

PROMOTION OF DENTAL CARE 4.0

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ABSTRACT

Dental care promotion is part of general health promotion. With dental care promotion. Especially for the elderly, it is hoped that with the promotion of teeth, the elderly can live independently and even produce, without the help of others. Regarding the elderly, the approach taken is of course specific, because the elderly are certainly rich in experience and knowledge, so when explaining dental promotion, it is necessary to use a specific approach. The industrial revolution 4.0 was marked by a group of new technologies known as disruptive innovation including artificial intelligence; nanotechnology; big data; blockchain; quantum computers; biotechnology, the internet of things, 3D printing; unmanned vehicles; and others. The industrial revolution changed the way of life; work, and communication. So in communicating everything related to dental health to the elderly, appropriate verbal communication is needed. Dental promotion in the elderly 4.0 is a dental promotion that pays attention to how to communicate with the elderly who have the potential to become denture users. The purpose of this study was to find a way to promote the teeth of the elderly in the era of the industrial revolution 4.0. So it is hoped that the solution method to determine the elderly's perception of denture care is through descriptive research using a modified Likert scale, namely a scale of four. The results showed that the perception of the elderly towards dental and oral care was good and very good. The conclusion of the study shows that this study supports the preparation of the elderly in receiving dental promotions. This study also suggests addressing the problems found in the study.

Keywords: *dental care promotion, elderly, perception of dentures*

INTRODUCTION

The promotion of elderly dental care in the 4.0 era needs to be our concern because the elderly are certainly rich in experience and knowledge, so the approach given is different from other age groups. The previous decade was more vertical, exclusive, and individualistic but the industrial revolution 4.0 is certainly different, namely, it is more horizontal, inclusive, and social. The reason for considering the industrial revolution 4.0 is important because the industrial revolution 4.0 has transformed the way of life, activities, and communication. Similar to the previous revolution, industrial revolution 4.0 also has the potential to improve the quality of life of people throughout the world¹.

It is feared that there is a change in civilization which is accompanied by an automation system and artificial intelligence (artificial intelligence) which is feared to cause one day these machines will replace jobs, and human life. It is unknown how long this revolution will dominate life, which will certainly impact changing civilizations.

The purpose of this study was to obtain perceptions of dental care by the elderly so that the urgency of the research could design an approach to promoting dental and oral care for the elderly in the era of the industrial revolution 4.0. Thus, this research is useful for health workers in promoting dental and oral care for the elderly both privately and publicly as well as for posyandu cadres when providing promotion or dental and oral counseling to the elderly. Increase knowledge and knowledge in the field of dental and oral health regarding the promotion of dental and oral care for the elderly.

RESEARCH METHODS

This research is descriptive, carried out from January to June 2022 at the Matahari Posyandu RT RW, Gunung Village, Kebayoran Baru District, South Jakarta. The research population was 30 members of the Matahari Posyandu elderly. This research was started by making a proposal, making a grid instrument, develop an instrument. The data instrument used is a questionnaire using a modified Likert scale, namely Scale four, data collection techniques by distributing instruments to the elderly who visit the Matahari Posyandu.

RESULTS AND DISCUSSION

Based on the eight statements submitted to 30 respondents, the results were obtained: seven statements (86%) answered very well and 1 statement (14%) answered well. As shown in Figure 1.

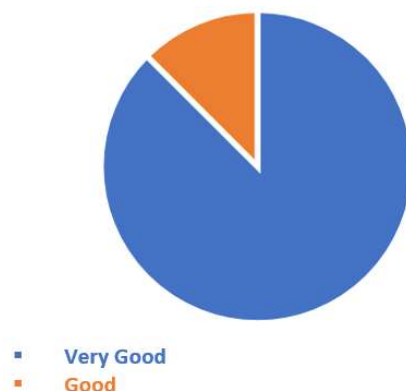


Figure 1 Elderly Perception of Dentures

Based on the results of this study, seven statements gave very good answers and one statement gave a good answer. This is because the posyandu is in the DKI Jakarta area which is the national capital. Of course, health workers, especially dental and oral health workers, can reach health service facilities with very easy and very adequate transportation, and vice versa, elderly mothers and fathers can easily access local health service facilities. Research in West Tanzania found that emergency dental care and health promotion developed and taught by a team of dentists from the United States to health workers in refugee camps and providing access to dental care, can be a solution to dental care problems in refugee camps².

