The application Pentol Bakar as an innovation at RSJID Dr. Amino Gondohutomo: A scoping review

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Abstract

Background: The "Pentol Bakar" application was developed to evaluate Pentol Bakar as an innovation in patient pick-up services for mental health emergencies and to assess the strengths and weaknesses of the service, as well as to conduct a SWOT analysis of the Pentol Bakar service for patients with mental health issues.

Method: The literature search method in this study is a scoping review, involving searching for journals or research articles through search engines. The process of article search and selection then used PRISMA-ScR. This review found a total of 893 articles, and the review results indicated that 5 articles were relevant to the research topic.

Results: The analysis showed that the "Pentol Bakar" application had some shortcomings for patients and/or their families, including limited exposure to and understanding of technology and the application, inability to pay for the service, and difficulty for healthcare workers in obtaining detailed information about the patient's condition. On the positive side, the application made it easier to provided broader access to services and made hospital services more efficient.

Conclusion: This study explores the outcomes related to psychiatric emergency handling, including the SWOT analysis. These findings are expected to contribute positively to improving the quality of mental health services at the relevant institution.

Keywords: Emergencies, Mental health, Medical Services, Application

INTRODUCTION

According to WHO, mental health is defined as when a person feels healthy and happy, has the ability to cope with life's challenges, can accept others as they are, and has a positive attitude towards themselves and others. Good mental health allows individuals to realise their abilities, cope with the stresses of daily life, work productively, and contribute to their community. Mental health disorders should not be taken lightly as the number of cases is still quite high (1). According to data from the World Health Organisation (WHO), more than 500 million people worldwide suffer from mental health disorders such as schizophrenia, depression, dementia, and other common mental health issues that are widespread across various countries (2).

The prevalence of mental health disorders in Indonesia, according to the 2018 Basic Health Research (Riskesdas) data, shows that more than 19 million Indonesians aged over 15years experience emotional mental disorders, and more than 12 million people in the same age group suffer from depression (3). Additionally, data from the Health Research and Development Agency in 2016 recorded that 1,800 people committed suicide, which is at least 5 people every day. Most of them (47.7%) were teenagers and individuals in the productive age group, which is between 10 and 39 years old (4). These two national surveys indicate that mental health issues are still quite significant in Indonesia.

The issue of mental health disorders is a complex problem that requires serious attention. The three main factors at the root of this problem are the lack of public

understanding about mental health disorders, the negative stigma that develops, and the unequal access to mental health services (5). The stigma attached to mental health issues and limited knowledge often cause sufferers to be reluctant to seek help, while limited access to services exacerbates the gap in mental health care. One alternative to overcome these barriers is the use of internet-based health services, which can reach young people vulnerable to mental health problems, as well as communities in areas with limited service access (6).

In Indonesia, internet-based interventions have the potential to be an effective strategy to reduce the gap in access to mental health services, especially since internet usage in the country increased to 50% of the population (120 million people) in 2018 (7). With the advancement of technology, internet-based interventions offer a potential solution to provide more equitable access to mental health services, reduce service gaps, and help communities overcome stigma and access difficulties. These digital interventions enable broader engagement, giving people with mental health disorders the opportunity to receive initial support and necessary information in a more affordable and friendly environment.

RSJD Dr. Amino Gondohutomo is a psychiatric hospital located in Semarang. A preliminary study conducted at this hospital also implemented internet technology innovation with an application called "Pentol Bakar" (Press the Button in Case of Mental Emergency) available in the Emergency Department (ED). The way this application works is that when there is a patient experiencing a mental health emergency at home, the family can directly open the Pentol Bakar application and press the "On" button in the application. This information will then be immediately connected to the ED at RSJD Amino, and the staff will promptly pick up the patient for a mental health assessment and bring them to the ED for further treatment.

Mental health emergencies at home are often marked by unpredictable and dangerous behavior, requiring immediate intervention. The "Pentol Bakar" application was developed to enhance the response to these emergencies, allowing patients' families to report concerning conditions quickly and efficiently. This innovation not only speeds up the handling process but also provides a sense of security for the patients and their families (8), because they know that help can be easily accessed when needed. Thus, the "Pentol Bakar" application has the potential to improve the quality of mental health services in the community and reduce the negative impact of emergencies occurring at home.

