Effect of Oral Hygiene in Improving The Health of Elderly People: A Systematic Review

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Abstract: Oral hygiene is very important in maintaining systemic infection in the elderly who have health problems such as stroke, diabetes mellitus, osteoporosis, and others. Oral hygiene can be maintained by regular oral hygiene in both healthy and sick conditions. Some conditions that may affect oral hygiene in elderly include socio-economic status, in improving oral health in elderly interventions can be done, among others, with oral mechanical and modern hygiene. Aim: systematic review to explain oral hygiene practices in the elderly towards improving health of the elderly, by studying related factors and analyzing interventions that can improve oral hygiene practice. Methods: This writing using systematic review design. The data used are obtained from ProQuest and Science direct. Search done using keyword oral hygiene, in elderly. Result: of the 1229 articles obtained were then screened according to the criteria and only 15 articles were used, the research includes hospitals, nursing homes and communities. Articles obtained by RCT and Cross sectional design. Conclusion: The practice of oral hygiene in the elderly is influenced by several factors, several modifications of intervention are needed to improve oral hygiene and oral hygiene practices. Oral hygiene is associated with the quality of life of the elderly.

1 INTRODUCTION

The elderly has been increasing in recent years around the world. Problems faced by the elderly in addition to health problems in general, a very common occurrence of oral health. Tooth loss, caries, periodontal, and other health problems are interrelate. Elderly people who require care have poor oral hygiene, this may increase the risk of ischemic disease such as aspiration of pneumonia and septicemia, and may increase dental caries (Nishiyama et al., 2010). Elderly who suffer from diseases such as stroke, diabetes mellitus, osteoporosis require more intensive mouth hygiene treatment

The practice of oral hygiene of elderly in some conditions is still very low. Modification of interventions with technology is necessary to improve the practice of oral hygiene. Toothbrush modification or toothpaste content, can improve oral health in the elderly.

Oral hygiene can be performed by dental professionals and nurses. The role of nurses in health promotion of oral and dental hygiene is often a role model and support for oral hygiene intervention systems.

2 METHOD

Limits
Limitations of published literature in 2010 to 2017 are in proQuest and direct science, with the topic of oral hygiene in lansiran by RCT and cross sectional methods.

Systematic Approach To Finding Literature

Literature search through proQuest and science direct in November 2017 to February 2018. Published articles about oral hygiene in the elderly. The selected method is research with Randomized Controlled Trial (RCT) and cross sectional. Non-english articles are issued. Which meet the criteria of the original article and review summary
**Search Method**
Searching Topics and abstracts for publications containing the word: oral hygiene, in elderly, RCT, cross sectional. operator used in the proquest by connecting words eg. oral hygiene with oral care, oral health. Elderly with old people.

**Critical Appraisal And Synthesis**
Selected articles viewed titles, abstracts, methods, and results. The appropriate articles are then analyzed, if they meet the criteria will be discussed. Articles that meet the criteria are further analyzed and synthesized. The list of articles is in figure 1. Study the articles met the inclusion criteria, articles with oral hygiene studies in the elderly in hospitals and nursing homes. With stroke, diabetes mellitus, osteoporosis, or are undergoing dental treatment. Results from the study are published in English.

Of the 792 search results in proquest, 20 articles were taken. Then viewed in full text match title, abstract, and result with topic desired reviewer. However only 12 met the inclusion criteria. Whereas 438 search results in science direct only 4 meet the inclusion criteria.

![Figure 1: Journal Search Algorithm.](image_url)

**3 RESULT**

**VLCR and PMMA**
After 6, 12, 24 months of significant plaque adhesion was higher with VLCR than in PMMA, tissue reactions were comparable between the two groups. And the average number of treatment sessions in patients after 24 months 50% higher VLCR than in PMMA. Good oral hygiene is necessary in denture patients with VLCR (Schwindling et al., 2014).

**Supervision of Mouth Treatment**
When compared to the average score of dental plaque and dentures for 6 months of intervention, 0.43 or 30% lower plaque scores on the teeth. And 0.38 or 20% lower on plaque scores on dentures (van der Putten et al., 2013).

**Use of Chlorhyxidine**
The prevalence of oral yeast decreased significantly in the intervention group at 6 months of observation (P, .05). Significant decreases were observed in the prevalence of Staphylococcus aureus, significant aerobic and facultative gram-negative.

