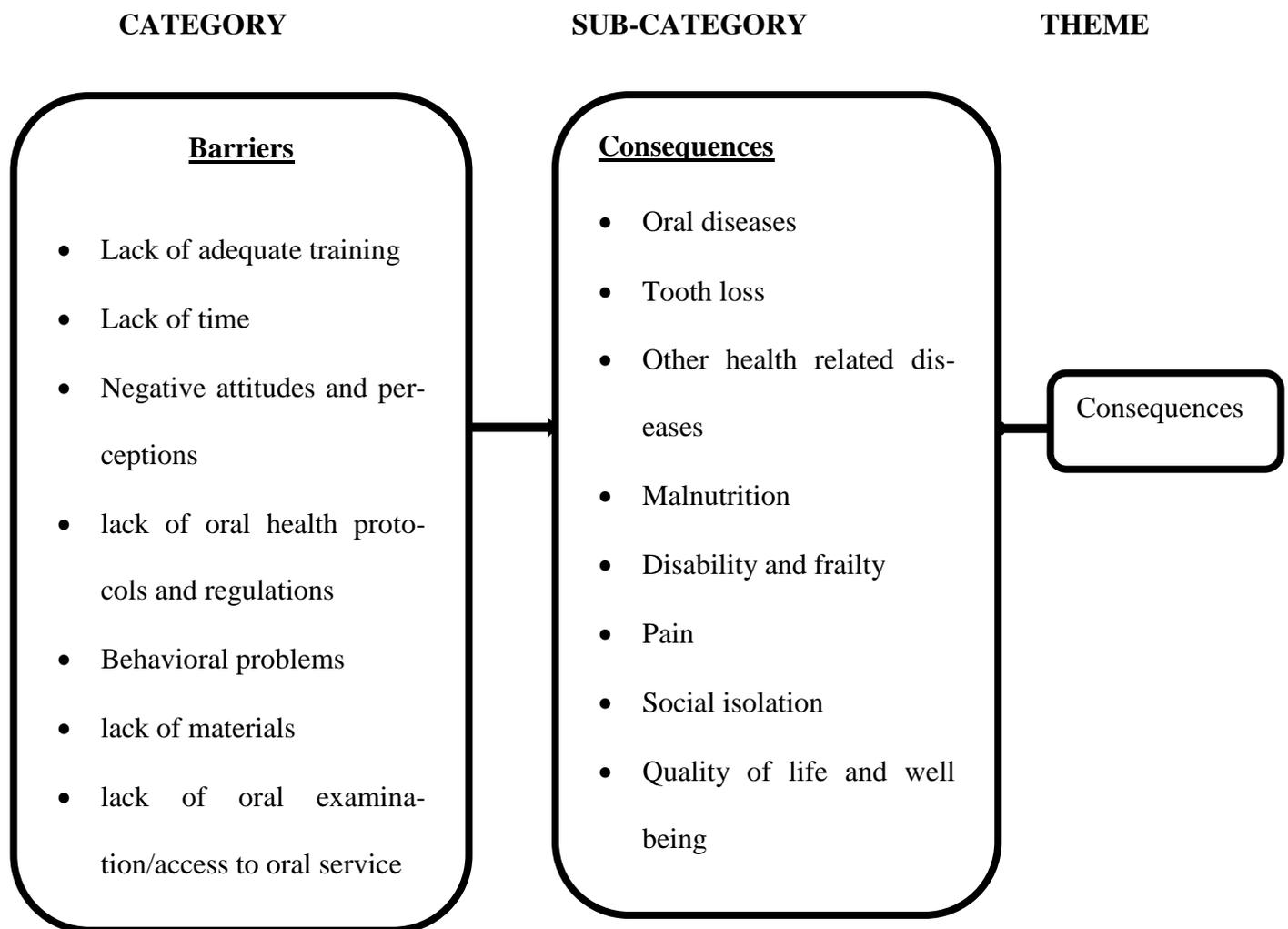


Figure 1: Theme, categories and sub-categories for consequences of neglected oral health of the elderly (first question)

5.1.1 Barriers that lead to poor oral health of the elderly

Studies have mentioned that there is lack of adequate oral hygiene among the elderly especially those living in institutions. (Gately et al. 2011, Zuluaga et al. 2012). This is attributed to various barriers that prevent the provision of adequate oral health care as will be mentioned below.

