PERFORMANCE OPTIMIZATION OF NURSING MANAGEMENT INFORMATION SYSTEM BASED ON THE FISHING APPLICATION (STUNTING MONITORING INFORMATION SYSTEM) TO INCREASE THE EFFECTIVENESS OF CHILD NUTRITIONAL HEALTH IN PRIMARY HEALTH SERVICES

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ABSTRACT

Introduction: Stunting is a problem that occurs in all countries, including Indonesia. Indonesia is ranked 3rd, with the highest prevalence in the Southeast Asia Region of 37%. Where DI Yogyakarta Province occupies the first position with a percentage of 25.3%. Meanwhile, Banten Province has a percentage of 6.8% with the highest prevalence in Pandeglang Regency at 11.5% and Serang City at 10.7%. Stunting is caused by a lack of nutritional intake for a long time. As a result of providing food that is not in accordance with nutritional needs. Stunting, can be measured based on the length or weight of the body, age, and sex of the child. In the current era of the COVID-19 pandemic, appropriate digitalization technology is needed that can help in solving the stunting problem in Indonesia. So, we will create an application called SI PANCING (Stunting Monitoring Information System). Objective: To determine the optimization of the performance of the nursing management information system based on the SI PANCING application (Stunting Monitoring Information System) to increase the effectiveness of the nutritional health status of children in primary health services. Research method: Mix (Mix method), to obtain qualitative and quantitative data on the research to be carried out. Research results: This application is useful for optimizing the performance of the nursing management information system based on the SI PANCING application (Stunting Monitoring Information System) to increase the effectiveness of the nutritional health status of children in primary health services. This application serves to provide various kinds of information such as medical history, general information on stunting health, records of health developments, monitoring of stunting data, and general information on health services. This application, can be downloaded on Playstore or Appstore for free. This application can connect parents (Family), cadres and health services, so that they can continue to monitor the health condition of children. There is also an online health consultation service which is expected to help parents (families), cadres and health services to care for, control and assist children with stunting. So, Indonesia is free from stunting

Keywords: Management Information System Performance, Nursing, SI PANGING, Child Nutrition Health, Primary Health Services

I NTRODUCTION

Stunting is a problem that is increasingly found in developing countries, including Indonesia. According to the United Nations International Children's Emergency Fund (UNICEF), one in three children is stunted, around 40% of children in rural areas experience stunted growth (Choliq et al, 2020 in Hasandi et al, 2019).

Stunting is a chronic malnutrition problem, caused by inadequate nutritional intake for a long time. Stunting can occur since the fetus and only appears when the child is two years old (MCA, 2017). Stunting is measured by taking into account nutritional needs, based on body length or weight, age, sex of the child, exclusive breastfeeding, and assessment of nutritional status. Parents who do not measure the length and weight of their children in health services, will increase the potential for stunting. Stunting that has occurred, if it is not balanced with catch up growth, results in decreased growth, both motor and mental (Rahmadhita, 2020), Effendi, 2022).

In 2017, 22.2% or around 150.8 million children under five in the world experienced stunting. In 2017, more than half of stunted children under five came from Asia (55%). Meanwhile, more than a third (39%) live in Africa. Of the 83.6 million stunted children under five in Asia, the highest proportion came from South Asia (58.7%) and the lowest proportion in Central Asia (0.9%). Data on the prevalence of stunting under five, collected by the World Health Organization (WHO), shows that Indonesia is included in the third country with the highest prevalence in the Southeast Asia region, which is 37%. Meanwhile, other countries in Southeast Asia are Myanmar (35%), Vietnam (23%),

and Thailand (16%) (Arehda&Jeki, 2019). In Indonesia, the first position of stunting prevalence in the DI Yogyakarta province was in the first position with a percentage (25.3%). Meanwhile, Banten province has a percentage of 6.8% with the highest prevalence in Pandeglang Regency (11.5%) and Serang City (10.7%).

The Indonesian government is targeting stunting reduction through the Sustainable Development Goals (SDGs) program in its target, it is hoped that by 2030 it can end all forms of malnutrition, stunting, and wasting in children under five. The SDGs are a sustainable development program to replace the Millennium Development Goals (MDGs) which ended in 2015. The SDGs goals related to malnutrition are in the second goal, namely zero hunger (Widari, Bachtiar, &Primayesa, 2021). Indonesia has joined the Scaling Up Nutrition (SUN) Movement, known as the First 1,000 Days of Life (HPK) Movement. This movement aims to accelerate nutrition improvement to improve the lives of Indonesian children in the future (MCA Indonesia, 2013).

According to While and Dewsbury (2013), information systems in nursing are a key component in providing modern nursing care. Management information system, one of the attributes that is useful in easing the documentation process in maintenance. At the same time, it creates a number of new documentation challenges (Nwosisi, Carl, & Christopher, 2012).

According to research conducted by SetianaAndarwulan et al, in 2020 the application of stunting early detection technology using the SI JAKS application to reduce errors in data processing and data reporting related to nutritional problems. Efforts to reduce the incidence of stunting in the Siwalankerto Village, Surabaya, reached the target of up to 50% by 2020 with the help of the SI JAKS application.