Based on the prevalence of mental health disorders in Indonesia and the advancement of digital technology that allows for innovation in the provision of physical and mental health services, researchers are interested in understanding how the analysis of the use of the Pentol Bakar application at RSJD Dr. Amino Gondohutomo in Semarang, Central Java, can be conducted. This research aims to understand the Pentol Bakar application as an innovation in patient pick-up services with mental health emergencies and to understand the strengths and weaknesses of the service, as well as to conduct a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) of the Pentol Bakar service for patients with mental health issues at RSJD Dr. Amino Gondohutomo.

METHOD

This type of research is qualitative with a descriptive research design. The method used in this research is a scoping review. The scoping review method was chosen because the reference sources used vary, coming from journal articles and official websites. Scoping review is a method used to identify literature in-depth and comprehensively by identifying and presenting an overview of the evidence on a topic, as well as noting the existing gaps in the research (9). A scoping review aims to answer questions from the specified research topic by using various sources of similar research articles, which are then grouped and concluded (10). In the process of conducting a scoping review, several steps need to be undertaken by researchers. This process refers to the framework initially developed by Arksey and O'Malley (2005), and later refined

by Levac, Colquhoun, and O'Brien (2010). These steps include: Formulating research questions that align with the study's objectives, searching various sources to find relevant literature, selecting literature based on its relevance to the topic, organizing and mapping the collected literature, drafting a report that includes the analysis of the selected literature, and consulting with experts in the related field (11).

The strategy employed by researchers in searching for articles or journals is to use the PCC framework, which includes Population, Concept, and Context. This framework serves as a guide in establishing inclusion and exclusion criteria, enabling the desired coverage or scope to be achieved in the research (12). Through the PCC framework, the research question formed is: "How is the use of the PENTOL BAKAR application developed as an Innovation for the Patient Pick-up Service with mental health emergencies at RSJD Dr. Amino Gondohutomo, Central Java Province?".

Table 1. *Framework* **PCC**

Population (P)	1. Patients with mental health emergencies 2. Healthcare workers who handle mental health issues - General public
Concept (C)	Ambulance service innovation as a response to mental health emergencies.
Context (P)	Operation and implementation of ambulance services in psychiatric hospitals.

Based on the PCC framework, the inclusion and exclusion criteria in the literature search can be formulated as follows:

Tabel 2. Inclusion Criteria dan Exclusion Criteria

Inklusi	Eksklusi
1. Psychiatric patients experiencing mental health emergencies	1. Psychiatric patients who do not experience mental health emergencies or are in a stable condition 2. Patients with physical disorders
2. Use of ambulance services for picking up psychiatric patients 3. Use of ambulance services for picking up psychiatric patients 4. Articles discussing the effectiveness, benefits, advantages, and disadvantages of mental health emergency application services	3. Research discussing mental health emergency services without ambulance services
5. Articles published in the last 5 years (2019-2024) in Indonesian and English	4. Articles published before 2019 in languages other than Indonesian and English

Data Collection Method :

In conducting the scoping review, researchers independently searched for literature through trusted databases, analyzing the articles found to identify differences and avoid duplication. The process of searching and selecting articles uses PRISMA-ScR, developed by the EQUATOR Network to enhance the quality and transparency of research reporting. Search results are selected based on inclusion criteria through the analysis of research titles and article abstracts. Selected

