

Tinjauan Sistematis: Pengaruh Perilaku Kebersihan dan Perawatan Kesehatan Lansia

Systematic Review: Affecting Behaviour of Hygiene and Health Care of the Eldery

Windya Kartika Paramita¹ ✉

¹ Department of Health Promotion and Behavior Science, Faculty of Public Health, Universitas Airlangga, Surabaya, Indonesia

Corresponding directed to e-mail: windya.kartika.paramita-2016@fkm.unair.ac.id

ABSTRACT

Background: The Elderly is an age group that has decreased organ function which is susceptible to various diseases. The elderly also experience physical decline which can affect personal hygiene and health care behavior. **Objective:** To determine the factors that affect the personal hygiene and health care of the elderly. **Method:** Personal hygiene referred to in this study was hygiene to care for the whole body including skin, feet, teeth, nails, and hair. This study was a systematic review of studies with primary data related to factors affecting personal hygiene and health care for the elderly. The study was conducted on 35 international journals. **Results:** Personal hygiene of the elderly are feet. Factors that influence their hygiene on demographic factors include residence, education, source of income, gender, age, and knowledge. Factors affecting elderly hygiene on personal characteristic factors include need assistance, perceived benefits, disease, frequency of cleansing, self-efficacy, physical change, degree of independence, mobility, and self-motivation. Factors affecting them on facilities and infrastructure factors supporters include equipment, care services facilities, equipment, distance to care service facilities, social support, and practical conditions. Factors affecting on healthy program factors include training, education caregiver, motivation caregiver, health promotion, health information seeking, satisfaction, informal care, behavioral programs, utilization, and functional health literacy. **Conclusion:** Factors affecting personal hygiene and health care for the elderly include demographics, characteristics of the elderly, supporting facilities, and infrastructure and health programs. Dominant factor affecting personal hygiene and health care for elderly are educational, residence, and income source.

Keywords: behavioral, elderly, health care, hygiene

ABSTRAK

Latar belakang: Lanjut usia (lansia) merupakan kelompok umur yang mengalami penurunan fungsi organ yang menyebabkan mereka rentan terhadap berbagai penyakit. Lansia juga mengalami penurunan kondisi fisik yang dapat memengaruhi perilaku kebersihan diri dan perawatan kesehatan. **Tujuan:** Penelitian ini bertujuan untuk menjelaskan faktor-faktor yang mempengaruhi perilaku kesehatan dan kebersihan diri lansia. **Metode:** Kebersihan diri dalam penelitian ini adalah perawatan kebersihan seluruh tubuh yang meliputi kulit, kaki, gigi, kuku, dan rambut. Penelitian ini merupakan penelitian tinjauan sistematis terhadap penelitian lain dengan data primer terkait faktor-faktor yang memengaruhi kebersihan diri dan perawatan kesehatan lansia. Penelitian dilakukan pada 35 jurnal internasional. **Hasil:** Kebersihan diri lansia salah satunya adalah pada kaki. Faktor-faktor demografi yang memengaruhi kebersihan diri antara lain tempat tinggal, pendidikan, sumber pendapatan, jenis kelamin, usia, dan pengetahuan. Faktor karakteristik individu yang memengaruhi higiene lansia meliputi kebutuhan akan bantuan, manfaat yang dirasakan, penyakit, frekuensi pembersihan, efikasi diri, perubahan fisik, derajat kemandirian, mobilitas, dan motivasi diri. Faktor sarana dan prasarana pendukung yang memengaruhi antara lain peralatan, sarana pelayanan pengasuhan, peralatan, jarak ke sarana pelayanan pengasuhan, dukungan sosial, dan kondisi praktis. Faktor-faktor yang memengaruhi faktor kesehatan program antara lain pelatihan,

Pendidikan dan motivasi pengasuh, promosi kesehatan, pencarian terhadap informasi kesehatan, kepuasan, asuhan informal, perilaku, pemanfaatan, dan literasi kesehatan fungsional. Kesimpulan: Faktor yang memengaruhi kebersihan diri dan perawatan kesehatan lansia antara lain demografi, karakteristik individu, sarana penunjang, serta prasarana dan program kesehatan. Faktor dominan yang memengaruhi kebersihan diri dan perawatan kesehatan lansia adalah pendidikan, tempat tinggal, dan sumber pendapatan.

