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The Effectiveness of *Caring-Based Family Psycho education* against Self-Efficacy and Anxiety in Post Stoke Patients during the COVID-19 Pandemic

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Abstract: ***Stroke is the leading cause of death worldwide after cancer and heart disease. Stroke becomes the first cause of death in Indonesia Stroke patients often experience physical, biological, spiritual, and psychosocial changes. Psychosocial problems experienced by stroke patients include self-efficacy, problems of anxiety and depression. The purpose of this study is to determine the Effectiveness of Family Psycho education against Self-Efficacy in Post Stroke Patients During the COVID-19 Pandemic. The research design used is quasi experimental design with pretest-posttest control group design. Data collection will be conducted in June-August 2021 at one of the hospitals in Indonesia. In the study, the total population was 33 respondents. The anxiety variable measuring tools using one from many of the Anxiety questionnaire called HARS and for the Self-Efficacy variable using Strategies Used by Patients to Promote Health (SUPPH). Characteristics of stroke patients are < 55 years 45.5%, men 87.9%, long suffering from stroke < 1 year 57.6%. The results of the analysis of self-efficacy and anxiety differences before and after Caring-based Family Psycho education intervention are p = 0.000 and p = 0.038 can be concluded statistically there is a significant difference between the value of Self-Efficacy and Anxiety before and after Family Psycho education intervention. Researchers recommend the use of caring-based Family Psycho education as a companion therapy for stroke patients.***

Keywords: post stroke, anxiety, self-efficacy, Family Psycho education, caring

1. Introduction

Stroke is one of the leading causes of death in the world among other dangerous diseases such as cancer and heart disease. The incidence of hemorrhagic stroke in developed countries is between 15-30% While, the incidence of stroke in developing countries or Asia for hemorrhagic stroke is about 30% (Davis & Maujean, 2013). World Health Organization, (2019) stated that one in four people are in danger of stroke in their lifetime. Furthermore, 87% of stroke-related deaths, and disability-adjusted life years.70% of strokes occur in low-and middle-income countries and in the last four decades the incidence increase doubles, including in Indonesia (WHO, 2019). The prevalence of stroke in Indonesia is based on the diagnosis of health workers by 7 per mile and diagnosed health workers or symptoms by 12.1 per mile. The problem that needs to be solved is that strokes more often leave a disability than death. This condition does not take into account the psychosocial burden for the family that cares for it. Stroke is an irreversible disease and a progressive decline (Goldszmidt, 2010).

Stroke patients experience dependence on others resulting in biological, psychological, social, spiritual changes. Psychosocial problems experienced in stroke patients include emotional improvement, not accepting the disease, anxiety, problems with self-efficacy and depression, especially during the COVID-19 pandemic. Family Psycho education is a health care program that provides information, education and therapeutic communication. Psycho education is a combination of psychotherapy and the implementation of education. Patients or families with chronic diseases who experience psychosocial problems, families with a lack of knowledge, mental illness can be done Family Psycho education (West, Hewison, Knapp, & House, 2010).

2. Methods

Research design and samples

The research design used is quasi experimental design with One Group Pre-post test Design Data collection will be conducted in June to August 2021 at one of the hospitals in Yogyakarta, Indonesia. The population in this study was the entirety of Stroke patients at one of the hospitals in Yogyakarta. A sample of 33 respondents with Purposive sampling technique with inclusion criteria; 1) Be willing to be a respondent, 2) Post Stroke patients (hemorrhagic and ischemic), 3) Compos mentis awareness, 4) Patients with systole blood pressure intervals: 110-160 mmHg and Diastole: 70-90 mmHg, 5) Muscle strength 2 – 4, 6) Patients aged 20 to 80 years. While the exclusion criteria 1) Aphasia patients, 2) Patients attached to ETT (Endotracheal Tube) 3) Patients have increased ICT 4) Patients with fractures or other diseases in the upper or lower extremities 5) Patients have spinal cord injuries or HNP. Measuring instruments in the respondent observation sheet study with *Family Psycho education Caring-based* intervention, this observation sheet is used to record respondent code, age, gender, stroke history, and occupation. Questionnaires for dependent variables are Self-Efficacy and Anxiety.