articles are entered into an article synthesis matrix table. The analysis results are summarized to produce outputs that refer to the research objectives or questions and discuss the implications for future research, practice, and policy. The results of the scoping review can be submitted for consultation with relevant parties, although this is optional (10).
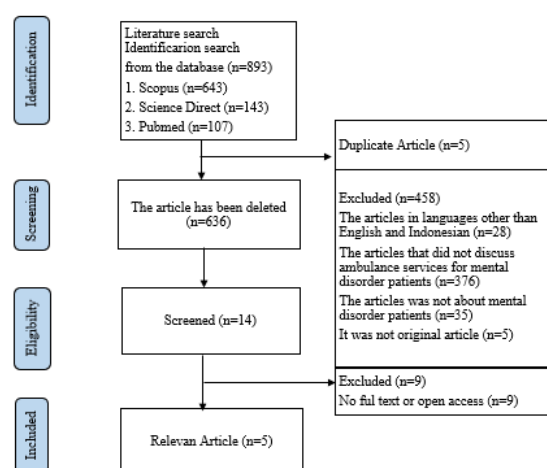

Figure 1. Diagram Alur PRISMA-ScR

RESULTS

Table 3. Literature Identity

Number	Author	Year Publication	Language	Title	The Name of Journal	Access Type	Journal Qualication
1.	Harriet Elizabeth Moore, Aloysius Niroshan Siriwardena, Mark Gussy and Robert Spaight	2023	English	*Mental health emergencies attended by ambulances in the United Kingdom and the implications for health service delivery: A cross-sectional study (Scopus)*	Journal of Health Services Research & Policy	Full text, open access	Scopus
2.	Joshua Moskovitz MD, Joshua Sapadin BA, Michael Guttenberg DO	2019	English	*Interfacility ambulance transport Of mental health patients (pubmed)*	Journal of the American college of Emergency Physician Open	Full text, open access	Pubmed
3.	Lizbet Todorova, Anders Johansson, Bodil Ivarsson.	2021	English	A Prehospital Emergency Psychiatric Unit in an Ambulance Care Service from the Perspective	Healthcare (Basel)	Full text, access open	Pubmed

Number	Author	Year Publication	Language	Title	The Name of Journal	Access Type	Journal Qualication
				of Prehospital Emergency Nurses: A Qualitative Study			
4.	M. Colla G.A. Oliveira G.D. Santos	2019	English	Operations Management in Emergency Medical Services: Response Time in a Brazilian Mobile Emergency Care Service	Procedia Manufacturing	Full text, access open	Science direct
5.	Torus et al	2021	English	*The growing field of digital psychiatry: current evidence and the future of apps, social media, chatbots, and virtual reality. World psychiatry*	World Psychiatry	Full text, access open	Scopus

Table 4. Identitas Literatur

Title	Author	Purpose	Method	Sample	Research Findings
Mental health emergencies attended by ambulances in the United Kingdom and the implications for health service	Harriet Elizabeth Moore, Aloysius Niroshan Siriwardena, Mark Gussy and Robert Spaight	Explain about the epidemiology of mental health emergencies handled by East Midlands Ambulance	Desain cross-Sectional Using routine observational retrospective data from EMAS	102,079 Data that has been entered to EMAS	The data analysis results show anxiety (38.0%), overdose (21.2%), depression (15.0%), and suicide attempts (8.6%). In terms of pickup, the records show treated and transported (59.9%), patients refusing care/transport (17.1%), treated and discharged (12.5%),

Title	Author	Purpose	Method	Sample	Research Findings
					no care needed (5.2%), and referred to a general practitioner (3.4%), indicating opportunities to enhance the provision of emergency medical services and collaboration between primary healthcare services and mental health professionals. The dispatch triage includes referring phone calls to healthcare professionals for consultation. Additionally, it is important to distinguish between physical and mental health emergencies and refer patients to appropriate services early in the emergency response cycle.
Interfacility ambulance transport of mental health patients	Joshua Moskovitz MD, Joshua Sapadin BA, Michael Guttenberg DO	Highlighting several hazards to help minimize risks faced by EMS and identifying best practices currently used during the transfer of mental health patients between facilities.	Writing Method: Using the article review method. This journal examines various aspects related to interfacility transport for mental health patients by emergency medical services (EMS).	Several materials on aspects related to interfacility transport for mental health patients by emergency medical services (EMS).	Protecting EMS personnel from injury is crucial to maintaining a healthcare system that can manage the increasing demands of emergency psychiatric services. Some recommended tips include assessing agitation and risk of violence, using telemedicine, restraints, and sedation. Injuries that frequently occur during the transfer of care are a major concern. Therefore, minimizing transportation, such