Kata kunci: Perilaku, Lansia, Pelayanan Kesehatan, Kebersihan

INTRODUCTION

World Health Organization states that the elderly population in 2017, the highest number in the world held by Japan reaching 69.785%, in which the 88.1% of their total number were women. In Indonesia, the number of the elderly population in 2017 reached 9.03% or 23.66 million of the whole elderly population (BPS, 2017).

The increase in this population needs to get special attention especially the improvement of personal hygiene so that health can be maintained. The World Health Organization (WHO) states that health is a state of physical, mental and social well-being, not only in the absence of disease or weakness, medical advances increase healing and reduce mortality, therefore it is important to measure health not only in life-saving aspects but also their quality of life (World Health Organization, 2020).

The Elderly has decreased organ function and physical decline that cause limitations in physical activities. These conditions make their personal hygiene an interesting aspect to study. Personal hygiene is very important and must be considered because cleanliness will affect health, safety, comfort, and well-being. Personal hygiene behavior is influenced by personal, social, and cultural factors. If someone is sick, hygiene problems are usually overlooked, especially in the elderly.

The impact that arises on personal hygiene problems is quite alarming, including if the lack of self-care in the head area will cause dandruff on the hair and itching on the scalp, eyes, and ears. Oral care if not done properly will cause oral mucosal disorders such as mouth sores and bad breath. Fingernails and toenails care if not treated properly will result in physical disturbances to the nail area, and skin that is not kept clean

will cause skin integrity disorders such as itching (Tarwoto, 2013).

Poor personal hygiene is balanced by the biological condition of the elderly who experience a continuous decline in physical endurance and make them more vulnerable to diseases that can cause infection. It also needs the support of various care programs and cares service facilities so that the health of the elderly is maintained and can ultimately improve the quality of life of the elderly.

Various researchers have conducted a study of factors affecting the personal hygiene and health care of the elderly with different results. This study conducts a systematic review of factors affecting the personal hygiene and health care of the elderly.

METHOD

This study used a systematic review method. The source of research data was from the literature obtained through the Google Scholar search engine, Pub Med, Science Direct and Google Scholar. A systematic review of hygiene and health care factors among the elderly was then performed after the reporting items were selected for a systematic review and meta-analysis guidelines (PRISMA). The search was carried out based on inclusion and exclusion criteria.

Population was a research paper on hygiene and health care factors among parents from 2012-2019. Based on a search with keywords hygiene of elderly and health care of elderly in the year published from 2012-2020, research articles and articles in English obtained 2,408 articles which were then obtained 255 articles in full text. Inclusion criteria were investigated that identified hygiene factors and health care among the elderly, using primary data for research in English. Based on the inclusion criteria, 35 articles were obtained which later

became the research sample. Data collection is presented in Figure 1. Data collection was conducted from March 28 to April 2, 2020. The exclusion criteria for

this study were review studies and using secondary data for research and did not have the data needed for this study. Data is presented in tabular form.

