

## The Use of Pocketbook For Increasing Knowledge and Motivation to Wear Dentures of Elderly in Timor-Leste

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### Article Information

### ABSTRACT

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**Background:** The aspect of mindset of the elderly in Santa-Kruz, Nain-Feto, Dil, Timor-Leste, which considers the cause of tooth loss and the use of dentures is not important and some can be less concerned about oral and dental health, is one factor. Promotion of using pocketbooks to knowledge to increase the motivation of the elderly in the use of dentures. **Objectives:** To get to know the effectiveness of pocketbooks in increasing knowledge and motivation for the use of dentures. **Methods:** This study used a quasi-experiment, and the research design used a pre-test and post-test. The population in the study all elderly in Santa-Kruz District, Nain-Feto, Dili District, sample 70 people was taken total sampling technique. Questionnaire research instrument. Analysis results study using the statistical test Wilcoxon Signed Ranks Test. **Results:** Level of knowledge and motivation for using dentures before using pocketbooks with good (28.6%), medium (57.1%), and bad (14.3%) categories. Motivation is good (42.9%), moderate (28.6%), and bad (28.4%). After promotion with good (91.4%), bad (2.9%), bad 0. Good motivation (97.1%), moderate (2.9%), bad 0. Wilcoxon Signed Ranks Test analysis between the level of knowledge and motivation is a p-value  $(0.00) < (0.05)$ , and the Mann-Whitney Test analysis between the level of knowledge and motivation is a p-value  $(0.00) < (0.05)$ , from the results of this study shows the effectiveness of promotion using pocketbooks on knowledge about tooth loss and motivation for using dentures in the elderly. **Conclusions:** There was an increase in knowledge about tooth loss and motivation for using dentures after the promotion of using pocketbooks.

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## **Introduction**

Oral health is an integral part of general body health, so that maintaining oral health by avoiding dental caries is same with taking care of other body health.<sup>1</sup> On the older stage, the teeth of elderly people may have been damaged, or dislodged, making it is difficult to chew food.<sup>2</sup> The reduced ability to digest food due to tooth decay or toothlessness is one of the factors that affect the nutritional needs of the elderly.<sup>3</sup>

The elderly is someone who belongs to the age group > 60 years and experiences various declines in endurance and various psychological stresses.<sup>4</sup> The aging process in the elderly is characterized by many multidimensional changes such as changes in physical, psychological, and social aspects. In Nain-Feto, Dili Province, Timor-Leste, most of elderly people do not participate in physical activities such as morning walks, health counseling, and dental health check ups, especially when they experience tooth loss. Hence, tooth loss is still become one of oral health problems which often experienced by the elderly.<sup>5</sup> Despite, not everyone who experiences tooth loss willing to use dentures.<sup>6</sup>

The use of dentures to replace the function of missing natural teeth, including playing an important role in the masticatory system.<sup>7</sup> Knowledge of the dentures user can be obtained from many sources, even they are not the user nor familiar with dentures.<sup>8</sup>

Health promotion will be effective if supported by suitable media promotion. Through it, changing behavior of the community can be expected increasing health awareness.<sup>9</sup> Pocketbook in health promotion is media for displaying information through print and electronic picture to increase audience's knowledge.<sup>10</sup>

Preliminary study for this research was conducted in March 2023 with a population of thirteen thousand and two hundred twenty six people in all ages. However, only seventy people aged 60-69 years in Santa-Kruz, Timor-Leste. After doing phone-interviewed on ten elderly with tooth loss topics, it was obtained that 70% of respondents did not know the impact of tooth loss, 30% had experienced only one tooth loss, two and more tooth loss and no desire to wear dentures. The results of the preliminary study reflected the lack of knowledge of respondents about tooth loss and the low motivation to use dentures after experiencing tooth loss. Some respondents assume that after teeth have been extracted, it does not require any treatment.

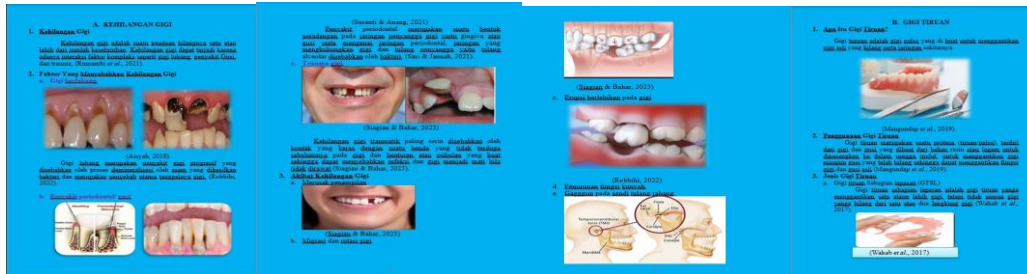
The purpose of this study was to determine the level of knowledge of tooth loss and motivation to use dentures with a pocketbook as media promotion.