Title	Author	Purpose	Method	Sample	Research Findings
					as through the use of telemedicine, is highly recommended.
A Prehospital Emergency Psychiatric Unit in an Ambulance Care Service from the Perspective of Prehospital Emergency Nurses: A Qualitative Study	Lizbet Todorova, Anders	Discussing and evaluating the care pathways	Descriptive Qualitative	Pre-hospital Emergency Nurse	This study found that the pilot project
Operations Management in Emergency Medical Servises: Response Time in a Brazilian Mobile Emergency Care Service	M. Colla, G.A. Oliveira, G.D. Santos.	Operations Management in Emergency Medical Services: Response Time in Mobile Emergency Care Services in Brazil	Literature review	11 jurnal	This study found limitations in internal processes and the quality of information needed for decision-making in ambulance dispatch. The results contribute to quantitative research on EMS with a focus on developing countries, as well as being relevant for exploring the specifics of operations management and its application in safety services.
The growing field of digital psychiatry: current evidence and the future of apps, social media, chatbots,	Torous et al	This study found limitations in internal processes and the quality of information needed for decision-making in	Literature review dengan iPARISH framework		This study provides an overview of the use of Digital Health Technologies (DHT) in delivering easily accessible and continuous mental health care interventions. It discusses the relevance of recent

Title	Author	Purpose	Method	Sample	Research Findings
and virtual reality. World psychiatry		ambulance dispatch. The results contribute to quantitative research on EMS with a focus on developing countries, as well as being relevant for exploring the specifics of operations management and its application in safety services.			technological advancements, including digital phenotypes and remote interventions.

Data Analysis

Table 5. Data Analysis Result

No	Title	Data Analysis Result and Discussion
1.	*Mental health emergencies attended by ambulances in the United Kingdom and the implications for health service delivery: A cross-sectional study*	Emergency Medical Services (EMS) play a role in community referrals for non-emergency or chronic conditions, including mental health. To optimize services, it is important to enhance emergency call triage by involving psychologists and psychiatrists. This helps operators identify patients who need continuous mental health care and direct them to appropriate primary care services earlier in the triage process.
2.	*Interfacility ambulance transport of mental health patients*	The transportation of patients with mental health disorders between facilities by emergency medical services (EMS) personnel presents unique risks for both patients and providers. The increasing occurrence of injuries and difficulties during these transfers of care is a major concern. Reducing the complexity of this process and identifying and addressing issues are key to improving the safety of both patients and providers. Protecting EMS personnel from preventable injuries is crucial to maintaining an effective healthcare system that can manage the growing needs of emergency psychiatric services. Reducing the need for interfacility transportation is an initial step to minimize risks for EMS personnel. Thorough patient evaluation and the use of risk assessment tools to determine the need for restraints can help. Practical strategies implemented before and during transportation can also reduce the risk of injury for EMS personnel.

No	Title	Data Analysis Result and Discussion
3.	*A Prehospital Emergency Psychiatric Unit in an Ambulcance Care Service From the Perspective of Prehospital Emergency Nurses: A Qualitative Study*	Collaboration among nurses is crucial to enhancing the safety and comfort of patients with mental disorders. Cooperation with the police strengthens the handling of cases requiring security support. Adapted psychiatric ambulances with small seats replacing the beds create a more relaxed atmosphere, reduce stigma, and improve communication.
4	*Operations Management in Emergency Medical Servises: Response Time in a Brazilian Mobile Emergency Care Service*	This study identifies limitations in internal processes and the quality of information needed to support decision-making in ambulance dispatch. The results contribute to quantitative research on EMS, especially in the context of developing countries.
5.	*The growing field of digital psychiatry: current evidence and the future of apps, social media, chatbots, and virtual reality. World psychiatry (scopus)*	Digital Health Technologies (DHT) are increasingly used for the clinical management of long-term mental health issues. Research shows that DHT supports individuals in managing symptoms independently in addition to regular care. Future research needs to combine these fields to utilize available data for timely and targeted remote interventions, preventing relapses and other adverse outcomes.