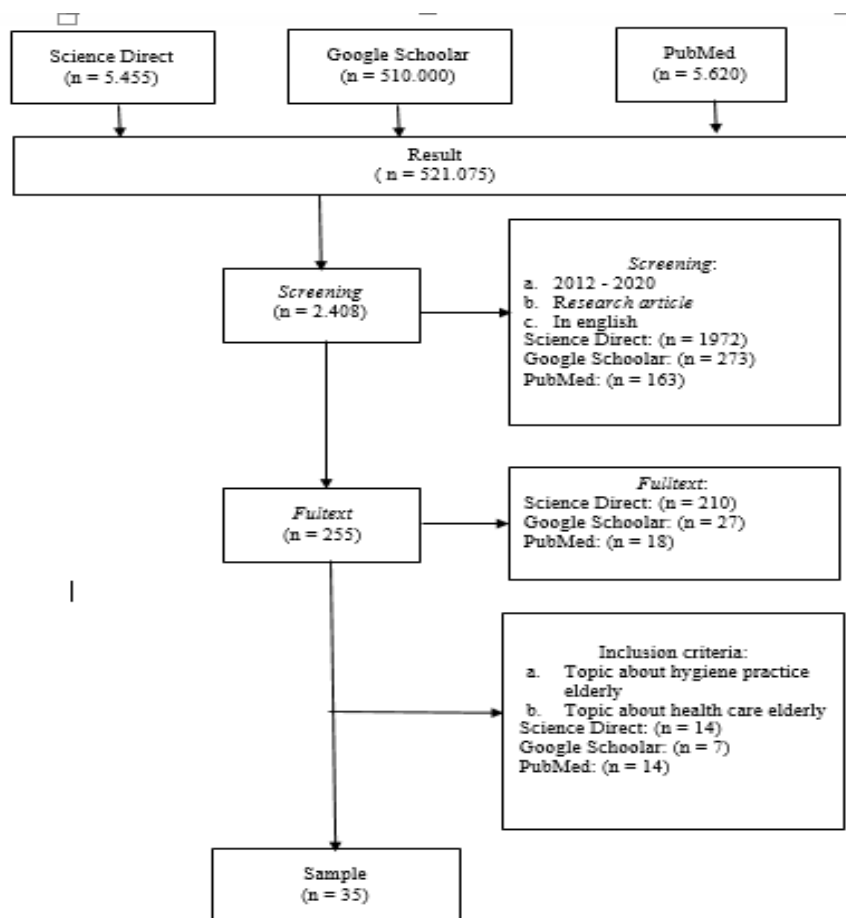


Figure 1. Data Collection

RESULTS AND DISCUSSION

The results of study involving 35 journals related to factors affecting the health care and hygiene of the elderly are explained in Table 1.

A study of 35 journals from 2012 to 2019 contained study of factors affecting personal hygiene, oral hygiene, foot hygiene, and health care of the elderly from various countries. A total of 15 (42.86%) studies examined personal hygiene. A total of 13 (37.14%) studies studied oral hygiene. A total of 2 (5.71%) studies studied foot hygiene and as many as 5 (14.28%) studies studied health care.

Most studies (48.57%) studied the elderly age ≥ 65 years. Elderly aged 65-74 years are young elderly who are still healthy and active. Elderly aged 75-84 years are middle aged, with conditions varying between healthy and active to

have chronic diseases. The elderly aged 85 years and over are the oldest elderly, who tend to be physically weaker. The elderly over 65 years have health problems due to the aging process, so it requires special consideration. At this age, they need general and oral health care, and require the services of these service providers. Some older adults have physical and/or psychological conditions that require special attention to the teeth (Razak *et al.*, 2014).

The study results of the factors that affect personal hygiene and health care for the elderly, can be divided into 4 groups namely demographics, characteristics of the elderly, supporting facilities and infrastructure, and healthy programs.

Factors affecting the hygiene of the elderly on demographic factors include residence, education, sources of income,

gender, age, and knowledge. The affecting factors on personal characteristic factors include need assistance, perceived benefits, disease, frequency of cleansing, self-efficacy, physically change, degree of independence, mobility, and self-motivation. Factors affecting elderly hygiene on facilities and infrastructure factors supporters include equipment, care services facilities, material, distance

to care service facilities, social support, and practical conditions. Factors affecting elderly hygiene on healthy program factors include training, education caregiver, motivation caregiver, health promotion, health information seeking, satisfaction, informal care, behavioral programs, utilization, and functional health literacy.

Table 1. Study of hygiene dan healthy care of elderly

No.	Name	Year	Region	Age (Years)	Study
1	Bashet et al.	2019	Bangladesh	≥ 60	Personal hygiene
2	Chapa et al.	2019	USA	> 65	Oral hygiene
3	Ruhaya et al.	2019	Malaysia	≥ 60	Oral hygiene
4	Miikkola et al.	2019	Finlandia	≥ 65	Foot hygiene
5	Kleisiaris et al.	2019	Swedish	≥ 65	Personal hygiene
6	Caner and Cilasun	2019	Turkey	≥ 65	Health care
7	Nawagi et al.	2018	Uganda	≥ 60	Health care
8	Shokry et al.	2018	Egypt	60-82	Oral hygiene
9	Lowe and Rossopoulos	2018	USA	≥ 65	Oral hygiene
10	Sharoni et al.	2018	Malaysia	≥ 60	Foot hygiene
11	Jiang et al.	2018	China	≥ 60	Personal hygiene
12	Atchessi et al.	2018	Nigeria	≥ 50	Personal hygiene
13	Kim and Hong	2018	Korea	≥ 65	Health care
14	Mahdizadeh and Solhi	2018	Iran	60-82	Personal hygiene
15	Wu and Liu	2017	China	≥ 60	Healthy care
16	Linden et al.	2017	Sweden	72-89	Oral hygiene
17	Priyanto	2017	Indonesia	≥ 60	Personal hygiene
18	Hajek et al.	2017	German	≥ 60	Personal hygiene
19	Delgado et al.	2016	USA	≥ 65	Oral hygiene
20	Irwan et al.	2016	Indonesia	≥ 60	Personal hygiene
21	Lestari et al.	2016	Indonesia	79,8 ± 6,4	Personal hygiene
22	Rasool dan Khalifa	2016	Bagdad	≥ 65	Personal hygiene
23	He et al.	2016	China	≥ 60	Personal hygiene
24	Lolita et al.	2015	Cameroon	≥ 65	Oral hygiene
25	Lafortune et al.	2015	Ontario	> 65	Health care
26	Lim et al.	2015	Korea	65-74	Personal hygiene
27	Dahm et al.	2015	USA	> 65	Oral hygiene
28	Kusdhany et al.	2015	Indonesia	≥ 70	Oral hygiene
29	Harooni et al.	2014	Iran	> 65	Personal hygiene
30	Razak et al.	2014	India	≥ 65	Oral hygiene
31	Azizan et al.	2013	Malaysia	> 65	Personal hygiene
32	Chen et al.	2013	North Carolina	≥ 65	Oral hygiene
33	Apartim et al.	2013	India	≥ 65	Oral hygiene
34	Harvey and Alexander	2012	USA	≥ 60	Personal hygiene
35	Al-Sinaidi	2012	Saudi Arabia	62,3 ± 6,8	Oral hygiene