Lack of adequate training

Findings indicated that caregivers have insufficient training and knowledge in oral hygiene techniques, oral health status and discovering the signs and symptoms of oral deformities. (Gil-Montoya et al 2006, Nitschke et al. 2010, Gately et al. 2011). For example in a study carried out by Zuluaga et al. (2012) it was reported that there was a lack of proper understanding in regard to oral hygiene for elderly with reduced mobility or cognitive impairment. In other studies caregivers and administrators expressed their incapability to identify oral diseases (MacEntee. 2006) and to notice the accumulated quantities of plaque on the teeth and prostheses of the elderly. (Gil-Montoya et al. 2006).

Lack of time

Most studies reported that lack of time was among the major barrier that hindered provision of daily oral hygiene of the elderly. In a study carried out by Gately et al (2011) on denture hygiene care, caregivers narrated that they had enough access to all the required oral tools and resources to clean client's dentures but they lacked time to clean resident's dentures. Gil-Montoya et al (2006) study mentioned that 81.8% of caregivers reported that lack of time restricted them to carry out oral care practices. Insufficient time was also seen to decrease effective brushing of prostheses and mouth cleaning. In MacEntee, (2006) study caregivers also expressed how it is challenging to provide daily oral hygiene beside other demanding responsibilities.

Negative attitudes and perceptions

Caregivers are reported to have negative attitude towards oral hygiene care of the elderly and thus do not give it priority. Nitschke et al, (2010) study stated that most of caregivers view the help with oral health care as displeasing task than other care activities. Whereas Gately et al. (2011) study mentioned that some caregiver's viewed denture clean-up as a duty for denture wearers and others reflected oral health care of other people to be nasty and unimportant. Kullberg et al. (2010) stated that regardless of oral care knowledge attained by caregivers, their behavior is affected by their attitudes and perceptions towards oral hygiene care.

Lack of oral health protocols and regulations

In Gil-Montoya et al. (2006) study it was stated that oral health in most protocols on personal hygiene and general health has been tackled badly and considered inadequately especially for elderly living in institutions. In the same study it was said that even though several researchers have identified insufficient attention given to oral health of the elderly, limited number of researchers have made an effort to explain how this problem could be adopted. MacEntee (2006) also continues to state that institutions do not have appropriate strategies for arranging oral services of the elderly.

Behavioral problems

It was mentioned that caregivers encountered behavioral challenges during the process of carrying out oral hygiene of the elderly. One of the identified problems was lack of cooperation especially among the dependent elderly and those with cognitive impairment due to their cognitive deficit, sensory functions and communication problems. It was reported that sometimes the elderly refused to open their mouth or tried to bite thus making it difficult for caregivers to carry out daily oral hygiene. (Chalmers & Pearson 2005, Gil-Montoya et al. 2006, Kullberg et al. 2010, Gately et al. (2011).

Lack of materials

Some studies have reported that institutions lack the required oral equipment's and cleaning materials needed to carry out daily oral hygiene of the elderly. One caregiver mentioned in a questionnaire that "*Care homes do not provide materials or cleaning*

agents.....it is provided by family or friends....or perhaps not at all”. (Gately et al. 2011).

Lack of oral examination and access to oral services

Researches worldwide have revealed that elderly living in institutions hardly go for regular oral examinations. During a survey period it was reported that the percentage of elderly who had stopped visiting the dentist had risen from 2.5% before they moved to an institution to 54% after. That implied the rate of oral consultations had reduced. It was further said that elderly in institutions could only access oral services when there was dental complications or on request. (Nitschke et al. 2010). In another study results from the questionnaire stated *“residents in dementia care homes in Wales have no access to dentists as their illness prevent them visiting dentists/complying and no community dentists visit homes either so if you have a problem-tough!”* (Gately et al.2011). In Griffin et al. (2012) study they stated that oral diseases among the elderly like loss of teeth, dental caries and un-treated periodontal diseases is an indication of inaccessible services to oral services that could help to control and prevent oral diseases .

5.1.2 Consequences

This sub-section will present in detail the consequences of neglected oral health of the elderly as shown in figure 1 under the sub-category section. These consequences are a result of the mentioned barriers in the category section.

Oral diseases

Gately et al. (2011) study reported that 95% of residents in institutions have un-cleaned dentures yet inadequate denture cleaning was found to lead to denture induced stomatitis. Other studies linked poor oral health to gum bleeding, tooth decay or oral infections. (Zuluaga et al 2012). In another study the rampant common oral problems among the elderly stated were Xerostomia involved which is due to drying of the mouth caused by medication side effects, tooth decay, periodontal disease, and loss of teeth. Soini et al (2006). All these oral complications result from poor or neglected oral health and hence affecting the lives of the elderly in so many ways.

