PSYCHOEDUCATION STRATEGY: ACCEPTANCE AND COMMITMENT THERAPY (ACT) TO IMPROVE SELF-EFFICACY OF STROKE PATIENTS

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Submission date: 25-Feb-2021 12:22PM (UTC+0700)
Submission ID: 1517688577
File name: Main_Text_ACT_Research_-_IJNP.docx (68.03K)
Word count: 4421
Character count: 26005

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Abstract

Stroke is the most common cerebrovascular event. Stroke patients often have biological, spiritual, and psychosocial changes. Psychosocial problems experienced in stroke patients including problems with self-efficacy. The purpose of this study was to determine the effect of Acceptance and Commitment Therapy (ACT) on the self-efficacy of stroke patients. This study utilized quantitative and quasi-experimental design without a control group. The study was conducted in a selected hospital rehabilitation unit in Yogyakarta. The respondents were selected via purposive sampling. The self-efficacy was assessed using questionnaires and statistically tested with the Wilcoxon test. Total number of respondents of this study was 33 stroke patients. The characteristic of respondents was mostly age 45 – 64 years old (72.73%), male (57.6%) and, had a history of stroke 1 – 6 months (39 %). Wilcoxon test results showed a computed p-value of 0.000 so that the null hypothesis was rejected. The researhers conclude that ACT is effective *to improve the self-efficacy of stroke patients. The researchers recommend utilizing ACT as a complementary therapy for stroke patients in the hospital rehabilitation unit.*

Keywords: stroke; self-efficacy; ACT; Psychoeducation; rehabilitation

Abstrak

Stroke adalah penyakit serebrovaskular yang paling umum terjadi. Pasien stroke seringkali mengalami perubahan biologis, spiritual, dan psikososial. Masalah psikososial yang dialami pasien stroke termasuk masalah *self-efficacy*. Tujuan penelitian ini adalah untuk mengetahui pengaruh *Acceptance and Commitment Therapy* (ACT) terhadap self-efficacy pasien stroke. Penelitian ini menggunakan desain kuantitatif dan eksperimen semu tanpa kelompok kontrol. Penelitian dilakukan di unit rehabilitasi salah satu rumah sakit di Yogyakarta. Responden dipilih melalui teknik *purposive sampling*. *Self-efficacy* dinilai menggunakan kuesioner dan diuji secara statistik dengan uji Wilcoxon. Jumlah responden penelitian ini adalah 33 pasien stroke. Karakteristik responden sebagian besar berusia 45 - 64 tahun (72,73%), berjenis kelamin laki-laki (57,6%) dan, memiliki riwayat stroke 1 - 6 bulan (39%). Hasil uji Wilcoxon menunjukkan nilai p hitung 0,000 sehingga hipotesis nol ditolak. Peneliti menyimpulkan bahwa ACT efektif untuk meningkatkan *self-efficacy* pasien stroke. Peneliti merekomendasikan pemanfaatan ACT sebagai terapi pendamping bagi pasien stroke di unit rehabilitasi rumah sakit.

Kata kunci: stroke; self-efficacy; ACT; Psikoedukasi; rehabilitasi

INTRODUCTION

Stroke is the most common cerebrovascular event. Worldwide, stroke also known as the second most common cause of death and disability (Krishnamurthi et al., 2020). 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.

The data from the Ministry of Health of the Republic of Indonesia (2018) shows that the prevalence of people with stroke aged above 15 years old in Indonesia has increased to 10.9 percent in 2018. Furthermore, most of stroke patients are over 60 years old. Stroke also cause disability among them. Stroke is a type of disease that requires a long treatment in the treatment process, and could even cause disabilities that can affect a person's physical and psychological condition. In the early stages of a stroke, a patient may experience a difficult situation in adapting to the changes that occur in his life. These changes may affect the level of self-efficacy of these patients.

person's behavior to maintain their health condition can be affected by their self-efficacy. According to Buckworth (2017), self-efficacy is defined as someone's belief in their capability to organize and take an actions that lead to a specific expected outcome. This is important things that could influences the adoption and maintenance of health behavior, especially for people during illness including stroke patients. Nurses play important role in stroke patients rehabilitation and need to provide self-efficacy enhancing program during their recovery program (Korpershoek et al., 2011). One of the psychological therapy that could be done by nurses is Acceptance and Commitment Therapy (ACT).