Table 2. Factor affecting the hygiene and healthy care of elderly

Factors	Total	Study	References
Demography			
Age	3	Oral hygiene, Personal hygiene	(Kusdhany <i>et al.</i> , 2015); (Bashet <i>et al.</i> , 2019); (He <i>et al.</i> , 2016)
Knowledge	2	Oral hygiene, foot hygiene	(Lowe and Rossopoulos, 2018); (Sharoni <i>et al.</i> , 2018)
Educational	4	Oral hygiene, Personal Hygiene	(Kusdhany <i>et al.</i> , 2015); (Bashet <i>et al.</i> , 2019); (He <i>et al.</i> , 2016); (Atchessi <i>et al.</i> , 2018)
Residence	4	Oral hygiene, Personal Hygiene	(Lolita <i>et al.</i> , 2015); (Jiang <i>et al.</i> , 2018); (Rasool and Khalifa, 2016); (Atchessi <i>et al.</i> , 2018)
Source income	4	Personal Hygiene	(He <i>et al.</i> , 2016); (Jiang <i>et al.</i> , 2018); (Nawagi <i>et al.</i> , 2018); (Atchessi <i>et al.</i> , 2018)
Gender	3	Personal Hygiene	(He <i>et al.</i> , 2016); (Jiang <i>et al.</i> , 2018); (Nawagi <i>et al.</i> , 2018)
Personal Characteristics			
Physically change	1	Foot hygiene	(Miikkola <i>et al.</i> , 2019)
Degree of independence	1	Personal Hygiene	(Priyanto, 2017)
Mobility	1	Oral hygiene	(Lowe and Rossopoulos, 2018)
Need assistance	3	Oral hygiene, Personal hygiene	(Chen <i>et al.</i> , 2013); (Jiang <i>et al.</i> , 2018); (Lafortune <i>et al.</i> , 2015)
Perceived benefit	3	Oral hygiene, Personal Hygiene	(Dahm, Bruhn and Lemaster, 2015); (Lim, Noh and Kim, 2015); (Irwan <i>et al.</i> , 2016)
Disease	3	Personal Hygiene; care service	(Kleisiaris <i>et al.</i> , 2019); (Jiang <i>et al.</i> , 2018); (Hajek, Bock and König, 2017)
Self-efficacy	2	Foot hygiene; personal hygiene	(Sharoni <i>et al.</i> , 2018); (Irwan <i>et al.</i> , 2016)
Frequency of cleansing	3	Oral hygiene	(Al-sinaidi, 2012); (Shokrya, Adelb and Rashad, 2018); (Apratim <i>et al.</i> , 2013)
Self-motivation	1	Oral hygiene	(Lindén <i>et al.</i> , 2017)
Supporting Facilities			
Equipment	3	Personal Hygiene	(Lestari <i>et al.</i> , 2016); (Shokrya, Adelb and Rashad, 2018); (Lindén <i>et al.</i> , 2017)
Care services facility	3	Oral hygiene, care service	(Chen <i>et al.</i> , 2013); (Lolita <i>et al.</i> , 2015); (Lafortune <i>et al.</i> , 2015)
Distance to care service facility	2	Oral hygiene	(Lolita <i>et al.</i> , 2015); (Lowe and Rossopoulos, 2018)
Material	3	Oral hygiene	(Dahm, Bruhn and Lemaster, 2015); (Chen <i>et al.</i> , 2013); (Shokrya, Adelb and Rashad, 2018)
Practical conditions	1	Oral hygiene	(Lindén <i>et al.</i> , 2017)
Social support	2	Personal Hygiene	(Harvey and Alexander, 2013); (Lindén <i>et al.</i> , 2017)
Healthy program			
Trending	2	Oral hygiene	(Chapa <i>et al.</i> , 2019); (Delgado <i>et al.</i> , 2016)
Education caregiver	2	Oral hygiene	(Lowe and Rossopoulos, 2018); (Razak <i>et al.</i> , 2014)
Motivation caregiver	2	Oral hygiene, care service	(Razak <i>et al.</i> , 2014); (Lafortune <i>et al.</i> , 2015)
Satisfaction	1	Care service	(Caner and Cilasun, 2019)
Informal care	1	Care service	(Wu and Lu, 2017)
Behavioral program	1	Personal Hygiene	(Azizan, Justine and Kuan, 2013)
Health promotion	2	Personal Hygiene; care service	(Kim and Hong, 2018); (Harooni, Hassanzadeh and Mostafavi, 2014)
Utilization	1	Care service	(Caner and Cilasun, 2019)
Functional health literacy	1	Personal Hygiene	(Mahdzadeh and Solhi, 2018)
Health information seeking	2	Foot hygiene; Personal Hygiene	(Mahdzadeh and Solhi, 2018); (Miikkola <i>et al.</i> , 2019)

