

Mobile Phone Use Among Indonesian Elderly People and Its Obstacles

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Abstract

Background: Mobile phone users among Indonesian elderly people experienced the highest increase in the last 5 years. This increase was 3.6% from 43.08% in 2019. Mobile phone is useful for the elderly. We explored the way the Indonesian elderly people use mobile phone and its obstacles.

Methods: This descriptive research included fifty elderly people in Bantul (Yogyakarta) and Sragen (Central Java), aged ≥ 60 years, without severe visual impairment, hearing loss or cognitive impairment.

Results: The mean age was 68.92 ± 5.4 years. Fifty-two percent of them are female and 48% others are male. They are mostly traders (48%) and retirees (40%). Most of them are high school graduates (48%). Their most common reason for using mobile phone is to communicate with their family (80%), to access health information (50%) and to prevent stress (38%). Their favorite activities include voice call (46%), social media (30%), browsing the internet/YouTube (18%) and video call (6%). The most preferred social media is WhatsApp (90%). They use their phones almost every day (96%) and less than 30 minutes per session (54%). The obstacles are too complicated machines (48%), expensive prices (24%), unclear images (16%) and easily damaged device (12%). They solve the problems by asking their family members for help (44%), seeking information on their own (42%), and asking their friends for help (14%).

Conclusion: Mobile phone provide benefits for the elderly, especially for communicating with family and accessing health information. Support and training can help them overcome their obstacles to using mobile phones.

Keywords: Mobile Phone, Elderly, Obstacle

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Introduction

Successful aging depends on the availability of supporting physical, social, and economic elements in the infrastructure of living areas and communities. The availability of a wide range of supports, services and opportunities to participate in community life, including means of communication, safe transportation, health services, support services, healthy foodstuffs, and opportunities for flexible work, volunteering, recreation and socialization are important elements to support successful aging (Albert and Gans, 2017).

It is estimated that by 2050, 80% of elderly people will live in low and middle income countries where the speed of aging of the population in these countries is much faster than in the past. Between 2015 and 2050, the proportion of the world's population aged over 60 will nearly double from 12% to 22%. Globalization, technological developments (e.g. transportation and communications), urbanization, migration and changes in gender norms affect the lives of older people (WHO, 2022).

Currently the elderly are still underestimated in the world of technology and are often seen as "non-technological" person, but there is no evidence that the entire elderly population rejects technology. Elderly people, like adults in general, accept and adopt technology when it meets their needs and expectations which is accompanied by a different approach to technological progress than adults in general. Aging which impacts sensory, motor and cognitive changes causes older people to require more time to learn, be more prone to errors, require motivation, support, more steps to operate the system (Conci and Pianesi, 2009).

Mobile phones users among Indonesian elderly people experienced the highest increase in the last 5 years. In 2021, mobile phones user increased slightly from 2020 (average 46.68%). The use of mobile phones among the elderly in 2021 tends to be stable when compared to the previous year. Approximately 46.79% of the elderly were recorded as using mobile phones last year. However, mobile phones user had never reached half of the elderly population. The majority of the elderly use mobile phone to keep in touch with family and relatives (Pahlevi, 2022).

A study in 2017 of 2071 respondents aged 65 years and over showed that there was a significant positive effect of using a mobile phone on life satisfaction compared to a group that did not have a mobile phone with depression as a mediating role (Sagong and Yoon, 2022). Mobile phones are also useful for finding information quickly, important tools in emergency and life-threatening situations, and as personal assistants for elderly users when needed, but the complexity of the various buttons on mobile phones is a burden for the elderly with cognitive impairment (Chen *et al*, 2013).

Some elderly people don't have the motivation to use mobile phone or don't use them anymore because they are not comfortable with the devices (hardware or software) and service providers which are mostly designed for young people only, and they are used to using computers and feel more comfortable using computers than mobile phones. Physical limitations and cognitive disorders as well as the high price of mobile phone make them not motivated to own a mobile phone (McGaughey *et al*, 2013).

Research on the use of mobile phones in the elderly in Indonesia, especially in the Central Java and Yogyakarta regions and their barriers is still rare. It is hoped that from the results of this research we can learn how to use mobile phones for the elderly and their obstacles then

we can find an appropriate way to overcome these obstacles, so that the benefits can be taken to increase the independence and physical and mental health of the elderly.

Material and Methods

This was a descriptive research study.

Sample

This research included fifty elderly people in Bantul (Yogyakarta) and Sragen (Central Java), Indonesia. Elderly with age more than or equal to 60 years, not in acute illness and able to answer all questions were included in this study. This study excluded older people with severe visual impairment, hearing loss or cognitive impairment.

Data Collection and Analysis

A demographic questionnaire included age, sex, occupation, and level of education. The questionnaire was prepared based on several literatures and conducted open interviews with the research subjects. The data obtained were analyzed using SPSS-18. The mean and the median were calculated.

