IMPLEMENTATION OF SLOW STROKE BACK MASSAGE TO REDUCE ANXIETY IN PATIENT WITH HEMORRHAGIC STROKE: A CASE STUDY

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ABSTRACT

Degenerative conditions like stroke impact both the elderly and younger individuals, posing physical and psychological challenges. Stroke, ranking second in global causes of death and third in disability, often leads to anxiety. Slow Stroke Back Massage (SSBM) therapy is a non-pharmacological approach addressing anxiety in stroke patients. This case study aimed to describe the process of nursing care incorporating Slow Stroke Back Massage (SSBM) therapy. This case study focuses on providing anxiety nursing care to a 67-year-old patient with hemorrhagic stroke through SSBM therapy. Conducted from July 6 to July 15, 2023, the study utilized evidence-based nursing principles, employing a 3-day SSBM therapy. Anxiety levels were assessed using the State-Trait Anxiety Inventory (STAI) questionnaire, revealing anxiety in the patient. Post-SSBM therapy, significant reductions in anxiety scores were observed, showcasing its potential to alleviate anxiety in stroke patients. This research contributes insights into employing SSBM therapy for anxiety mitigation, aiming to enhance nursing services for individuals dealing with stroke-induced anxiety.

Keywords: Anxiety, Stroke hemorrhagic, Slow Stroke Back Massage

INTRODUCTION

Currently, degenerative illnesses represent the leading global cause of mortality. As per available reports, these conditions are the predominant contributors to worldwide deaths. According to World Health Organization (WHO) (2019), the global incidence of deaths due to degenerative diseases is anticipated to rise steadily. A projection suggests that over two-thirds (70%) of the world’s population will succumb to degenerative diseases. Common examples prevalent in society include coronary heart disease, hypertension, diabetes, stroke, and cancer. Furthermore, degenerative conditions like stroke are increasingly affecting not only the elderly but also younger individuals (Permatasari 2020).

Globally, stroke ranks as the second leading cause of death and the third leading cause of disability. According to WHO data (2018), Annually, there are 13.7 million new cases of stroke, resulting in approximately 5.5 million deaths. Notably, 70% of strokes and 87% of related deaths and disabilities occur in low and middle-income countries.

Based on the results of Indonesian Basic Health Research ([Riset Kesehatan Dasar [Riskesdas]) (2018), the prevalence of non-communicable diseases like cancer, chronic kidney disease, diabetes mellitus, hypertension, and stroke has risen from 7% to 10.9%, affecting an estimated 2,120,362 people. Within this, the incidence of ischemic stroke constitutes approximately 81%, while hemorrhagic stroke accounts for around 19%.

It’s worth noting that the incidence of hemorrhagic stroke falls within the range of 15%-30%, with East Kalimantan Province has the highest stroke incidence rate at 14.7%, followed closely by Yogyakarta with a rate of 14.6%. On the other hand, West Sumatra has a stroke incidence rate of 10.8%. In 2018, the province recorded 8,557 cases of stroke, with the highest number of cases concentrated in Padang City, totaling 1,893
The overall percentage of stroke sufferers in West Sumatra was 0.24% (Sofiatun et al., 2018). Stroke refers to neurological alterations resulting from a disruption in the blood supply to a specific area of the brain (Puspitasari & Oktariani, 2021). Stroke induces disability, manifesting as limb paralysis, speech disorders, and impaired cognitive functions, all stemming from compromised brain function (Yunica et al., 2019). Hemorrhagic strokes, occurring within the brain, are termed intracerebral hemorrhages. Symptoms encompass complete or partial loss of consciousness, nausea, vomiting, headaches, sudden weakness or numbness on one side of the body in the face, legs, or arms, seizures, dizziness, and disorientation (Susilo, 2019).

The physiological changes undergone by stroke survivors can elicit psychosocial responses, encompassing both psychological and social dimensions (Komariah et al., 2022). Conditions like stroke warrant careful attention due to the potential for reoccurrence and more severe outcomes, including death and disability. Such concerns can contribute to anxiety among individuals who have experienced a stroke (Amila et al., 2019). Anxiety is a common psychological reaction observed in both acute-phase stroke patients and those in the post-stroke phase (Amila et al., 2019).

To mitigate anxiety among clients, a preventive approach is essential. This involves employing generalist therapy techniques to manage anxiety, including deep breathing exercises, distraction methods, five-finger hypnosis, spiritual approaches, and, if necessary, medication (Putri & Amalia, 2019). Massage serves as a complementary therapeutic intervention in nursing practice, aiming to alleviate anxiety among individuals (Meidayanti et al., 2023; Normaliyanti et al., 2021).