The Elderly is an age group that has shown a decline in organ function. The older age of a person causes a decrease in bodily functions due to aging which causes a decrease in physical strength. Decreasing physical strength of the elderly can reduce the personal hygiene behavior of the elderly. Elderly personal hygiene includes various skin, mouth, and foot health. Personal hygiene in the elderly can affect the health status of the elderly. Besides, the health status of the elderly is also influenced by care service support.

Effect Demographics on Personal Hygiene and Health Care

The demographic factors are residence, educational, source income, gender, age and knowledge. Women had better gingival health and oral hygiene than men. This difference is clearly seen in urban and rural populations (Lolita *et al.*, 2015). There are some controversies surrounding the findings of oral medication related to gender. Several studies have shown that women used outpatient services more frequently in the previous two weeks than men. It is related to the physical and psychological characteristics of women. Men are stated to be more likely to delay treatment than women because of social and behavioral factors (Jiang *et al.*, 2018).

Knowledge about health can influence health behavior to some extent. Knowledge about health and health behavior plays an important role in the health literacy of the elderly (He *et al.*, 2016). Some studies denote conflicting results about impact knowledge on elderly healthcare.

Several studies have shown that elderly who live alone are more likely to be hospitalized than those who live with informal caregivers. Education was stated to have a positive and significant effect on the use of outpatient services. Other studies showed that parents with lower levels of education have more visits to their general practitioners (Jiang *et al.*, 2018).

The educational level also show an association with cognitive function (Kusdhany *et al.*, 2015). Cognitive abilities related to memory disorders are expressed as factors that influence oral hygiene among parents. Forgetfulness is

expressed as a frequent occurrence that is part of the daily life of the patient / an older person. These memory disorders make the elderly forget to brush their teeth and how to brush, how to use a new oral care tool, or how to treat new prosthetic construction (Lindén *et al.*, 2017)

Age distribution affects bath, brush, and washing cloth practices in both groups' elderly people. An increase in age reduces practice regarding hygiene. Older ages associated with health problems also related to poor hygiene practices. Common colloquial that increase in ages reduces people's ability in maintaining good health and personal hygiene regarding bath, oral and dress hygiene (Bashet *et al.*, 2019). Older people tend to have more comorbid conditions and suffer worse treatment effects so they have more needs for health care (Jiang *et al.*, 2018). Elderly health behavior is also influenced by economic and environmental factors. Low level of economic development and difficult environmental factors cause low transmission of health knowledge in them (He *et al.*, 2016).

Effect Personal Characteristic on Personal Hygiene and Health Care

Personal characteristic factors include assistance requirement, perceived benefit, disease, frequency of cleansing, self-efficacy, physical change, degree of independence, mobility, and self-motivation. Aging can cause the skin to become drier. In addition, the elderly also have problems with the skin and nail structures such as calluses and nails growing into the skin (Miikkola *et al.*, 2019; Delgado *et al.*, 2016).