Results

According to the result, the mean age was 68.92 ± 5.4 years. Fifty-two percent of them are female and 48% others are male. They are mostly traders (48%) and retirees (40%). Most of them are high school graduates (48%). Their most common reason for using mobile phone is to communicate with their family (80%), to access health information (50%) and to prevent stress (38%). Their favorite activities include voice call (46%), social media (30%), browsing the internet/YouTube (18%) and video call (6%). The most preferred social media is WhatsApp (90%). They use their phones almost every day (96%) and less than 30 minutes per session (54%). The obstacles are too complicated machines (48%), expensive prices (24%), unclear images (16%) and easily damaged device (12%). They solve the problems by asking their family members for help (44%), seeking information on their own (42%), and asking their friends for help (14%).

Figure 1: Diagram showing the results of the study

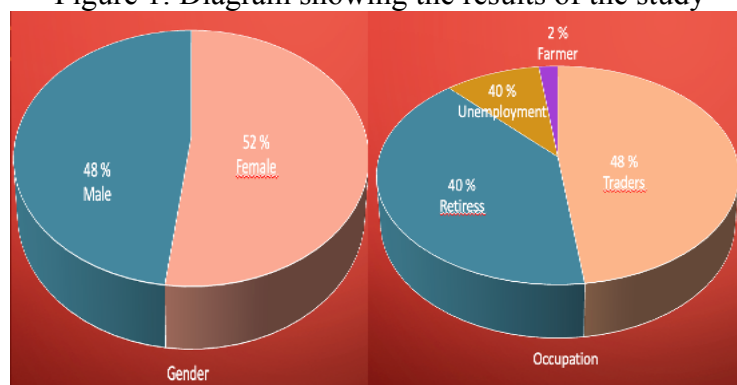


Figure 1 (continued): Diagram showing the results of the study

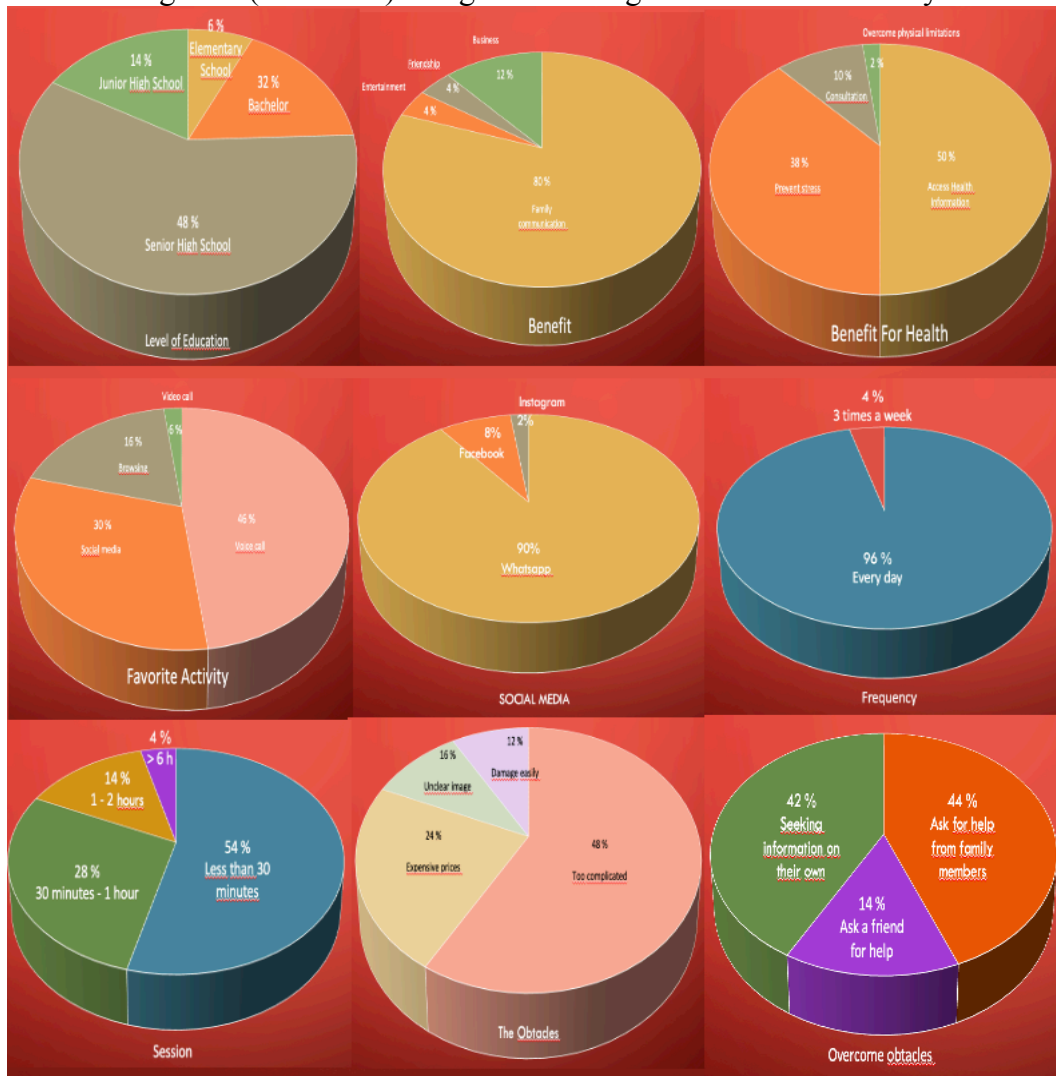


Figure 1: Diagram showing the results of the study

Discussion

This is the first study that examines the use of mobile phones by the elderly in Sragen (Central Java) and Jogjakarta. In 2022, there are eight provinces that are included in the aging population, West Sumatra, Lampung, Central Java, DI Yogyakarta, East Java, Bali, North Sulawesi and South Sulawesi. Yogyakarta is the province with the highest proportion of elderly (16.69%). According to age group, the older elderly in Indonesia, the less likely they are to be exposed to information and communication technology. The percentage of young elderly who use mobile phones (56.27%) is higher than middle elderly (39.87%) and old elderly (23.84%) (Badan Pusat Statistik, 2022).

In our study, their most common reason for using mobile phone is to communicate with their family (80%), to access health information (50%) and to prevent stress (38%). Their favorite activities include voice call (46%), social media (30%), browsing the internet/YouTube (18%) and video call (6%). The most preferred social media is WhatsApp (90%). They use their phones almost every day (96%) and less than 30 minutes per session (54%).

This is similar to a cross-sectional study conducted by Busch *et al.*, (2021) on 154 mobile phone users aged over 60 years, where they use mobile phones for social and non-social reasons. Mobile phone use for social purposes (including social media, audio/video calls, and instant messaging) reached 45.2% of total mobile phone use among the elderly, while 54.8% of this was for non-social use. Social media and reading news via mobile phone is the most activity carried out. Social media is the most used activity with an average of 39.8 minutes per day. The sample population spends an average of 159,4 minutes per day using a mobile phone. As a means of social interaction, mobile phones can prevent loneliness, problematic smartphone usage and cognitive decline.

A Study by Reid *et al.*, (2017) shows several priorities underlying elderly people using mobile phones. The first priority is ease of use (easy to use, easy to understand, can be started quickly). The second priority is the existence of use value (good quality for the price, warranty, service). The third priority is a good set of functional features (light and bright screen, buttons that are easy to perform an activity, and buttons that feel solid).