## **Methods**

This research method uses quasi-experiment, with a pretest and posttest design. The population in the study was all elderly people in Santa-Kruz District, Timor Leste. Sample of 70 people was taken with the total sampling technique and using a questionnaire as a research instrument. For the data analysis, this study used the Wilcoxon Signed Ranks statistical test. The study was conducted in June-July 2023. A total of 70 respondents were divided into two groups, 35 respondents in the experimental group and 35 respondents in the control group.

**Results**

The pocketbook which used in this study has 14 pages that contain information such as the definition of tooth loss, what factors that cause tooth loss, the consequences of tooth loss, how is the prevention and treatment process, how to use of dentures, types of dentures, advantages and disadvantages, functions of dentures, and procedure of denture care.



Source: Personal Photo

Image. 1: Pocketbook for Tooth Loss and Denture User

Based on gender and age characteristics, the experimental group showed that most respondents were female which is 20 people (57.1%) with range of age 60-64 y.o with 20 respondents (51.1%), while in the control group most were male with majority range of age 60-64 y.o which consists of 25 people.

Table 1. Distribution Level of Knowledge about Tooth Loss Before and After Promotion Using Pocket Books

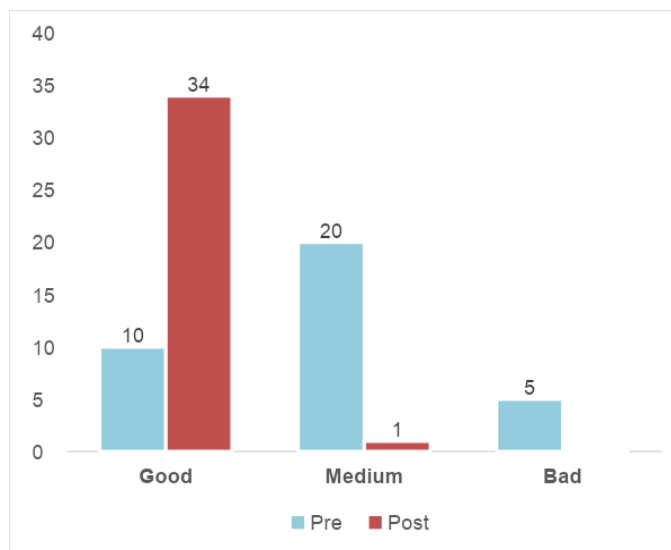


Table 1 shows that before giving promotion using a pocketbook, only 20 people had a moderate level of knowledge (57.1%), then it increased to 34 people afterward (91.4%).

Table 2. Distribution Level of Motivation to Use Dentures Before and After Promotion Using Pocketbooks

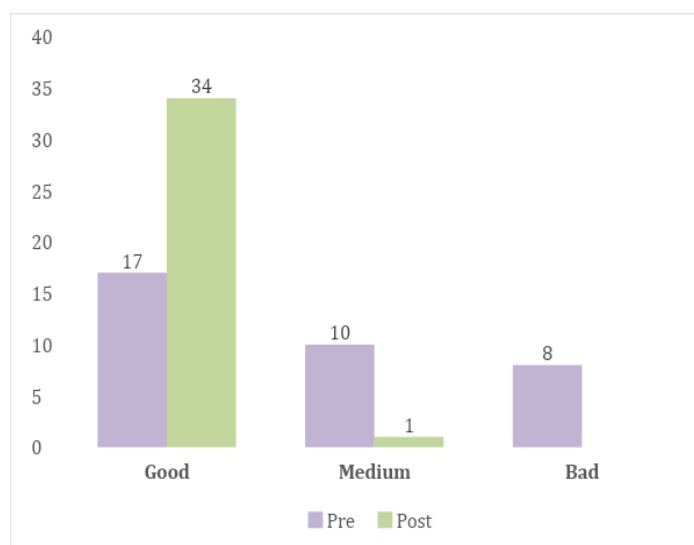


Table 2 shows that before giving a promotion using a pocketbook, respondents' motivation to use dentures is quite high with 17 people (42.9%), then the percentage rose to 34 people (97.1%) after they experienced health promotion.