DISCUSSION
Mental Health Emergency Applicatios "Pentol Bakar"

Handling psychiatric emergencies requires proper assessment, safety assurance, immediate attention to the client, and risk evaluation related to violence, loss of control, aggression, self-harm, suicide, or homicide. In psychiatric emergency situations, treatment is generally focused on managing behavior and symptoms (Cucu Rokayah, 2023). RSJD Amino has an innovation related to handling psychiatric emergencies, which is the "Pentol Bakar" application that focuses on picking up patients with psychiatric emergencies.

Handling psychiatric emergencies requires proper assessment, safety assurance, immediate attention to the client, and risk evaluation related to violence, loss of control, aggression, self-harm, suicide, or homicide. In emergency situations, treatment usually focuses on managing behavior and symptoms. RSJD Amino has an innovation in the form of the "Pentol Bakar" application, which focuses on picking up patients with psychiatric emergencies.

Based on an interview with one of the healthcare workers at RSJD Amino Gondohutomo, it was found that there are two options for patient pickup. The first option includes 3 nurses and 1 driver, and the second option includes 1 doctor, 2 nurses, and 1 driver. Additionally, the process of picking up psychiatric emergency patients begins with the patient's family contacting a WhatsApp number directed from the application. Subsequently, the healthcare workers verify the patient's information, including the patient's condition, mental health history, and other details based on information from the family. The healthcare team picking up the patient wears personal protective equipment such as vests, safety helmets, and carries other medical support tools like restraint straps and injection sets (syringes, sedatives like diazepam).

Advantages and Disadvantages of Using the Pentol Bakar Application

The Pentol Bakar application developed by RSJD Dr. Amino Gondohutomo has both advantages and disadvantages in its usage. The Pentol Bakar application has the following disadvantages:

1. Patients and/or their families are less exposed to information about the Pentol Bakar application.

2. Patients and/or their families are still less familiar with technology.

3. The mobile phones owned by patients and/or their families are inadequate to download the Pentol Bakar application.

4. Patients and/or their families prefer to contact the hospital through WhatsApp rather than using the application

5. Healthcare workers find it difficult to understand the detailed condition of patients with mental emergencies.

Despite its shortcomings, the Pentol Bakar application has various advantages, such as:

1. Introducing innovations in digital health services, especially in the Central Java region.Memudahkan pasien/dan keluarga menangani kegawatdaruratan psikiatri

2. Making it easier for patients and their families to handle psychiatric emergencies.

3. Providing wider access to healthcare services.

4. Making hospital services more efficient by knowing the patient's condition in advance.

5. Speeding up the response of healthcare workers in handling psychiatric emergencies.

Based on the analysis of various articles conducted by Koh et al. (2022), mental health service applications have the potential to provide timely support, reduce mental health care costs, combat stigma in seeking help, and improve therapy outcomes. However, the research also identifies several challenges, such as user engagement issues, safety in emergencies, and breaches of privacy and confidentiality.

Advantages and Disadvantages of Ambulance Services for Patients with Mental Disorders

Digital-based psychiatric emergency services have the potential to enhance mental health care in various ways, such as (14):

1. Collecting mental health data that is continuous, dense, and diverse to be used in diagnosis and monitoring.
2. Analyzing data, particularly through digital paradigms, to generate actionable insights and predictions at the individual clinical level.
3. Offering a variety of interventions that often extend beyond the application itself, by facilitating connections to clinical services, peer support, personalized resources, emergency services, and even new therapies.

Risks and challenges associated with transporting mental health patients by Emergency Medical Services (EMS) include the fact that patients with mental health conditions often exhibit aggressive or uncontrollable behavior during transport, thereby increasing the risk of injury to EMS personnel. To date, there are no uniform guidelines or standards for handling the transportation of mental health patients, and the differences in regulations between institutions add to the confusion in practice, further increasing the risk of injury (15).