According to previous research, individuals can experience increased comfort and reduced anxiety through massage therapy, specifically a technique known as Slow Stroke Back Massage (SSBM) (Chen et al., 2013; Lubnna et al., 2003; Patonengan et al., 2023). The Slow Stroke Back Massage (SSBM) technique involves gently rubbing for 3 to 10 minutes, contributing to anxiety reduction. Long, gentle strokes are designed to provide pleasure and comfort to the patient, while shorter, circular strokes tend to be more stimulating (Amila & Sembiring, 2020).

In the observed case on July 5, 2023, the client expressed significant anxiety and fear related to the experienced stroke. Concerns about mortality, aging, unfulfilled responsibilities to her husband, and the absence of children heightened the client's distress, manifesting in physical symptoms such as paleness, trembling voice, and shortness of breath. The State-Trait Anxiety Inventory (STAI) scores of 46 (Y1) and 57 (Y2) indicated a moderate anxiety level.

To address these issues, implementing therapies to alleviate anxiety in stroke patients is crucial within the Indonesian healthcare context. Therefore, this case study aimed to describe the process of nursing care incorporating Slow Stroke Back Massage (SSBM) therapy. This approach aims to provide valuable insights into the application of SSBM therapy as a means of reducing anxiety and improving the overall well-being of stroke patients in the Indonesian health services.

**METHOD**

This study adopts a case study methodology within the framework of the nursing process. The nursing process involves a systematic progression through stages such as assessment, data analysis, formulation of nursing diagnoses, development of a nursing plan, and subsequent implementation and documentation. The sample population for this research is comprised of 67-year-old individuals diagnosed with hemorrhagic stroke.

Conducted as an evidence-based nursing experiment, the research spanned from July 6, 2023, to July 15, 2023. Over this period, Slow Stroke Back Massage (SSBM) therapy was implemented across three days. The assessment of anxiety levels utilized the State-Trait Anxiety Inventory (STAI) questionnaire, incorporating pretest and posttest evaluations for comprehensive analysis.

The State-Trait Anxiety Inventory (STAI) is a psychological assessment tool featuring 40 self-report items rated on a 4-point Likert scale. This
inventory assesses two distinct types of anxiety—state anxiety and trait anxiety—through 20 items dedicated to each category. State anxiety items, such as "I am tense; I am worried" and "I feel calm; I feel secure," capture immediate emotional states, while trait anxiety items, including statements like "I worry too much over something that really doesn't matter" and "I am content; I am a steady person," gauge long-standing anxiety tendencies. Respondents rate each item on a scale ranging from "Almost Never" to "Almost Always," with higher scores indicating elevated anxiety levels. The STAI exhibits robust internal consistency coefficients (ranging from 0.86 to 0.95) and test-retest reliability coefficients (varied between 0.65 and 0.75).

The intervention included Slow Stroke Back Massage (SSBM) therapy, and data were manually processed using Excel. The results indicated a decrease in anxiety scores both before the intervention and after implementing both generalist anxiety measures and SSBM therapy. The SSBM massage, facilitated with baby oil, lasted for 10 minutes. The patient was comfortably seated, with the researcher positioned behind them. An ample amount of baby oil was applied and massaged onto the palms. The technique involved circular motions from the sacrum 2 to cervical 7, circular movements with fingertip support along the same area, triangular motions from sacrum 2 to cervical 7, and concluded with longitudinal strokes.

RESULTS AND DISCUSSION
This study provides nursing care encompasses a comprehensive process involving assessment, data analysis, nursing diagnosis formulation, development of a nursing plan, implementation, evaluation, and documentation.

Case presentation
The assessment conducted on July 5, 2023, involved a 67-year-old client, the head of the family, residing in Kelurahan Pisang on Jl. Wak Ketok, RW 06 RT 02, Kecamatan Pauh, Kota Padang. The client, a retired civil servant for the past 7 years, was diagnosed with hemiparesis sinistra post-hemorrhagic stroke in February 2022 and received a 10-day treatment at Mdjamil Hospital.

As the second child of three siblings, the client lives with her husband in a nuclear dyed family. The family exhibits a democratic communication pattern, with the client having an open attitude towards her husband. The family is currently in the Aging Families stage, signifying the approach of old age for the parents. This comprehensive background information sets the context for understanding the client's current health condition, providing a basis for developing appropriate nursing interventions.

The client, presently undergoing regular monthly check-ups at Semen Padang Hospital, has a history of stroke and high blood pressure. There are no reported chronic diseases or infectious illnesses in other family members, and there is no family history of hereditary diseases. During the assessment, the client expressed feelings of anxiety and worry related to the current illness. These emotions manifest as restlessness, fear, uneasiness, and mental disturbance. The client's concerns revolve around the fear of aging, unfulfilled responsibilities towards the husband due to the absence of children, and an apprehension of death associated with aging.

