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Application of Music Therapy to Reduce Anxiety of Non-Hemorrhagic Stroke (NHS) Patients

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Stroke iskemik atau stroke non-hemoragic (SNH) adalah suatu kondisi dimana terjadi sumbatan pembuluh darah yang menyebabkan aliran darah ke otak sebagian atau keseluruhan terhenti. Karya ilmiah akhir ini bertujuan untuk menilai efektifitas terapi musik pada pasien stroke non-hemoragik (SNH) dengan masalah keperawatan ansietas. Metode yang diterapkan dalam penyusunan karya ilmiah akhir ini adalah metode studi kasus tunggal. Subjek dalam studi kasus ini adalah melibatkan satu orang klien dengan kasus stroke non-hemoragik (SNH) dan memiliki masalah ansietas yang sedang menjalani perawatan. Pengumpulan data menggunakan teknik wawancara, observasi dan dokumentasi. Proses asuhan keperawatan kepada klien dilakukan selama 3 hari, dan didapatkan hasil pengkajian yaitu badan kaku sebelah kiri sehingga pasien mengalami kecemasan (ansietas) akibat kondisi yang dialami. Intervensi yang diberikan yaitu reduksi ansietas dipadukan dengan penerapan EBN yaitu terapi musik yang diimplementasikan selama 15 menit selama 1 kali dalam 3 hari. Berdasarkan hasil evaluasi didapatkan bahwa pada hari ketiga masalah keperawatan ansietas sudah teratasi dengan data objektif pasien tampak tenang. Selanjutnya dapat disimpulkan bahwa terapi musik dapat menurunkan tingkat ansietas pada pasien stroke non-hemoragik (SNH). Intervensi terapi musik dapat dimasukan sebagai bagian dari SOP keperawatan atau terapi pendukung.

Application of Music Therapy to Reduce Anxiety of Non-Hemorrhagic Stroke (NHS) Patients

Ischemic stroke or non-hemorrhagic stroke (SNH) is a condition where there is a blockage of blood vessels that causes blood flow to the brain to partially or completely stop. This final scientific work aims to assess the effectiveness of music therapy in non-hemorrhagic stroke (SNH) patients with anxiety nursing problems. The method applied in the preparation of this final scientific work is a single case study method. The subject in this case study involves one client with a case of non-hemorrhagic stroke (SNH) and has an anxiety problem who is undergoing treatment. Data collection using interview techniques, observation and documentation. The nursing care process for clients is carried out for 3 days, and the results of the assessment are obtained, namely the stiff body on the left so that the patient experiences anxiety (anxiety) due to the conditions experienced. The intervention provided is the reduction of anxiety combined with the application of EBN, namely music therapy which is implemented for 15 minutes for 1 time in 3 days. Based on the evaluation results, it was found that on the third day the nursing problem of anxiety had been resolved with objective data the patient looked calm. Furthermore, it can be concluded that music therapy can reduce the level of anxiety in non-hemorrhagic stroke (SNH) patients. Music therapy interventions can be included as part of the nursing SOP or supporting therapy.

Introduction

Stroke is a cerebrovascular disease that occurs due to reduced blood flow to the brain, which is caused by a blockage or narrowing of blood vessels or can also occur due to rupture of blood vessels. Lifestyle changes such as irregular eating, lack of exercise, excessive working hours and fast food consumption are habits that have the potential to trigger strokes. According to *the World Health Organization* (WHO), stroke is a symptom that defines a sudden functional disorder of the brain with signs and symptoms, either focal or global within a period of 24 hours or more. (Agina Widyaswara Suwaryo et al., 2021)

Every year 1.5 million people in the world suffer a stroke. Of these, 5 million died and another 5 million suffered permanent disabilities, which became a burden on families and communities. Stroke is rare in people under the age of 40, if it occurs the main cause is high blood pressure. However, stroke also occurs in about 8% of children with sickle cell disease. High blood pressure and smoking are the most significant risks that can be changed. For every 10 people who die from a stroke, four can be saved if their blood pressure is regulated. Among those under the age of 65, two-fifths of stroke deaths are linked to smoking. The incidence rate of stroke is declining in many developed countries, largely as a result of better control of high blood pressure and reduced levels of smoking habit. However, the absolute number is increasing due to an aging population (WHO, 2024).