They also have problems with thickened toenails and other foot problems. these problems cause the elderly to need multi-professional care assistance. Research reports that some elderly perform foot care in professional care, some visit pedicurists or other foot care professionals regularly, and few of the elderly perform foot care themselves. However, professional foot care is only considered a pleasure and not as part of health care. Some elderly people do not visit a specialist even though they feel the need to do so. Health care is carried out when there is pain and experience

limitations in carrying out daily activities or if problems occur that cannot be handled alone (Miikkola *et al.*, 2019).

Knowledge and experience of why and how oral hygiene is needed to achieve good oral health. Brushing teeth and other oral hygiene procedures must be learned early because otherwise they will be the main care when elderly (Lindén *et al.*, 2017).

Self-efficacy is an important driver for parents who practice self-care in a calm manner. Self-efficacy has a positive effect on the practice of health promotion. Therefore, self-care education programs are important for the illiterate elderly (Irwan *et al.*, 2016).

The Effects of Supporting Facilities on Personal Hygiene and Health Care

Supporting factors include material, equipment, distance, care, material, distance to care service facilities, social support, and practical conditions. Changes in routine in the daily life of parents due to disability or disease can result in new oral hygiene routines with new tools for cleaning teeth.

The social context of parents can cause social pressure to maintain oral hygiene. Social pressure from relatives or friends or parents themselves who want to maintain oral health. Regarding social support, the expert group states that older people often depend on relatives or others who buy oral hygiene utilities (Lindén *et al.*, 2017).

Access to sanitation infrastructure, including toilets, showers, and handwashing facilities, has long been identified as a precursor for personal hygiene and good health. Difficulty in access to safe drinking water and good sanitation facilities and poor hygienic practices are associated with some diseases like skin diseases, ARIs, and diarrheal diseases, the leading diseases. Without adequate quantities of safe water for personal hygiene, skin and eye diseases spread easily among elderly people. Unless proper sanitation facilities are in use complemented with the right types of hygiene behaviors, elderly people will be vulnerable to recurrent incidences of water and sanitation-related diseases (Bashet *et al.*, 2019).

The Effects of Healthy Programs on Personal Hygiene and Health Care

Inadequate funding can also greatly affect oral care. Elderly can treat the patient's oral cavity due to inadequate supply (Dahm, Bruhn and Lemaster, 2015). Health program factors such as care, training, caregivers, education, caregiver motivation, health promotion, health information seeking, satisfaction, informal care, behavioral programs, utilization, and functional health literacy. People who have low health literacy and seek health information, have better health status than those who do not use health information resources. Those who are actively seeking health information are participants who are more active in their own health care. Functional health literacy has a positive impact on the intention to seek health information and health information resources. Nasrabadi and colleagues (Mahdizadeh and Solhi, 2018).

Inadequate health literacy is one of the obstacles to finding health information in women. People with inadequate health literacy tend to seek health information. There is a reciprocal relationship between health problems and health information seeking. Elderly people with lower levels of health literacy receive health-related information from their family and friends and religious leaders. This result shows the importance of designing culturally appropriate interventions to improve health, in accordance with understanding how to receive and get access to health information in the population (Mahdizadeh and Solhi, 2018).

Caregiver certification was significantly related to looking in the elderly client's mouth and having training in providing oral care. Oral care practices training that was inadequate, with evident deficiencies in providing knowledge of oral care procedures such as flossing, daily brushing, and cleaning their clients' dentures (Delgado *et al.*, 2016).

The higher utilization and satisfaction of health services has two reasons which include an increased level of coverage and increased frequency of visits. Broader coverage and frequent visits are desired, but only to the extent

that negative externalities are generated by visitors who often do not interfere with service to those who do not visit health facilities but may need more. A high number of visits must be tracked to discover any unnecessary procedures or unsolved health problems of the elderly (Caner and Cilasan, 2019).

The health education program for the elderly significantly affects the knowledge of the elderly. The effectiveness of the program carried out causes an increase in health knowledge. This is important for them because they have short-term memory. Thus, program effectiveness can lead to positive changes in the oral health status of the elderly (Shokrya, Adelb and Rashad, 2018).

Preventive dental counseling for elderly patients consists of two components, namely education and motivation, so that caregiver education and motivation is important. Elderly education can be carried out by means of discussion with patients about current causes of disease and past diseases and ways of intervening and preventing future diseases. The discussion of etiology should be complete, but according to the level of understanding of the elderly individual. Home care procedure instructions given to the elderly in caring for teeth must be carried out in a simple but effective model (Razak *et al.*, 2014).