Other health related diseases

There is great evidence that oral diseases have a correlation with other general diseases particularly aspiration pneumonia which is said to affect most of the elderly living in institutions. (Kullberg et al. 2010). Decayed teeth and occurrence of bacteria in saliva have been confirmed to increase the risk of aspiration pneumonia. (Bissett & Preshaw 2011). Another study stated that to some level respiratory and cardiovascular diseases have a link to oral diseases. Gil-Montoya et al. (2006). It was also discovered that poor oral health of elderly with dementia could lead to other medical problems like pneumonia and bacteria anemia. (Chalmers & Pearson 2005).

Tooth loss

In Bissett & Preshaw (2011) study, they mentioned that damage of natural teeth can lead to destruction of regular functions of the mouth like speech, looks, laughing and chewing capability. They continue to say that tooth loss can lead to social isolation, loss of self-esteem lack of appetite, loss of self-confidence and inability to create intimate relationships. In another study tooth loss risk was seen to be most common among the elderly aged 75 and over due to the prevalence rates of periodontal infections and dental caries among these age groups.

Malnutrition

Soini et al (2006) Study revealed that nutritional status, oral status and oral health have a strong connection therefore malnutrition, inadequate oral health and eating problems were found to be related in this study. This similar study discovered that the elderly who were undernourished or in danger of malnourishment, it was due to inadequate oral status and oral health problems. Furthermore most of the elderly consume numerous drugs of which some of them may lead to reduction of saliva creation hence causing dryness in the mouth together with eating and swallowing difficulties. Bissett & Preshaw (2011) further says that damage of the oral functions can limit food varieties, thus leading to nutritional deficit, loss of weight and inadequate fluids. All these problems are risk causes for malnutrition. (Soini et al 2006).

Disability and Frailty

Studies revealed that inadequate oral health is connected with the presence of oral swelling which may result in weakening in muscle strength hence leading to an increase the possibility of disability and support in execution of daily activities of living. (Soini et al 2004). Disability is described as trouble or reliance in carrying out activities vital to independent living including important roles, personal-care tasks and independent living in a home. Frailty is defined by the presence of weight loss, exhaustion, low walking speed, low handgrip strength and physical inactivity. (Fried et al 2004).

Pain

A study conducted on dementia influence on dental pain established that, behavioral difficulties in elderly with dementia are triggered due to oral pain and difficulty. Their way of expressing pain is through behaviors such as refusing to eat, lack of interest in food, lip chewing, violent during the process of carrying out daily activities of living, tongue, hands, teeth grinding and dragging at the face or mouth, shouting and restlessness. (Chalmers & Pearson 2005).

Quality of life and wellbeing

Inadequate oral health in general was reported to create a negative effect to the quality of life of the elderly and their wellbeing (Chalmers & Pearson 2005, Zuluaga et al. 2012) and difficulty to maintain a lively social life. (Kullberg et al. 2010). The capability to interact socially, eat sufficiently, diet maintenance, weight, speech, hydration and swallowing are all affected. (Chalmers & Pearson 2005).

However solutions to prevent and control the mentioned consequences need to be identified in order to maintain good oral health condition of the elderly in institutions. Figure 2 below shows various interventional measures than can enhance oral health of the elderly. ‘Promotion’ is the major theme, category ‘Interventions’ and several subcategories that answer the second research question are formed from the articles.