According to the Indonesian Ministry of Health (2024), stroke in Indonesia is the main cause of disability and death, which is 11.25 of the total disability and 18.5% of the total deaths. According to the 2023 Health Survey data, the prevalence of stroke in Indonesia reached 8.3% per 1,000 population. Based on the Indonesian Health profile in 2020, the number of stroke cases in Indonesia was recorded to be quite high, namely 1,789,261 Indonesian residents experienced or suffered from stroke. According to data from the Ministry of Health of the Republic of Indonesia (2018), the prevalence of stroke in West Java Province is 11.4%, with an estimated number of 131,846 sufferers. (Rafiudin et al., 2024). Stroke can attack the brain suddenly and develop faster lasting more than 24 hours caused by ischemic or hemorrhagic in the brain so that in these circumstances the oxygen supply to the brain is disrupted and can affect nerve performance in the brain which can lead to a decrease in consciousness. Hemorrhagic stroke shows a worse functional and clinical status than non-hemorrhagic stroke, hemorrhagic

stroke requires longer and more intensive treatment in both acute management and rehabilitation. (Salvadori et al., 2021) (Salvadori et al., 2021)

Stroke symptoms vary depending on the location of the bleeding and the amount of brain tissue affected. Symptoms usually appear suddenly without warning and often occur during activities. Symptoms that often appear and disappear or slowly get worse over time are usually such as changes in the level of consciousness, difficulty speaking, difficulty swallowing, headaches that occur suddenly, loss of coordination, nausea vomiting, seizures, loss of balance, difficulty moving one of the limbs and also weakness on one side of the body . About 75% of them experience physical problems and mental disorders including anxiety which often occurs with a prevalence of between 20% to 60% in stroke cases. The prevalence of anxiety in stroke patients is much higher, which is 6-8 times, anxiety in stroke patients is often not treated optimally. The signs and symptoms of stroke patients who experience anxiety are characterized by restlessness, easy to sad, easily afraid, easily worried, angry, sleepless, difficult to concentrate and feeling useless. Measures to minimize anxiety nursing problems according to the Indonesian Nursing Intervention Standard (SIKI) include anxiety reduction, relaxation therapy, anger control assistance, emotional support, self-hypnosis support, group support, belief support, dementia management, distraction techniques, guided imagination techniques, music therapy, progressive muscle relaxation therapy and art therapy. (Saxony, 2022) (Wulandari et al., 2022) (Murtini et al., 2024)

Music therapy has an effective impact on overcoming anxiety nursing problems, physiologically music therapy can provide a relaxed response and reduce anxiety in patients. Music also stimulates the release of endorphins, the body's hormones that provide a sense of pleasure that plays a role in reducing anxiety. By addressing anxiety issues, the negative impact on quality of life can be reduced, the burden on the family or close people caring for the patient is reduced and the obstacles to motor, cognitive and social functioning are reduced. The phenomenon found in the Stroke Unit Room where the study found stroke patients with anxiety but not many nursing interventions have been carried out. Based on the background description above, the author is interested in taking this case to apply and discuss this case with the title "Application of Music Therapy to Reduce Anxiety of Non-Hemorrhagic Stroke Patients (SNH) in the Stroke Unit Room." (Wulandari et al., 2022) (Murtini et al., 2024)