The study by Moore *et al.,* (2023) escribes the epidemiology of mental health emergencies handled by the East Midlands Ambulance National Health Trust (EMAS). There were 102,079 medical records of mental health emergency conditions handled by ambulance services in the East Midlands, containing the characteristics of mental health emergencies, including Emergency Call (Dispatch) records, Initial Diagnosis (Primary Impression), and Treatment Outcome. Dispatch is determined by the description provided by the '999' caller about the patient's

condition. Primary Impression is determined by the paramedic handling the emergency based on the initial diagnosis of the patient's condition and is thus usually more specific than the Dispatch. Patients experiencing mental health crises are often recorded in Dispatch as physical disorders/issues, such as anxiety problems being misperceived as respiratory issues because the patient is short of breath (16).

The handling of mental health emergencies often involves the misidentification of initial conditions, where emergency calls more frequently classify problems as physical conditions, such as respiratory issues, rather than mental health issues. The most commonly identified mental health problems by paramedics at the scene are anxiety, intentional drug overdose, and depression. This indicates that direct clinical assessment (Primary Clinical Impression) is more accurate in predicting care outcomes. Anxiety often becomes the main predictor of why patients are taken to hospitals that provide mental health services (16).

Recommendation The Application of Pentol Bakar Based on SWOT Analysis

The use of telepsychiatry is a potential solution to reduce the need for inter-facility transfers by providing remote psychiatric services that have been proven to decrease hospital admissions and ER wait times, as well as improve EMS efficiency. Several proposed recommendations include developing screening criteria for EMS personnel to determine whether patients should be taken directly to mental health facilities, promoting the use of telepsychiatry, standardizing best practices in risk assessment before transport, implementing brief meetings between healthcare professionals before transport begins, establishing uniform security equipment for patient restraint, and creating a database to track injuries and refusals of patient transport at mental health facilities (15).

Another recommendation is to enhance the capabilities of EMS personnel through training to better recognize mental health emergencies and involve mental health specialists in the triage process. This aims to ensure that patients can be accurately identified and referred to appropriate services earlier, thereby improving the effectiveness and safety in handling mental health emergencies (16).

Furthermore, Cook (2019) proposed a collaborative model involving a multidisciplinary team consisting of paramedics, mental health nurses, and police officers. This model has proven effective in several regions in England, such as West Midlands, where such collaboration successfully reduced admission rates in the Emergency Department. Through this approach, paramedics can conduct assessments and refer directly to mental health services, ultimately improving the quality of care and reducing pressure on emergency services. Collaboration between ambulance services and mental health services is necessary to ensure that the most appropriate and effective care is provided as quickly as possible.

Another recommendation was also made by Todorova et al., (2022) where ambulance services in Sweden do not use beds but chairs, resembling a small room to create a greater sense of comfort for psychiatric patients. Additionally, collaboration with police departments is necessary to secure pickup locations, enhancing patient comfort.

A situational analysis regarding the effectiveness of using the application *(pentol bakar)* also needs to be further reviewed. A simple SWOT analysis related to the application will provide many new insights to make the application more useful in the future. Here is the situational SWOT analysis of the grilled meatball application:

