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THE RELATIONSHIP BETWEEN KNOWLEDGE AND MOTIVATION ABOUT THE USE OF DENTURES IN PARTICIPANTS OF POSBINDU MELATI GUNUNG VILLAGE SOUTH JAKARTA

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ABSTRACT

According to the World Health Organization (WHO) conveyed in The World Oral Health Report, that the level of awareness of the Indonesian population in caring for dental and oral hygiene is not good so that there are 90% of individuals who have oral health problems and an increase in the prevalence of edentulous / tooth loss reaching 24%. Tooth loss that is too long, can also cause a decrease in alveolar bone in edentulous areas, decreased masticatory function to speech disorders and can also affect the temporomandibular joint. Some data mention the lack of knowledge and motivation to use dentures. The study aimed to determine the relationship between knowledge and motivation for using and maintaining dentures for health at the Melati Posbindu RW.06 gunung village. This type of research is quantitative with a cross-sectional research design. The research sample was participants of Posbindu Melati RW 06, Gunung sub-district, using a purposive sampling method that met the sample inclusion criteria, totaling 33 respondents. The inclusion criteria for this study were participants aged ≥ 15 years and willing to be respondents, with exclusion criteria for respondents with severe oral disease and mental disorders. Analyzed using the Spearman rank correlation analysis statistical test with SPSS 25. The results of the research conducted obtained the results of the Spearman Rank Correlation analysis that the results of the significance of the relationship were known to have a significance value or sig. (2-tailed) of p value 0.000 with a magnitude of the relationship between the knowledge variable and motivation of 0.881. It can be concluded that there is a very strong relationship between knowledge and motivation to use and care for dentures for health at Posbindu Melati RW 06, Pegunungan Village in 2023.

Keywords: *Knowledge, Motivation, Denture users.*

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INTRODUCTION

Teeth have an important role in the process of speaking, beautifying appearance, and also chewing. Teeth that are not treated or kept clean and healthy will cause caries, periodontal disease and fractures when traumatized. Therefore, if the teeth are left continuously in such a state, there is a potential for tooth loss(1). Globally, the elderly population is growing faster than any other group. Based on population projection data in 2016 through the National Socio-Economic Survey (SUSENAS), the elderly population reached 22.4 million people or 8.69% of the world's population. Based on the 2017 Ministry of Health survey, there were 23.66 million elderly people in Indonesia or 9.03% of the total population. According to the Inter-Census Population Census (Supas 2015), Indonesia's population will reach 269.6 million by 2020. The number of productive age (15-64 years) is 185.34 million people, and the unproductive age (65+ years) is 18.2 million people. Indonesia's population is projected to continue to grow to 318.96 million by 2045. Based on this data, Indonesia will experience a demographic bonus period until 2045. Where the number of productive age population is more than the unproductive population (not yet productive and already unproductive). The number of productive age people in 2020 reached 68.75% of the total population of 267 million people. This has an impact on general health conditions and dental health where tooth loss, caries, periodontal disease, and lack of patient information about oral hygiene occur(2). Dental and oral hygiene is seen from the presence or absence of plaque, food debris, calculus, and discoloration on the tooth surface. According to the World Health Organization (WHO) in World Oral Health Report that the level of awareness of the Indonesian population in caring for dental and oral hygiene is not good so that there are 90% of individuals have oral health problems, and an increase in the prevalence of edentulous/tooth loss reaching 24%(3).

Tooth loss is a common health problem and can be caused by a variety of factors. One of the main causes is periodontal disease, which is an infection and inflammation of the gum tissue that supports the teeth. This disease can damage the supporting tissue of the teeth, causing teeth to fall out (4-5). In addition, severe dental caries is also a significant factor that causes tooth loss. Caries, which is caused by bacterial infection, can damage the

tooth structure to the point where it can no longer be maintained (6). Trauma or injury also contributes to tooth loss. Hard impacts due to accidents or the habit of biting hard objects can cause teeth to fall out (7-8). In addition, malnutrition, characterized by a deficiency of essential vitamins and minerals such as calcium and vitamin D, can weaken the structure of the teeth and jawbone, increasing the risk of tooth loss (9). Bruxism, or the habit of grinding teeth, can also cause excessive wear on the teeth, which can eventually lead to tooth loss (4-9). In addition, systemic conditions, such as diabetes can increase the risk of periodontal disease, which leads to tooth loss (10-11). Smoking and excessive alcohol consumption also contribute to impaired gum and alveolar bone health, which can lead to tooth loss (12). Aging is another factor that cannot be ignored, because as age increases, the risk of tooth loss increases due to various factors such as decreased oral health and systemic diseases (13).