Research instrument and data collection

The measuring tool for Self-efficacy, Strategies Used by Patients to Promote Health (SUPPH) consists of 20 questions that have been translated into Indonesian by professional translators. The questionnaire using Strategies Used by Patients to Promote Health (SUPPH) consists of 20 questions: positive behavior 7 statements, stress 10 statements, and decision making consists of 3 statements 1) Very unsure 2) A little sure 3) Sure 4) Very sure 5) Sure at all. Anxiety measurement tool with HARS Questionnaire with 14 questions consists of 14 indicators namely feelings of anxiety, tension, fear, sleep disturbances, impaired

intelligence, feelings of depression, somatic symptoms (muscles), somatic (sensory) symptoms, cardiovascular symptoms, respiratory symptoms, gastrointestinal symptoms, urogenital symptoms, autonomic symptoms, and behavior on the interview using a rating scale namely: 1) None 2) Light 3) Medium 4) Weight 5) Very heavy.

The principles of Ethics in research consist of Autonomy, confidentially, nonmaleficience, beneficence and justice. . This research has qualified the feasibility of research ethics expressed by the Health Research Ethics Commission (KEPK) of Bethesda Hospital Yogyakarta with letter number: No.47/KEPK-RSB/V/2021, published on May 1, 2021.

The stage of implementation of Data Collection: the author introduces self-identity and provides an explanation of the objectives, benefits, procedures and time contracts to respondents, after the respondent understands and does not mind participating in the writing, then asked to sign an informed consent sheet. The Family Psycho education Procedure consists of 5 sessions, each session is carried out 20-40 minutes.1) Session I: Getting to know family health issues, 2) Session 2: Identifying The ability to care for clients 3) Session 3: Practicing the ability to care for stroke patients, 4) Session 4: Health management in the family 5) Session 5: Ability and utilizing health services.

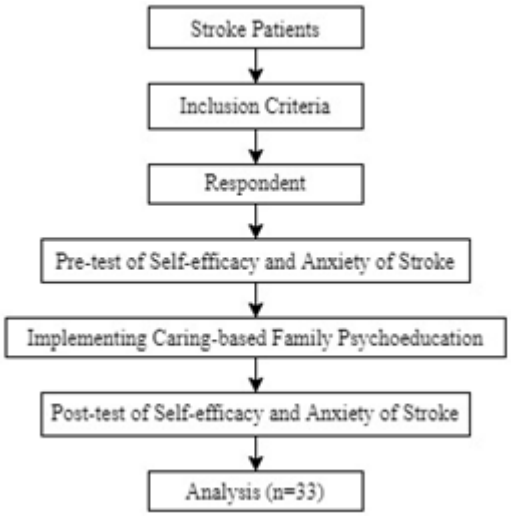

Figure 1: Patient's flow chart

Data analysis

The univariate analysis was utilized to show the distribution of frequency of respondents based on their age, gender, and history of stroke. Before a further analysis with the Wilcoxon test, the data were tested for normality, and the result showed that the self-efficacy score before and after the therapy was not normally distributed. Furthermore, the data were analyzed using the Wilcoxon test to determine the different scores of self-efficacy an Anxiety before and after *Caring-based Family Psycho education* intervention.

Ethical consideration

This study was registered to the research ethics board of the Health Research Ethics Commission Bethesda Hospital, No.47/KEPK-RSB/V/2021, published on May 1, 2021.

3. Results

Characteristics of respondents

Table 1 shows the characteristics of the respondents involved in this study. The majority of respondents were 45 – 64 years old (72, 73 %), male (57.6 %), and had a history of stroke 1-6 months (39 %).

Table 1: Characteristics of respondent based on age, gender and history of stroke (n=33)

Characteristics	Frequency	Percentage (%)
Age		
< 55 years old	15	45.5
55 – 65 years old	8	24.2
66 – 74 years old	7	21.2
> 74 years old	3	9.1
< 55 years old	15	45.5
Gender		
Male	29	87.9
Female	4	12.1
History of Stroke		
≤ 1 years	19	57.6
> 1 years	14	42.4

Primary Data Source (2020)

Self-efficacy and Anxiety distribution

Figure 2 shows the self-efficacy distribution before and after receiving Caring-based Family Psycho education**.** Before receiving *Caring-based Family Psycho education* majority of respondents had low self-efficacy (63, 6%), in contrast after receiving *Caring-based Family Psycho education* majority of respondents had high self-efficacy.