Health media has varied so that the elderly can see it in various forms of media including print and electronic media. Print media can be in the form of billboards, banners, leaflets, pocketbooks, etc. While electronic media can be in the form of audio-visual, television, YouTube videos and so on which can be accessed via mobile phones or laptops. Research by Bandung (2019) found dental and oral health promotion using vlogs and using lectures to increase knowledge about oral health practices. Brushing teeth effectively, and there is no significant difference between promoting dental health education using vlogs and using lectures³. In contrast research in London (2016) found there was a significant increase in knowledge and intention to seek dental services through television-based dental health promotion. Television media as a dental health promotion tool for certain communities is more attractive. The research by Bracksley-O'Grady, S (2021) found that implementing behavior change and health promotion opportunities for future dental professionals is through professional health promotion training⁵.

Even though the elderly's perception of dental and oral care is very good and good, a dental care promotion approach is needed that is different from the conventional promotion

approach so far, where we are already in the era of the industrial revolution 4.0 so changes occurring in various ways including one of them, namely how to communicate.

The dental care promotion approach 4.0 is a promotion carried out in the marketing 4.0 era where the world is increasingly horizontal, inclusive, and social and life is increasingly dynamic with the internet. So social media is a tool for self-expression and an opportunity to connect with anyone. Can create, modify, and disseminate various information to anyone and anywhere. In contrast to the past which was vertical, exclusive, and individualistic.

High connectivity, makes the spirit more open to working together, interacting, exchange ideas in creating joint action. The principle of citizenship 4.0 arises after going through adolescence and turning into adulthood. Characterized by independence and playing an active role in developing the surrounding community. Becoming a citizen 4.0 needs to consider the following four-human life stages;

Fundamental group Life-Stage (0-20), lasts the first 20 years of life. When a baby gives hope to those around him. Start looking for a solution to a problem, and feel optimistic, because the birth process is a special event. Childhood is full of high imagination. School-age begin to learn from the problems encountered by finding solutions. Starting to be bullied by friends is known as social pressure from the environment. When teenagers are full of turmoil because they are very influenced by the environment. What's more, the influence of hormonal changes that affect the internal self is known as the search for identity.

Forefront Life-Stage group (20-40). Growth is optimal. Starting from early aging such as gray hair, decreased skin firmness, and even changing metabolism.

Foster life stage age group (40-60 years). Conditions are more stable or more established. Make a meaningful contribution to the environment. Mid-life crisis. No longer paying attention to yourself. Contribute to the betterment of the community. Be an example for those around him. Bring benefits to others. Final life stage age group (60-80). Many life experiences are used to help others. Every stage in life has important moments that can define life. Enjoying life, doing activities that are liked and useful. In order not to be wrong in taking steps in life. Need concept citizen 4.0 to help it.

With the industrial revolution 4.0 and the results of good and very good perceptions of the elderly towards dentures. The promotion of dental care 4.0 is a necessity in several age groups, namely the third and fourth age groups, which need to be considered. Due to a decrease in body function, one of which is the function of the teeth.

