Kemenkes Poltekkes Surakarta

THE 8TH INTERNATIONAL NURSING CONFERENCE 2024

"Health Management for Heart Disease: Rehabilitative, Promotional, and Preventive Measures"

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PROGRAM

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Tuesday, September 24th, 2024 Balai Krida Husada Health Polytechnic Of Surakarta

"Health management for heart disease: rehabilitative, promotional, and preventive measures."

Time (UTC+7)	Activities	Operator
07.00 am – 07.30 am	REGISTRATION OPEN	Committee
07.30 am – 07.35 am	Safety Briefing	Committee
07.35 am – 07.45 am	Opening Performance	UKM Kesenian
07.45 am – 07.50 am	Opening Master of Ceremony	Master Of Ceremony
07.50 am – 08.00 am	Sing the National Anthem Indonesia Raya, Mars of Poltekkes Surakarta and Mars of PPNI	Committee
08.00 – 08.05 am	Report from Head of Committee	Amelia Nur Rahmadani
08.05 am – 08.15 am	Opening Speech by Director of Health Polytechnic of Surakarta	Mr. Sudiro, S.Kep, Ns, M.Pd
08.15 am – 08.20 am	Prayer Sessions	Committee
08.20 am – 08.30 am	Closing by Master of Ceremony and Introduction of the Moderator	Master Of Ceremony
08.30 am – 08.50 am	SESSION 1 Speaker 1 Athanasia Budi Astuti, SKp, MN The School of Nursing, Health Polytechnic of Surakarta, Ministry of Health, RI **"Nursing Care for Client with Hypertension"**	Speaker
08.50 am – 09.00 am	Discussion	
09.00 am – 09.50 am	Speaker 2 Oscar Fidel Antunez Martinez, Ph.D.Cand., MSN, BSc,RN National Autonomous University of Honduras **"Prevention of Heart Disease"**	

09.50 am – 10.00 am	Discussion	
10.00 am – 10.20 am	Keynote Speech Dra. Oos Fatimah Rosyati, M.,Kes. The Director of Provision of Health Workers, Ministry of Health, RI **"Heart Health Transformation Policy"**	
10.20 am – 10.30 am	Discussion	
10.30 am – 11.20 am	Speaker 3 Dr. Kavita A/P Sukirthalingam, Ph.D Pharmacology, RPh Management and Sience University Malaysia **"Pharmacology for Heart Disease"**	
11.20 am – 11.30 am	Discussion	
11.30 am – 11.50 am	SESSION 2 Speaker 4 Rendi Editya Darmawan, S.Kep.,Ns.,M.Kep The School of Nursing, Health Polytechnic of Surakarta, Ministry of Health, RI **"Nursing Care for Children's Client With Heart Valve Leakage"**	Speaker
11.50 am – 12.00 am	Discussion	
12.00 am – 01.00 pm	BREAK	Speaker
01.00 pm – 01.50 pm	Speaker 5 Sabine Pieters RN M.Sc Zuyd University of Applied Sciences,Netherlands **"The Role of Health Professionals in Managing Heart Disease and the Challenges"**	
01.50 pm – 02.00 pm	Discussion	
	Speaker 6	

02.00 pm – 02.50 pm 02.50 pm – 03.00 pm	Ns.Yuswinda Kusumawardhani, M.Kep., Sp.Kep.MB The Government General Hospital of Dr. Kariadi **"Education to Increase Awareness About Heart Disease"** Discussion	
03.00 pm – 03.20 pm 03.20 pm – 03.30 pm 03.30 pm – 03.50 pm 03.50 pm – 04.00 pm 04.00 pm – 04.20 pm 04.20 pm – 04.30 pm	SESSION 4 Speaker 7 Nur Basuki, M.Physio., PhD The School of Physiotherapy, Health Polytechnic of Surakarta, Ministry of Health, RI **"Cardiac Rehabilitation Programs For Heart Disease"** Discussion Speaker 8 Ratna Wirawati Rosyida S.Kep.,Ns.,M.Kep Health Polytechnic of Surakarta, Ministry of Health, RI **"Nursing Care for Client with Heart Failure"** Discussion Speaker 9 Novita Kurnia Wulandari, S.Tr.Kep., Ns., M.Tr.Kep The School of Nursing, Health Polytechnic of Surakarta, Ministry of Health, RI **"Nutrition for Client with Heart Disease"** Discussion	Speaker
04.30 pm – 05.00 pm	Closing Master of Ceremony	Master Of Ceremony

Original Research

Recommendations of The Development of Community-Based Daily Emergency First Aid Management Training: Based on Focus Group Discussion

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ABSTRACT

Background: *The SDGs are in line with the possibility o emergencies in society, which can happen at any time an endanger everyone's health. Community members require first ai proficiency and a health promotion model for prepared personne in order to lower death and morbidity rates.This study's goal is t describe the development of community-based daily emergenc first aid management training recommendations based on focu group discussion results.*

Methods: *A qualitative was applied to produce a training mode for the community. The study was conducted at July-Octobe 2023. The informants were ten people from the Health Service PSC 119, PSC 119 of partner universities, doctors and nurses a the Community Health Center, village government, and healt cadres. Focus group discussion was used as a method in thi research..*

Results*: The focus group discussion result includes th evaluastion and recommendations of the development o Community-Based Daily Emergency First Aid Managemen Training.*

Conclusion: *The conclusion of this research is that the*

Community-Based Daily Emergency First Aid Managemen Training Model need to be revised in the area of training seting

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cardiac arrest, cardiac attack community-based training, first-ai precede-proceed model

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INTRODUCTION

The Sustainable Development Goals (SDGs), an extension of the Millennium Development Goals (MDGs), are intended to guide the sustainable growth of global society from 2016 to 2030. Emergency situations in society can arise anywhere, at any moment. Inadequate handling of this emergency situation could put society in danger of death and disability, which is definitely not consistent with the goals of the recently declared Sustainable Development Goals (United Nation, 2016). In order to avert death and disability, first aid is the urgent care given to sick or injured individuals until professional help arrives at the site (Federación Internacional de Sociedades de la Cruz Roja y de la Media Luna Roja (IFRC), 2016) . A individual who finds a casualty in an crisis condition is known as a Community To begin with

Responder (CFR). CFR plays an awfully vital part for casualties in crisis conditions in sparing lives. CFRs are individuals of the community who are volunteers who have received preparing or outreach to assist individuals who involvement therapeutic crises whereas holding up for an rescue vehicle to be on its way (Kindness et al., 2014) .

Study conducted by (Harnanto & Sunarto, 2023) found that Within the to begin with arrange of the ponder, input was found with respect to the advancement of fitting preparing for the community. In the mean time, these condstage of the ponder was found Community-Based Day by day Crisis To begin with Help Administration Preparing gives a positive impacts in information, aptitudes, and state of mind of respondent with sig 0.00. This study is One model that is widely used as a theoretical basis for developing a health program is the *Precede-Proceed Model.* is a *Precede-Proceed* Model for planning and evaluating health programs widely taught and used in Anglophone health promotion practice, with over 1000 published applications (Green et al., 2005). This study showed that people with better knowledge are more likely to engage in health-related behaviors. Therefore, the PRECEDE-PROCEED Model can be used as a theoretical framework for health promotion interventions in different populations, and these interventions are particularly effective in terms of improving knowledge (Kim et al., 2022). This study need to be evaluated in order to improve the quality of the training.

It is necessary to increase the quality of the training program. Based on the background description above, it is deemed necessary to conduct research with the theme "Recommendations of The Development of Community-Based Daily Emergency First Aid Management Training: Based on Focus Group Discussion."

MATERIALS AND METHOD

A qualitative with focus group discussion was applied in this study. The main output of this research is the evaluation of production of a community empowerment model in the form of training to increase community readiness in providing first aid for daily emergency condition conducted in a study by (Harnanto & Sunarto, 2023). Informants in this first research stage consisted of ten people from the Health Service, PSC 119 staffs, doctors and nurses at the Community Health Center, village government, and health cadres. Data at the exploration and analysis stage was obtained from the result of focus group discussion followed by analysis of more specific problem determinants, identification of factors that support community readiness in providing assistance to victims, as well as regulatory analysis. Ethical clearance for this research was obtained from the Health Research Ethics Committee of the dr. Moewardi Regional General Hospital.

RESULTS

The focus group discussion provided the results as presented in table 1.

Table 1. Analysis of Qualitative Research Results

Themes Of Study	Informant's Statement of previous study	The result of FGD
Needs analysis	a. A needs assessment has never been carrie out for any training carried out for th community. Indirectly, nurses who accompany communit empowerment activities carry out trainin needs assessments based on health problem that arise in an area. c. The theme of the training carried out was not suggestion from the community/health cadres the resource person immediately received letter of assignment to provide certain training d. Never been assigned to carry out a trainin needs assessment for the community. e. Cadres have never been directly involved i training planning. f. Cadres take part in training activities based o invitations and assignments from sub-distric heads.	The needs assessment in thi research is complete but need to be supplemented wit choices of time and o prospective trainin participants.
Setting training goals	a. Training objectives are determined based o the program holder's suggestions. b. Most training objectives are formulated base on findings of health problems in an area. c. The aim of the training is to follow th assignment warrant. d. Have never read the training objective document other than the training assignmen letter. e. Cadres know the purpose of the training fron the invitation letter and explanation from th resource person. f. Feeling that they have never been involved i formulating training objectives.	Cadres have been involve in planning trainin activities throug invitations to activit preparation meetings.
Training Design	a. The training carried out for the community i not yet equipped with a curriculum and tools. b. The training for the community that has bee carried out so far is still just a socializatio program based on the latest governmen programs and current health problems. c. There is no curriculum for training for th community. d. Never read or found a training curriculum fo the community. e. Cadres have never received a trainin curriculum for the community. f. Lack of understanding that training must b equipped with a curriculum and tools.	The training curriculun already exists and is wel formed in accordance wit the curriculum preparatio rules of the Ministry o Health.

Themes Of Study	Informant's Statement of previous study	The result of FGD
Implementation o Training	a. The training is mostly program based and i carried out only in a short time (on averag half a day of activity). b. The implementation of the training seeme lacking in proper planning, carried out in short time, carried out on weekdays so tha participants were less than optimal. c. The training was carried out in only a ver short time (half a day). d. The training implementation time is adjuste to the budget and SPj activities so that it is les than optimal. e. A lot of training is carried out on weekdays s that working cadres find it very difficult to follow, training in a short period of time is les than optimal in terms of results. f. Implementation is less than optimal becaus time is very limited.	Training has been carried ou according to the curriculum tha has been developed.
Training Evaluatio	a. Evaluation is only carried out using a ver simple method, namely through a feedbac process during training implementation, n follow-up on training results is carried ou within a certain period of time. b. There are no effective evaluation methods tha have been implemented, for example pretest posttest for the cognitive domain and actio checklists for the psychomotor domain. c. Evaluation is carried out by means o questions and answers during training only. d. A good evaluation model has not bee implemented when implementing training. e. There is no evaluation process during trainin and follow-up on training results from th organizer. f. Only ask questions about the material durin the training, there are no tests or measurement of skills during the training with demonstrations/simulations.	Training evaluation is i accordance with planning in th cognitive, psychomotor an affective domains.
Training Funding	a. Most of the funding from local government comes from university community servic activities. b. Funding from city government. c. Based on office budget. d. Funding sources are obtained from annua programs. e. Training is funded by the government. f. Training receives funding allocation from th government.	This training received fundin from higher education partners In the future, it is hoped that w will be able to acces community participation i training funding.

Themes Of Study	Informant's Statement of previous study	The result of FGD
Recommendation of Improvements.	a. Training development is based on the stages o *training needs assessment* , *setting trainin objectives* , designing training , implementin training *and* evaluating *training* . People prefe training with simulation or *roleplay models* . b. Training was developed based on trainin development theories starting from nee assessment to good evaluation, interactive an interesting learning media were prepared, sucl as short and not boring learning videos. c. Adding interesting learning media for th community. d. People prefer simulation and roleplay methods. e. The cadres proposed increasing the number o simulations and rehearsals. f. The realm of practice is expanded rather tha theories because cadres need skills to be applied directly.	The roleplay method has bee adapted in this training.