ACT is an empirically supported psychotherapy therapy that can provide solutions for patients suffering from various mental and physical conditions. ACT can overcome problems such as pain, sadness, disappointment, illness, and anxiety (Dindo et al., 2017). For additional, the purpose of ACT is to he help patients to accept their health condition and experience and to make them commit to change bad behavior to good behavior to prevent further health problem (Widuri, 2012). ACT consists of six principles, there are acceptance, defusion of cognition, being fully present, value, self as a context, and committed action (Ismoyowati, 2018). ACT already proves its effectiveness and great impact on the social, mental problem of stroke patients but researchers have not paid proper attention to it. Many other studies describe the self-efficacy and ACT in the health care area, but the research on analyzing the effect of ACT on the self-efficacy of stroke

patients is rarely done. The purpose of this study was to determine the effect ACT on the stroke patients' self-efficacy.

METHODS

Research design and samples

A pre-post experimental study without a control group was used in this study. This research was conducted in the selected Hospital Rehabilitation Unit in Yogyakarta. The population of this study was 33 stroke patients and purposive sampling technique was utilized following the inclusion criteria: 1) Willing to be respondent in the study, 2) Registered as stroke patients at the selected Hospital Rehabilitation Unit in Yogyakarta, 3) Level of consciousness: Compos Mentis; 4) Aged 20 – 80 years old. Moreover, the exclusion criteria of this study were: 1) patients with aphasia, 2) Increased intracranial pressure, 3) Low hemoglobin, 4) Had spinal cord injury, 5) Had a hearing problem.

Research instrument and data collection

Data collection in this study used one type of questionnaire as a research instrument. The Strategies Used by Patients to Promote Health (SUPPH) was used to measure the stroke patients' self-efficacy. This questionnaire consists of twenty questions: reduction of stress(10 items), decisions making (3 items), and positive behaviors (7 items). The data gathering procedure started when the researcher got a permission letter from the person in charge of the research area where this study was conducted. Prospective respondents who met the criteria are given informed consent. The researcher described the purpose of the study, the role of the respondents, and also the other ethical considerations. The ethical considerations were the respondent's voluntary participation, explanation about the risk and benefit of the study, the right to refuse or withdraw, the guarantee of confidentiality of the information provided, and the consent of the respondent. The respondents gave their consent right after they agreed to be included in this study. The next step was giving the self-efficacy questionnaire to the respondents to be answered by them. The researcher also helped the respondent who has difficulty to write down their answer. The researcher would make sure the self-efficacy questionnaire has fully answered before implementing ACT to the respondents.

Term of ACT was treatment 3 sessions with one session about 15-20 minutes. The first session consists of foster mutual relationships, explain research procedure, data demographic collection, identify conditions the patient currently conforms to the 6 ACT principles. The second consists of train the respondents to be focus on therapy and carry out acceptance therapy. The third session includes; practice ways to cope with bad behavior, assigning personal value using the "Wheel of Live" diagram,

encourage the respondents to commit, and being responsible for that value. After ACT has finished, the self-efficacy questionnaire was given to the respondents again on the next schedule of their therapy. All data were collected in two weeks.

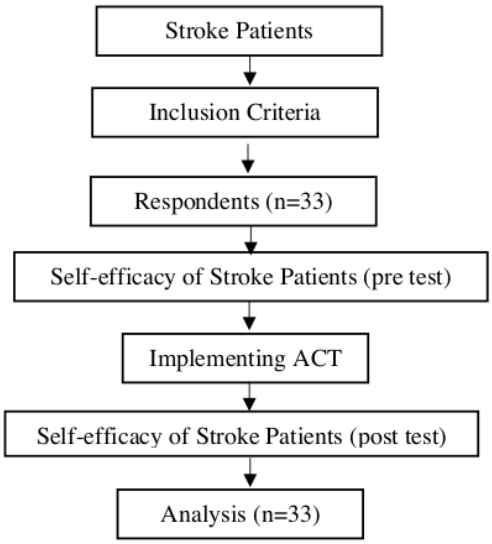

Figure 1. Patients' flow chart

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 before and after ACT intervention.

