An analysis of elderly experience using the GALASEMA application

Un análisis de la experiencia de los adultos mayores utilizando la aplicación GALASEMA

Pepin Nahariani[1a*], Shanti Rosmaharani[2a], I'in Noviana[3a], Ririn Probowati[4a]

SUMMARY

Introduction: *The low access of the elderly to use information and communication technology is one of the obstacles to using applications. The purpose of the study was to explore the experience of the elderly using the GALASEMA application.*
Methods: *This study used a descriptive qualitative research design. Semi-structured interviews, observations, and field notes were used to examine 10 participants who applied the GALASEMA application in their daily life for three months. Data analysis used the Colaizzi method.*
Results: *The study found three themes about the experience of the elderly using the GALASEMA application. The themes were elderly health screening, new experiences, and family support.*

Conclusion: *These three themes influence the independence of the support system, increasing cognitive abilities and emotional management abilities of the elderly. This influence significantly affects the quality of life of the elderly.*

Keywords: *Elderly, GALASEMA application, quality of life.*

RESUMEN

Introducción: *El bajo acceso de los adultos mayores al uso de las tecnologías de la información y la comunicación es uno de los obstáculos para el uso de aplicaciones. El propósito del estudio es explorar la experiencia de los adultos mayores utilizando la aplicación GALASEMA.*
Métodos: *Este estudio utilizó un enfoque cualitativo descriptivo. Se utilizaron entrevistas semiestructuradas, observaciones y notas de campo para examinar a 10 participantes que aplicaron la aplicación GALASEMA en su vida diaria durante tres meses. El análisis de datos utilizó el método de Colaizzi.*
Resultados: *El estudio encontró tres temas sobre la experiencia de los ancianos en el uso de la aplicación GALASEMA. Los temas fueron exámenes de salud de ancianos, nuevas experiencias y apoyo familiar.*
Conclusión: *Estos tres temas influyen en la independencia del sistema de apoyo, aumentando las capacidades cognitivas y de gestión emocional de los ancianos. Esta influencia afecta significativamente la calidad de vida de las personas mayores.*

Palabras clave: *Adulto mayor, aplicación GALASEMA, calidad de vida.*

INTRODUCTION

The elderly is a period with a decline in physical condition, health, and cognitive function (1-3). According to the United Nations, in the world, the elderly population will reach 703 million people in 2019, and the number is expected to exceed 1.5 billion in 2050 (4). The population of elderly will continue to experience an unavoidable increase and many of them are currently in their productive age and will grow older next year. Most of the elderly in Indonesia consist of young elderly, middle elderly, and the elderly. The young elderly were in the age group of 60-69 years, as much as 63.65 %, the middle elderly people were in the age group of 70-79 years, by 27.66 %, and the elderly aged 80 years and over as much as 8.68 % (5). An increase in the population of the elderly will have a significant impact on society and the healthcare system, causing health problems for the elderly (4,6-8).

The elderly are a group at high risk of declining health status. During the current COVID-19 pandemic, many health surveillance activities must be stopped to prevent the transmission of COVID-19, including the Integrated Healthcare Center for the elderly (9). It also provides regular health monitoring, health promotion, and consultation. On the other hand, life expectancy in Indonesia can continue to increase, and it is hoped that the quality of life of the elderly will be maintained and will not require high costs for elderly care (10-12).

Current technological advances will encourage changes in the lifestyle of today's society, where the role of humans begins to change (1). Various types of technology have been introduced to support daily activities, such as computers, the internet, and digital health technology (4). One of the technologies whose use is currently growing rapidly is smartphones. Smartphones allow all ages, including parents, to interact with each other easily (1). Therefore, it is essential to explore this technology to find out the meaning of life, independence, consultation, and the creation of positive feelings for the elderly (13). Over time, especially with technological advances, researchers are making efforts to improve the quality of life of the elderly through the GALASEMA application. GALASEMA stands for Healthy and Independent Elderly Movement and can be used by men and women of all ages, both young and elderly because it has easy-to-understand features to monitor health at home (10). This application contains educational materials to prevent physical and mental illnesses that mostly occur in the elderly. In addition, this application includes exercise videos and diet materials that the elderly can do at home by themselves. The GALASEMA application also includes several assessments to determine the health status of the elderly by answering instruments such as the Barthel Index, Mini Mental Status Exam (MMSE), WHOQOL-BREF, Geriatric Depression Scale (GCS), UCLA Loneliness Scale, and Daily Spiritual Experience Scale (DSES).