Based on RISKESDAS data in 2018, data on the proportion of the population who received action to overcome oral and dental problems with tooth loss due to tooth extraction / self-date on the characteristics of the age group 25-34 years 12.1% and the need for denture installation with the same age 0.8%, the age group 35-44 years lost teeth due to tooth extraction / self-date 17, 5% and the need for denture installation with the same age 1.4%, the denture group 45-54 years lost teeth due to extracted / self-dated 24% and the need for denture installation with the same age 2.5%, the age group 55-64 years lost teeth due to extracted / self-dated 29% and the need for denture installation with the same age 3.8%. The 65+ age group had tooth loss due to extraction/date alone 30.6% and the need for denture fitting of the same ag 4.1%. Age group according to WHO, the age group 35-44 years lost teeth due to tooth extraction / self-date 17.5% and the need for denture installation with the same age 1.4%, age 65+ lost teeth due to tooth extraction / self-date 30.6% and the need for denture installation with the same age 4.1% (14)

Pathological migration of the remaining teeth due to prolonged tooth loss can also cause a decrease in alveolar bone in edentulous areas, decreased masticatory function and speech disorders, and can also affect the temporomandibular joint. Ideally, a good occlusion should allow the mandible to translate without occlusal resistance during functional

movements, especially in the posterior segment, so that the load distribution is more evenly distributed (4). To overcome the impact of tooth loss, it is necessary to use dentures to restore the function of missing natural teeth, which, among others, play an important role in the masticatory system. This system is a functional unit consisting of teeth, temporomandibular joint (TMJ), muscles supporting mastication both directly and indirectly, as well as blood vessels and nerves that support the entire masticatory system network. The teeth play a very important role in the process of crushing food. Disruption and discomfort will increase if there are many missing teeth. Only the use of a removable partial denture will eliminate and restore the disorders that occur in the masticatory system (15).

Knowledge is the result of "knowing", and this happens after people perceive a certain object. Sensing occurs through the human five senses, namely: the senses of sight, hearing, smell, taste, and touch. Most human knowledge is acquired through the eyes and ears. A denture is an artificial device used to replace teeth that have been lost or knocked out. Dentures are also called prostheses, prostheses restorations, and dentures (16-17). Meanwhile, knowledge is a critical domain for forming one's actions. Behavior based on knowledge will be more lasting than behavior that is not based on knowledge (18).

According to research by Noviana et el (2020) on tooth loss in mothers aged 30-60 years conducted at the Karang Tengah recitation Rt 005/03 Lebak Bulus Cilandak South Jakarta, the results showed that respondents who had tooth loss ≤ 3 teeth were 30 people (75%) while tooth loss > 3 teeth were 10 people (25%). Respondents in the 45-60 year age group had higher tooth loss than the 30-45 year age group (5). Previous research (2020) on the level of knowledge and attitudes about the use of removable partial dentures in the Pre-Elderly at Posbindu Delima Merah, Pasir Gunung Selatan Village, Cimanggis District for 57 respondents. The results showed that age 45-50 years knowledge was categorized as good (27.3%), and sufficient knowledge (72.7%). Age 51-55 years of knowledge categorized as good (9.5%), sufficient knowledge (71.4%), (19%) less knowledge. Age 56-59 years knowledge with good category (21.4%), knowledge with less category (8.8%). Although in this study, there is no correlation between age and the level of knowledge about the use of dentures, it can be concluded that the average level of knowledge about the use of removable

partial dentures is categorized as sufficient knowledge (71.9%) and lack of knowledge (8.8%) (19).

Based on this data information, it can be found that the data on tooth loss due to tooth extraction/date itself with the installation of a denture is different, so there are still very many who have not used a denture. We certainly need to do this to increase public knowledge in the use of dentures as health support. In addition, several things that are associated between tooth loss and denture installation are influenced by aspects of socio-economic level, education, aesthetics, functionality, income, and culture (20). Knowledge is the result of "knowing", and this happens after people perceive a certain object. Sensing occurs through the human five senses, namely: the senses of sight, hearing, smell, taste, and touch. Most human knowledge is acquired through the eyes of ears. A denture is an artificial device used to replace teeth that have been lost or knocked out. Dentures are also called prostheses, prostheses, or restorations dentures (16-18). Based on this background, the author was encouraged to conduct research on the relationship between knowledge and motivation to use dentures in participants of posbindu melati RW 06 Gunung Kebayoran Baru village.

MATERIAL AND METHODS

This study is quantitative with descriptive observational with a cross-sectional research design. This study was conducted during the implementation of the community service program on November 11, 2023, through data collection using a questionnaire that includes questions related to knowledge and motivation for using dentures; the questionnaire has been tested for validity and reliability. The methodology used is non-experimental to test the relationship between dependent and independent variables. This study aims to determine the relationship between knowledge and motivation about using dentures in Posbindu Melati participants in Gunung Village, South Jakarta. The population in this study was the Posbindu community aged > 15 years at Posbindu Melati RW 06, Gunung Kebayoran Baru Village; this age is due to the community being involved as agents of change as well as resources that drive Posbindu as a community health Effort, present according to the abilities and needs of

the community in this program is one of the community empowerment programs to live healthy so that the target of Posbindu is all citizens aged ≥ 15 years.