Ethical consideration

This study was registered to the research ethics board of the Health Research Ethics Commission Bethesda Hospital, No. 71/KEPK-RSB/V/20, published on May 2, 2020.

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 responden based on age, gander and history of stroke (n=33)

Characteristics	Frequency	Presentage (%)
Age		
25 – 44 years old	4	12,12
45 – 64 years old	24	72,73
≥ 65 years old	5	15,15
Gander		
Male	19	57.6
Female	14	42.4
History of Stroke		
1-6 months	13	39
7-12 months	9	27
>1 year	11	33

Primary Data Source (2020)

Self-efficacy distribution

Figure 2 shows the self-efficacy distribution before and after receiving ACT. Before receiving ACT majority of respondents had low self-efficacy (21 respondents), in contrast after receiving ACT majority of respondents had high self-efficacy.

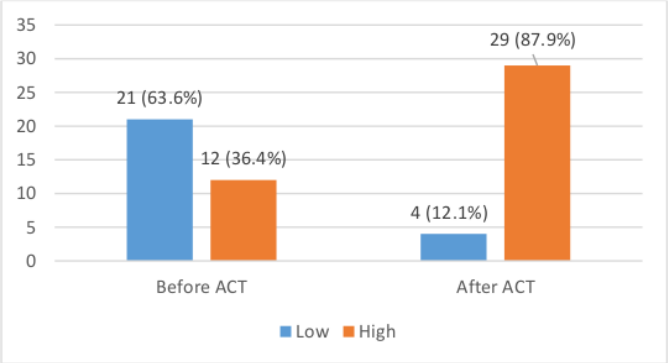

Figure 2. Self-efficacy distribution

Self-efficacy differences

Table 2 shows the effect of ACT 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 ACT (p=0.000), indicating that ACT increases the self-efficacy of stroke patients.

Tabel 2. The effect of ACT on Self-Efficacy of Stroke Patients (n = 33)

Variable	Frequency	Presentage	P- *value*
Self-efficacy Pre Intervention			
Low	21	63,6	
High	12	36,4	
Self-efficacy Post			
Low	4	12,1	
High	29	87,9	0,000

Primary Data Source (2020)

DISCUSSION

The result of this study showed that the majority of respondents were 45 – 64 years old (72.73 %), male (57.6 %), and had a history of stroke 1-6 months (39 %). According to the Ministry of Health of the Republic of Indonesia (2018) data, the prevalence of stroke sufferers increases at the age of 45 years and over. Based on the pathophysiology associated with the deterioration of the vascular system, which increases with age, the higher the chance of having a stroke. In statistics, this factor is 2 times the age of ≥ 55 years. Based on research by Amoako et al., (2014) the prevalence of stroke increases in the economically active or working age group. This study explained that more than a third of patients diagnosed with stroke must stop working. This has quite worrying implications for the socio-economic welfare of individuals and families.

The result of this study also showed that the majority of the respondents are male (57.6 %). The result of this study is in line with the research conducted by Sianturi et al., (2018), the respondents of that research showed that out of 33 respondents with stroke, 57.6% were male and 42.4% were female. According to the American Heart Association (2015) every year there are more than 100,000 men under 65 years of age will suffer a stroke. This means that men are thought to be more at risk than women. Other causes for men who are more at risk of having a stroke are lifestyles such as smoking, high blood pressure, high cholesterol, and diabetes.

The majority of the respondents in this study had a stroke history is 1-6 months (39%). Safruddin, Asfar & Dewi (2018) state that there is a

significant relationship between stroke duration and someone's cognitive function. The duration of suffering from a stroke also affects person in accepting his physical condition, feeling hopeless and useless. A history of recurrent stroke is a risk factor for stroke. About 15% of strokes are caused by having had a previous stroke and only 3% from the first stroke. Stroke cases occurred in men with active smokers and hypertension around 14.2%, a history of the first stroke was 6.9%, and a history of recurrent stroke in smokers was 3.3% (Rambe & Nasution, 2008).