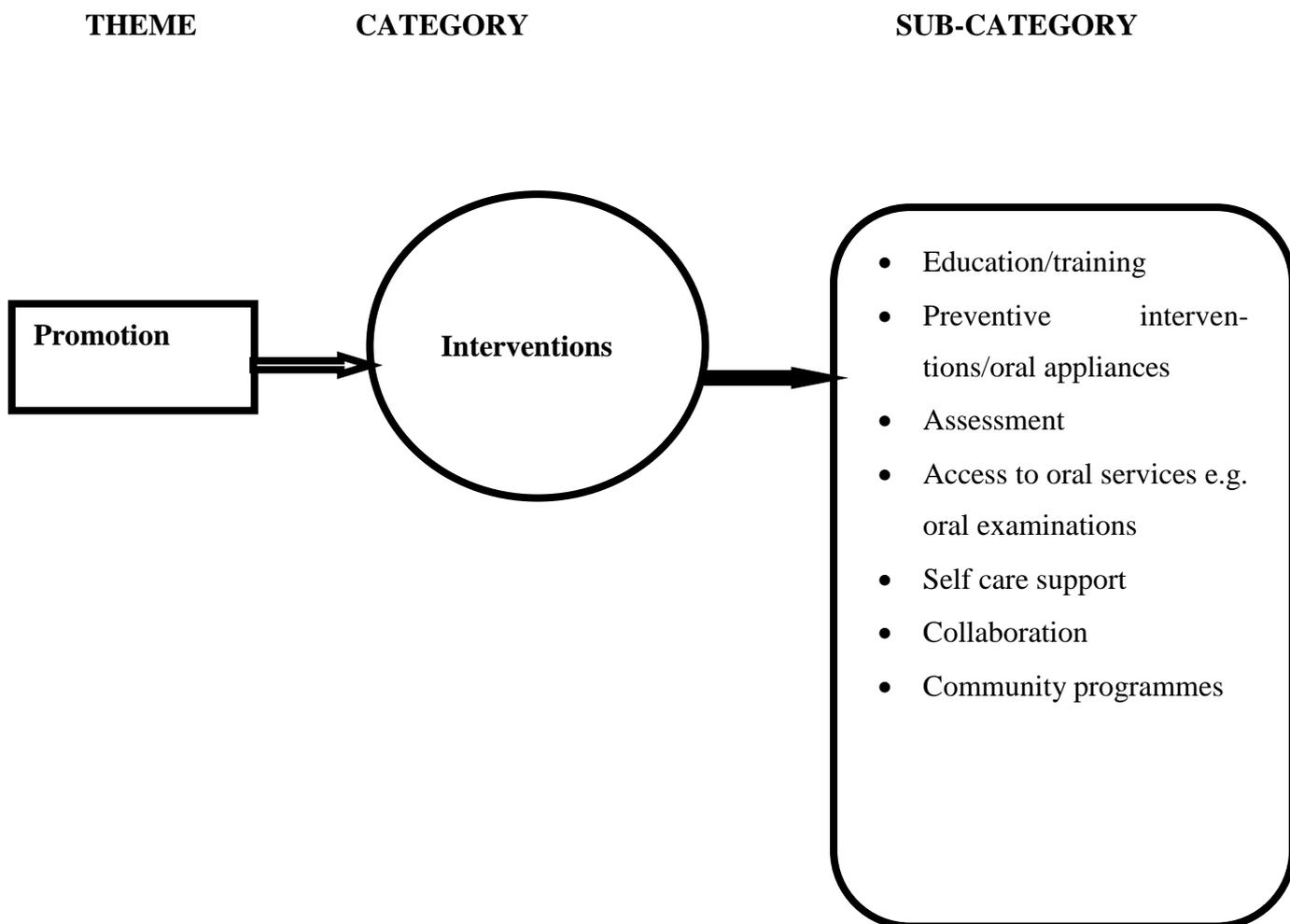


Figure 2, theme, category and sub-categories for oral health promotion strategies (2nd question)

5.2 What is needed to promote oral health of the elderly (Qn 2)

Oral health is part of general health and good oral health is important for good aging . This chapter will present in detail the intervention strategies that are suggested by different researchers for purposes of promoting oral health needs of the elderly in institutions. Figure 2 displays these interventions under the sub-category section.

Education and Training

The need for education and further training of caregivers in oral hygiene practices and techniques is emphasized greatly by most researchers in this study. (Chalmers & Pearson 2005, Kullberg et al. 2010, Bissett & Preshaw 2011, Gil-Montoya et al. 2006). According to Kullberg et al. (2010) their study reported that recurrent dental hygiene education for caregivers was viewed as one of the solutions that could improve oral health of the elderly. In this particular study evidence was seen in the significant decline of gingival and dental plaque among the elderly in the institution after an oral hygiene education was conducted. It was further suggested said that caregiver's attitudes and perceptions towards oral hygiene should be included in the dental education curriculum as well as integration of oral hygiene education in nursing education programmes.

Chalmers & Pearson (2005) study findings found out that other effective ways to improve the oral health of the elderly were to raise awareness of oral health issues to the administration and top nursing staff as well as identifying an 'oral health contact' in the institution who would be responsible specifically for oral health issues of the elderly and a usual dental team attending to the oral needs of the elderly.