Based on the results of the interview, a model was prepared which was then tested in a small groups respondents.

DISCUSSION

In the first stage of the study, input was found regarding the development of appropriate training for the community. Meanwhile, the second stage of the study was found Community Based Daily Emergency First Aid Management Training gives a positive effects in knowledge, skills, and attitude of respondent with sig 0.00 (Harnanto & Sunarto, 2023). The findings of this study align with previous research utilizing educational programs derived from this model, demonstrating enhanced knowledge and attitudes in individuals with chronic heart failure (Wang et al., 2017). This research discovered a rise in community willingness to help victims of emergencies. This study verified earlier research that showed a rise in community trust in utilizing PSC-119 services following first aid training for individuals with severe emergency situations (Sunarto & Harnanto, 2021).

Enhancing knowledge, abilities, and perspectives through the use of the PRECEDE-PROCEED model allows for the application of theoretical frameworks, interventions, and evaluations in health promotion strategies, leading to growth (Green et al., 2005). Increasing interest in health promotion activities can also help enhance knowledge, skills, and attitudes. A study using a comparable model found that implementing the PRECEDE-PROCEED model for health promotion had a positive impact on the community's interest, confidence, and willingness to engage in health promotion initiatives (Tapley & Patel, 2016). The Precede-Proceed model links health promotion aims with public health goals, offering a moral compass for inclusive and participatory health promotion (Porter, 2016). Group discussions can increase mutual understanding between group members so that they become an effective means of health education (Riyadi & Ferianto, 2021).

CONCLUSION

The results of the Community-Based Daily Emergency First Aid Management Training Model need to be revised in the area of training seting.

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Original Research/Systematic Review

SELF STIGMA AND STRESS AMONG CAREGIVERS OF PERSONS WITH SCHIZOPHRENIA IN COMMUNITY: CROSS SECTIONAL STUDY

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Abstract

Background: Caregivers of persons with schizophrenia often experience significant levels of stress due to the challenging nature of caregiving. In addition to this burden, self-stigma—where caregivers internalize negative societal beliefs about mental illness—may exacerbate their stress levels. While existing research has explored caregiver stress and stigma independently, the relationship between self-stigma and stress among caregivers remains underexplored, particularly in community settings. Objective: This study aimed to examine the relationship between self-stigma and perceived stress among caregivers of persons with schizophrenia living in the community. The study sought to determine whether higher levels of self-stigma were associated with increased stress.

Methods: A cross-sectional, correlational study was conducted with 100 caregivers of persons with schizophrenia from various community settings. Participants completed the Family Self-Stigma Scale (FSSS) and the Perceived Stress Scale (PSS) to assess their levels of self-stigma and stress, respectively. Pearson's correlation analysis was used to examine the relationship between self-stigma and stress.

Results: The results showed a significant positive correlation between self-stigma and stress ($r = 0{,}235$, $p < 0.05$), indicating that caregivers who experienced higher levels of self-stigma reported greater stress. Additionally, caregivers with higher self-stigma scores had elevated levels of perceived stress, suggesting that internalized stigma may contribute to their psychological burden.

Conclusion: The findings highlight the crucial role of self-stigma in contributing to stress among caregivers of individuals with schizophrenia. Interventions targeting self-stigma reduction could be beneficial in mitigating

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INTRODUCTION

Schizophrenia is a severe and chronic mental disorder that affects approximately 1% of the global population, characterized by profound disturbances in cognition, emotion, and behavior (Gogtay et al., 2017). It is often associated with symptoms such as hallucinations, delusions, disorganized thinking, and impaired functioning. The unpredictable and persistent nature of schizophrenia presents significant challenges not only for individuals living with the disorder but also for their caregivers, who play a crucial role in the long-term management and support of patients (Kane & Correll, 2018).

Caregiving for individuals with schizophrenia is widely recognized as a demanding and stressful role. Caregivers, often family members, are tasked with managing complex psychiatric symptoms, monitoring medication adherence, providing emotional support, and ensuring the safety of their loved ones (Saunders, 2021). The burden of these responsibilities can result in high levels of stress, burnout, and compromised well-being among caregivers (Goswami et al., 2020). In addition to the physical and emotional demands of caregiving, these individuals often face social stigma related to mental illness, which can further exacerbate their stress. In this context, caregivers of individuals with schizophrenia often experience high levels of stress, which may be exacerbated by factors such as self-stigma.

Self-stigma, defined as the internalization of negative societal attitudes toward individuals who provide care for people with mental illness, has been shown to exacerbate psychological distress in caregivers (Chang & Tsai, 2021). When caregivers internalize these stigmatizing beliefs, they may feel ashamed, isolated, and less confident in their caregiving roles, which can heighten their stress levels. The caregivers' self-perception, particularly in dealing with the demands of caring for someone with schizophrenia, can be negatively influenced by the societal stereotypes surrounding mental illness (Corrigan et al., 2016). Stigma related to mental illness remains pervasive worldwide and has detrimental effects not only on individuals with mental health disorders but also on their caregivers. Stigma manifests in various forms, including public stigma, structural stigma, and self-stigma (Corrigan & Watson, 2002). Self-stigma, in particular, is the internalization of negative societal attitudes and stereotypes, leading individuals to adopt these biases and view themselves in a negative light (Mak & Cheung, 2020).

Self-stigma occurs when caregivers internalize negative societal perceptions and stereotypes associated with mental illness and caregiving. Research suggests that caregivers of individuals with schizophrenia often face societal stigma, which can lead to feelings of shame, social isolation, and low self-esteem (Corrigan & Watson, 2002). When caregivers internalize these negative views, it can severely affect their psychological well-being, increasing their vulnerability to stress and reducing their ability to cope with caregiving demands (Mak & Cheung, 2020).

Caregiving for someone with schizophrenia is often long-term, involving frequent episodes of psychosis, unpredictable behavior, and the need for constant supervision (Saunders, 2021). These caregiving tasks are associated with high levels of caregiver burden, emotional exhaustion, and psychological distress (Goswami et al., 2020). Self-stigma can exacerbate these stressors by adding an additional emotional burden, where caregivers may feel personally responsible or inadequate in their caregiving role (Lee et al.,

2021). This stress, if left unaddressed, can lead to burnout and adverse health outcomes for caregivers, such as depression, anxiety, and physical health deterioration (Schene, 2021).

While the burden of caregiving is well-established, there is growing evidence that self-stigma plays a critical role in exacerbating caregiver stress. Self-stigma can serve as an additional emotional burden that caregivers must carry, compounding the already significant stresses associated with caregiving. Livingston and Boyd (2010) found that caregivers who internalized stigmatizing beliefs about mental illness were more likely to experience higher levels of psychological distress, including feelings of hopelessness, anxiety, and depression.Caregivers who experience self-stigma may also withdraw from social interactions and support networks, which are essential for mitigating stress. Research indicates that social support is a crucial buffer against caregiver stress (Saunders, 2021). However, caregivers who are ashamed of their caregiving role or who fear being judged by others may be reluctant to seek help or participate in community support groups, thus exacerbating their sense of isolation and emotional burden (Corrigan et al., 2016). This isolation, combined with internalized negative beliefs, can create a vicious cycle in which self-stigma reinforces stress, and stress, in turn, deepens feelings of inadequacy and self-stigmatization (Mak & Cheung, 2020).

Studies have highlighted the significant correlation between self-stigma and caregiver stress. Mak and Cheung (2020) found that caregivers who reported higher levels of self-stigma also reported greater psychological stress and lower life satisfaction. The internalization of stigma can reduce caregivers' willingness to seek support, further exacerbating feelings of isolation and helplessness (Livingston & Boyd, 2010). Consequently, caregivers may avoid seeking help due to fear of judgment or negative societal perceptions, thereby increasing their stress levels and reducing their ability to provide effective care (Corrigan et al., 2016).

Given the critical role that caregivers play in the management of individuals with schizophrenia, understanding the impact of self-stigma on their mental health is essential. Addressing self-stigma in caregiver support programs could potentially alleviate caregiver stress, improve their quality of life, and enhance the quality of care provided to individuals with schizophrenia. However, despite the recognition of these issues, there is a lack of comprehensive research exploring the relationship between self-stigma and stress specifically within the community caregiving context. This study aims to investigate the relationship between self-stigma and stress among caregivers of individuals with schizophrenia in the community, providing insights that can inform targeted interventions to support caregivers more effectively.

MATERIALS AND METHOD

Study Design

This research employed a cross-sectional correlational study design to explore the relationship between self-stigma and stress among caregivers of individuals with schizophrenia living in community settings. A cross-sectional approach was chosen as it allows for the examination of both variables (self-stigma and stress) at a single point in time, providing a snapshot of their relationship within this population.

Participants

The study involved primary caregivers of persons with schizophrenia from various communities within several public health center in Indonesia. Caregivers were eligible if they met the following inclusion criteria: (1) they were the primary caregiver for an individual diagnosed with schizophrenia by a licensed psychiatrist, (2) the caregiving role had been ongoing for at least one year, and (3) they were at least 18 years old. Caregivers with a history of serious mental illness or who were under psychiatric treatment themselves were excluded from the study to minimize confounding factors related to stress and stigma. A total sample of 100 participants was recruited using purposive sampling, a non-probability sampling technique where participants were selected based on predefined criteria and the study's objectives.

Data Collection and Instruments

Data were collected using two validated instruments:

Affiliate Stigma Scale (ASS) The ASS uses a 4-point Likert scale, ranging from 1 (strongly disagree) to 4 (strongly agree), and includes 22 items assessing three domains (or subscales) of affiliate stigma: affective, cognitive and behavioural. A higher mean score of the 22 items indicates a higher level of affiliate stigma. The ASS has good internal consistency [$\alpha = 0.94$] for caregivers of mental illness and for exploratory factor analysis. Perceived Stress Scale (PSS): The Perceived Stress Scale (PSS) developed by Cohen et al. (1983) was used to assess the stress levels of caregivers. The PSS is a widely used tool for measuring the perception of stress, consisting of 10 items that evaluate the degree to which caregivers feel their lives are unpredictable, uncontrollable, and overwhelming. Responses are recorded on a 5-point Likert scale ranging from 0 (never) to 4 (very often). Total scores range from 0 to 40, with higher scores indicating higher levels of perceived stress. The PSS has demonstrated high reliability (Cronbach's alpha = 0.78) and validity across diverse populations (Lee, 2012).

Procedure

Before data collection, ethical approval was obtained from Health Polytechnic Semarang. Informed consent was obtained from all participants, who were assured of the confidentiality of their responses and their right to withdraw from the study at any time without consequences. Data were collected through self-administered questionnaires distributed in person at community health centers and caregiver support groups. Trained research assistants were present to provide clarification if needed. Participants were asked to complete both the ASS and PSS instruments, and demographic information was also collected, including age, gender, education level, duration of caregiving, and the relationship to the individual with schizophrenia.

Data Analysis

The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 26.0. Descriptive statistics, such as means, standard deviations, frequencies, and percentages, were used to summarize the demographic characteristics of the sample and the overall scores on the ASS and PSS. The relationship between self-stigma and stress was examined using Pearson's correlation coefficient (r). Pearson's correlation was appropriate for this study because both self-stigma and stress were measured as continuous variables, and the data met the assumptions of normality (Sedgwick, 2012). A positive correlation was hypothesized, where higher levels of self-stigma would be associated with higher levels of perceived stress. Statistical significance was set at a p-value of less than 0.05.

RESULTS

Demographic Characteristics of Respondents

A total of 100 caregivers of person with schizophrenia participated for the study with a response rate of 100%. Among them, 60% were female and 80% were married. The majority age of the caregivers was 41-60 years. Forty three (43%) were graduated from senior high school and only 17 % were from university. The majority of the caregivers were marital relationship (65%) and all were living together with the patients in the same household. The majority of caregivers have cared the patient more than 5 years (45%).