According Bourin (2018), stroke patients might experience several change on types of personality or behavior. These changes are frequent, relatively unknown and unrecognized. These disorders include: fatigue; attention or concentration disorders; motivation and initiative reduction; emotional lability, hypermobility; depression; anxiety; cognitive deterioration, or dementia. Besides, a study conducted by Stone et al (2004) reported that some post-stroke patients had several negative personalities, such as easily feel bored, unhappy, anxiety, depressed, dissatisfied, irritable, unrealistic, ang, withdrawn, useless, and worthless. Furthermore, a study conducted by West et al (2010) concluded that the assessment of psychological distress is concentrated in the first week after stroke. The study also found that functional outcomes are influenced by that result of psychological distress assesement. As one of personality features, self-efficacy plays an important role to eliminate bad health-related behavior in post-stroke patients (Torrisi et al., 2018). Patients with low self-efficacy experienced severe depressed start from the first month till sixth months after the stroke (Korpershoek et al., 2011).

The main result of this study showed that ACT significantly increased the stroke patients' self-efficacy. Based on the result of this study, the researchers assumed ACT has successfully helped respondents accept their health condition, explore positive things in themselves and the respondent's life, and tried to rebuild patient confidence to be able to return to optimal health levels. ACT emphasizes the aspects of acceptance and the values believed by stroke patients, not on rejection or denial of experiences experienced by these patients. Furthermore, the purpose of ACT intervention is as a problem solution to change bad health behaviors and replace it with good behaviors. The patients should do it with full awareness and not under the intimidation of nurses (Hayes et al., 2013).

According to Davis & Maujean (2013), self-efficacy is the key factor that influences the well-being of stroke patients. Those who have high self-efficacy reported a higher level of confidence and ability to undertake daily living activities, such as geting in or out of bed, dressing, taking a shower, toileting, and walking around and doing household. High self-efficacy stroke patients are better prepared to adapt to their changed circumstances and

the body's functioning. A similar study was conducted by Khashouei, Ghorbani & Tabatabaei (2016) on type II diabetes patients using a control group. The results of the study indicate that ACT provides a significant change in the level of self-efficacy in the intervention group. ACT has also been shown to be effective in increasing self-efficacy 4 times in the intervention group compared to the control group of Chronic Renal Failure (CRF) patients in the Hemodialysis Unit (Ismoyowati, 2018).

According to Zhang et al (2018), ACT is the most researched intervention model targeting psychological flexibility. It promotes behavior that aligns with someone's values rather than allowing thought events to dominate regardless of their usefulness. Psychological flexibility in ACT consist of six big components: cognitive defusion, acceptance, self as a context, being fully present, values, and committed action. In the defusion process, the patients would be guided to develop an accurate awareness of their thought and emotions (Larmar et al., 2014). In addition, Snyder et al., (2011) explained that exercise defusion is addressed to reduce the impact unpleasant personal event. Defusion would also work together with acceptance to the impact of dysfunctional rule-governance to allow the patients to reach their desire. Acceptance is defined as somone willingness to experience automatic and bad emotion without trying to control it, either in term of the frequency, form and situational experienced (Zhang et al., 2018). Defusion and experiencing self as a context also work together to enhance patient ability to choose to take action according to their values, discomfort experience or whatever other their personal events (Ruiz, 2010). Moreover, Hoffmann et al., (2019) identified that self-as-context is opposite to self-as-content. Self-as-context is the experience that the patients are not the content of their thoughts, but the one experiencing it. In ACT the patients also should be guided to contact the present moment. The term of the present moment could be defined as a fully awareness of psychological experience and also environmental events in the present (Fung, 2015). These first four aspect discussed above are a kind of mindfulness operational definition (Chin & Hayes, 2017).