The low access of the elderly to use information and communication technology is one of the obstacles to using an application (14). Some elderly said they could not run the GALASEMA application because they did not have a smartphone. In addition, the elderly also complain of health problems when they use technology, such as staring at a cellphone screen for a long time and also fatigue and pain in their hands and eyes. However, some older people are still actively using smartphone technology, so the GALASEMA application can help monitor the health status of the elderly. Based on the explanation above, this study aims to find out the experiences of the elderly in using the GALASEMA application as part of modern communication tools.

METHODS

The Design of The Study

This study used a descriptive qualitative research design. Data were collected in Bandung village, which has the highest number of elderly and is located in rural areas.

Sample Study

This study consisted of 10 participants who came from the local neighborhood area. Participants were chosen conveniently based on their age. These participants represent sources

of information as an important influence in the development of the GALASEMA application. This data was taken from February to March 2022 in Bandung Village, which has the highest degenerative disease cases and is also supported by restrictions on access to health services during the COVID-19 pandemic, which causes the quality of life of the elderly to decline.

Data Collection and Instrument

A semi-structured interview is used to collect information data in developing the GALASEMA application implementation. The interview guide used is Watson's theory. Initial data was obtained through Focus Group Discussion (FGD) involving the role of cadres and policies from regional leaders (village heads) and heads of public health care, and the data was developed into the preparation of in-depth interview guidelines (15). The data is used as an instrument for conducting in-depth interviews. The theory used in making the instrument is a theory that places caring as the basis and central in nursing practice. Caring gives nurses the ability to understand and help clients. A nurse must be aware of nursing care to assist clients in achieving health or achieving death peacefully. This instrument is valid and reliable.

Data Analysis

Colaizzi's qualitative data analysis method was used to analyze the data. The data analysis consists of nine steps (15). The steps for analyzing qualitative data from Colaizzi are as follows, Describe the phenomenon under study. Second, the study tries to understand the phenomenon of his research concept description by enriching the information through literature study and collecting descriptions of phenomena through participants' opinions or statements. In this case, the researcher conducted interviews and wrote them in the form of a transcript to describe the research concept. Third, read the entire description of the phenomenon that all participants have submitted. Fourth, read the interview transcript and quote meaningful statements from all participants. Finally, after understanding the participant's experience, the researcher rereads the transcript of the interview and selects statements in the transcript that are significant and relevant to the study's specific objectives and keywords in the statements that have been selected by providing a marker line.

Describe the meaning of the significant statement. The researcher rereads the identified keywords and tries to find the essence or meaning of the keywords to form categories. Organizing a collection of meanings that are formulated into groups of themes. The researcher reads all the existing categories, compares, and looks for similarities between these categories, and finally groups similar categories into sub-themes and themes. Write a complete description. The researcher assembles the themes found during the data analysis process and writes them into a description in the form of research results. Meet with participants to validate the description of the analysis results. The researcher returns to the participants and reads the grid + the results of the theme analysis. This is done to determine whether the description of the theme obtained because of the study follows the conditions experienced by the participants. Combining the data from the validation results into the description of the analysis results. The researcher reanalyzed the data obtained during the validation for the participants to be added to the final in-depth description of the report so that readers can understand the participants' experiences.

Research Ethics

Ethical permission was sought from the Ethical Committee of Stikes Pemkab Jombang with ethical clearance number 0621120014/KEPK/ STIKES-PEMKAB/JBG/XII.2021.

RESULTS

The participants' general information consists of 3 elderlies, 2 families, 2 cadres, ahead of public health, a head of the village, and a midwife.

The results showed from 10 participants who were taken to be able to use the GALASEMA application. Most of the elderly are assisted by their family to access and use the GALASEMA

application. In addition, a pocketbook for the elderly that contains the GALASEMA application was given, so that the elderly read it and can add knowledge and insight to encourage the features of the application.

Table 1

General Information of Participants

Participants	Age	Gender	Education
Elderly 1	50	Female	Elementary
Elderly 2	56	Female	Elementary
Elderly 3	58	Male	Junior High
Family 1	30	Male	Junior High
Family 2	35	Female	Junior High
Cadre 1	48	Female	Senior High
Cadre 2	40	Female	Senior High
Head of public health	40	Female	Bachelor
Head of the village	51	Male	Bachelor
Midwife	35	Female	Diploma

The application can be downloaded from the play store with the keyword "GALASEMA". The content consists of available features, such as a questionnaire of screening education for the elderly, video, diet, and consultation (Figure 1). The results of the study found three themes as experiences in the application of using GALASEMA application. First, after the study, the elderly had a lot of experience using this application and significantly increased knowledge and independence in their health-related needs. Second, all participants said that this application is very useful as a means of companion in the daily life of the elderly. Third, the elderly can solve health problems independently and in collaboration with families and related health workers.