Method

The method used in this study is a design with *a single instrumental case study* approach. Case studies are carried out by collecting data according to the flow of the nursing process, namely studying, determining nursing diagnosis, preparing intervention plans, implementing nursing actions and evaluation. The population in this case study was Non-Hemorrhagic Stroke (SNH) patients who were treated in the Stroke Unit Room. The sampling technique used *the purposive sampling technique* with a total of 1 research sample of Non-Hemorrhagic Stroke (SNH) patients. The inclusion criteria were stroke patients who experienced anxiety, were willing to become participants and had stable clinical conditions. The exclusion criteria are stroke patients who have decreased consciousness who are hospitalized in the Stroke Unit Room. The research was conducted in February 2025 for 3 days in the Stroke Room of the Gunung Jati Hospital Unit, Cirebon City. Data collection took three ways, namely interviews using nursing care formats, observation and documentation of patients' medical records. Data analysis was carried out descriptively from the beginning of the assessment process and documentation was carried out every day for 3 days to determine the development of the patient's condition. A decrease in anxiety was measured through the patient's observation or verbal response to music therapy.

Research Results

After the assessment was carried out on February 8, 2025, the following patient data was obtained. The patient named Mr. Y, the patient's age is 43 years old, male, high school education, work as a junk collector, the patient has been married but divorced and the patient's address is in Kalijaga Village, RT 08/RW 03 Harjamukti District, Cirebon Regency. The patient was treated at the hospital accompanied by his brother, Mr. M who is 43 years old, male, high school education and works as an employee of the environmental service. In the assessment of health history, data was obtained that the patient had a history of DM and stroke in 2009 for 6 months, the patient had no history of food, drug and weather allergies, the patient never had an operative history. In the current health history assessment, it was found that the patient Mr. Y (43 years old) with a medical diagnosis: Non-Hemorrhagic Stroke (SNH) entered the Stroke Unit Room from the emergency room on February 7, 2025. The patient said that his head was dizzy, the

back of his head and the left body was stiff and could not move since 3 days before entering the hospital. At the time of the assessment on February 8, 2025, it was found that the patient complained of dizziness and the left body was stiff and could not move. In the assessment of family health history, data was obtained that alm. The patient's father had a history of DM disease and heart complications. The patient is the second child of 8 siblings, the patient is married but divorced and has 3 children, 2 female, 1 male.

On the physical examination of Mr. Y patient, the general condition of the patient was found to be weak with composmnetic awareness GCS 15 (E: 4 M:6 V:5), client blood pressure 213/119 mmHg, pulse 98x/min, respiration 20x/min, SPO2 99% and temperature 36 C. BB 80 kg with TB 174 cm. In the respiratory system, a symmetrical chest shape, regular breathing rhythm and no chest retraction were obtained. A study of the nervous system found that there was a sensation of pain felt in the back of the head and the examination of the N1-N12 nerve obtained normal results except for N11 Acoccerius Nerve and the results of the patient experiencing weakness of the left limb with the strength of the left muscle 2 and the strength of the right muscle 5. The study of rest and sleep patterns was obtained from the patient's sleep pattern before getting sick: always experiencing sleep disturbances, every day the patient always slept at 4 a.m. and woke up at 7 a.m. (3 hours), sleep patterns since the patient was still having trouble sleeping. An assessment of the digestive system found that the oral cavity looked dirty, there was no inflammation in the mouth, a distended abdominal shape and normal intestinal noise 20x/minute. In the nutritional pattern, the results of the patient did not experience a change in appetite during illness and before the illness, the study of the urine system obtained the results of the client installing a catheter condom with a urine volume of 1400 ml/24 hours, the musculoskeletal system obtained the results of symmetrical upper and lower extremity and installed a Nacl 20 tpm infusion in the upper left extremity. Activities or activities of patients after illness are always assisted by nurses and families in carrying out activities such as *hygiene* or dressing. In the sensory perception system, the results were obtained that the patient did not experience hearing, smell, and vision impairment. In the psychological assessment of the patient, the patient's emotional status was obtained and he was afraid and anxious that he could not recover as usual and felt helpless because he could not do activities as usual. Social studies found that patients have a poor lifestyle, patients are heavy smokers, can consume 3-4 packs a

day, drink 3-5 cups of coffee a day, have poor sleep habits every day staying up late and sleeping at 4 a.m. Spiritual studies were obtained as a result of patients not being able to perform worship activities five times and could only pray in bed.