The table below summarizes the demographic profile of the respondents:

Table 1. Respondent characteristics

Respondent characteristics	n	%
Gender		
Man	40	40
Woman	60	60
Age		
30-40	32	32
41-60	45	45
> 600	23	23
Level education		
elementary school	0	0
Yunior high school	40	40
Senior high school	43	43
University	17	17
Marital status		
Single Married	10	10
Divorced Widowed	80	80
	5	5
Duration of caring	5	5
< 1		
1 – 5		
>5	12	12
	43	43
	45	45
Relationship with patient		
Child	15	15
Parent	20	20
Husband or wife	65	65

Correlation Analysis

The average self-stigma score among the caregivers was 54,62 (SD = 41,96), while the average stress score was 26,51 (SD = 37,19). The results show a positive correlation between self-stigma and stress, with a Pearson correlation coefficient of **r = 0.235 (p <**

0.05), indicating a strong relationship between the two variables.
The correlation between self-stigma and stress is presented in the table 2 below:

Table 2. Stress description before and after intervention

Variabel	Mean	Sd	r	p
Self stigma	54,62	41,96	0.235	0,019
stress	26,51	37,13		

DISCUSSION

The findings of this study revealed a significant positive relationship between self-stigma and stress among caregivers of persons with schizophrenia in the community. These results are consistent with existing literature, which highlights the detrimental effects of stigma on the mental health and well-being of caregivers in mental health contexts. Caregivers who experience high levels of self-stigma are more likely to encounter psychological stress, contributing to a decline in their overall quality of life.

This internalization process can have profound psychological consequences for caregivers. Research has shown that caregivers who experience self-stigma often feel a sense of shame and embarrassment about their caregiving role, leading to increased social isolation, lower self-esteem, and a reduced sense of personal efficacy (Corrigan et al., 2016). For caregivers of individuals with schizophrenia, self-stigma is compounded by the widespread stigma surrounding schizophrenia itself, which is frequently portrayed in negative and stigmatizing terms in the media and society at large (Ochoa et al., 2021). As a result, caregivers may experience feelings of inadequacy, self-blame, and a sense of responsibility for the illness, which can heighten their levels of psychological stress.

The present study found that the majority of caregiver on this study were female and have marital status, however , in this study, the majority caregivers had experienced high self-stigma (mean 54,62) and reported feelings of inadequacy and self-blame. They often feared judgment from the community, which led to social withdrawal and reduced access to external support networks. This isolation likely contributed to an increase in stress, as caregivers were left to manage the challenges of caregiving with minimal emotional and practical support. Such findings align with previous research by Livingston and Boyd (2010), who also found that self-stigmatization in caregivers correlates strongly with stress and burnout.

Schizophrenia, as a chronic mental illness, demands substantial emotional and physical resources from caregivers. In this study showed that caregivers had high levels of stress (mean 26,51) and reported in this study are consistent with earlier studies that demonstrated the significant burden placed on caregivers, especially when coping with the persistent symptoms of schizophrenia such as hallucinations, delusions, and social withdrawal (Goswami et al., 2020). The unpredictable nature of schizophrenia can exacerbate the stress experienced by caregivers, particularly in managing relapses and crises.Furthermore, the chronic nature of the illness often means that caregivers are required to provide long-term support, which can lead to cumulative stress over time (van der Sanden et al., 2019). This prolonged stress without adequate coping mechanisms can result in mental and physical health deterioration among caregivers, further reinforcing the need for targeted interventions.

These findings underscore the importance of addressing self-stigma and stress in caregiver support programs. Interventions aimed at reducing self-stigma, such as psychoeducation and support groups, may empower caregivers to challenge negative

societal perceptions and build resilience. According to a study by Mak and Cheung (2020), caregivers who participated in stigma reduction programs reported lower levels of stress and improved self-esteem. Mental health professionals can play a critical role in providing caregivers with tools to cope with the stress of caregiving, offering psychosocial support, and creating safe spaces for caregivers to discuss their experiences without fear of judgment. In recent studies, the relationship between self-stigma and caregiver stress has been highlighted as a significant area of concern. A study by Mak and Cheung (2020) demonstrated that caregivers who reported higher levels of self-stigma also experienced greater psychological stress and lower quality of life. Similarly, Lee et al. (2021) found that caregivers who internalized negative societal views about mental illness were less likely to engage in adaptive coping strategies and were more prone to experiencing caregiver burnout.

In addition, policy-makers should consider integrating caregiver support into community-based mental health services. Offering resources such as counseling, respite care, and peer support groups may help mitigate the stress and emotional burden faced by caregivers of persons with schizophrenia.

CONCLUSION

In conclusion, this study highlights a significant relationship between self-stigma and stress among caregivers of individuals with schizophrenia. The findings suggest that interventions targeting self-stigma reduction could be instrumental in alleviating caregiver stress, ultimately improving the quality of life for both caregivers and individuals with schizophrenia. Ongoing support for caregivers, particularly through community-based mental health services, is essential to address the multifaceted challenges they face in their caregiving roles.

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Original Research/Systematic Review

Measuring User Satisfaction of Educational Applications WatDiab Uses the End User Computing Satisfaction Questionnaire (EUCS)

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Abstract

Background: Diabetes care services continue to develop to adapt to the use of smartphones containing diabetes care applications. Each application has weaknesses and shortcomings so that it does not provide user satisfaction. Including the WatDiab application used in this research, which contains educational features and information about diabetes care services with a preventive and promotive approach to biopsychosocial, spiritual aspects that measure user satisfaction.
Method: The design of this research is descriptive correlational. The research population was 930 people suffering from type 2 diabetes in the Karang Anyar Regency and Surakarta City, Central Java and Yogyakarta City, then the sample was calculated according to Solvin, which was 140. Data collection used the EUCS (end use computing satisfaction) questionnaire consisting of aspects of content, accuracy, format, ease of use and timeliness.
Results: The research results show that many people are dissatisfied with the WatDiab application regarding ease of use and timeliness. These two aspects also have no relationship with satisfaction. The results of the regression correlation analysis show that there is a strong relationship (r 0.789) between EUCS aspects and respondent satisfaction using the WatDiab application. It can also be seen that as many as 70.1% were able to explain respondents' satisfaction in using the WatDiab application.
Conclusion: WatDiab application user satisfaction as measured using EUCS in the aspects of ease of use and timeliness needs to be improved in order to provide user satisfaction. It is recommended to select the features that users are most interested in and reduce the features that users do not request.

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Introduction

The high number of diabetes mellitus sufferers tends to increase every year, and is even predicted by WHO to become a pandemic in developing countries, including Indonesia, which requires attention from nursing service providers. Not only the physical aspects, the biopsychosocial and spiritual aspects of diabetes patients with various complications require attention. Thus, it can be understood that when treating diabetes patients, it is not just medication alone, but there are many aspects that must be carried out which require an integrated system.

The past Covid 19 pandemic provided experience regarding patient care services that needed to be developed. This is in line with the development of information technology in the society 5.0 era which demands the development of nursing services that must adapt. One of them is using cellular telephones such as smartphones which can be a

means of nursing education services that are easy to reach, anytime and anywhere and can be repeated.

It has been proven that smartphones that have applications for students can improve understanding of scientific concepts and logical thinking (Susanto L H. et al, 2022), (Setiawaty S. et al, 2022). Likewise, for health worker education, it has also been proven that the use of applications is effective in improving students' skills (Sulastini S. et al, 2023). Therefore, applications on smartphones can be developed to make it easier for diabetics during diabetes counseling or foot wound care services at home (homecare). For example, research reveals that applications on smartphones can increase the self- efficacy of diabetes patients so that they can change diabetic foot care behavior (Cheng Y J. et al, 2023).

Several experts stated that applications on smartphones need to be created to improve foot care behavior, increase self-efficacy and provide education about foot care (Cheng Y J. et al, 2023). Henceforth, it is necessary to develop and integrate all social and spiritual biopsycho aspects. However, it is important to remember that using applications has several weaknesses and disadvantages that need to be followed up (Santoso B J. et al, 2022). For this reason, there is a study trying to develop, refine and test applications on smartphones regarding self-efficacy and reducing the risk of diabetic feet (Kilic & Karadag, 2020).

The diabetes care application used in this research, abbreviated as WatDiab, was designed using the Android operating system (AOS) as a platform. This considers that it is more cost effective and has very wide users in society (Mehraeen E. et al, 2022). The programming language used is JavaScript, TML5, PHP and the MySQL database which is hosted on the Play Store service. Features include: Patient data, foot care, self-efficacy and spiritual well-being. Each feature contains questionnaires, educational material and information in the form of images and videos.

This application provides a reminder feature to remind patients to care for their feet every day. It is known that using a reminder application will remind patients regularly and can help with self-care at home (Gusdiani I. et al, 2021). There is also an information feature on wound care service locations consisting of wound care clinics closest to the patient's domicile around Solo Raya and Yogyakarta.

This application was designed based on the results of multi-year research starting from 2021 to 2023. The research results were combined and then an assessment of satisfaction with using the WatDiab application was carried out using the EUCS (End Use Computing Satisfaction) method to determine the application's shortcomings and weaknesses in the aspects of content, accuracy, format, ease of use and timeliness

Method

This research uses an exploratory descriptive design, namely knowing the satisfaction of users of the WatDiab educational application using the End User Computing Satisfaction (EUCS) Questionnaire which can measure application satisfaction in the aspects: Content, Accuracy, Format, Ease of Use and Timeliness.

The research population consisted of 930 people suffering from type 2 diabetes in the Karang Anyar Regency and Surakarta City, Central Java and Yogyakarta City. The sample was taken using a purposive sampling technique and the sample size was calculated using the Slovin formula so that a sample of 140 was obtained.

This research was carried out using the WatDiab application which had a content validity test with a value of 0.89 and a reliability test with a value of 0801 and was declared feasible. Data was collected in the first way, namely providing an explanation

about the WatDiab application and how to download it on a smartphone. Then assistance is provided when trying to use the application at least 2 times within a period of 2 weeks. The final step was to collect respondent satisfaction data using the End User Computing Satisfaction (EUCS) instrument developed by Doll et al, 1998 in (Fitriansyah, A & Harris, 2018) which is one method that can be used to measure the level of satisfaction of mobile application users (Sugandi & Halim, 2020). The data collected in linkert form consists of Very Satisfied (4), Satisfied (3), Dissatisfied (2) and Very Dissatisfied (1).

Permission for research ethical feasibility was obtained from the Muwardi Hospital Surakarta Health Research Ethics Commission on April 28 2021 Number: 464/IV/HREC/2021.

Results and Discussion

The results of the research are presented below, starting with Table 1, which shows data about the education of the majority of respondents, namely junior high school level and 23 people in the category of graduates from higher education.

Table. 1 Characteristics of Research Respondents

Karakteristik	Frekuensi	Presentase (%)
Gender		
Male	53	37,9
Female	87	62,1
Age		
<40 years old	42	30
40-50 years old	42	30,0
50-60 years old	50	35,7
>60 years old	6	4,3
Job		
Housewife	50	35,7
Civil cervant	31	22,1
Retired	11	7,9
Private	48	34,3
Educational level		
Elementary school	37	26,4
Junior high scool	50	35,7
Senior high school	30	21,4
Universities	23	16,4

The table above also shows that only 6 respondents were in the age category above 60 years and most were in the category less than 50 years. In the same table it can be seen that the gender of most respondents is female. The majority of respondents' occupations were housewives and entrepreneurs.

Table 2.Distribution of Respondent Satisfaction Correlations on EUCS aspects

Satisfaction level	**Aspect EUCS**									
	Content		Accuracy		Format		Ease of use		Timeliness	
	n	%	n	%	n	%	n	%	n	%
Very dissastified	1	0,7	1	0,7	2	3,6	25	10,7	40	28,5
Dissatisfies	6	4,3	5	3,6	16	10,7	55	39,3	1	4,4
Satisfied	104	74,5	103	73,7	99	71,4	50	35,7	85	57,1
Very satisfied	29	20,5	31	22	22	14,3	10	14,3	14	10

In table 2, the distribution of respondent satisfaction from the content aspect shows that the most respondent satisfaction data is obtained. The same thing can be seen in the aspects of accuracy and format. Meanwhile, regarding the ease of use and timeliness aspects, it can be seen that many respondents were dissatisfied with the WatDiab application.

