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WEB-Based Empowerment of Individuals to Detect Health Status and Follow-Up Treatment

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ABSTRACT
The high morbidity and mortality rate of the community is due to lack of knowledge in detecting health status and inability to make decisions to overcome health problems, causing delays in treatment. Providing education in the form of simulations and applying patents of a method of increasing independence for detecting health status and following up on appropriate treatment and patents of WEB site-based self-care methods is the application of information and communication technology in nursing services which is one solution to overcome this because it can optimize individual independence so that distance, time, place, and cost are not an obstacle to getting nursing services and achieving SDGs 3; ensuring a healthy life and improving the welfare of the population. Community service uses interview methods, health promotion about upper respiratory tract infections, hypertension, infections, rheumatism, dental caries, skin infections, refractive errors, pulmonary tuberculosis, pulp and pariapical tissue diseases and cataracts. Followed by simulations, assistance to all participants in using the WEB https://ariganursingselfcare.com/, observation and monitoring of the application of WEB to increase independence in detecting health status and following up on treatment. Community service was carried out from August to October 2023 in the community in the Medan Sunggal Health Center working area with a total of 173 people. The results showed 113 (65%) respondents were independent in detecting health status and following up on treatment, but there were still 60 (35%) respondents who needed continuous assistance in applying the WEB.

Keyword: Detection of Health Status, Treatment,WEB

1. Introduction

The high lack of patient knowledge in detecting health status and the inability to make decisions in overcoming health problems causes patients to experience delays in appropriate treatment and this has an impact on high morbidity and mortality rates which should be avoided by using increasingly advanced digital information technology, because technology has changed the way to obtain health information and access medical services which are currently growing [1].

Digital information technology that can be used to overcome this is the application of patent IDS 000004526 A method of increasing independence for health status detection [2] and following up on appropriate treatment and patent IDS 000005334 WEB site-based self-care method [3]. This site provides services that can be accessed by users to provide information about nursing care from reliable and actual sources according to the user's wishes. In addition, this invention helps people independently obtain nursing care information with a self-care consultation feature related to complaints and diseases experienced without having to go to health

services. This invention only requires a simple device that has a WEB browser and has internet access in order to consult and obtain nursing care information. The user of this invention is free of charge. The nursing care information in this WEB uses simple sentences that can be understood by the general public, and can be accessed anywhere and anytime. People can directly access through a WEB browser, view the information and consult without downloading. Some nursing information is displayed in a private form, so visitors are expected to become members of this WEB in order to access all information and consult. This community service aims to achieve SDGs number 3, namely ensuring a healthy life and improving the welfare of the population [3].

The most common diseases in Medan Sunggal PUSKESMAS in 2023 were Upper Respiratory Tract Infection (URTI), high blood pressure, infection, rheumatism, dental caries, skin infection, refractive error, pulmonary TB, pulp and pariapical tissue disease and cataract. The diseases suffered by the community in the PUSKESMAS work area are diseases that can be prevented and cured with promotive efforts and appropriate management. With the WEB-based platform, it is expected that individuals can be more proactive in maintaining their personal health, thereby improving their quality of life and reducing the risk of disease complications.

2. Method

The strategy of community service to prevent and reduce disease morbidity and mortality rates and improve the quality of healthy life of patients at Medan Sunggal Primary Health Care Center is the application of the author's patent IDS 000004526 A method of increasing independence for health status detection [2] and following up on appropriate treatment and patent IDS 000005334 WEB site-based self-care method [3]. This invention relates to a method of enhancing independence for detecting health status and following up on appropriate treatment, specifically information technology for enhancing patient independence in detecting health status, and obtaining appropriate healthcare using an artificial intelligence designed to simulate an intellectual conversation with one or more humans in text or called a chatbot. This invention provides nursing education to patients with the scope of general conditions, danger signs and decisions to use health services.

This invention is proposed to improve health knowledge and patient independence in detecting health status and obtaining appropriate health services according to the user's health status. The chatbot is integrated with the development of an order management system that acts as a service delivery that will serve users when asking for information on general conditions, danger signs and patient decisions in choosing health services [4].

Community service is carried out in coordination with the PUSKESMAS team with the target being patients or assisted communities in four villages included in the working area of Medan Sunggal PUSKESMAS, namely Sunggal, Tanjung Rejo, Babura and Simpang Tanjung villages and involving two auxiliary PUSKESMAS (PUSTU) namely Sunggal and Tanjung Rejo. Community service activities use interview methods, health promotion about upper respiratory tract infections, hypertension, infections, rheumatism, dental caries, skin infections, refractive errors, pulmonary tuberculosis, pulp and pariapical tissue diseases and cataracts. Followed by simulations, assistance to all participants in using the WEB https://ariganursingselfcare.com/, observation and monitoring of the application of the WEB to increase independence in detecting health status and following up on treatment.