Four passions of Life. Passion is divided into four. They are a passion for knowledge, passion for business, passion for service, and passion for people. Like the following picture:

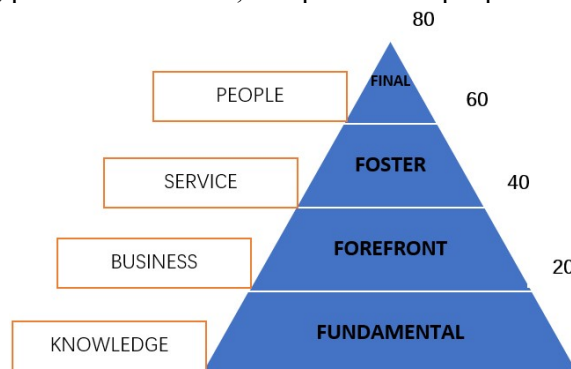


Figure 2 Citizen 4.0 Model⁶

A citizen 4.0 needs to have a very broad passion for knowledge to continuously develop himself; passion for business is to make a greater contribution to its existence with entrepreneurship which has three characteristics, namely: the first is careful to see

opportunities, the second is the courage to take calculated risks, the third is trying to establish collaboration; passion for service by serving, the opportunity to see life from another perspective, done consistently and sincerely; passion for people if managed very well will give birth to a very beautiful relationship, such as according to Harari in his book *Sapiens* which mentions the advantages of humans compared to other creatures is the power of synergistic cooperation between humans⁶.

Health workers and health cadres should consider the four passions of life in providing dental care promotion to the elderly, namely passion for knowledge. Health workers and cadres adapt their extensive knowledge and continuous self-development of the elderly so that in promoting dental care an interactive communication emerges between the elderly and health workers and cadres; passion for business, namely giving a greater contribution with its existence. Health workers and cadres who provide promotion of dental care to the elderly. With the promotion he conveyed, it was felt by the elderly that they contributed more to their dental health because they took into account the entrepreneurial spirit, namely; carefully looking at what are the main complaints of the elderly, daring to take risks from the promotion of dental care that they convey, and create a conducive collaboration with the elderly; passion for service. By serving the opportunity to see life from another perspective, done consistently and sincerely.

This should be owned by health workers and cadres, so they have empathy for the elderly. Research in Yogyakarta (2021) found institutional-based dental and oral health promotion models such as schools and home visits to be equally effective in increasing parent/caregiver knowledge⁷; passion for people is giving more attention to other people instead of being selfish, will create a harmonious and beautiful relationship. Health workers and health cadres must be able to create these conditions when giving promotions to the elderly. Giving more attention to the elderly who are being promoted for dental care, will create a beautiful relationship between health workers and cadres and the elderly. Research in the West African country of Sierra Leone (SL) (2021) found that dental and oral health care requires a very large dental workforce with a capacity that must be increased⁸. Likewise, the research conducted by Kharbanda, O. P. et al. (2021) found the use of AYUSH health workers who are professionals from the traditional system of medicine. Oral health promotion and education can be very helpful for a population-based oral health promotion approach⁹. Likewise, the research conducted by Astrom A et al. (2021) found dental and oral care workers who had received health information promotion. Expanding their knowledge and improving their skills regarding aspects of dental and oral health for drug use can contribute to positive attitudes and increased utilization of free dental care offered to drug users¹⁰. Meanwhile, research in England by Nayee S (2018) found that communities in that country may contain sub-groups with striking perspectives regarding knowledge and attitudes to dental and oral health; however, there is support for a systems approach to oral health promotion initiatives that involve multiple health and social care services, including an important role for schools, and actively engage with first-time parents¹¹.

Promotion of dental care 4.0 includes the promotion of dental care and the promotion of denture care. Dental care includes: brushing your teeth at least 2 times a day; Increasing drinking water; Using enough toothpaste; Maintaining food intake; Changing your toothbrush every three months; Have regular dental check-ups at the dentist.

The correct way to brush your teeth is 1. Place the toothbrush bristles on the tooth surface near the edge of the gums at a 45-degree angle; 2. Brush each part of the teeth starting from the part of the teeth used for chewing (occlusal), the part of the teeth close to the cheek (buccal), and the part near the tongue (lingual); 3. Cleaning the inside of the front teeth (lingual and palatal) by holding the toothbrush in a vertical position, brushing in a circular motion

starting from the edge of the gums to the top of the teeth (incisal), this movement is done two to three times; 4. The duration of time to brush all parts of the teeth is approximately 2-3 minutes, then followed by rinsing so that the teeth are clean; 5. Avoid brushing your teeth hard because it can cause the outer surface of the teeth (enamel) to erode, causing sensitive teeth. 6. Brushing your teeth in a horizontal (straight) motion for a long time can cause permanent damage to your gums.