The research sample consisted of Posbindu Melati RW 06 Kelurahan Gunung participants, who used a purposive sampling method that met the inclusion criteria, totaling 30 samples. The inclusion criteria in this study were participants aged > 15 years and willing to be respondents and willing to fill in the informed consent. In comparison, the exclusion criteria were participants under 15 years old and had mental illness. The data obtained will be analyzed using the Spearman rank correlation statistical analysis test with SPSS 25.

RESULT AND DISCUSSION

The independent variable in this study is knowledge, while the dependent research variable in this study is motivation to use dentures. The following are the characteristics of the respondents, Table 1 Distribution of 33 respondents based on age (18.2%) or 6 respondents were in the age category range <45 years, 23 respondents (69.7%) and >66 amounted to 4 respondents or 12.1%. It should be noted that the minimum age is 36 years and the maximum response is 74 years old. As age increases, the mindset and capacity to capture becomes better, as well as the knowledge because of better experience.

Tabel 1. Frequency Distribution of Respondents' Age

Age	Frequency	Percentage
<45	6	18,2
46-65	23	69,7
>66	4	12,1
Total	**33**	**100**

Wong et al examined the elderly community in Hong Kong and stated that most elderly people consider that oral problems, such as pain and loose teeth are natural. Li et al stated that most elderly people in China believe that they can use dentures to replace lost teeth (1). Table 2 shows the distribution of 33 respondents based on gender, 2 respondents (6.1%) were male, while 31 respondents (93.9%) were female. From the sample obtained more respondents were female. In the study of Adjani, et al (2023).

Tabel 2. Frequency Distribution of Respondents' Gender.

Gender	Frequency	Percentage
Male	2	6,1
Female	31	93,9
Total	**33**	**100**

It was found that the percentage of women who had good knowledge was higher than men. The results of this study are in line with previous research which states that female respondents have better knowledge about dentures because women are more concerned with their appearance by restoring aesthetics to their faces and care more about dental care than men. The 2018 Riskesdas report also shows that most denture users are women for aesthetic reasons (1).

Bivariate analysis uses a non-parametric test, namely the Spearman rank test to see the relationship between knowledge and motivation to use dentures in participants of posbindu melati RW 06 Gunung Kebayoran Baru village, South Jakarta. Based on the results of the research conducted, the results of the Spearman rank correlation analysis showed that the results of Relationship Significance Known significance value or sig. (2-tailed) of p value 0.000. The result is that there is a significant relationship between knowledge and motivation and the level of strength of the relationship between knowledge variables and motivation is 0.881 or very strong. It can be concluded that there is a very strong relationship between knowledge and motivation to use and maintain dentures for health in Posbindu Melati RW 06 Gunung Village in 2023. The scale used is based on the 2020 Sugiono theory of guidelines for providing correlation coefficient interpretation.

Based on research conducted Yasir (2015), the results of the study using the Kendall's Tau-B statistical test showed a good level of knowledge category with a strong motivation of 12 respondents (30%). Good knowledge with moderate motivation as many as 8 respondents (20%). There is a relationship (p.0.013) between knowledge about dentures and motivation to wear dentures after extraction of back teeth in private clinics. There is a slight difference in the results of the significance of the strength of the relationship with the results of research conducted by Az Zahra (2022) the results of research conducted based on

Spearman's test with a significance of p <0.05, it was found that there was a significant relationship between age and level of knowledge and between occupation and motivation to use dentures. In conclusion, the results were significant but did not have a strong correlation. This is likely due to the different age and employment characteristics of respondents.

Motivation is a psychological drive that drives a person in action and behavior. One factor that has a big role in the use of dentures is motivation. Individuals who use dentures have certain motivations so that what is expected can be achieved after using the denture (13). According to tidjo 2013 listed in the study didik, at all (2023) the results of the study on motivation showed that the average score of respondents' motivation in using dentures was 401.75. Based on these results, the score interpretation criteria are very good (81%-100%). In making the decision to use dentures, one of the important factors is motivation, which is based on knowledge. Determining a person's health behavior will be motivated by the advantages and disadvantages of the behavior to be adopted, which is based on knowledge. while according to Siwantoro knowledge is a very important domain for the formation of a person's actions. Behavior based on knowledge will be more lasting than behavior that is not based on knowledge (18).

Based on the results of the study with the theory provides a statement in line that knowledge provides a very important domain for taking action. The increasing knowledge will also increase the motivation to do something, in this case the motivation to use dentures because of the three research results described between knowledge and motivation to use dentures, the results show that there is a relationship between the two variables.

CONCLUSION

Based on the research and the results of data processing and discussion, it can be concluded that there is a strong relationship between knowledge and motivation in the use of dentures in Posbindu Melati RW 06 Gunung Kebayoran Baru Village, South Jakarta. Through the PkM program, it can be considered in increasing knowledge and motivation for the community to use dentures after tooth extraction and those who have never used dentures.

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