A study by Chen *et al.*, (2013) on 100 respondents aged 60 years and over, revealed that basic mobile phones functions are very important for elderly users. The eight features that respondents use most frequently are the calling feature, address book, alarm, date and time display, panic button for emergencies, incoming calls with a picture of the caller, and camera. Calling was the highest ranking because they are considered the easiest. The feeling of safety and security for the elderly and makes them keep in touch with their family and friends made the function of calling also increased.

From our study, we found that the obstacles are too complicated machines (48%), expensive prices (24%), unclear images (16%) and easily damaged device (12%). They solve the problems by asking their family members for help (44%), seeking information on their own (42%), and asking their friends for help (14%). Many mobile phones are not designed specifically for the elderly. Nowadays, mobile phones are mostly designed for young users with a variety of high-tech applications, playing games and surfing the web. The small size of the device, navigation controls with small buttons, often make the elderly not interested in using a mobile phone, and those who have a mobile phone find it difficult and even frustrating (McLeod, 2009).

Elderly mobile phone users find it difficult to understand and operate overly complex cross hardware interfaces and matrix software interfaces so they would prefer to use easily, simply, and intelligibly interface designs such as duplet hardware interfaces and page software interfaces. Reduced motor skills and finger dexterity, impairment of vision and cognitive abilities of older people such as remembering information followed by decline of processing and reaction time cause them to take longer to use mobile phones and encounter more difficulties related to mobile phone interface design compared to younger people (Lin *et al.*, 2009).

Common conditions in old age such as hearing loss, vision problems, joint pain, diabetes, depression and dementia which can appear together or what is commonly referred to as geriatric syndrome plus physical and social environmental conditions can affect the health and independence of older people directly and indirectly. (WHO, 2022). Furthermore, household economic capacity also influences access to information and communication technology and the use of mobile phones, computers and internet access (Badan Pusat Statistik, 2022). This needs to be taken into consideration by family, friends and the

community to help elderly people use mobile phones. Support from the government and the mobile phone industry and service providers is needed to help with this problem.

Research on the use of mobile phones in the elderly in Indonesia, especially in the Central Java and Yogyakarta regions and their barriers is still rare. This study explores how the use of mobile phones in the elderly, what are the obstacles and how do they overcome these obstacles. It is hoped that as health workers we can help the elderly to promote the benefits of using mobile phones and mobile phone manufacturers can take advantage of this opportunity to create a new breakthrough mobile phone that is friendly for the elderly, easy to use for the elderly but has a big impact on improving the health of the elderly. The limitations of this study were the small number of subjects and did not assess the multiple comorbid and other functional status of the subjects. further study is needed with more research subjects and a wider area.

Conclusion

This study revealed that mobile phone provide benefits for the elderly, especially for communicating with family and accessing health information. The obstacles are too complicated machines, prices, unclear images and easily damaged device. Support and training can help them overcome their obstacles to using mobile phones.

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