Table 3. Distribution Level of Knowledge about Tooth Loss Before and After Promotion Using Leaflets

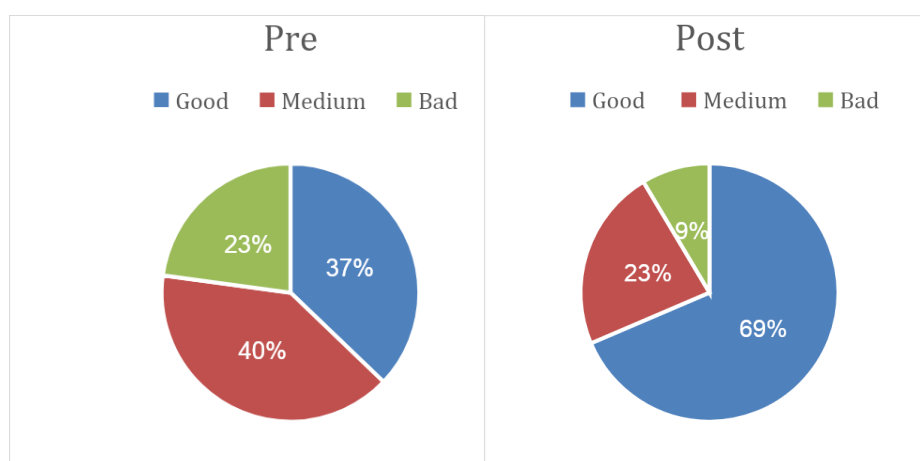


Table 3 shows that there is knowledge improvement of the control group. The pre-post result shows that majority respondents have moderate level of knowledge, then the trend changes become good level before giving promotion using leaflets on knowledge about tooth loss, most respondents had a moderate level of knowledge, namely 14 people (40.0%), while after giving promotion it increased to 24 people (68%).

Table 4. Distribution Level of Motivation to Use Dentures Before and After Promotion Using Leaflets

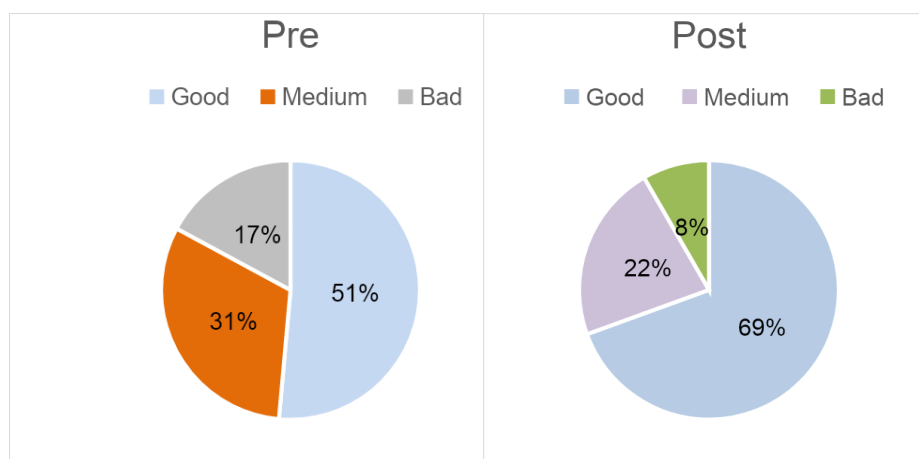


Table 4 shows that before giving a promotion using leaflets about motivation to use dentures, most respondents had a good level of motivation, namely 18 people (51.4%), while after the promotion it increased to 25 people (77.1%).

Table 5. Results of Wilcoxon Signed Ranks Test Analysis

Knowledge of Tooth Loss					
Group	N	Positif ranks	Ties	Negative ranks	Sig (2-tailed)
experiment	35	33	1	1	0,00
control	35	28	3	4	0.00
Motivation of Denture Use					
experiment	35	33	2	0	0,00
control	35	29	4	2	0,00

Based on the results of the Wilcoxon signed Ranks test analysis for tooth loss knowledge, the significant value of 0.00 is smaller than 0.05. It is concluded that  $H_0$  is accepted, meaning that there is a difference in effectiveness before and after promotion using a pocketbook. Similarly, the motivation to use dentures also showed a significant value of 0.00 smaller than 0.05, meaning that there was a difference in effectiveness after promotion using a pocketbook.