New Experience

The results of the study found three themes as experiences in the application of using GALASEMA application. After the study, the elderly had a lot of experience with using this application and significantly increased knowledge and independence in their health-related needs. All participants said that this application is very
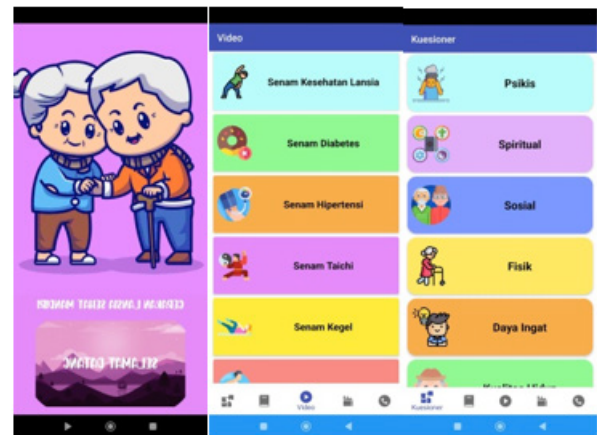

Figure 1. User Interface GALASEMA Application.

useful as a means of companion in the daily life of the elderly. The elderly can solve health problems both independently and in collaboration with families and related health workers.

"…if I can't sleep at night, I feel dizzy, and my body feels heavy then I now know it's because my blood pressure is rising and I know what I will do about it…" (P1)

"…the symptom of difficulty remembering or recognizing something is a symptom of dementia, and it should not be ignored, and I will do it…" (P2)

Support System

The role of cadres is very important in the research process. In addition to assisting, cadres can also assist in solving other health-related problems, namely through coordination with health workers, village midwives, and public health care (Puskesmas). The role of the family also provides an optimal role during assistance at home. Support can be physical, social, psychological, informational, and instrumental. The elderly are greatly helped by their families as well as related to applications that use gadgets that require special skills, especially in their operations

"…I became more comfortable, and it was greatly helped by the presence of village cadres and my family because I was confused about how to open and operate this application, even though

I can finally be independent now (smiles)…."(P6)

"*….At first, I felt lonely because the child had come with his own family. But now I don't feel lonely anymore, my thinking ability has also increased, and my complaints have decreased since this application was introduced, let alone assisted by a very kind cadre….? (P7)*

Health Screening

The GALASEMA application aims to make it easier for the elderly and accompanied by their families. Mentoring activities are usually carried out during the elderly integrated Healthcare Center schedule, which is held twice a month, assisted by Midwives, Cadres, and Village Heads. At the time of the implementation of the Posyandu, there was a weight check, blood pressure, and further socialization about the GALASEMA application.

"*….I agree with this GALASEMA application assistance program. The hope is that in the future, the elderly will be able to be independent even though our location is in rural areas; those who were initially ignorant of technology, now they are getting used to this application, and can be applied in their daily lives….*" (P9)

"*….I am assisting with this application with the help of the cadres. It runs very effectively. The cadres are enthusiastic, and I have data on the development of elderly health, which is very much needed by Public Health Care (Puskesmas) and is the basis for monitoring and evaluation activities for the health of the elderly, especially during post-pandemic conditions like this….*" (P10)

DISCUSSION

The GALASEMA applications can improve the quality of life of the elderly independently and routinely. The experience of the elderly in operating the application is a new thing. The new experience makes the elderly interested in trying and solving problems independently through the GALASEMA application. The GALASEMA application keeps the elderly and healthcare providers safe, provides good health services, reduces health provision costs, and decreases morbidity risk and mortality rates during the COVID-19 pandemic (13). These conditions can ultimately improve health screening for the elderly. The screening will provide data and appropriate nursing care for problems that occur in the elderly. These are physical, psychological, and spiritual aspects (16). Elderly health screening contained in the GALASEMA application is also needed as initial data for healthcare facilities. The data can be used as a basis for solving problems in the community and collaborating with Public Health Centre.

The GALASEMA application was used by the elderly and assisted by families and cadres. Many elderly have to adapt to using applications due to technological limitations. Family is essential in assisting the elderly and increasing closeness as a support system for the elderly (17). Cadres also have an equally important part as assistance in terms of education related to the problems faced by the elderly and the use of health facilities to optimize the quality of life of the elderly. Older people with degenerative diseases need related physical and psychological health, social life, and the environment where they live (18). From this statement, the GALASEMA application provides the family support system for their health status

The GALASEMA application can be downloaded on the play store, so everyone can also use the GALASEMA application for the health of the elderly. This application provides a questionnaire for health screening and prepares a feature for consultation. If the elderly want to ask about health, the GALASEMA application for the elderly can be directly consulted through the application. So the elderly and the family feel very helpful, and the family feels that the elderly are becoming more active and have decreased disease and their addiction to caring for the family. The elderly needs health application which easy to understand for the effectiveness of health status (1). This application gives more benefits to the elderly, especially in health screening from home, and the caregiver can manage the health status of the elderly.