Preventive interventions/oral appliances

Use of oral hygiene care strategies was found to be efficient in preventing oral diseases among the elderly. (Chalmers & Pearson 2005). Daily brushing of teeth was found to reduce the levels of cardiovascular diseases whereas increased use of fluorides and chlorhexidine were found to reduce tooth loss and coronal/dental caries among the elderly. (Gil-Montoya et al. 2006, Griffin et al 2012). Uncooperative elderly, a specific electric toothbrush with rotation-oscillation was found to be effective in removing dental plaque. (Gil-Montoya et al. 2006).

Elderly with cognitive impairment these products were found to be appropriate; Fluoride products with these specification 1000 and 5000 ppm toothpastes, Gluconate products for mouth rinsing, dietary sugar substitutes, saliva substitutes and regular care of dentures. (Chalmers & Pearson 2005). Periodontal diseases can be controlled and prevented with scaling and root planning. It was also found out that continuous use of fluorides decrease the rate of tooth loss in the elderly. Professional application of fluoride through community water systems has been proven to diminish coronal caries in elderly by 25%. (Griffin et al 2012).

Oral assessment

In Chalmers & Pearson (2005) they emphasised that caregivers and dentists need to carry out an oral health assessment on the elderly upon admission to the institution and after to screen their oral health condition. This will help caregivers and dentists to assess the oral hygiene interventions that would be required and to develop oral health plans accordingly based on the individual priority needs of the elderly especially institutions where dental specialists are limited. Bissett & Preshaw (2011) they also continue to state that one of the effective ways of drawing an oral hygiene plan for someone is to conduct an oral health assessment first to inspect the oral health condition. This process helps to establish current and upcoming risk factors and then make a way forward appropriately.

Access to oral services

Nitschke et al. (2010) states that in order to maintain good oral health of the elderly, it is important to carry out an oral examination upon admission in the institution and thereafter routine oral examinations should be available to the elderly and semi-annually. This will help to discover any oral complications so that preventive and treatment measures could be provided early enough before emergencies situations happen.

Self-care support

It was pointed out that the elderly who still had the functional capacity to carry out their oral hygiene had to be assessed and a care plan to assist them needed to be developed. Caregivers were urged to play a lead through encouraging and giving support to the elderly during daily mouth cleaning process. (Bissett & Preshaw, 2011). In another study independent elderly only required monitoring and encouragement in the use suggested oral practices. (Gil-Montoya et al. 2006).

Collaboration

Establishment of close cooperation between caregivers and oral healthcare professionals need to be strengthened. A community dental hygienist or educator could educate caregivers in practical hand-on knowledge in oral health education. This will not only increase caregiver's knowledge in oral health issues but also maximize oral health conditions of the elderly in terms of access to oral health services and good oral hygiene. (Bissett & Preshaw, 2011).

Community programmes

The need for establishing community programmes to prevent and control oral health complications of the elderly was suggested. These programmes should be channeled through elderly projects and networks that deal with elderly issues in order to educate the elderly, caregivers, healthcare professionals and policy makers about the importance of good oral health and enhance access to effective preventive interventions such as increased use of fluorides. (Griffin et al 2012).

5.3 Discussion of results

There is scientific evidence that oral health of the elderly in institutions is neglected and done inadequately. Poor oral health is seen to result in oral diseases and other health related complications. This is attributed to various barriers which include among other things caregivers lack of education and continuous training in oral health practices, caregivers negative attitudes, limited time due to other prioritised tasks, lack of resources, limited access to dental services, lack of systematic oral policies and guidelines in institutions and resistance behaviors from the elderly especially the cognitive and physically impaired. (Gil-Montoya et al. 2006, Kullberg et al. 2010, Nitschke et al. 2010, Gately et al. 2011).

In the background Petersen & Yamamoto (2005) stated that the consequences of poor oral health of the elderly result in oral diseases and complications such as tooth loss, coronal dental and root caries, high prevalence rates of periodontal diseases, xerostomia and mouth cancer. Poor oral health has also been reported to impact negatively on the general health of the elderly through causing oral pains and instigating behavioral problems among the elderly especially those with Dementia (Chalmers & Person 2005), lead to change of diet and limited food choices hence causing malnutrition and loss in muscle strength. (Soini et al 2006). Although it's also stated that it is difficult to carry out oral hygiene of the elderly suffering from chronic or severe conditions like cognitive and physical disability due to their resistance to oral hygiene. (Gately et al. 2011). Toothloss is another consequence mentioned that can cause impairment to the functions of the mouth hence affecting speech, appearance, laughing, chewing, eating, smiling, self-esteem, social relations and hence causing a great effect on quality of life.