Based on these data, the diagnoses that appear in patients include: 1) Anxiety b.d situational crisis; 2) Deficit of self-care b.d weakness; 3) Physical mobility disorders b.d neuromuscular disorders. The description of the nursing outcomes and intervention plans of the primary nursing diagnosis is as follows: Anxiety is related to situational crisis D.0080 with the aim of Action after 24 hours of nursing intervention in 3 days, the level of anxiety decreases (L.09093) with the following outcome criteria: verbalization of worry due to the condition faced decreases, disturbing behavior decreases, tense behavior decreases and sleep patterns improve. Anxiety reduction intervention (I.09314) Observation: Monitor signs of anxiety (verbal and nonverbal). Therapeutic: Use a calm and convincing approach, provide music therapy, choose music you like, position yourself in a comfortable position. Education: Inform factually about diagnosis, treatment, and prognosis. Collaboration: Collaboration in administering anti-anxiety medications, if necessary. Based on the nursing outcomes and intervention plans that have been prepared for the diagnosis of anxiety nursing, interventions implemented in anxiety reduction include: 1) Monitoring signs of anxiety (verbal and nonverbal), 2) Using a calm and convincing approach, 3) Factually informing about diagnosis, treatment, and prognosis combined with *evidence-based nursing* music therapy.

Discussion

The assessment is the initial stage using the nursing process and is a systematic process in collecting data from various source processes, namely patients, families, room nurses, patient status and direct observation results to patients. The assessment conducted by the author on Mr. Y, 43 years old, who was admitted to the hospital on February 7, 2025 and studied on February 08, 2025, obtained data: patients admitted to the hospital with complaints of stiff left body that could not be moved since 3 days before entering the hospital, patients said that their head was dizzy and kleyengan in the back of the head, The patient's family said the patient had a history of Diabetes Mellitus from his father and had a history of stroke since the age of 16, a history of stroke previously occurring for 6 months in 2009. Clients often experience sleep disturbances, every day clients can sleep around 4 am and wake up at 7 am (3 hours), clients are heavy

smokers, every day can consume 1 to 3 packs, drink coffee a day up to 3 to 5 cups. This is supported by research explaining that there are many risk factors for stroke, but many of the risk factors that are often found are hypertension, diabetes mellitus, smoking and hypercholesterolemia. Diabetes can cause non-hemorrhagic strokes caused by the atherosclerosis process. Smoking behavior is one of the risk factors for stroke and cardiovascular disease. According to research, stroke patients often experience signs and symptoms that often appear in stroke patients, namely experiencing movement disorders, disturbances or difficulties when walking due to disturbances in muscle strength and body balance or called immobilization. Yudo Utomo (2022) Agustin et al. (2022)

In the psychological status, the client was scared and anxious that he could not recover as usual and felt helpless because he could not do activities as usual. This is in line with research explaining that stroke is a health problem that has a long-term impact on the recovery process, stroke patients often experience physical limitations and dependence on activities that cause psychological disorders, one of which is anxiety or anxiety. Murtini et al. (2024). Based on the data found from the study, the author raised the diagnosis of nursing priorities for Mr. Y according to SDKI, namely: Anxiety related to situational crisis D.0080. Anxiety is an individual's emotional condition and subjective experience of an object that is unclear and specific due to the anticipation of danger that allows the individual to take action to face the threat (SDKI, 2017). This diagnosis is taken based on the data available in the SDKI study, one of the related clinical conditions of this diagnosis is an acute disease: Stroke. On February 8, 2025, subjective data was obtained on the client, the client said he was afraid and anxious that he would not recover as he had before. Objective data were found at the time of assessment and observation of the client appearing anxious, appearing tense and the client appearing to lie weak in bed. This is because the patient is afraid of the condition of his disease.