Table 3.Distribution Correlations of Respondent Satisfaction on EUCS aspects

Aspect EUCS	Koefisien				sig
	B	Std Error	Beta	t	
Contain	,072	,014	,278	3,488	,002
Accuracy	,100	,053	,273	2,801	,047
Format	,133	,034	,139	2,023	,005
Ease of Use	,048	,038	,219	1,667	,187
Timeliness	,073	,036	,118	1,303	,195

The results of the t test analysis for the Contain, Accuracy and format aspects showed a correlation with respondent satisfaction when using the WatDiab application. Meanwhile, the Ease of Use and Timeliness aspects obtained values of 0.187 and 0.195, meaning > 0.05, so it was concluded that it was not related to respondent satisfaction.

Table 4. Correlation And Regression Analysis of EUCS Aspects and Respondent Satisfaction

Variable	r	R Square	p. value
satifaction	0,789	0,701	0,000

The results of the regression correlation analysis show that there is a strong relationship between EUCS aspects and respondent satisfaction using the WatDiab application. It can also be seen that as many as 70.1% were able to explain respondents' satisfaction in using the WatDiab application. The relationship that occurred was also very significant (p. value=0.000 <0.005).

Diabetes sufferers are at risk of experiencing serious complications, namely foot injuries, which can easily occur if early detection is too late by the patient himself. In this condition, concrete steps need to be taken that are creative, innovative, effective and easy for the patient to carry out themselves anytime and anywhere (Agustini. et al, 2022). One way is by using information technology in the form of educational applications on smartphones.

Many applications have been made on smartphones in various operating systems

(OS) such as Android, iOS, Blackberry, Windows with various features. The majority of smartphone users in developing countries use the OS operating system, so this research focuses on Android-based applications.

Most of the respondents in this study were elderly and pre-elderly. Meanwhile, most of the respondents' education levels were basic (primary and junior high school). This needs attention because older diabetes sufferers have physical and psychological vulnerabilities and limitations as it is believed that younger groups can master smartphone applications more easily. So the younger generation is more satisfied using applications on smartphones than the elderly. This was found in research on the millennial generation when using health applications which obtained results that there was health application user satisfaction with a significance value of 0.000 (Ningrum B, 2023).

This is in line with research on respondents with an average age of 44 years which states that smartphone-based applications can be a useful tool that leads to positive changes in the self-care activities of diabetes sufferers and indicates user satisfaction (Kim. J, 2015).

When using Android applications, most diabetes sufferers will experience problems in operating the application on their smartphone. It is known that there are several weaknesses of smartphones when used by older diabetics. Diabetes patients will not be free when using applications on smartphones. For this reason, the application design must be friendly to elderly users and the application function must meet the preferences of those over 56 years old (Wahyudi, C.T & Rahman, 2019). The ease of use of the WatDiab application by respondents will be discussed below by looking at the respondents' satisfaction with using it.

When developing an application, it is necessary to have usability aspects so that it is easy for users to operate and provide benefits and satisfaction to users. This has been found in research that the application must be friendly, the writing must be bold and use large letters so that it is easy to see and therefore satisfying (Hewu A. et al, 2022). Thus, each application must continue to be evaluated and developed if necessary, redesigned to make it easier to use, especially for elderly users (Duma K V W. et al, 2022).

This research analyzes respondents' satisfaction using the WatDiab application using the EUCS (end use computing satisfaction) questionnaire which consists of aspects: content, accuracy, ease of use format and timeliness. The research results seen in table 2 show that the highest number of respondents who expressed satisfaction and very satisfaction were in the aspects of content, accuracy and timeliness. Meanwhile, those who expressed dissatisfaction and very dissatisfaction were found in the aspects of format and ease of use.

This shows that it is necessary to review the aspects of format and ease of use because many respondents were dissatisfied. As several studies have been carried out on applications for diabetes sufferers which analyzed the features in several applications regarding their functionality so as to provide satisfaction for users. The results of this research lead to complete development and will take the health care system to a completely new level for developing countries(Anowar, 2020).

The use of media such as smartphones as a tool in information technology is recognized as a way to overcome the problems of diabetes patients, not only physical problems but also psychological and spiritual problems. As a medium, smartphones can be used to carry out promotions and education so that patient knowledge, skills and behavior change effectively. For example, in preventing and controlling blood sugar levels for type 2 diabetes (Andriyanto, 2018).

As in research on the diabetes self management and education (DSME) application which aims to help diabetes sufferers manage caring for themselves who suffer from

diabetes, in its use it was found that there were influential factors, namely the level of education (Kurniawan T. et al, 2020). In academic circles for health sports education, it has been found that Android applications for health fitness are very popular (Antoni, M., & Suharjana, 2019). Meanwhile, in other areas of health education, it is known that digital-based learning and consultation methods between lecturers and students have increased satisfaction in documenting using Case Midwifery Notes (Mutiah, C., Abdurrahman, A., Iswani, R., Putri, I., & Nazar, 2023).

It is also known that smartphone-based applications can direct knowledge, skills and behavior to positive changes in self-care activities for diabetes sufferers and show satisfaction from users (Kim. J, 2015). In another aspect, it is also known that the application can improve self-care management in managing the diet of diabetes mellitus patients through monitoring using the application (Kim. J, 2015). In another aspect, it is also known that the application can improve self-care management in managing the diet of diabetes mellitus patients. through monitoring using applications (Luawo et al, 2019).

The respondents' dissatisfaction with the Watdiab application regarding the ease of use aspect can be understood because the features in the application include quite a lot of biopsychosocial and spiritual. Apart from that, many of the respondents are also elderly, so a study suggested that the application can be used by the elderly by paying attention to several things such as instructions for using the application, feature icons and clear buttons using large images and text (Wahyudi, C.T & Rahman, 2019).

Nowadays applications on smartphones can play an important role in complementing diabetes care. Therefore, so that differences do not occur, it is better to regulate the content and context of the problem and further adapt it to user needs with clear guidelines (Huang Z. et al, 2018).

Respondents' dissatisfaction with the WatDiab application in the timeliness aspect can also be explained by the fact that the many features mean that users need a long time to use it to understand the contents of the features. So there is concern that the use of this application will be less, as in research on 18 participants who used the application less in a certain period of time (Ogrin.et al, 2018).

User satisfaction with applications on smartphones for users who live in urban areas is at the same level as in the city of Surabaya. However, further development still needs to be carried out, such as timeless aspects and simplifying usage procedures as well as continuing to motivate people to use applications when they want to get health services (Azzahrah F. et al, 2020).

It is also known that applications on smartphones have the potential to improve diabetes care, especially in self-management. But there is still no evidence of the sustainability of its use so that an evaluation of the impact of using the 1,100 applications available worldwide for diabetes care on diabetes care is not yet known (Garabedian L F. et al, 2015). Interest in mobile health applications (apps) for diabetes self-care continues to increase. Mobile health is a promising new treatment modality for diabetes, although few smartphone applications have been designed based on appropriate studies and priorities(Salari. et al, 2019)

Even though there are many shortcomings and weaknesses in using smartphone applications in health services, especially education for diabetes patients, there are still opportunities for further development such as diabetes self-management on mobile devices, the potential of which is still largely unexplored (Chomutare, 2011). Likewise, the use of technology needs to be considered as applications with mobile and cloud-based systems can be effective, satisfying and promising tools to facilitate modification of chronic care self-management. A safe, efficient and effective educational method is needed for diabetes patients. Currently, online-based education has developed, but this

education is one- way so the monitoring process receives little attention. For this reason, it is necessary to develop two-way online-based education so that interaction occurs between patients, families and health workers (Isworo, 2021).

Conclusion

Based on the results of the research that has been carried out, it can be concluded that user satisfaction of the WatDiab application as measured using the EUCS questionnaire in the aspects of ease of use and timeliness needs to be improved in order to provide user satisfaction. It is recommended to select the features that users are most interested in and reduce features that are not requested by users.

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Original Research

The Effect Of Audio Visual-Based Education On Environmental Modification On Changes In Family Behavior With Stroke Patients

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ABSTRACT

Background: *Factors of family behavior towards caring for and modifying the home environment of stroke patients are knowledge of environmental modification, attitudes that support environmental modification, actions towards implementing environmental modification. Families who ignore environmental modifications for stroke patients are very dangerous, capable of causing patients to be at risk of falling, so providing education about environmental modification is needed. Objective: to determine the effect of audio-visual-based education on environmental modification on changes in family behavior with stroke patients.*

Methods: *analytic descriptive quantitative research using pre experimental design with one group pre test and post test design. The population of this study were families whose family members had a stroke in 7 villages of Kaliwungu District, Kudus Regency totaling 121 people, the sample size was 55 respondents using purposive sampling. Bivariate analysis using wilcoxon test.*

Results: *The sig value (2-tailed) of the level of knowledge, attitude and action is 0.000 <0.5, meaning that Ha is accepted and Ho is rejected, there is an effect of audio-visual-based education on environmental modification on changes in family behavior with stroke patients.*

Conclusion: *There is an effect of audio-visual-based education on environmental modification on changes in family behavior with stroke patients.*

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INTRODUCTION

Stroke is also called Cerebro Vascular Accident (CVA) or "Brain Attack", which is a description of neurological changes that occur due to disruption of blood supply to parts of the brain or when blood vessels in the brain rupture which causes brain cells to experience a decrease in oxygen supply which will cause cell death, so that stroke can cause death or permanent disability (Sari et al., 2023). Stroke is an emergency in the neurological system that occurs suddenly and is one of the highest causes of disability and death in the world (Puri & Setyawan, 2020).

Based on data from the World Stroke Organization (WSO) in 2022, there were more than 12.2 million new stroke cases recorded every year in the world. It was also recorded that as many as 78% of stroke sufferers were under the age of 70 years in the world (Feigin et al., 2022) . The prevalence of stroke in Indonesia is estimated at 2,120,362 people. North Kalimantan occupies the first position with the highest number of stroke cases in Indonesia, around 55.8% (Ministry of Health of the Republic of Indonesia, 2020). Based on data from the Central Java Central Statistics Agency (2019), non-hemorrhagic stroke cases have increased by 3-4 times more than hemorrhagic stroke cases. Central Java ranks 11th in stroke cases in Indonesia. According to the Kudus District Health Service, from January to November 2023 in Kudus District there were 1,906 people who suffered from stroke. The highest incidence of stroke cases at the Kaliwungu Community Health Center was 535 people, consisting of 275 men and 260 women (Kudus District Health Service, 2023). Based on the number of stroke cases which continues to increase every year, stroke if not treated immediately is very dangerous and can cause complications.

The most common complication that occurs in stroke patients is falls. Falls can result in patients experiencing decreased independence in daily life activities such as eating, bathing, dressing, toileting, and physical mobility, and can even cause trauma (Cho et al., 2015). Based on the results of research conducted by Wing et al (2018), a simple intervention in modifying the environment that can have a big impact on preventing falls is asking families of stroke patients to overcome tripping hazards at home, clean up clutter and walkways. In implementing interventions to modify the environment, the role of the family and family support is needed. Families in making modifications to the home environment are influenced by behavioral factors, including knowledge about environmental modifications, attitudes that support environmental modifications, and actions towards implementing environmental modifications (Idris & Kurnia, 2017).

Providing environmental modification education to stroke patients at risk of falling is quite effective in increasing behavioral changes in family members. Because the family is the implementer of preventive services, one of which is providing assistance and care for stroke patients (Sunaringsih et al., 2021). Education through audio and visual media means a person can easily understand the information obtained because most knowledge is obtained through the eyes and ears (Sahmad, 2015). Based on research conducted at the Mataram City Hospital, it was found that the results of the health education video project in the discharge planning process could increase family readiness in caring for stroke patients at home. This was based on the results of the Mann Whitney test with a p value (0.000) $<\alpha$ (0.05)(Muhsinin et al., 2019).Educational media with visuals, audio and animation is considered capable of changing the behavior of families with stroke patients.