Furthermore, Chin dan Hayes (2017) explained two other primary components of ACT, which were values and committed action. Values in ACT is the quality chosen by the patients about what being and doing. Values in ACT is the quality chosen by the patients about what being and doing. This would direct the therapist to train the patient in choosing their value rather than deciding upon values. The last, committed action is defined as patienst ability to developing behaviors patterns that are consistent. These behaviors is filled with values, not actions driven by unworkable internalized rules and schemas, etc (Fung 2015). Moreover, commitments, from an ACT perspective, is defined as moment-to-moment decision to build patterns of meaningful action, it is not a promise of several

actions to be made in the future (Chin & Hayes, 2017). The success of ACT is also influenced by the process that occurs and the role of the therapist as a person who helps patients develop positive values in themselves so that they do not only focus on reducing symptoms due to a disease (Khashouei, Ghorbani & Tabatabaei, 2016). Moreover, Elita, Sholihah, and Sahiel (2017) explained that when ACT was carried out, a patient was not recomend to control and avoid their traumatic personal experiences because these experiences would come and go in thoughts or feelings. The patient would be guided to identify their values and life goals based on their personal experience and making decision to take action consistenly. The patient would not be viewed as an unhelpful person. Instead, a meaningful, loveable, valuable person who could give their impact to family and society (Mohabbat-Bahar et al., 2015).

Apart from being proven to increase self-efficacy, ACT has also shown several positive effects on health. The study conducted by Suhardin, Kusnanto, and Krisnana (2016) concluded that ACT affects the quality of life of cancer patients. Their study found that the respondents stated improved of optimistic feeling and increased the canter patient functional scale. The functional scale consists of: physical functions, role functions, emotional functions, cognitive function, and social functions. In addition, the cancer patients reported of reducing several symptoms after the implementation of ACT, such as fatigue, loss of appetite, pain, insomnia, nausea, and vomiting. ACT also proved its effectiveness to reduce anxiety in the previous studies. In a study conducted by Hasheminasab et al., (2015), the respondents showed a clinically significant change in the severity of their anxiety disorders after a given 10 sessions of ACT. ACT not only effective to help patients who are diagnosed with anxiety disorder, but also shows its benefits to reduce extreme struggle with anxiety. Moreover, through ACT the patients would have better control of the unwanted private events. The result of a study conducted by Saedy et al., (2015) claimed that ACT also effective to lower the level of anxiety in participants treated with both medication and ACT, instead of those who were treated only with medication. ACT helps patients to have better attitudes towards their thought and feeling related to their anxiety states. Through daily practice on mindfulness, the patients would develop their ability to using control solution strategies for anxiety. When the patients begin to accept the feelings and emotions, reducing the negative thought would automatically be done, and better behavior such as an effective action would be more dominant rather than anxious reactions (Heydari et al., 2018).

A study conducted by Maria et al (2020), used TB-HIV patients as their respondents, found that ACT significantly reduce depression in the experimental group, rather than in the control group where ACT did not implement. They also explained that when the depressive person willing to

face and undergo the consequences obtained through ACT, there is a change in the cognition process where appraisal of situations that cause depression is no longer seen as something negative. When the appraisal change because the meaning changed, the level of depression will also decrease. In a literature review study, included 19 intervention studies in the systematic review process, Salari et al., (2020) indicated that ACT has a significant effect on insomnia problem and person sleep quality. Moreover, ACT also shows its effectiveness to promotes health-related lifestyle and behavior changes (LBCs), such as weight management, physical activity, lower emotional distress, and reduce in smoking addictive problem (Lillis & Kendra, 2014) (Maghsoudi et al., 2019) (Yıldız, 2020).

There were two limitation of this study. First, this study could only be done in one research location in order to minimize the number of people included in this research due to Covid-19 pandemic. Second, the short data collection time.

CONCLUSION

This study concluded that ACT significantly increased the self-efficacy of stroke patients. In clinical practice, the researchers recommend utilizing ACT 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 ACT on other psychosocial problems of stroke patients.

ACKNOWLEDGEMENT

The researchers would like to show their gratefulness and appreciation to "the Ministry of Research and Technology/ National Agency for Research and Innovation of the Republic of Indonesia" for funding this study.

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