According to (PPNI, 2018), after conducting the process of assessing and formulating a nursing diagnosis, the author then sets a plan to overcome the problems found. At the planning stage, the author prepares a nursing action plan in accordance with the priority diagnosis seen, namely anxiety. The author makes goals in planning in accordance with the Indonesian Nursing Output Standards (SLKI), determines interventions in accordance with the Indonesian Nursing Intervention Standards (SIKI) and rationalizes using various literature. In addition to using SIKI

(2018) as a reference in compiling interventions, the author also uses *a systematic review* examined by the title "The Effect of Music Therapy Interventions on Anxiety Levels in Stroke Patients" as a reference in providing music therapy to reduce asthma nursing problems in stroke patients. According to in addition to using pharmacological treatment, reducing anxiety in stroke patients can be done with non-pharmacological treatment, one of the alternatives to non-pharmacological treatment in stroke patients includes therapeutic touch relaxation, Murtini et al. (2024) Haryani et al. (2021) *guided imagery*, hypnosis, *hydrotherapy*, *transcutaneous electrical nerve stimulation* (tens), emotional support and music therapy. The success of music therapy is due to the fact that the application of music therapy goes well and is supported by the patient's cooperative attitude during therapy. The success of this music therapy has a positive impact on reducing the patient's anxiety.

The nursing actions carried out are to monitor signs of anxiety (verbal and nonverbal), create a therapeutic atmosphere to foster trust, understand situations that create anxiety, listen attentively, practice relaxation techniques and provide music therapy. Music therapy is given for 15 minutes for 1 time in 3 days. At the implementation stage, the patient is given a comfortable position, then the patient is asked to close his eyes and breathe in and then exhale slowly so that the patient feels relaxed, then the patient is given music with the type of music used, namely classical instrumentals, the patient listens to music through *a headset* and is given for 15 minutes. According to music therapy it is effective in reducing the symptoms of depression in patients with a variety of different medical diagnoses and ages. Music therapy can be given to patients by various methods, one of which is through the sound of musical instruments and natural sounds. Music therapy is holistic and non-invasive so it is expected that it can be integrated as part of the nursing field to address anxiety issues. Murtini et al. (2024)

The results of the evaluation on February 10, 2025 were obtained On the third day after the anxiety reduction and music therapy measures were carried out, the anxiety nursing problem had been resolved because the patient said that he was no longer anxious and the patient's objective data seemed calm. Listening to music has been shown to improve individual cognitive performance, in individuals with chronic health conditions, music therapy has been shown to improve mood, reduce stress, depression and anxiety. This is because listening to music will make the heart feel comfortable, calm and relaxed. (Murtini et al., 2024). This study only

involved one subject (a single case study) so it cannot be generalized. The duration is also relatively short (3 days) and there are no quantitative measurements such as the Hamilton scale or HARS to measure anxiety levels. Further research is recommended to involve more patients in quasi-experimental or experimental designs, using standard quantitative measures to assess anxiety levels, conducting comparisons of different types of nonpharmacological therapies and evaluating the optimal duration of music therapy and its long-term effects on stroke recovery.

Conclusion

Non-Hemorrhagic Stroke (SNH) is a condition in which a blockage of blood vessels occurs that causes blood flow to the brain to be partially or completely stopped. Nursing care for Non-Hemorrhagic Stroke (SNH) patients begins from studying, determining nursing diagnoses, planning nursing actions, performing nursing actions and evaluating the nursing care that has been given to the patient. The priority diagnosis of care in this case study is anxiety that is carried out by nursing actions in accordance with SIKI and combined with *evidence-based nursing* , namely music therapy. Implementation is carried out in 3 days according to the intervention that has been determined. At the evaluation stage, it was obtained on the third day after nursing action was carried out, nursing problems of anxiety were difficult to overcome. The application (EBN) that was applied showed quite good results, there was a decrease in the level of anxiety.

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