Based on the results of a preliminary study conducted by researchers on January 18 2024, a picture was obtained from interviews with 10 families who had stroke patients, 3 people said stroke patients still used squat toilets when defecating, 4 people said they did not provide support for regular environmental arrangements for improving the safety of stroke patients, 3 people said they had not installed bars at the bedside of stroke patients. On average, stroke patients live with their families and their families do not understand how to modify the environment. Families who ignore environmental modifications for stroke patients are very dangerous and can put the patient at risk of falls. In connection with the increasing number of stroke cases with a risk of falls and the absence of research that focuses on changing family behavior regarding environmental modifications to reduce the risk of falls in stroke patients, researchers are interested in conducting research by providing audio visual based environmental modification education to determine the effect of providing this education on changes. family behavior with stroke patients.

MATERIALS AND METHOD

This research includes quantitative research using analytical research. This research describes a type of analysis of the influence of audio-visual-based education about environmental modification on changes in the behavior of families with stroke patients. This type of research uses a pre-experimental design with a one group pre-test and post-test design approach. This research was conducted in May 2024 in 7 villages in Kaliwungu Subdistrict, Kudus Regency, namely Kedung Dowo, Prangkat Lor, Mijen, Garung Lor, Bakalan Krapyak, Karang Ampel, and Prangkat Kidul. The population in this study were 121 families whose family members experienced a stroke in Kaliwungu District, Kudus Regency. The sample size in this study was 55 respondents using the Slovin formula according to Sugiyono (2014). The sampling technique in this research used purposive sampling. The inclusion criteria in this study are caregivers of stroke patients who are willing to be respondents, caregivers of stroke patients aged 18 - 60 years, caregivers of stroke patients who are able to communicate verbally and non-verbally, caregivers of stroke patients who do not have five physical limitations. senses of sight and hearing, caregivers of stroke patients who have Android cellphones, tablets, laptops, computers or the like. Exclusion criteria: caregivers of stroke patients who were not present at the time of the study, caregivers of stroke patients who did not participate in educational activities from start to finish, caregivers of stroke patients who did not fill out the questionnaire completely, caregivers of stroke patients who experienced a decline in their condition or hemodynamic status bad things during the research process.

The instrument used in this research is a pre-test and post-test questionnaire for behavioral variables consisting of 3 domains, namely the knowledge domain, 10 statements using the Guttman scale, the attitude domain, 10 statements using a Likert scale, the action domain, 10 questions using the Thurstone scale. Validity test of knowledge questionnaire adopted from researcher Abu Syairi UIN Syarif Hidayatullah Jakarta with the title "Level of knowledge of patient families about self-care for family members who have strokes at RSU Tangerang Regency in 2013", the results of the validity test measurement obtained an r table value of 0.42 meaning that the research questionnaire is valid because the r table value is

above 0.361.The results of the attitude questionnaire validity test adopted from researcher Bety Sonatha Universitas Indonesia with the title "The relationship between knowledge levels and family attitudes in providing post-stroke patient care", obtained an r table value of 0.481 where r count> r table at a significant level ($\alpha = 0.05$). The results of the action questionnaire validity test adopted from researcher Lenni F.S from the University of North Sumatra with the title "Description of family behavior towards post-stroke patients in rehabilitation efforts at St. Elisabeth Hospital Medan 2010", obtained an r table value of 0.444 and the research questionnaire is valid because the r table value is above 0.361. The questionnaire in this research has been tested for validity and reliability by previous researchers and was declared valid and reliable. The intervention was carried out using an audio-visual media instrument regarding environmental modification for stroke patients which lasted 5 minutes and was expert tested. The results of the expert judgment test stated that the video narrative contained issues related to the material, the language was easy to understand, the presentation was interesting, the video quality was clear, the images were colorful, the audio was clear, the content of the material covered all the material about environmental modification, the flow of the material points was clear, the language quality used easy-to-understand language, the sentences were easy to understand, and used regular language. Observations in this study were carried out twice before and after the intervention was given to the respondents. The subject group was observed before the intervention, then observed again 1 week after the intervention.

The research results were then processed using the IBM SPSS Statistics version 22 program, where the researcher first carried out a normality test using the Shapiro Wilk Test. The results of the pre test data normality test were obtained with a significant value in the knowledge domain of 0.003 (<0.05), the attitude domain of 0.003 (<0.05), the action domain of 0.001 (<0.05) and the post test with a significant value in the knowledge domain of 0.000 (<0.05), attitude domain 0.000 (<0.05), action domain 0.000 (<0.05), which means the data is not normally distributed, so bivariate analysis was carried out using non-parametric statistical methods using the Wilcoxon test.

RESULTS

This study analyzes the effect of audio-visual-based education about environmental modification on changes in the behavior of families with stroke patients. The independent variable in this study is audio-visual-based education about environmental modification, while the dependent variable is changes in family behavior with stroke patients.

Respondent Characteristics

1. Age
   Age characteristics of respondents who were given educationaudio-visual based on environmental modification towards behavioral changes in families with stroke patients in Kaliwungu District, Kudus is:

Table 1. Frequency Distribution of Respondents Based on Respondents' Age Characteristics in Kaliwungu District, Kudus

Age	Frequency	Percentage (%)
Late adolescence (18-21 years)	11	20.0
Early adulthood (22-40 years)	25	45.5
Middle adult (41-60 years)	19	34.5
Total	55	100.0

Based on table 4.1, the results from 55 respondents in Kaliwungu District show that the majority of respondents are in the early adulthood age category (22-40 years), amounting to 25 respondents (45.5%).

2. Gender

Gender characteristics of respondents who were given educationaudio-visual based on environmental modification towards behavioral changes in families with stroke patients in Kaliwungu District, Kudus is:

Table 2. Frequency Distribution of Respondents Based on Respondents' Gender Characteristics in Kaliwungu District, Kudus

Gender	Frequency	Percentage (%)
Man	23	41.8
Woman	32	58.2
Total	55	100.0

Based on table 4.2, the results from 55 respondents in Kaliwungu District show that the majority of respondents are in the female gender category, amounting to 32 respondents (58.2%).

3. Last education

Characteristics of the last education of respondents who were given educationaudio-visual based on environmental modification towards behavioral changes in families with stroke patients in Kaliwungu District, Kudus is:

Table 3. Frequency Distribution of Respondents Based on Characteristics of Respondents' Last Education in Kaliwungu District, Kudus

Education	Frequency	Percentage (%)
Sd	7	12.7
Junior high school	19	34.5
Senior high school	25	45.5
College	4	7.3
Total	55	100.0

Based on table 4.3, the results from 55 respondents in Kaliwungu District show that the largest number of respondents were in the high school education category, namely 25 respondents (45.5%).

4. Work

Characteristics of the work of respondents who were given educationaudio-visual based on environmental modification towards behavioral changes in families with stroke patients in Kaliwungu District, Kudus is:

Table 4. Frequency Distribution of Respondents Based on Respondents' Job Characteristics in Kaliwungu District, Kudus

Work	Frequency	Percentage (%)
Work	49	89.1
Doesn't work	6	10.9
Total	55	100.0

Based on table 4.4, the results from 55 respondents in Kaliwungu District show that the majority of respondents are in the working category, namely 49 respondents (89.1%).

Univariate Analysis

1. Family behavior before being given audio-visual based education about environmental modification.

Table 5. Frequency Distribution of Respondents Based on Family Behavior Before Being Given Audio Visual Based Education on Environmental Modification

Variable	Knowledge				Attitude				Action				Behavior Category
	Good		Not enough		Positive		Negative		Good		Not enough		
	F	%	F	%	F	%	F	%	F	%	F	%	
Pre Test	55	100,0	0	0	50	90,9	5	9,1	55	100,0	0	0	Effective Behavior

The research results showed that the behavior of respondents before being given audio-visual based education about environmental modification,shows that 55 respondents fall into the category of effective behavior, but in the domainAttitudes were in the negative category for 5 respondents (9.1%). This is proven in the answers to the attitude domain, questionnaire statement item number 2 "Stroke patients' beds must be supported to prevent falls" from this statement, 21 respondents (38.2%) answered Agree (S), and 21 respondents (38.2%) answered Strongly Agree. (SS) only 8 respondents (14.5%). Most of the respondents work, so the attitude of respondents in installing bed support for stroke patients is given less attention.

2. Family behavior after being given audio-visual based education about environmental modification.

Table 6. Frequency Distribution of Respondents Based on Family Behavior After Being Given Audio Visual Based Education on Environmental Modification

Variable	Knowledge				Attitude				Action				Behavior Category
	Good		Not enough		Positive		Negative		Good		Not enough		
	F	%	F	%	F	%	F	%	F	%	F	%	
Post Test	55	100,0	0	0	55	100,0	0	0	55	100,0	0	0	Effective Behavior

The research results showed that the behavior of respondents after being given audio-visual based education about environmental modification,shows that 55 respondents fall into the effective behavior category. This is shown based on the results of respondent interviewsthat the health education information obtained by respondents from video or audio-visual media uploaded to YouTube by researchers can be well received and easy to understand, thereby influencing changes in the behavior of families with stroke patients.

Bivariate Analysis

The effect of audio-visual-based education about environmental modification on changes in family behavior with stroke patients. Based on the results of data processing with SPSS version 22, the following results were obtained:

Table 7. The Effect of Audio Visual Based Education on Environmental Modification on Changes in Family Behavior with Stroke Patients

Variable	Knowledge		Attitude		Action		Behavior Category
	Good	Not enough	Positive	Negative	Good	Not enough	
Pre Test	55	0	50	5	55	0	Effective Behavior
Post Test	55	0	55	0	55	0	Effective Behavior
P value	0,000						

Table 3 above shows a recapitulation of data on behavior change results analyzed from pre-test scores (before being given audio-visual-based education about environmental modification) and post-test scores (after being given audio-visual-based education about environmental modification). The testing technique used is the Wilcoxon test with a significant levelα= 0.5.From the results of the pre-test and post-test, changes in the behavior of families with stroke patients who were given education about audio-visual-based environmental modification experienced quite significant differences, namely before being given audio-visual-based education about environmental modification,shows that 55 respondents fall into the category of effective behavior, but in the domainThere were 5 respondents (9.1%) in the negative attitude category. After being given audio-visual based education about environmental modification,shows that 55 respondents fall into the effective behavior category

DISCUSSION

Univariate Analysis

1. Family behavior before being given audio-visual based education about environmental modification.

One of the factors that influences respondent behavior in this research is predisposing factors, this factor is influenced by work factors (Lawrence Green in Damayanti, 2017). Based on the research results,majority respondents49 respondents (89.1%) worked and 6 respondents (10.9%) did not work. In the process of making bed supports, the obstacle that respondents are concerned about is the problem of time for making bed supports which requires quite a long manufacturing process, seen from the percentage of 89.1% of respondents working, of course their daily time is used for work and respondents have busy time, so they pay less attention. things that support the safety of stroke patients in minimizing the risk of falls are fully only when the respondent is off work but the time given is very minimal.

The results of this study are in line with the research of Ariska, Handayani, & Hartati (2020), the results of the study stated that caregivers who were working were 38.2% less involved in caring for stroke patients, compared to those who were not working who were involved in providing care. stroke patients were more severe by 45.5%. The results of statistical tests in this study obtained a p value of 0.002, which means there is a relationship between employment status and the burden of caregivers in caring for stroke family members.

2. Family behavior after being given audio-visual based education about environmental modification.

During the educational process, respondents were enthusiastic and paid attention to the video being shown.Based on the results of respondent interviews, the video presentation made by researchers for education is very clear and interesting. This is supported by research by Purwono (2018), which states that audio visuals can clarify the presentation and delivery of messages so that they are not too verbalistic (in written or oral form, and in words), because if the information is more abundant and focused in word form -Written and spoken words more quickly make users feel bored and unfocused, overcome limitations of time and sensory power, space, such as: large objects are replaced with reality, film frames, pictures, models or films, play a role in tutorial learning.

Audio-visual-based education about environmental modification for stroke patients was able to increase changes in respondents' behavior, as evidenced in the attitude domainbehavioral categories of 55 respondents before being given education about environmental modificationthere were 5 respondents (9.1%) with negative attitudes, then after being given education about environmental modification there were differences in the attitude domain, all of them became positive attitudes (100%). This is proven again in the answer to the action domain item question number 4 "Did you change the layout of the house according to the sufferer's condition, so that the sufferer was able to carry out activities according to his abilities?", from this question 47 respondents answered "yes". , while only 8 respondents answered "no". The results of these answers can be seen from the educational

background of respondents who were given audio-visual based education, because education is closely related to behavior change.