CONCLUSION

The elderly experience using the GALASEMA application includes elderly health screening, new

experiences, and family support. This application can increase spiritual, physical, and psychological aspects. Hopefully, this application can also be used for families, cadres, medical personnel, and the community. This application is necessary to prevent the decreasing quality of life among the elderly.

ACKNOWLEDGEMENT

REFERENCES

1. Restyandito R, Zebua JA, Nugraha KA. Icon Design on Mobile-Based Health Applications for Elderly. J Technology Information and Computer Science. 2019;6(6):637.

2. Efendi F, Indarwati R, Aurizki GE, Susanti IA, Maulana AEF. Policymakers' perspectives on responding to the elderly's mental health needs in post-disaster situations. J Public health Res. 2022;11(1):2386.

3. Anwar S, Peng LS, Mahmudiono T. The Importance Of Spirituality, Physical Activity and Sleep Duration to Prevent Hypertension among Elderly in Aceh-Indonesia. Age (Omaha). 2020;69:8-41.

4. Yap YY, Tan SH, Choon SW. Elderly's intention to use technologies: A systematic literature review. Heliyon. 2022;8(1):e08765.

5. Al-Shaarani F, Minister Ghaj. Full mobile and maxillofacial prostheses. Damascus University Publications. 2006;1999:1-6.

6. Reviani, Wulandari RD. An evaluation of the implementation of the elderly health program in Indonesia: A case study. J Heal Transl Med. 2020;23:177-181.

7. Abasmay F, Nuniek Nugraheni S, Masduchi RH. Association between fear of falling, balance and functional mobility in the elderly. Indian J Forensic Med Toxicol. 2020;14(2):2348-2352.

8. Wulandari RD, Qomarrudin MB, Supriyanto S, Laksono AD, Qomaruddin B, Laksono AD. Socioeconomic disparities in hospital utilisation among elderly people in Indonesia. Indian J Public Heal Res Dev. 2019;10(11):1800-1804.

9. Dora MD, Haryanto J, Kholifah SN, Efendi F, Has EMM, Basri AA. Factors affecting the success of aged-friendly primary health care program for elderly in Surabaya city. Medico-Legal Updat. 2020;20(2):673-677.

10. Application I, Movement G, Healthy L, Nahariani P, Kep S, Kep M, et al. Journal of Community Service Health Stikes Jombang Regency Government Vol. VIII No. March 1, 2022 And independent of the independence of the elderly) towards the independence of the elderly the implementation of galasema application (movement of healthy and independent elderly) 2022;VIII(1):58-63.

11. Abbafati C, Machado DB, Cislaghi B, Salman OM, Karanikolos M, McKee M, et al. Global age-sex-specific fertility, mortality, healthy life expectancy (HALE), and population estimates in 204 countries and territories, 1950–2019: a comprehensive demographic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396(10258):1160-1203.

12. Cahyawati S, Rumaolat W, Rumi NSJ, Rumaolat W. Factors related to the utilisation of the integrated health services center for the elderly. J Ners. 2020;15(2):63-66.

13. Abbaspur-Behbahani S, Monaghesh E, Hajizadeh A, Fehresti S. Application of mobile health to support the elderly during the COVID-19 outbreak: A systematic review. Heal Policy Technol. 2022;11(1):100595.

14. Wildenbos GA, Peute L, Jaspers M. Aging barriers in fl uencing mobile health usability for older adults: A literature based framework (MOLD-US). Int J Med Inform. 2018;114(March):66-75.

15. Shosha GA. employment of colaizzi 's strategy in descriptive phenomenology: A reflection of a researcher. 1857:31-43.

16. Handojo A, Julio T, Sutiono A, Purbowo AN. Elderly Healthcare Assistance Application using Mobile Phone. 2021;(Icsiit 2017):3-8.

17. Kusumadewi S, Kurniawan R, Marfianti E, Khodzim A. Online through participation in the development of community education information systems on the utilization of online public health health applications. Health services are important. COVID-19 pandemic conditions and facilities that make it easy to build digital applications. 2020;4(2).

18. Abdi S, Spann A, Borilovic J, de Witte L, Hawley M. Erratum: Correction to: Understanding the care and support needs of older people: A scoping review and categorisation using the WHO international classification of functioning, disability and health framework (ICF) (BMC geriatrics (2019;19(1):195). BMC Geriatr. 2020;20(1):23.386.