CONCLUSION

Elderly is an age group of more than or equal to 65 years who have experienced aging. This age also consists of an age range where the age group affects the personal hygiene of elderly behavior. In addition to age, demographic factors such as gender, education, income, and residence as well as elderly knowledge influence the personal hygiene and healthy care behavior of the elderly.

Decreased organ function and physical weakness of the elderly restrict the movement of the elderly which can affect the personal hygiene behavior of the elderly. These limitations make some elderly people need support such as equipment and equipment that supports and requires social support and assistance from the closest parties. Related to health care, the location of health facilities, motivation, and education from caregivers, behavioral programs,

utilization, and functional health literacy also contribute to supporting their health.

REFERENCES

- Al-sinaidi, A. A. (2012) 'Periodontal health and oral hygiene practice of elderly Saudis living at Riyadh Nursing Home', *King Saud University Journal of Dental Sciences*, 3(1), pp. 1-5. doi: 10.1016/j.ksujds.2011.10.005.
- Apratim, A. *et al.* (2013) 'Denture Hygiene Habits among Elderly Patients Wearing Complete Dentures', *The Journal of Contemporary Dental Practice*, 14(December), pp. 1161-1164.
- Atchessi, N. *et al.* (2018) 'Factors associated with the healthcare-seeking behaviour of older people in Nigeria', *Archives of Gerontology and Geriatrics*, 79, pp. 1-7.
- Azizan, A., Justine, M. and Kuan, C. S. (2013) 'Effects of a Behavioral Program on Exercise Adherence and Exercise Self-Efficacy in Community-Dwelling Older Persons', *Current Gerontology and Geriatrics Research*, 2013, pp. 1-9.
- Bashet, A. *et al.* (2019) 'A Comparative Study on Water, Sanitation and Hygienic Practices of Elderly People in a Selected', *International Journal of Research and Scientific Innovation*, 6(2), pp. 38-43.
- BPS (2017) *Statistik Indonesia. Statistical Yearbook of Indonesia*. Jakarta.
- Caner, A. and Cilasan, S. M. (2019) 'Health Care Services and the Elderly: Utilization and Satisfaction in the Aftermath of the Turkish Health Transformation Program', *Gerontology & Geriatric Medicine*, 5, pp. 1-5. doi: 10.1177/2333721418822868.
- Chapa, R. L. *et al.* (2019) 'to Implementation', *Journal of Dental Education*, 83, pp. 39-47. doi: 10.21815/JDE.019.005.
- Chen, X. *et al.* (2013) 'Self-reported Oral Health and Oral Health Behaviors in Older Adults in the Last Year of Life', *Journal of Gerontology: MEDICAL SCIENCE*, 68(10), pp. 1310-1315. doi: 10.1093/gerona/glt024.
- Dahm, T. S., Bruhn, A. and Lemaster, M. (2015) 'Critical Issues in Dental Hygiene Oral Care in the Long-Term Care of Older Patients: How Can the Dental Hygienist Meet the Need?', *The Journal of Dental Hygiene*, 89, pp.