Based on the research results, the majority of respondents' highest level of education was high school with 25 respondents (45.5%). Education is one of the factors that influences the process of changing the behavior of a person or group of people as well as efforts to mature humans through teaching and training efforts. Education can benefit both stroke patients and their families as care providers by preventing the risk of falls in stroke patients (Farayi et al, 2016).

Based on this research, audio-visual-based environmental modification education on the level of behavior change is useful for preventing the risk of falls for stroke patients, respondents experienced significant changes in behavior. The results of this research are in line with Pramana's reearch (2019), the results of the research state that there is an influence of health education through audio-visual media on changing the behavior of hypertension sufferers in preventing stroke at UPT Kesmas Sukawati II in 2019 with a p value of 0.000.

Bivariate Analysis

The effect of audio-visual-based education about environmental modification on changes in family behavior with stroke patients. The Wilcoxon test results obtained a p value of 0.000<0.5, which means Ha is accepted and Ho is rejected, so it can be concluded that aThere is the influence of audio-visual-based education about environmental modification on changes in the behavior of families with stroke patients. The results of this research are in line with the research of Ajeng A, Zuhrotunida, & Yunita R (2018), the results of the research state that the behavioral variable shows that video educational media has an average increase in behavior change of 0.19321 higher than leaflet media, statistical test results p value 0.021, effective behavior change depends on the quality of the stimulus that communicates with the respondent and acceptance of new behavior through the educational process based on knowledge, awareness and positive attitudes.

Audio-visual-based education about environmental modifications for families of stroke patients can have an impact on overcoming the impacts that can occur from stroke, namely decreased productivity because sufferers experience long-term disabilities (sensomotor disorders). These sensomotor disorders (such as decreased muscle strength, loss of sensation, and decreased ability to coordinate the body) can cause sufferers to become less productive. Sensomotor disorders due to stroke can cause balance problems, loss of coordination or ability to maintain position. This balance disorder can result in loss or decreased function which can make stroke patients vulnerable to falls (Robby et al, 2023).

The risk of falls in stroke patients needs to be prevented, so support is needed to change the behavior of families with stroke patients regarding modifying a good environment for stroke patients, by providing health education. Providing audio-visual based health education is carried out so that families of stroke patients understand, comprehend and are able to act and behave effectively in an effort to prevent the risk of falls for stroke patients. One of the advantages of education using audio visuals is that it is very easy for families to play back educational videos about environmental modification which can be accessed online via YouTube. If health education is not provided, many families will not pay attention to the environmental conditions around stroke patients which can trigger disease complications for

stroke patients. Families of stroke patients focus more on basic care for stroke patients, without paying attention to additional care such as arranging a good environment for the health safety of stroke patients (Natsir, 2020).

The results of this research are in line with the research of Mutrika & Hutahaean (2022), the results of the study stated that there was an increase in scores of 91% after educational interventions regarding preventing the risk of falls from a pre-test score of 11.1 to 21.2 in the post-test score. The results of the analysis show that there is a significant relationship between the pre-test and post-test results (p value = 0.000).

CONCLUSION

Based on the research results, by using computer assistance the results obtained a sig (2-tailed) value for behavioral variables consisting of knowledge, attitude and action domains of 0.000 < 0.5, which means Ha is accepted and Ho is rejected, so it can be It was concluded that there was an influence of audio-visual based education about environmental modification on changes in the behavior of families with stroke patients.

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Original Research

The Effect Of Slow Deep Breathing Relaxation On Reducing Anxiety Levels In Patients With Preoperative Caesarean Section At Ibu Fatmawati Soekarno Surakarta Hospital

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ABSTRACT

Background: *Pre-operative is the first stage in which the patient is prepared before the operation begins. Sectio Cesarea is a surgical procedure by making an incision in the uterine wall through the front wall of the abdomen which aims to deliver the fetus. Sectio Cesarea can cause psychological responses in patients. Anxiety is one of the psychological responses that usually occurs in pre-operative patients. One way to deal with anxiety is by using the Slow Deep Breathing relaxation technique which can increase lung ventilation and blood oxygenation so that it can reduce anxiety.*

Methods: *This study uses a quantitative method with a Pre-experiment design with one group pre-test and post-test design. The sample of this study were pre-operative patients with Sectio Caesarea with anxiety at RSUD Ibu Fatmawati Soekarno Surakarta as many as 35 respondents. The sampling technique was total sampling.Bivariate analysis using Wilcoxon Signed Ranks test.*

Results: *The sig value (2-tailed) 0.001 < 0.5, meaning Ha is accepted and Ho is rejected, there is an effect of Slow Deep Breathing relaxation on reducing the level of anxiety in pre-operative Sectio Caesarea patients at RSUD Ibu Farmawati Soekarno Surakarta.*

Conclusion: *There is an effect of Slow Deep Breathing relaxation on reducing anxiety levels in pre-operative patients with Sectio Caesarea at RSUD Ibu Fatmawati Soekarno Surakarta.*

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Anxiety; Pre-Operative Sectio Caesarea; Slow Deep Breathing.

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INTRODUCTION

Sectio Caesarea is an action by performing surgery or abdominal surgery to remove the fetus from the mother's stomach. The action of artificial labor taken by performing surgery and aiming to reduce pregnancy complications and pregnancy complications is called Sectio Caesarea (Metasari & Sianipar, 2021). Sectio Caesarea is performed for babies with indications of weighing more than 500 grams with an incision in the uterine wall that is still intact (Sirait, 2022). Nowadays, birth using the Sectio Caesarea method has become a global trend (Suhadi & Pratiwi, 2020). Based on data from the World Health Organization (WHO) in 2021, it was recorded that the number of Caesarean section deliveries worldwide had increased by around 7% and is expected to continue to increase every year (Anisa, 2023). The prevalence of Caesarean section in Indonesia is estimated to reach 927,000 out of 4,039,000 deliveries or as many as 927,000 out of 4,039,000 deliveries using Caesarean section (Ministry of Health of the Republic of Indonesia, 2020). Based on data from the Central Java Central Statistics Agency in 2020, cases of Caesarean section deliveries were 32.3%, with indications of KPD (13.4%), preeclampsia (5.14%), and fetal abnormalities (4.40%) (Altiara, 2024). This figure shows that deliveries using the Caesarean section method are increasingly being carried out by mothers giving birth.

Rapidly developing and increasing every year, this action will indeed free mothers from the pain that will be experienced during the labor process. However, mothers who will have a Caesarean delivery will definitely experience surgical stressors that cause increased fear, anxiety, and worry. According to Sari (2020) 90% of preoperative patients are at risk of experiencing anxiety. Anxiety that is not immediately handled properly, quickly, and the more severe the anxiety, it can have an impact on the delay of surgery due to the patient's unpreparedness to undergo surgery (Rohmawati 2022). For patients who are undergoing surgery for the first time, they consider surgery to be something scary because the patient has not previously had experience with the things that will be faced during surgery such as anesthesia, pain, and changes in body shape after surgery (Ulia, 2022). Preoperative anxiety arises because the patient thinks that they will face something that is not certain of the outcome (Sitorus & Wulandari, 2020). Patients who are going to undergo surgery will often ask questions continuously and repeatedly even though their questions have been answered (Agustina, 2019). Efforts are needed to minimize the impact of anxiety, namely pharmacologically and non-pharmacologically (Saputri, 2022). Slow Deep Breathing Relaxation is a simple non-pharmacological relaxation technique that is done by taking a deep breath gently (holding inspiration to the maximum) which aims to reduce muscle tension, boredom, and anxiety in order to increase pulmonary ventilation and increase blood oxygenation (Nurjana & Syamsir, 2023).

Based on research conducted by Widaryanti (2021), anxiety before Slow Deep Breathing relaxation therapy was in the moderate anxiety category with a median pre-test value of 20. After Slow Deep Breathing relaxation therapy, the post-test results showed that the median value dropped to 9.5 with a mild anxiety category. Slow Deep Breathing relaxation is considered capable of reducing anxiety levels. If someone does Slow Deep Breathing relaxation, the body will experience a slowing of the heart rate which causes the person to feel relaxed and calm so that it can reduce anxiety (Andi & Nahwaria, 2021). In 2023, the number of patients with Sectio Caesarea procedures at RSUD Ibu Fatmawati

Soekarno Surakarta was quite high, totaling 205 patients. In April-June 2024, 50 patients gave birth using Sectio Caesarea, so researchers were interested in conducting research on the effect of Slow Deep Breathing relaxation on reducing anxiety levels in pre-operative patients with Sectio Caesarea at RSUD Ibu Fatmawati Soekarno Surakarta.

MATERIALS AND METHOD

Describe the type of Slow Deep Breathing relaxation on anxiety levels in pre-operative patients with Sectio Caesarea at RSUD Ibu Fatmawati Soekarno Surakarta. This type of research uses a pre-experimental design with a one group pre-test and post-test design approach. This research was conducted in October 2024 at RSUD Ibu Fatmawati Soekarno Surakarta in the Mawar ward. The population in this study were pre-operative patients with Sectio Caesarea at RSUD Ibu Fatmawati Soekarno Surakarta in the Mawar ward. The sample size in this study was 35 respondents. The sampling technique used in conducting this research was Non-probability sampling using total sampling or saturated sampling. The inclusion criteria in this study were patients with mild to severe anxiety, patients who had just given birth for the first time undergoing Sectio Caesarea (G1P0A0), patients who had never undergone major surgery or general anesthesia, patients aged 20 to >30 years, cooperative patients and willing to be respondents, patients who did not receive pharmacological therapy for anxiety, patients who did not suffer from serious illnesses such as: hypertension, diabetes mellitus, mental disorders, musculoskeletal, immune, heart, and kidney. Exclusion criteria: patients who experienced a decline in health status during the study, patients who experienced a decline in mental health during the study, patients who withdrew as research subjects or respondents. The instruments used in this study used 3 instruments, namely the Slow Deep Breathing relaxation procedure standard operating procedure sheet. The observation sheet in this study was in the form of demographic data containing the characteristics of the respondents including age, last education, occupation, surgical experience, and anxiety level. The Amsterdam Preoperative Anxiety and Information Scale (APAIS) questionnaire sheet consists of 6 questions, of which 4 questions (1,2,4, and 5) are used to test the level of patient anxiety related to surgical procedures. Questions (3 and 6) are used to test the need for information. In the questionnaire, each item has a value of 1 to 5 on a Likert scale. There are 5 answer choices, namely very inappropriate with a score = 1, inappropriate with a score = 2, uncertain with a score = 3, appropriate with a score = 4, and very appropriate with a score = 5. This research instrument is standard because this questionnaire has previously been tested for validity and reliability to obtain a valid and reliable Indonesian version of the APAIS instrument. Validity Test The validity test of the Indonesian version of the Amsterdam Preoperative Anxiety and Information Scale (APAIS) questionnaire has been tested with a panel discussion of experts. The strong relevance of the 6 items of the content validity coefficient statement for the Indonesian version of APAIS was obtained, namely 6 / (0 + 0 + 0 + 6) = 1.0. In addition, a good correlation was found between the anxiety component statement items, the correlation coefficient of statements 1, 2, 4, and 5 was 0.773-0.868 and statements 3 and 6 were 0.481-0.712. The results of the content validation showed that the APAIS instrument was relevant to representing aspects of Perdana's (2020) preoperative anxiety concept. Observations in this study were conducted by visiting each room or ward 3 hours before surgery. The researcher interviewed respondents

regarding data such as age, education, occupation, and previous Sectio Caesarea surgery experience. The researcher first explained to the respondents about the benefits, objectives, research procedures, and explained how to fill out the questionnaire, and provided informed consent. The researcher measured the patient's anxiety level (pre-test) first, then taught the Slow Deep Breathing relaxation technique for 15 minutes with a frequency of 6x administration. The researcher re-measured the respondent's anxiety level (post-test). The results of the study were then processed using a computer program with bivariate analysis with a non-parametric statistical method using the Wilcoxon Signed Ranks Test.