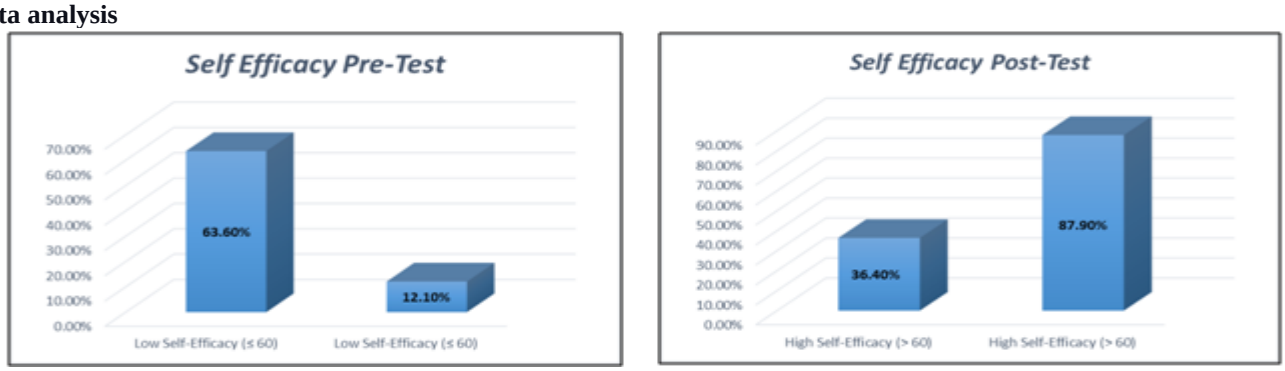

Figure 2: Self-efficacy distribution

Figure 3 shows the Anxiety distribution before and after receiving Caring-based Family Psycho education**.** Before receiving *Caring-based Family Psycho education* majority of respondents had low Anxiety (81, 8%), in contrast after receiving *Caring-based Family Psycho education* majority of respondents had low Anxiety (97%).

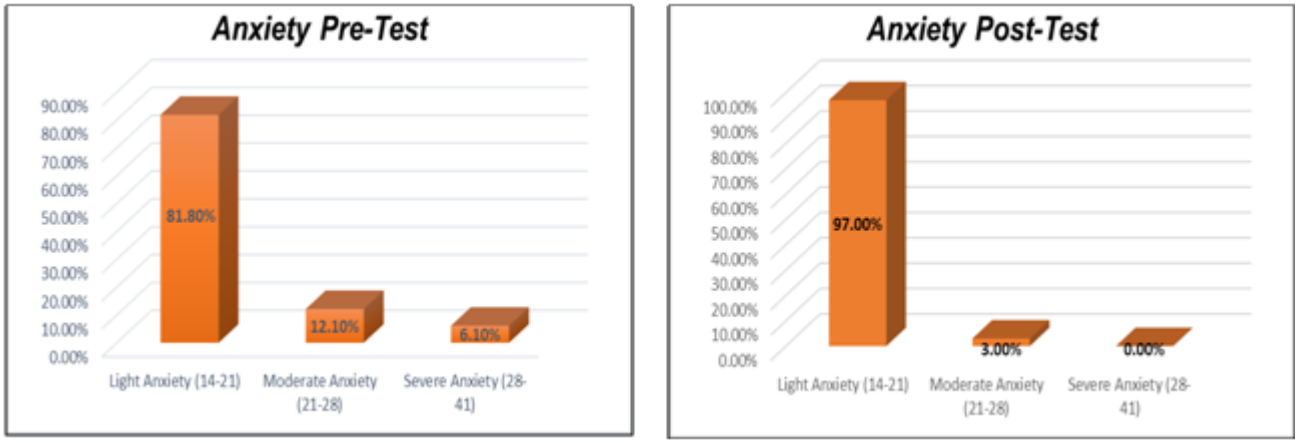

Figure 3: Self-efficacy distribution

Self-efficacy and Anxiety differences

Table 2 shows the effect of *Caring-based Family Psycho education* on the self-efficacy of stroke patients using the Wilcoxon test. There was a significant difference in the self-efficacy of stroke patients before and after receiving *Caring-based Family Psycho education* (p=0.000), indicating that *Caring-based Family Psycho education* increases the self-efficacy of stroke patients.

Table 2: The effect of Caring-based Family Psycho education on Self-Efficacy of Stroke Patients (n = 33)

Variable	Frequency	Percentage (%)	P-*value*
Self-efficacy Pre Intervention			
Low	21	63, 6	0, 000
High	12	36, 4	
Self-efficacy Post Intervention			
Low	4	12, 1	
High	29	87, 9	
Primary Data Source (2021)			

Table 3 shows the effect of *Caring-based Family Psycho education* on the self-efficacy of stroke patients using the Wilcoxon test. There was a significant difference in the self-efficacy of stroke patients before and after receiving *Caring-based Family Psycho education* (p=0.000), indicating that *Caring-based Family Psycho education* increases the self-efficacy of stroke patients.