Table 6. SWOT Analysis

	Opportunities (O) There is a significant gap between people who need care and their access to care facilities (18). his is evident as there are still provinces without Mental Hospitals, while only 40% of General Hospitals have mental health service facilities (Ministry of Health of the Republic of Indonesia, 2022).	**Threats (T)** *PENTOL BAKAR* It has a high service rate, making it very likely that people with lower economic status are reluctant to use this application.
External		
Internal	The innovation of PENTOL BAKAR can facilitate patients who have difficulty accessing mental health services.	
Strengths (S) 1. This application can facilitate the community in need of emergency mental health care from specialized mental health hospitals through an emergency button. 2. This application is already available on the Play Store, and the registration process is easy. 3. It makes it easier for the Emergency Medical Service team to locate patients with psychiatric emergencies.	**Strengths - Opportunities (SO)** 1. Collaborate with relevant parties such as community institutions. 2. Engage with the surrounding community. 3. Increase promotion of the application by collaborating with healthcare facilities.	**Strengths - Threats (ST)** 1. Diversify payment options and financing schemes: including installments or financial aid programs. 2. Expand the target user base by adding additional services such as online mental health consultations (telemedicine).
Weakness (W) 1. Not all segments of society use smartphones. 2. The *PENTOL BAKAR* application only serves as an intermediary for selecting ambulance services and is then directly redirected to a WhatsApp number. 3. Other necessary features, such as mental health condition screening, categories of psychiatric emergencies understandable by laypeople, and automatic estimation of distance and arrival time, have not yet been integrated into this application.	**Weakness - Opportunities (WO)** 1. Development of Additional Features in the Application: Integrate additional features such as initial mental health condition screening, psychiatric emergency categories, and estimated ambulance arrival time to make the application more functional and informative for users. 2. Provision of Alternative Access for Non-Smartphone Users: Provide emergency call services based on SMS or hotlines for people who do not have smartphones so	**Weakness - Threats (WT)** 1. Collaboration with the Government to Improve Service Accessibility: Work with local governments to provide financial support or subsidies for underserved communities to make service rates more affordable. 2. Optimization of User Services: Improve service processes by providing direct communication channels with medical personnel through the application without being redirected to WhatsApp, to offer more responsive and integrated services.

they can still access the offered services. 3. Strengthening User Education on Mental Health: Provide educational modules in the application that teach how to assess basic psychiatric conditions and understand available emergency services, to help laypeople make decisions in emergency situations.	Socialization and Training Program on Application Usage: Conduct educational campaigns and training for the community, especially in areas with limited health access, on how to use the *PENTOL BAKAR* application and the importance of mental health access.

Pentol Bakar's innovation in managing psychiatric emergencies has shown significant impact in mental health services, especially in improving access and efficiency in managing patients with emergency conditions. With a structured pick-up system, the app speeds up the response of health workers, enables early intervention, and ensures the safety of patients and medical personnel during the transport process.

However, several challenges remain, such as the lack of public understanding of the app, technological limitations for patients' families, and difficulties for medical personnel in obtaining detailed patient information prior to pick-up. This points to the need for increased socialisation, technology education, and the development of more comprehensive operational standards to ensure the effectiveness of the service.

In addition, the influence of health policies is also a factor that needs to be further explored. With the increasing use of digital-based emergency services, the government and relevant institutions need to consider regulations that support these services, including subsidising costs for underprivileged patients and strengthening cooperation with social services.

More broadly, apps like Pentol Bakar can serve as an innovative model for other regions looking to develop technology-based psychiatric emergency services. If implementation challenges are overcome, such apps have the potential to reduce the stigma attached to mental health help-seeking, improve patient outcomes, and move the mental health system towards a more inclusive and effective digital transformation. It is important to continuously evaluate and develop features in the PENTOL BAKAR application in order to optimally fulfil user needs. Through training and counselling to health workers and app users, it is hoped that understanding of the importance of emergency management can be improved.

CONCLUSIONS

In this study, researchers explored the PENTOL BAKAR application, which was developed as one of the innovations in the pick-up service for patients with psychiatric emergencies at RSJD dr. Amino Gondohutomo. The findings of this study are related to the effectiveness of using the application in handling psychiatric emergencies, thus accelerating the response of health workers in handling psychiatric emergencies. Through the literature review methodology, the researcher was able to determine the results of the exploration related to the handling of psychiatric emergencies, which included SWOT analysis and interviews with stakeholders. The researcher was able to identify the strengths and weaknesses of the app and provide valuable feedback for further development. For hospitals, the app can improve the flow of emergency care through the emergency button so that they can respond to patients more quickly, while for health workers it can

intervene in a more timely manner, reduce the risk of delayed treatment, and improve the accuracy of services, and for health policy makers it can be a reference in making and considering regulations related to the use of this digital technology in the future. These findings are expected to make a positive contribution in improving the quality of mental health services in related institutions.

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