One of the puskesmas, which has a program to reduce stunting rates in the city of Serang, is the Singandaru Health Center. Efforts were made to reduce the stunting rate at the Singandaru Health Center, namely coordinating and with integrity in efforts to reduce the stunting rate, providing guidance and assistance to the community, and conducting socialization of efforts to reduce stunting rates in the Singandaru Health Center area. Several health centers in Serang city have carried out similar activities to reduce stunting rates. However , the activities carried out were less than optimal in reducing stunting rates in Serang city. Therefore, the author launched a breakthrough application SI PANCING (Stunting Monitoring Information System) which is able to become a milestone in the birth of an information system related to nutritional problems so that it can be minimized to a minimum. This application can help mothers understand stunting and pay more attention to their child's growth and development. This application can integrate families who have stunting children with primary health services in their surroundings. So, this application can monitor optimally.

METHOD
This research uses mixed research methods (Mix method), mixed research methods will produce two types of data, namely quantitative and qualitative data. The combination research (Mix method) was chosen because the researcher wanted to get the best understanding of the research problem formulation. Researchers want to know the nutritional health record of children in Indonesia, as a form of effort to prevent an increase in stunting rates (Creswell, 2016).

RESULTS AND DISCUSSION
4.1 Registration Flow
4.1.1 Register as a Family
1. Login

In this menu, parents (Family) must first login using a valid account (if you already have an account). Accounts can be obtained, from registration or initial registration.

2. Registration Menu

If the parents (Family) do not have an account, they must first register using valid data. How to register, simply follow the guidelines contained in the application display by completing the required fields (See attachment 1 part 2).

3. Verification Code

After registering, parents (family) will receive a verification code via SMS to the phone number used for registration, if appropriate, there will be a tick icon stating the account has been successfully registered.

4. Main Menu

The main menu display of SI PANGING will display several icons, namely children's health records, family identity, general information about children, general information about stunting and contact the nearest health service.

5. Children's Health Record Menu

In this menu, parents (Family) must complete the child's identity and stunting monitoring, by completing the parts that must be completed (See appendix 1 section 4A).

6. Family Identity Menu

Parents (Family) are asked to complete the existing identity correctly according to the data in the BKKBN (National Population and Family Planning Agency). Family identity, both mother and husband (See appendix 1 section 4B).

7. General Information Menu About Children
In this menu, Parents (Family) will get general information about their children (See appendix 1 section 4C).
8. General Information Menu Regarding Stunting
The education offered on stunting is about the definition of stunting, the causes of stunting, the five stunting prevention goals, all the problems that cause stunting and some questions about stunting (See appendix 1 section 4D).
9. Menu Contact Related Health Services
In this menu, parents (Family) will be facilitated to consult with health workers such as doctors, nurses, and nutritionists with the SI PANTING friend's hotline with some frequently asked questions. (See appendix 1 section 4E).

4.1.2 Register as a Health Service
1. Login
In this menu, health services must first login using a valid account (if you already have an account). Accounts can be obtained, from registration or initial registration.
2. Registration Menu
In this menu, you must login using a valid account first (if you already have an account). Accounts can be obtained, from registration or initial registration when opening the login menu.
3. Verification Code
After registering, the health service will receive a verification code via SMS to the phone number used for registration, if appropriate, there will be a tick icon stating that the account has been successfully registered.
4. Main Menu
The main menu display, as a health service, will display the prevalence icon of stunting data, patient data and an icon to contact the patient's family.
5. Stunting Data Prevalence Menu
This menu presents the latest data on the prevalence of stunting in Indonesia according to the SSGI and the prevalence of stunting in Banten Province in 2022.
6. Menu Patient Data
Patient data will be grouped by village/kelurahan concerned.
7. Menu Contact Patient's Family
The patient's contact consists of the client's name, mother's name, father's name, mother's phone number, and father's phone number. With this data, the health service will easily contact families in monitoring stunting.

4.2 Application Advantages
The SI PANTING application produces various information such as medical history, general health information, general information on stunting, stunting monitoring, and consultation on stunting. The advantages of the SI PANGING application are:
1. There is a feature to consult about stunting with health services.
2. There is a chat room feature that will become a shared space for parents (Family) to ask questions.
3. The application design is attractive and uncomplicated, making it easier for users to use it.
4. Connecting data with the Social Security Administering Body (BPJS).
5. This application makes it easy to monitor children with stunting by parents (Family) and health services.
6. The use of this application is continuous and free.
7. Recording and reporting system in the form of soft files and saves time, energy, and finances (Reduces stationery and transportation).

CONCLUSION
Stunting is a problem that occurs in all countries, including Indonesia. Indonesia is ranked 3rd, with the highest prevalence in the Southeast Asia Region of 37%. In Indonesia, DI Yogyakarta Province occupies the first position with a percentage of 25.3%. Meanwhile, Banten Province has a percentage of 6.8% with the highest prevalence in Pandeglang City at 11.5% and Serang City at 10.7%. In the current era of the COVID-19 pandemic, appropriate digitalization technology is needed that can assist in solving the stunting problem in Indonesia. So, we will create an application called SI PANCING (Stunting Monitoring Information System). It is hoped that this application can help parents (families), cadres and health services who hold stunting health programs in those places to treat, control and assist children with stunting. So, stay healthy in the digital era 5.0 and Indonesia is stunting free.

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