Poor oral health has been viewed to increase the risk of other health complications especially aspiration pneumonia and cardiovascular diseases the most common problems among the elderly especially in institutions. (Chalmers & Person 2005, Gil-Montoya et al. 2006, Kullberg et al. 2010, Bissett & Preshaw 2011). This is further justified in

(Johnson's 2012) study in the background where it is confirmed that poor oral health and respiratory diseases have a correlation.

On the other hand oral health of the elderly should be considered important as other components of life and therefore need to be attended too regularly. Good oral hygiene can control and prevent oral health complications and other health related diseases among the elderly. Effective strategic interventions were suggested in the studies that could be implemented in order to ensure good oral health of the elderly.

Education and continuous training of caregivers in oral health issues has been strongly recommended by most studies. This will equip caregivers with sufficient knowledge and skills in oral health (Chalmers & Pearson 2005, Kullberg et al. 2010, Bissett & Preshaw 2011, Gil-Montoya et al. 2006) as well enhance their attitudes and perceptions towards oral of the elderly. (Kullberg et al. 2010). In the theoretical framework (WHO 1986) the health promotion concept for developing personal skills supports health education and enabling people to learn. The author is of the view that oral health education could be an important intervention facilitated to caregivers in institutions and hence lead to improved oral health of the elderly.

Strengthening oral hygiene care and preventive strategies are emphasised and need to be implemented effectively for example increase access to oral services including oral examination (Nitschke et al. 2010), undertake early oral assessment (Chalmers & Pearson 2005) and daily use of appropriate products and appliances. Also key to note is strengthening cooperation between caregivers and oral health professionals. All these factors once improved will enhance oral health of the elderly.

Establishment of community oral health programmes is another intervention strategy suggested that could prevent and control oral diseases and complications among the elderly. Griffin et al (2012). In the theoretical framework, WHO (1986) health promotion concept on strengthening community action encourages enhancement of community development programmes and participation through provision of health learning op-

portunities, enhance social support, information access and to ensure that these programmes are implemented effectively and continuously. This is one way of empowering communities and promoting their own health as well control over their environments. The same recommendation is made by (Petersen & Yamamoto 2005) in the background that establishment of a community based oral healthcare programme will provide oral instructions to both caregivers and the elderly, oral examination and dental treatment hence leading to improved oral health situation of the elderly.

5.4 CRITICAL REVIEW

The topic was an eye opener to the author as it provided good knowledge and understanding of oral health in general and its associated complications. However the author encountered some problems in answering questions of the study. Initially the approach to the first question seemed simple and direct yet it was not. As you can refer to the way the results were got, it was more of a 2 in 1 question. The author realized that it was important to first present in detail the problems that lead to poor oral health of the elderly before answering the results of the question. It was not possible to merge the two together otherwise it would have narrowed down the results. Furthermore the second question was difficult to categorise although several subcategories were formed.

The author also faced some difficulties to find a suitable and direct theory on oral health and thus used health promotion concepts developed in the OTTAWA charter for health promotion. However, these concepts being general for all health promotion programmes the author was skeptical to alter its information. Therefore it was hard to link these concepts directly to the results of the study.

6 CONCLUSION AND FURTHER RESEARCH

Oral health of the elderly living in institutions has been given a low priority yet it is also important like other care needs. Inadequate oral health has resulted in various oral diseases including periodontal diseases, tooth decay, oral inflammations, xerostomia, tooth loss and other health related complications like aspiration pneumonia, malnutrition, disability, frailty and oral pains hence impacting negatively on the quality of life of the elderly and their wellbeing.

In order to improve the oral health of the elderly, Caregivers need to receive oral education and continuous training in oral hygiene techniques and procedures. This will enhance their knowledge and skills in oral hygiene measures as well as improve their attitude and perceptions towards oral hygiene of the elderly and hence enhance the wellbeing and quality of life of the elderly. Integration of oral health issues into community programmes need to be enhanced and effective strategic interventions need to be emphasized. Increased collaboration and sustainable communication between caregivers, administrators and oral health professionals need to be strengthened; this will optimize opportunities for oral hygiene care strategies recommended and maintenance of elderly oral health. (Chalmers & Person, 2005). Health care professionals are expected to participate in interventions that support health promotion. (Linsley P, 2011).

Despite all the strategic measures to promote oral health of the elderly, it is still a global challenge. (Petersen, 2003). Therefore there is need to conduct more researches to assess the effectiveness of the suggested strategic interventions and how they could be made sustainable so as to maintain good and daily oral hygiene of the elderly in institutions.

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