- 229-237.
- Delgado, A. M. *et al.* (2016) 'Research Professional Caregivers' Oral Care Practices and Beliefs for Elderly Clients Aging In Place', *The Journal of Dental Hygiene*, 90, pp. 244-248.
- Hajek, A., Bock, J. and König, H. (2017) 'Which factors affect health care use among older Germans? Results of the German ageing survey', *BMC Health Services Research*, pp. 1-8. doi: 10.1186/s12913-017-1982-0.
- Harooni, J., Hassanzadeh, A. and Mostafavi, F. (2014) 'Influencing factors on health promoting behavior among the elderly living in the community', *J Educ Health Promot*, 3, p. 40.
- Harvey, I. S. and Alexander, K. (2013) 'Outcomes among Older Women', *J Cross Cult Gerontol*, 27(3), pp. 275-290. doi: 10.1007/s10823-012-9172-3. Perceived.
- He, Z. *et al.* (2016) 'Factors Influencing Health Knowledge and Behaviors among the Elderly in Rural China', *International Journal of Environmental Research and Public Health*, pp. 1-16. doi: 10.3390/ijerph13100975.
- Irwan, A. M. *et al.* (2016) 'ScienceDirect among older persons in a developing country: Theories-based research', *International Journal of Nursing Sciences*, 3(1), pp. 11-23. doi: 10.1016/j.ijnss.2016.02.010.
- Jiang, M. *et al.* (2018) 'Factors associated with healthcare utilization among community-dwelling elderly in Shanghai, China', *PLOS ONE*, pp. 1-22.
- Kim, Y. and Hong, S.-W. (2018) 'Health-Related Effects of the Elderly Care Program', *BioMed Research International*, 2018, pp. 1-8.
- Kleisiaris, C. F. *et al.* (2019) 'Factors Affecting the Health Status of Elderly People Receiving Home Care ORIGINAL PAPER Factors affecting the health status of elderly people receiving home care', *Archives of Hellenic Medicine*, (February), pp. 238-244.
- Kusdhany, L. S. *et al.* (2015) 'Oral Hygiene Status and Cognitive Function in Indonesian Elderly', *International Journal of Clinical Preventive Dentistry*, 11(4), pp. 261-264.
- Lafortune, C. *et al.* (2015) 'Community-based primary health care for older adults: a qualitative study of the perceptions of clients, caregivers and health care providers', *Lafortune et al. BMC Geriatrics*, pp. 1-11. doi: 10.1186/s12877-015-0052-x.
- Lestari, A. S. *et al.* (2016) 'Access to Personal Hygiene Improves the Quality of Life at Elderly Hostels', *International Research Journal of Engineering, IT & Scientific Research*, 2(11), pp. 22-28.
- Lim, E. J., Noh, J. H. and Kim, E. Y. (2015) 'A Study of Factors Affecting Health-Promoting Behaviors to Young-Elderly Adults in Urban and Rural Communities', *International Journal of Bio-Science and Bio-Technology*, 7(5), pp. 367-374.
- Lindén, I. G. *et al.* (2017) 'Factors Affecting Older Persons' Ability to Manage Oral Hygiene: A Qualitative Study', *International & American Associations of Dental Research*, 2(3), pp. 223-232. doi: 10.1177/2380084417709267.
- Lolita, Y. M. *et al.* (2015) 'Oral Health Status of the Elderly at Tonga, West Region, Cameroon', *International Journal of Dentistry*, 2015, pp. 1-9.
- Lowe, O. and Rossopoulos, E. (2018) 'Assessment of oral health status of elderly population living in residential care facilities', *MEDDOCS Open Access Publisher*, pp. 1-4.
- Mahdizadeh, M. and Solhi, M. (2018) 'Electronic Physician (ISSN : 2008-5842)', *Electronic Physician*, 10(3), pp. 6462-6469.
- Miikkola, M. *et al.* (2019) 'Challenges of foot self-care in older people: a qualitative focus-group study', *Journal Foot of Ankle Research*, 4, pp. 1-10.
- Nawagi, F. *et al.* (2018) 'Sociodemographic Characteristics and Health Profile of the Elderly Seeking Sociodemographic Characteristics and Health Profile of the Elderly Seeking Health Care in Kampala, Uganda', *Current Gerontology and Geriatrics Research*, (May), pp. 1-8. doi: 10.1155/2018/4147509.
- Priyanto, S. (2017) 'The Correlation Between Independence Levels and The Efforts to Fulfill Personal Hygiene of Elderly in Panti Sosial Tresna Werdha (PSTW) Abiyoso Pakem Sleman Yogyakarta', *Muhammadiyah Journal of Nursing*, pp. 62-65.
- Rasool, A. J. and Khalifa, M. F. (2016) 'Evaluation of Health Promotion Behaviors for Elderly Population at

- Geriatric Homes in Baghdad City’; *International Journal of Scientific and Research Publications*, 6(9), pp. 369-376.
- Razak, P. A. *et al.* (2014) ‘Geriatric Oral Health: A Review Article’, *Journal of International Oral Health*, 6(August), pp. 110-116.
- Sharoni, S. K. A. *et al.* (2018) ‘The effects of self-efficacy enhancing program on foot self-care behaviour of older adults with diabetes: A randomised controlled trial in elderly care facility , Peninsular Malaysia’, *PLOS ONE*, pp. 1-23.
- Shokrya, A. E., Adelb, M. R. and Rashad, A. E. A. (2018) ‘Educational program to improve quality of life among elderly regarding oral health’, *Future Dental Journal*, 4(2), pp. 211-215. doi: 10.1016/j.fdj.2018.07.002.
- Tarwoto (2013) *Keperawatan Medikal Bedah*. Jakarta: CV Sagung Seto.
- World Health Organization (2020) ‘Constitution’.
- Wu, H. and Lu, N. (2017) ‘Informal care and health behaviors among elderly people with chronic diseases’, *Journal of Health Population and Nutrition*, pp. 1-8. doi: 10.1186/s41043-017-0117-x.