Putting a toothbrush should be a long distance from the toilet because the toilet is predicted to be one of the places that have the most potential to cause health problems. Because millions of bacteria of all kinds live in the toilet, the process of transferring bacteria to various objects is very easy through water splashes and the release of chemical substances through the air. The transfer of these bacteria has great potential through our bodies, from towels to toothbrushes that we use in everyday life.

If the body is exposed to bacteria through a towel, for example, there are antibodies to protect the body, but if a toothbrush is exposed to bacteria, of course, there is no defense to protect the brush.

To overcome this unwanted situation, place a toothbrush at a distance of approximately 1.5 meters, and make sure the toilet is closed when, after, or no longer in use. Always replace the toothbrush regularly every 2-3 months¹².

Maintaining the cleanliness of the toothbrush by 1. Washing hands with water using hand washing soap; 2. Flush the toothbrush with hot water before and after brushing your teeth, make sure there are no food residue and dirt attached to the toothbrush; 3. Soak the toothbrush in an antibacterial mouthwash solution (mouthwash) overnight; 4. Place the toothbrush in an upright position so that the remaining water in the brush head and bristles flows to the brush handle at the lower end which causes a dry state in the brush head. The condition of a clean toothbrush protects us from the spread of bacteria, viruses, etc. Make sure your teeth are clean in the long run by changing your toothbrush every 3-4 months.

Researchers at Harvard found chemical and biological particles from toilets can spread around a radius of 1.5 meters. So that all objects within that radius can be exposed to chemical and biological particles originating from the toilet, provided that the toilet is open, and the toothbrush is damp and dirty so that it is easy to survive, if this situation does not occur, the possibility of bad things is not desirable. can be minimized¹³.

While denture care includes: 1. Choose the type of denture according to the indication; 2. Use toothpaste specifically for dentures; 3. Choose a toothbrush that has soft bristles; 4. Keep dentures hygienic; 5. Soak dentures in warm water; Remove dentures when not in use; 6. Choose a cleaner recommended by a dentist; 7. Consult dentures regularly¹⁴. As for denture care, Mujiwati et al. (2022) include the Use of dentist-recommended cleansers. Clean dentures in running water and brush or soak dentures in warm water. Check your teeth regularly¹⁵.

Referring to the American Dietetics and the National Institute of Health, there are several things to consider regarding a good diet for oral health, 1. Balanced nutrition, namely consuming 4 healthy, five perfect foods in a balanced manner; 2. Make sure the mouth is wet and moist; 3. Stay away from consuming carbohydrates because they are easily fermented. Pay attention to yourself such as many missing teeth and bad habits such as chewing on one side, and so on.

CONCLUSION

Based on the results of the study, it can be concluded that the elderly's perception of dentures is very good and good, but to promote dental care for the elderly, it needs to be more horizontal, inclusive, and social. What is known as the citizen 4.0 approach? There needs to be a promotion of dental care that adopts citizenship 4.0 which creates a promotion of dental care

4.0. Includes a very broad passion for knowledge to continuously develop oneself; passion for the business makes a greater contribution to its existence with entrepreneurship which has three characteristics, namely: first, carefulness in seeing opportunities, second, daring to take calculated risks, third, trying to establish collaborations; passion for service, serving is an opportunity to see life from the perspective of others, done consistently and sincerely; passion for people, namely having a very beautiful relationship with the elderly in promoting dental care. Health workers and health cadres should adapt to the four of life which include a passion for knowledge; passion for business; passion for service; as well as a passion for people in promoting dental care for the elderly.

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