Community service is carried out to improve health knowledge and patient independence in detecting health status and getting the right health services according to the user's health status. The chatbot is integrated with the development of an order management system that acts as a service delivery that will serve users when asking for information on general conditions, danger signs and patient decisions in choosing health services which include steps:

1. Identify and elaborate on what falls into the category;
    a. Common signs and conditions include shortness of breath, fever, increased pulse, loss of sense of taste and smell, persistent nausea or vomiting, headache or dizziness and chest pain;
    b. Signs and dangers are increased blood pressure, increased breathing, increased heart rate, and increased body temperature;
    c. Patient's decision in the form of self-medication, herbs, medicines that have been taken, hospitals, clinics, and health centers;

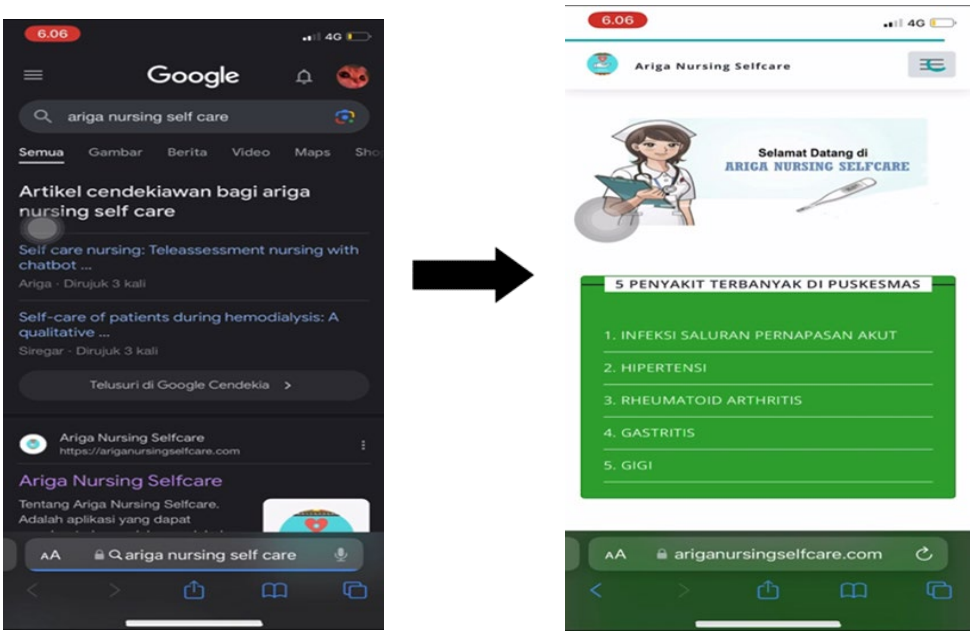
2. Identify and analyze design needs; and
3. Describe the architectural design of an expert system for general condition signs, danger signs, and patient and family decisions to overcome their disorders;

A WEB site-based self-care method implemented via a computer or laptop or smartphone, comprising: selecting the type of consultation and filling in various answers to questions regarding the selected disease consultation which will be displayed by the question database, the user's answers will be stored in the user's answer database; and performing the answer matching process with the user's answer database, where the user's answers are matched with the question answer database which is related to the diagnosis database, and analyzed using the Fuzzy Logic method to get the diagnosis results and treatment methods which will be stored in the user's consultation result history database, the diagnosis results analyzed using the Fuzzy Logic method are based on the matched answers with values close to the diagnosis results [3].

3. Result and Discusssion

Community service was carried out from August to October 2023 in the community in the Medan Sunggal Health Center working area with a total of 173 people. Community service uses interview methods, health promotion about upper respiratory tract infections, hypertension, infections, rheumatism, dental caries, skin infections, refractive errors, pulmonary tuberculosis, pulp and pariapical tissue diseases and cataracts. Followed by simulation, assistance to all participants in using the WEB https://ariganursingselfcare.com/, observation and monitoring of the application of WEB to increase independence in detecting health status and following up on treatment. Below will be displayed documents of community service activities.

Figures 1. Disease Health Promotion



Figures 2. https://ariganursingselfcare.com/

Figure 3. Simulation and Assistance in Using WEB

Figure 4. Mass Media Publications (analyzed newspaper) and Youtube

The results showed that 113 (65%) respondents were independent in detecting health status and following up on treatment, but there were still 60 (35%) respondents who needed continuous assistance in implementing WEB.

These results indicate that efforts to empower individuals through information technology have yielded positive results in increasing independence in terms of health detection and medication management. Although the majority of respondents have been able to utilize the WEB platform independently, there are still some who need further assistance to be able to optimize the benefits of the application [5].

In this context, further evaluation and approaches are needed to understand what factors cause some respondents to still require assistance, as well as what efforts can be made to increase independence in using WEB technology for health [6]. This could involve developing special training or mentoring programs for groups that still need extra help, developing content that is easier to understand to ensure that all people can use the technology effectively to improve health and well-being so that efforts to empower public health through WEB technology can be more targeted and far-reaching, supporting the vision of inclusive and sustainable health services [7].

4. Conclusion

There is a need for a more targeted and inclusive approach to improving digital health literacy in the community, and the importance of developing mentoring and training programs that suit individual needs. Continued evaluation and adjustment of strategies will be key in optimizing the benefits of web technology in supporting community health independence. And the importance of collaboration between health service providers, government, and communities in strengthening health empowerment through WEB technology, in order to achieve the common goal of improving accessibility, understanding, and implementation of optimal health practices at the community level.

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