RESULTS

This study analyzes the effect of Slow Deep Breathing relaxation on reducing anxiety levels in pre-operative patients with Sectio Caesarea. The independent variable in this study is Slow Deep Breathing relaxation, while the dependent variable is the level of anxiety pre-operative Sectio Caesarea.

Respondent Characteristics

Univariate Analysis

1. Age
   The age characteristics of respondents who were given Slow Deep Breathing relaxation to reduce anxiety levels in pre-operative Caesarean Section patients at RSUD Ibu Fatmawati Soekarno Surakarta Hospital are:

Table 1. Frequency Distribution of Respondents Based on Respondents' Age Characteristics at RSUD Ibu Fatmawati Soekarno Surakarta Hospital

Mean	Std. Deviation	Min-Max	95%
22,60	1.988	20-27	21,92 23,28

Based on the analysis results in table 4.1, data shows that the average age of respondents is 22.60, standard deviation 1.988 with the youngest age being 20 years and the oldest age being 27 years.

2. Education and Occupation Level
   Characteristics of the Education Level and Occupation of respondents who were given Slow Deep Breathing relaxation to reduce anxiety levels in pre-operative Sectio Caesarea patients at RSUD Ibu Fatmawati Soekarno Surakarta Hospital are:

Table 2. Frequency Distribution of Respondents Based on Characteristics of Education and Occupation Level of Respondents at RSUD Ibu Fatmawati Soekarno Surakarta Hospital

Katrakteristik Responden	Frekuensi	Persen (%)
Tingkat Pendidikan		
SD	2	3,1
SMP	8	12,3
SMA	15	23,1
Perguruan Tinggi	10	15,4
Total	35	100,0

Pekerjaan		
Ibu Rumah Tangga / Tidak Bekerja	18	27,7
Wiraswasta	5	7,7
PNS	7	10,8
Swasta	5	7,7
Total	35	100,0

Based on table 2, Education level shows that most respondents have a high school education of 15 people (23.1%) followed by a bachelor's degree of 10 people (15.4%). Based on occupation, most respondents are unemployed, 18 people (27.7%) followed by civil servants, 7 people (10.8%).

3. Anxiety Level Before and After Intervention
   Characteristics Before and After Slow Deep Breathing Relaxation Intervention on Reducing Anxiety Levels in Pre-Caesarean Section Patients at Ibu Fatmawati Soekarno Surakarta Hospital are:

Table 3. Frequency Distribution of Respondents' Anxiety Levels Before and After Slow Deep Breathing Relaxation Intervention at Ibu Fatmawati Soekarno Surakarta Hospital

Tingkat Kecemasan	**Sebelum**		**Sesudah**	
	Frekuensi	**%**	**Frekuensi**	**%**
Tidak ada	0	0	5	7,7
Ringan	4	6,2	24	36,9
Sedang	17	26,2	6	17,1
Berat	14	21,5	0	0
Total	35	100,0	35	100,0

Based on table 3, data shows that there was a change in anxiety levels before and after the intervention. As many as 24 people (36.9%) experienced a decrease in anxiety after the intervention, even 5 people (7.7%) experienced complete improvement in anxiety.

Bivariate Analysis

Results of the Wilcoxon Signed Ranks Test on the Effect of Slow Deep Breathing Relaxation on Anxiety Levels in Pre-Caesarean Section Patients at RSUD Ibu Fatmawati Soekarno Surakarta Hospital are :

Table 4. the Effect of Slow Deep Breathing Relaxation on Anxiety Levels in Pre-Caesarean Section Patients at RSUD Ibu Fatmawati Soekarno Surakarta Hospital

Hasil Uji *Wilcoxon*	**N**	**Mean Rank**	**Sum of Ranks**	***P-Value***	***Z***
Negative Ranks	33[a]	17,00	561,00		
Positive Ranks	0[b]	.00	.00	0,001	-5,241
Ties	2[c]				
Total	35				

Table 4 Based on the results of the statistical analysis of the Wilcoxon Signed Rank Test, the p-value obtained was 0.001, thus the p-value $<\alpha$ (0.001 <0.05) then H0 was rejected and Ha was accepted, meaning that there was a significant effect on anxiety before and after the Slow Deep Breathing relaxation intervention was carried out.

DISCUSSION

Univariate Analysis

The results of the study showed that the population of anxiety incidents from 35 respondents was predominantly aged 20-27 years with an average of anxiety occurring most at the age of 22 years. Younger patients tend to experience depression and anxiety more easily than older patients (Husain, 2021). This is in line with Rangkuti's research (2021) on average at the age of 20-25 years in pre-operative Sectio Caesarea patients experienced more anxiety at 44% compared to patients over the age of 25 years. The maturity of a person's age affects their mindset and emotions, because the more mature a person is, the easier it is for someone to respond to situations and overcome the anxiety they experience (Sari, 2023).

The results of the level of education for anxiety were mostly high school graduates, namely 15 respondents (23.1%). In line with Lola's research (2023) the highest level of anxiety was at the high school level, as many as 37.0% or 17 respondents. The higher the level of education, the better the knowledge (Ningsih, 2019). According to Suryana (2023), it needs to be emphasized that it does not mean that someone with low education absolutely has low knowledge, because knowledge is not only obtained from a formal place but can be obtained from the experiences of other people around him. In the study, Rahima (2022) argued that the higher the level of education, the more rational the response will be in facing daily challenges.

The results of the study on the type of work were 27.7% or 18 respondents as housewives or unemployed experienced anxiety. Anxiety about facing the labor process tends to occur more often in mothers with their first pregnancy who are not working (Sadiah & Aprilina, 2021). In line with Ulfa's research (2021), almost all respondents who were housewives (IRT) or unemployed experienced anxiety as many as 158 respondents (77.83%). Mothers who are pregnant while working tend to have low levels of anxiety, because a person can interact with the community and gain additional knowledge, besides that they can also meet their needs during pregnancy and the labor process. According to Sari (2020), patients who are not working must think about medical costs, costs during hospitalization, and costs of care at home after surgery.

The results of the research data on anxiety levels before and after the intervention showed a change in value where there was no anxiety from previously 0 respondents (0%) to 5 respondents (7.7%), mild anxiety 4 respondents (6.2%) to 24 respondents (36.9%), moderate anxiety 17 respondents (26.6%) to 6 respondents (9.2%), and severe anxiety 14 respondents (21.5%) to 0 respondents (0%). Preoperative anxiety arises because the patient thinks that they will face something that is not certain of the outcome (Sitorus & Wulandari, 2020). In Rismawa's study (2019) 42 patients also experienced anxiety stressors before surgery. According to Rahima (2022) preoperative anxiety that arises in patients during the preoperative period is when patients anticipate unknown events that have the potential to cause pain and change body image, as well as increased dependence on other people or family. In line with research conducted by Widaryanti (2021), the level of respondent anxiety was moderate with a median pre-test value of 20, after Slow Deep Breathing it dropped to 9.5 with a mild anxiety category.

Bivariate Analysis

Based on the results of the Wilcoxon Signed Rank Test statistical analysis, the p-value was 0.001 <0.05, which means that H0 is rejected and Ha is accepted, meaning that it can be concluded that there is an effect of Slow Deep Breathing relaxation on reducing the anxiety level of pre-operative Sectio Caesarea patients at RSUD Ibu Farmawati Soekarno Surakarta.The results of this study are in line with the research of Arniyanti & Nahwaria (2021), the results of the study stated that Slow Deep Breathing relaxation can reduce anxiety levels in leukemia children undergoing chemotherapy with an initial anxiety score of 11.88 down to 10.31. There was a difference in the decrease in anxiety level scores of 1.57. The results of the analysis showed that there was a significant relationship between the pre-test and post-test results (p-value 0.001). Someone who does Slow Deep Breathing relaxation will experience a slowing of the heart rate which causes the person to feel relaxed and calm so that it can reduce anxiety (Andi, 2021). Slow Deep Breathing can improve blood circulation, the body's metabolic system and supply oxygen flow to the brain at a balanced level (Aslamiah, 2023). Thus, Slow Deep Breathing relaxation affects anxiety levels. Good and correct Slow Deep Breathing techniques can help mothers reduce pre-operative anxiety levels for Sectio Caesarea.

CONCLUSION

Based on the results of the study using computer assistance, the results of the Sig. (2-tailed) Wilcoxon Signed Ranks Test analysis on the anxiety of respondents who were given Slow Deep Breathing relaxation intervention p = 0.001 <0.5, which means that Ho is rejected and Ha is accepted, so it can be concluded that there is an effect of Slow Deep Breathing relaxation on reducing the level of anxiety of pre-operative Sectio Caesarea patients at RSUD Ibu Farmawati Soekarno Surakarta Hospital.

REFERENCES

Original Research

Early Detection and Emergency Ability of Postpartum Mothers during The Postpartum Period

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ABSTRACT

Background: Reducing maternal mortality and newborn mortality is the target of the Sustainable Development Goals by 2030. The incidence of maternal deaths was 17 consisting of 2 deaths of pregnant women, 2 deaths of maternity mothers and 13 deaths of postpartum mothers. The causes of death include 3 caused by bleeding, 7 caused by pre-eclampsia, 1 caused by sepsis, 3 caused by heart disease and 3 caused by others (embolism, post partum blues and COVID 19 spec). Therefore, early detection is important for postpartum mothers. Purpose. Describe early detection of danger signs in postpartum mothers.

Methods: Descriptive Analytic, that is, researchers try to explore how the phenomenon of the problem of puerperal mothers' danger signs

Results: Early detection ability of postpartum emergencies is the most with Medium ability 19 respondents (37.3%). This condition makes postpartum mothers mostly lack understanding of how early detection of emergencies contained in KIA book. early detection ability of puerperal mass emergency hazards in Bleeding 49%, Lochea 58%, Pre-eclampsy 49%, Fever 59%, Mastitis 38%, Post Partum Blues highest 63.7% and infection by 48%.

Conclusion: Blues highest 63.7% and infection by 48%. Postpartum Mother's Advice Always increase knowledge about early detection of puerperal emergencies.

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INTRODUCTION

Maternal mortality rate (MMR) is one of the targets that has been determined in the 5th goal of the Millennium Development Goals (MDGs) development to reduce maternal mortality by three-quarters in the period 1990-2015. The MDGs ended in 2015 and the World Health Organization (WHO) set a new agenda for the continuation of what had been built in the MDGs by setting Sustainable Development Goals (SDGs), the target to be achieved is to reduce MMR globally to below 70/10,000 live births by 2030 (WHO, 2015).

Mothers and children are family members who need priority in the implementation of health efforts, because mothers and children are vulnerable groups. This is related to the phase of pregnancy, childbirth and puerperium in the mother and the phase of growth and development in the child. This is the reason why the importance of maternal and child health efforts is one of the priorities for health development in Indonesia. Maternal Mortality Rate (MMR) is one of the important indicators in determining the level of public health. Maternal

and Child Health (MCH) is still a health problem in Indonesia (Dinas Kesehatan Provinsi Jawa Tengah, 2019).

Maternal Mortality Rate (MMR) in Central Java Province of 64.18 percent of maternal deaths occurred during puerperium, amounted to 25.72 percent during pregnancy, and amounted to 10.10 percent occurred at the time of delivery. While based on age groups, the highest incidence of maternal death is at the age of 20-34 years by 64.66 percent, then in the age group of >35 years by 31.97 percent and in the age group. The district/city with the highest number of maternal death cases is Brebes Regency with 37 cases, followed by Grobogan with 36 cases, and Banjarnegara with 22 cases. While Klaten Regency occupies the 15th highest maternal death cases from 29 regencies/cities in Central Java (Dinas Kesehatan Provinsi Jawa Tengah, 2019).

Based on the District Health Profile report, the number of maternal deaths in 2020 was 17 deaths. The cause of most maternal deaths is still caused by PEB / Hypertension in pregnancy as many cases, bleeding as many as 3 cases, sepsis as many as 1 case and others as many as 3 cases. The incidence of maternal deaths was 17 consisting of 2 deaths of pregnant women (11.76%), 2 deaths of maternity mothers (11.76%) and 13 postpartum maternal deaths (76.47%). Of the 17 maternal deaths, 3 deaths were caused by hemorrhage, 7 deaths were caused by pre-eclampsia, 1 death was caused by sepsis, 3 deaths were caused by heart disease and 3 deaths were caused by others (embolism, babyblues and COVID 19 spec) (Profil kesehatan Kabupaten Klaten, 2020).