Table 6. Results of Mann-Whitney Test Values

Knowledge	Mean	Sig (2-tailed)
Pocketbook media	12.37	0,00
Leaflet media	11.06	0,00
Motivation	Mean	Sig (2-tailed)
Pocketbook media	14.20	0,00
Leaflet media	11.17	0,00

Based on Table 6, the Mann-Whitney Test results show a significance value of  $0.00 < 0.05$ , meaning that there is a difference in the effectiveness of the experimental group and the control group.

## Discussions

The elderly are a group of people who experience the aging process that occurs gradually and naturally.<sup>11</sup> Oral disease is a major problem in society, especially among the elderly, this happens because there is an aging process of the elderly which is characterized by many changes in the body.<sup>12</sup> The condition of tooth loss in a person can affect masticatory function, appearance and speech so it will certainly have an impact on reducing a person's quality of life.<sup>13</sup> The use of dentures is a necessity and a solution to overcome tooth loss, but many elderly are still less concerned about the importance of wearing dentures to restore the function of permanent teeth.<sup>14</sup>

Based on gender characteristics, the experimental group showed that most respondents were female. Research shows that women are more at risk of tooth loss than men.<sup>11</sup> So that, this condition makes female have the motivation and awareness to do better self-care.<sup>15</sup> Based on the Riskesdas, the percentage of receiving care from dental medical personnel for female (96.3%) was higher than men (93.2%), this situation makes women's visits to dental care is higher than men.<sup>16</sup>

From the age group, both the experimental group and control group had the majority aged 60-64 years old. People on this stage of age will be seen as seniors who are mature and could socialize in the community.<sup>16</sup> Based on Indonesian Basic Health Research (Riskesdas), the percentage of tooth loss at the age of 55-64 years was 5.9%, then the age of 65 years and above is nearly 17.6%.<sup>17</sup> This shows that the more people getting older, the more possibility of tooth loss increases. In addition, the level of knowledge can be influenced by several factors such as age, education level and environment.<sup>18</sup>

There are differences in the effectiveness of promotion using pocketbooks on knowledge about tooth loss. Pocketbooks help readers to present complete messages and information which are equipped with attractive images and colours.<sup>19</sup> Pocketbooks, as a media on health promotion programmes, have an important role in providing the information needed.<sup>20</sup> Taamu et.al<sup>21</sup> support this result, they stated that the use of pocketbooks is beneficial in maintaining oral hygiene toward pregnant women at Puskesmas Jepara. There is knowledge improvement of people who are given health promotion using pocketbooks from four to fifteen. Other studies show that pocketbooks can increase the knowledge of male and female santri about Community Movement for Clean and Healthy Living Behaviour (PHBS) in boarding schools.<sup>22</sup>

Educational media is a teaching tool in the form of a vehicle that contains learning material and distributes it more effectively and efficiently, to stimulate students or the community, especially the elderly so that they can absorb it better.<sup>23</sup> Health education media are tools to facilitate the delivery of information and reception of messages for the community.<sup>24</sup> Leaflet is one of effective medias for providing health education. A research by Fadhila<sup>25</sup> supports this result that there is an increase of oral health knowledge of elementary students in Kendari from 21.2% to 78.8% while receiving promotion by leaflet. The effectiveness of leaflet also has been proven on improving the knowledge of pregnant women about Breastfeeding Complementary Food (MP-ASI).<sup>8</sup>

Motivation is a basic drive that exists within a person or individual whose goal is to change behavior for the better in meeting their needs. Motivation or motive is an impulse from within a person that causes the person to carry out certain activities to achieve a goal.<sup>11-26</sup> Motivation is based on needs that can cause someone to try to fulfill them in doing something well.<sup>27</sup> Several reasons that motivate the elderly unwilling to wear dentures, despite experiencing tooth loss, were the high cost, takes a long duration of making process, lack of education, and low motivation regarding the importance of wearing a denture.<sup>28</sup>

Based on Table 6, there is a difference in effectiveness before and after promotion using a pocket book regarding knowledge of tooth loss and motivation to use dentures. Result study found that giving education through pocketbooks can rise housewives' knowledge.<sup>20</sup>

## Conclusions

There was an increase of knowledge and motivation to use dentures after the promotion of using a pocketbook. Future research can conduct research which focuses on the variety of pocketbooks in increasing knowledge and motivation to use dentures in the elderly.

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