A decrease was observed in the prevalence of Staphylococcus aureus (P, .01) and gram-negative aerobic and facultative bacilli. Candida albicans and Klebsiella pneumonia are prominent pathogens found. The Kluyvera strain has also been isolated from this group. Oral hygiene with 0.1% Chlorhyxidine has been shown to be effective in reducing pathogen optrunitis in the mouth (Ab Malik et al., 2017).

**Survival of ART with CT in Preventing Dental Caries in The Elderly**
In the ART and CT group after two years, the ART group showed similar survival to the CT group, meaning there was no statistically significant difference between ART and CT. However, ART can be a more cost-effective way of providing dental care to elderly people in nursing homes (Da Mata et al., 2015).

**Oral Care with Respect to The Quality of Life of Patients With Stroke**
The effectiveness of oral hygiene to improve oral health and health with respect to quality of life (OHRQoL and HRQoL) in stroke patients...
receiving rehabilitation. Respondents were randomized to (1) conventional oral hygiene programs (COHCP) and oral hygiene instructions, (2) Modern oral hygiene programs (AOHCP), 0.2% Chlorhexidine mouthwash, and oral hygiene instructions. After 3 months observation, respondents who received AOHCP significantly improved HRQoL (p <0.001).

The Relationship of Economic Status (SES) to Dental Caries (DMFT)

Bivariate analysis showed a significant relationship between socioeconomic status with dental caries in elderly. They with low socioeconomic have poor oral health. Elderly with low socioeconomic tend to have diet, behavior, and awareness of oral hygiene is also low

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<th>Author</th>
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<th>Study Focus</th>
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<tr>
<td>Yoshihide N, et al</td>
<td>2010</td>
<td>Effect mucosal care on oral pathogen</td>
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<td>Sonia S, et al</td>
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<td>Virginia P dan Cindy K</td>
<td>2015</td>
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<tr>
<td>Buket A, et al</td>
<td>2011</td>
<td>Socioeconomic status, oral hygiene practices, oral health status and stomatitis</td>
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<td>Milos P, et al</td>
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<td>Shun te Huang, et al</td>
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<td>Linyang W</td>
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<td>Mayu Yamane, et al</td>
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<td>Nathali S, et al</td>
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<td>ProQuest</td>
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<tr>
<td>Mashami Y, et al</td>
<td>2013</td>
<td>The relationship of oral health status to lifestyle</td>
<td>ProQuest</td>
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4 DISCUSSION

The findings in this review that modification of oral hygiene interventions with the use of technology can improve oral health in the elderly. In some cases Oral hygiene is aimed at genuine dental care and dentures of the elderly and is associated with an elderly quality of life

Low socioeconomic status can affect oral health in the elderly. This can be attributed to educational status, behavior, awareness of oral health. Those with low socioeconomic status tend to have low education, a diet that tends to be less healthy. In addition to the socioeconomic status of oral health of the elderly is also influenced by lifestyle. Those who smoked and drank more potentially had poorer toothpastes and dental caries

Oral hygiene may affect the risk of aspiration pneumonia in the elderly with dysphagia undergoing home treatment using nasogastric tube feeding.

This review contributes in explaining the oral hygiene practices of the elderly living in hospitals, nursing homes, and communities. By comparing several interventions that can improve oral health. As well as examine several factors that could be
associated with oral hygiene and oral health practices.

5 CONCLUSION

Oral hygiene in elderly is influenced by several factors including socio-economic status, oral hygiene practice (Wang et al., 2017), elderly residence (Evren et al., 2011), supervise the implementation of oral hygiene (van der Putten et al., 2013), lifestyle (Yoshioka et al., 2013) and application of technology (Dai et al., 2017). Modern oral hygiene also helps reduce aspiration risk in stroke patients. Oral hygiene in elderly people with stroke can reduce the risk of pneumonia. In some studies also found oral hygiene benefits to prevent the presence of bacteria and dental caries. Elderly with good oral health can maintain the number of teeth so that the ability to chew well. So the nutritional needs of the elderly remain well met. Furthermore, oral health can improve the health of the elderly that affects the quality of life of the elderly itself.

REFERENCES