51% of maternal deaths occur within 1 day to 1 year after delivery (Petersen et al., 2019). Recent value-based payment models have focused on moving care upstream and centering intervention on providing incentives to increase adherence to the 6-week postpartum visit. However, these interventions may have missed the mark as many women experience health problems long before the 6-week time point, resulting in increased emergency department visits (Howell et al., 2017).

According to Petersen et al., (2019), 51% of maternal deaths happen between a day to a year following birth. Upstreaming care and putting incentives at the core of the intervention to boost adherence to the 6-week postpartum appointment have been the main goals of recent value-based payment models. These treatments could not have been effective, though, since many women encounter health issues well before the 6-week mark, which raises the number of ER visits (Howell et al., 2017).

A mother's risk of death is highest in the first two days following childbirth. By enabling the early identification of issues that may have a negative impact on mother health, postnatal care provided within the first two days following childbirth can help prevent maternal mortality (Ndugga et al., 2020). The nine months of pregnancy and the delivery procedure are followed by the puerperium, or postpartum, phase. This puberty phase lasts around six weeks. Physical changes, uterine involution and lochea discharge, breastfeeding and breast milk expenditure, changes in other body systems, and psychic alterations are among the physiological and psychological changes that occur during this time (Rinaldy et al., 2021). The puerperium is a period at risk of maternal death, about 60% of maternal deaths occur after childbirth and almost 50% of deaths during the puerperium occur in the first 24 hours after delivery. The causes of maternal death during the puerperium are caused by puerperal complications. The cause of the unknown problem of the danger of the puerperium is the lack of knowledge of

the postpartum mother, so that the postpartum mother does not realize if she experiences danger signs during the puerperium (Kristiningtyas, 2022).

Based on a preliminary study conducted by researchers at the Ceper Health Center, Klaten, there are currently 205 postpartum mothers. The results of the investigation were 1 case of death that occurred in postpartum mothers in 2021 due to preeclampsy and bleeding and there were 21 people hospitalized for several reasons between bleeding, eclampsia, and infection.

Based on the background of the problem and the results of the preliminary study, researchers are interested in conducting a study entitled "Early detection of emergencies in postpartum mothers at the Ceper Health Center, Klaten"

MATERIALS AND METHOD

This type of research uses Descriptive observational. Descriptive observational research method is research conducted with the aim of describing a situation objectively.

The population in this study was all postpartum mothers who were within the scope of the Ceper Health Center, Klaten. The sampling method is a way to determine the sample used in the study. In this study using total sampling where all postpartum maternal patients who met the inclusion and exclusion criteria were sampled. Data from each is analyzed and presented in the form of frequency tables.

RESULTS

Distribusi Frekuensi Tingkat Pendidikan Responden

Table 1. Respondent Characteristics

	Characteristics	**n**	**%**
Education Level			
	Elementary school	5	9.3
	Junior High School	10	19.6
	High School	31	60.8
	Diploma/bachelor	5	9.3
	Total	51	100
Age (years Old)			
	<25	15	29.4
	26-30	22	43,1
	>31	14	27,5
	Total	51	100

Occupation			
	House wife	36	70,6
	Government Officials/ Employee	15	29,4
	Total	51	100
Paritas			
	1st child	20	39,2
	2nd child	20	39,2
	3rd child	7	13,7
	4th child	7	7,8
	Total	51	100
Types of Childbirth			
	Vaginal Labor	41	80,4
	Induced labor/Cesarean Section	10	19,6
	Total	51	100

Table1 shows that the majority education level of respondents were High school, 31 people (60,8 %). Age-wise, most responders were between the ages of 26 and 30.

(43,1 %). Based on occupation was dominated by housewives (70,6%). Based on paritas majority respondents were 1st and 2nd child (39,2% and 39,2%). Based on types of childbirth, the majority respondents were vaginal labor (80,4%).

Table 2. Early detection capability of postpartum emergencies

Early detection capability	**n**	**%**
Low	16	31.3
Medium	19	37.3
High	16	31.3
Total	51	100

Table 2 shows that the frequency distribution according to the highest postpartum emergency detection ability was medium ability, which was 19 respondents or 37.3%.

Table 3. Crosstabulation between Education and Postpartum emergency detection capabilities

Level of Education	Postpartum emergency detection capability			Total
	Low	Medium	High	
Elementary school	4 (80%)	1(20%)	0	5
Junior High School	5(50%)	5 (50%)	0	10
High School	7(22%)	11(35%)	13(43%)	31
Diploma/bachelor	0	2(40%)	3(60%)	5
Total	16	19	16	51

Table 3 shows that of the *crosstabulation* frequency distribution, the largest is elementary school with postpartum emergency detection capabilities as low as 80%.

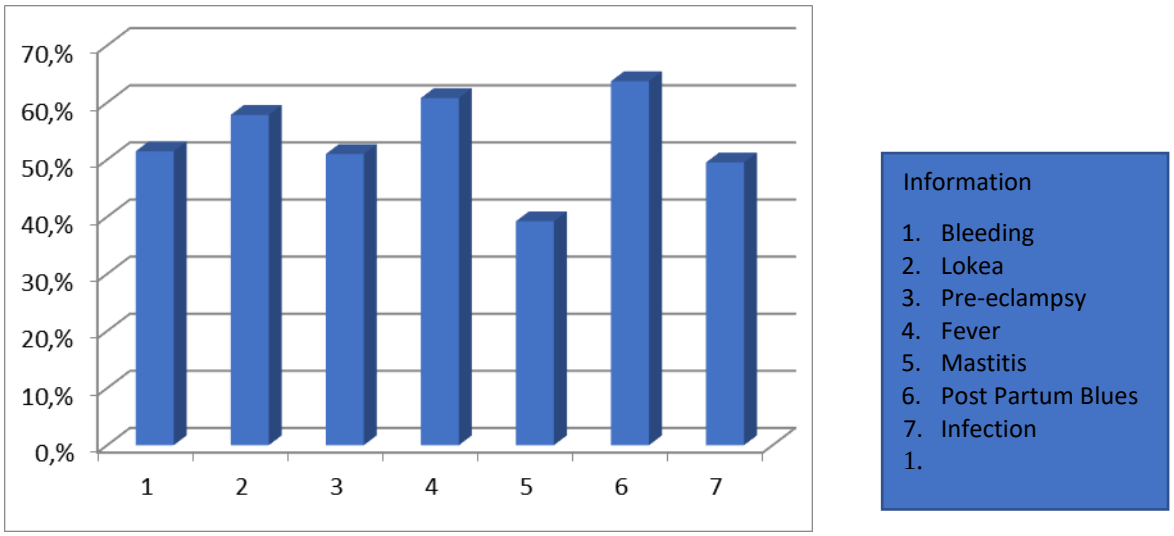

Figure 1. Mother's ability to detect puerperium emergencies of each competency

Figure 1 shows that the ability to detect early danger of puerperal mass emergencies in Hemorrhage 49%, Lochea 58%, Pre-eclampsy 49%, Fever 59%, Mastitis 38%, Post Partum Blues highest 63.7% and infection by 48%.

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DISCUSSION

As a whole, the family may ensure the success of public health by maintaining and improving the health of every member, which is necessary to sustain the postpartum mother's health. In light of this, postpartum moms' support from their families is crucial in helping them focus on their health and be careful about getting examined throughout work (Herawati & Dewi, 2023).

The work of respondents in this study was mostly housewives as much as 70.6%. Non-working mothers have less contact with information sources so that by using KIA book, housewives have more time to read and understand the information in KIA book.

The results showed that the distribution of respondents' frequency according to education level was the largest level of high school education, which was 31 respondents or 60.8%. The level of education of postpartum mothers in this study is very influential on the use of KIA book, where digesting and understanding of health promotion with book media called KIA book is easier. The findings of this study are consistent with the idea that suggests education level has a significant impact on modifying attitudes and adopting healthy lifestyle practices. A person's ability to assimilate information and apply it to daily behavior and lifestyle will be facilitated by a higher education level, whilst a lower education level will further impede one's ability to do so. KIA book are very important, because in the book recorded information that is useful as a guide for pregnant women in caring for their pregnancy until their children are born. In addition, there is a record of pregnancy health development filled in by health workers, namely midwives when the mother checks the pregnancy. The level of education possessed by respondents of this study, shows the ability for respondents to make decisions using the KIA book (Donsu et al., 2016).

The results showed that the ability to detect early danger of puerperal mass emergencies in Post Partum Blues was the highest at 63.7% and the lowest at mastitis problems at 39%. The problem of mastitis detection ability is very low comparable to the results of research on mastitis conducted by Hasanah obtained data that a total of 26 respondents (45.6%) experienced a moderate risk of mastitis, and a number of 31 respondents (54.4%) experienced a low risk of mastitis. Most of the respondents totaling 24 respondents (42.1%) experienced nipple abrasions, 20 respondents (35.1%) experienced breast milk dams, 10 respondents (17.5%) experienced mastitis, and 3 respondents (5.3%) experienced breast duct blockage (Hasanah et al., 2017). If the mother's nipples are in a state of abrasions, it will increase bacterial infections and affect the health of the child. Mothers who experience problems in breastfeeding will have an impact on exclusive breastfeeding of mothers to their babies. One of the factors that affect the success of exclusive breastfeeding is the physical factor of the mother. Physical factors of the mother are related to the condition of the mother who supports breastfeeding or not such as maternal fever, mastitis, and so on.

The quality of postpartum maternal health services can be seen from the time standards where postpartum mothers are recommended to make at least 3 postpartum visits with operational standards including vital signs (temperature, respiration, pulse, and blood pressure) high examination of the fundus uteri; examination of lochia and other vaginal discharge; breast examination and exclusive breastfeeding advice; provision of communication, information, and education (KIE) on postpartum maternal and newborn health, including family planning;

and postpartum family planning services. The purpose of this postpartum visit is to evaluate the health of moms and their infants as well as to identify, prevent, and address any issues that may arise (Reinissa & Indrawati, 2017).

Research on pregnant women about puerperal emergencies such as bleeding, lochea problems, pre-eclampsia, fever, mastitis, post partum blues and infection with the use of Maternal and Child Health (KIA) book, was found mostly at the level of knowledge with moderate categories, this illustrates that respondents have mostly used KIA book, but do not know and understand the entire contents of KIA book. While respondents with good knowledge, because respondents have used KIA book and read and understand the contents of KIA book, and if related to parity, mothers with multipara parity are more experienced and have repeatedly read KIA book compared to primiparous and multipara. The more parity, the more experience and knowledge so that it can give better results and a past experience affects learning (Donsu et al., 2016).

The following variables were found to have an impact on women's postpartum experiences: social support network after birth, perceived readiness for the postpartum period, and access and contact with their medical team. While some women reported having good contact with their providers, many others mentioned barriers brought on by racism and/or provider rotation. Because of inadequate educational approaches, most women felt somewhat unprepared for the postpartum phase. When women saw warning signs that prompted them to visit the emergency room, their lack of information frequently made them fearful. Social support networks had a significant impact on women's capacity to manage the shifting duties of bringing home a new baby and were essential for postpartum contentment.

The solution that can be done to increase the knowledge of postpartum mothers about emergencies is to carry out continuous health promotion through village midwives and health cadres. Conditions like this are very important enough emergency information during the puerperium, understanding the mother enough to lead to better health behavior. Postpartum mothers will understand what to do if there is a puerperal emergency, where to ask for help and when to decide a problem.

CONCLUSION

Early detection ability of postpartum emergencies is the most with Medium ability 19 respondents (37.3%). This condition makes postpartum mothers mostly lack understanding of how early detection of emergencies contained in KIA book. early detection ability of puerperal mass emergency hazards in Bleeding 49%, Lochea 58%, Pre-eclampsy 49%, Fever 59%, Mastitis 38%, Post Partum Blues highest 63.7% and infection by 48%. Postpartum Mother's Advice Always increase knowledge about early detection of puerperal emergencies

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