Table 3: The effect of Caring-based Family Psycho education on Anxiety of Stroke Patients (n = 33)

Variable	Frequency	Percentage (%)	P-value
Anxiety Pre Intervention			
Light Anxiety	27	81.8	0, 000
Moderate Anxiety	4	12.1	
Severe Anxiety	2	6.1	
Anxiety Post Intervention			
Light Anxiety	32	97	
Moderate Anxiety	1	3	
Severe Anxiety	0	0	
Primary Data Source (2021)			

4. Discussion

The results showed the age with the majority of stroke patients was <55 years (45.5%). The incidence of Stroke increases with the age of 50-64 years and over 65 years (Framingham, 2015). The results of this study are supported by research conducted by Rasmaliah, & Hiswani (2012) that out of a total of 118 stroke patients, among them aged ≥ 60 years as many as 64.5% (71 people) and the lowest in the age group of < 40 years and 40-49 years respectively by 1.8% (Krishnamurthi, Ikeda, & Feigin, 2020). The majority of strokes were male at 29 people (87.9%). According to *the American Heart Association (AHA)* in 2015, more than 100, 000 men under 65 suffer a stroke. Men have higher risk factors than women. Other causes in men are more at risk of having a stroke are lifestyles such as smoking, high blood pressure, high cholesterol and diabetes. The majority of long-suffering strokes were < 1 year with a total of 19 people (57.6%). According to Bazzano (2000), in the analysis of logistic regression showed meaningful results from 2 variables namely the number of stroke history *p* value = 0.024, OR = 4, 461 and recurrent *strokes p* value = 0.031, OR = 4, 756, so it can be concluded that the continuity of the history of the first stroke and stroke with repeated attacks is the most dominant independent risk factor of stroke history to stroke events (Bazzano, 2010).

The results of the *Self-Efficacy* statistics test before and after *Family Psycho education* intervention is p = 0.000 can be concluded statistically there is a significant difference between the value of *Self-Efficacy* before and after the intervention of *Family Psycho education*. Stroke patients who have been in treatment for a long time will generally be stable and are in the rehabilitation phase. According to Abraham, humans have certain needs that must be met satisfactorily through homeostatic processes, both physiological and psychological [(9).] In patients who have a stroke, psychosocial disorders such as decreased *self – efficacy* may occur. *Family Psycho education* is a therapy that helps patients adapt physiologically and psychosocially, one of which is to increase *self-efficacy*. The majority of respondents played an active role in the *Family Psycho education* intervention. *Family Psycho education* is a therapy that focuses on interaction in the form of communication, trust and making a joint commitment between the therapist and the patient.

Statistical test results showed a significant difference between the values of anxiety levels before and after the intervention of *Family Psycho education*. The study was

supported by research from Vasilopoulou *et al.*, (2015) which stated that patients suffering from Stoke had a high anxiety level of 47.8%. This study is supported by research by Hmwe, Subramanian, Tan, & Chong (2015), states that patients undergoing rehabilitation show anxiety with a prevalence of 52% (Potter & Perry, 2011). Anxiety and depression are the most common psychological disorders that occur in Stoke. According to the synthesis of researchers, the majority of respondents experienced mild anxiety due to already experiencing the process of adaptation to changes in the patient's lifestyle (Korpershoek & Hafsteinsdóttir, 2011). *Family Psycho education* is a therapy that aims to improve psychology aspect to be more flexible or the ability to undergo changes that happen today better.

Family Psycho education therapy will have a positive impact that affects neurotransmitters that bring changes in the brain, especially the limbic system that have an impact on stress and anxiety. The neurotransmitter at play is *Gamma-Amino Butyric Acid* (GABA) associated with a relaxation response that can lower a person's anxiety levels.

5. Conclusion

This study concluded that *Caring-based Family Psycho education* significantly increased the self-efficacy and Anxiety of stroke patients. In clinical practice, the researchers recommend utilizing *Caring-based Family Psycho education* as a complementary therapy for stroke patients in a hospital rehabilitation unit. For further research, a larger number of respondents should be participated and also the effect of *Caring-based Family Psycho education* on other psychosocial problems of stroke patients.

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