The client experiences difficulty sleeping at night, attributing it to numbness in the hands resulting from stroke symptoms. Frequent waking up at night is also reported. Physically, the client appears pale and restless during discussions, with a trembling voice and labored breathing, indicating the emotional toll of the illness. These observations provide valuable insights for devising a nursing care plan that addresses both the physical and emotional aspects of the client's condition.

The client also said that both hands felt numb and could not be held. The client also said that he could only carry items that were not too heavy and that it was difficult to carry items with his hands because his hands felt weak and stiff. The client also said that his legs were difficult to walk and felt stiff. The client said he felt anxious about this.

The client expressed a lack of understanding about his illness as the primary cause of anxiety. Limited information provided by doctors and healthcare professionals during hospital check-ups contributed to this uncertainty. The client looks forward to the assistance of nursing students in
overcoming anxiety and gaining insights into his condition.

To quantify anxiety, the researcher utilized the State-Trait Anxiety Inventory (STAI) measuring instrument. The results from the STAI form Y1 questionnaire indicated a score of 46, categorizing the client's anxiety as moderate. Similarly, the STAI form Y2 yielded a score of 57, also falling into the moderate anxiety category. The client acknowledged feeling uncertain about coping with the anxiety stemming from his illness. These findings emphasize the importance of addressing the informational needs and emotional well-being of the client in the nursing care plan.

**Identified Patient Needs**

Based on the previous presentation, the nursing diagnosis for the client includes anxiety, characterized by concerns about the consequences of the condition, restlessness, and difficulty sleeping. The second diagnosis is physical mobility disorders, with complaints of difficulty moving extremities and a decreased range of motion. The third diagnosis is knowledge deficit, characterized by a lack of exposure to information about the disease, as the client expressed not knowing enough about their condition. These diagnoses provide a comprehensive understanding of the client's physical and emotional needs, forming the basis for tailored nursing interventions.

**Tailored Care Strategies**

In response to the patient's needs, nursing action plans have been devised based on the anxiety diagnosis for the client and family. For anxiety, the plan includes guiding the client in overcoming anxiety, providing health education on anxiety, and explaining relaxation techniques such as deep breathing, distraction, 5-finger hypnosis, spiritual approaches, and Slow Stroke Back Massage (SSBM) therapy.

Regarding the second diagnosis of physical mobility disorders, the nursing action plan involves assessing the client's muscle strength and teaching Range of Motion (ROM) techniques. For the third diagnosis of knowledge deficit, the plan includes providing health education, explaining the disease process to both the client and family, discussing the stroke's understanding, causes, signs, and symptoms, as well as outlining proper care and potential consequences if the stroke is not treated appropriately. These nursing interventions aim to address the multifaceted aspects of the client's condition and promote overall well-being.

**Applied Nursing Interventions**

Nursing implementation involves a series of activities where nurses execute planned interventions for each diagnosed condition. The goal is to maintain functional abilities and prevent complications. This phase of nursing care is crucial for translating theoretical plans into practical actions that directly benefit the patient's health and well-being (Friedman, 2010).

The nursing implementation is scheduled to take place from July 6, 2023, to July 15, 2023, spanning 10 days with a total of 8 implementation meetings. The implementation will occur concurrently for both the client and the client's family. The initial implementation, on July 6, 2023, focuses on establishing a relationship of mutual trust with the clients and their families. The objective is to create a safe and comfortable environment for the clients to openly discuss their health concerns during assessments. Actions include delivering a therapeutic greeting, introducing oneself, explaining the purpose of upcoming activities, and mutually agreeing on the topics, times, and locations for subsequent activities and meetings with the client and family. This foundational step is crucial for effective communication and collaborative care throughout the implementation period.

Following the establishment of mutual trust, the student proceeds to assess the client's feelings related to the experienced stroke. The student explores whether the client feels anxious and delves into the specific situations causing anxiety. This assessment helps the client recognize the broader impact of anxiety. The student then educates the client on how to overcome anxiety using deep breathing relaxation techniques. This involves explaining the technique of deep breathing, emphasizing slow inhalation (with maximum breath holding), and demonstrating slow exhalation through the mouth. The anticipated benefits of practicing this technique include pain...
relief, a sense of peace of mind, and a reduction in feelings of anxiety. Ultimately, this activity aims to enhance the client's overall comfort, relaxation, and emotional well-being.

The second stage of implementation, conducted on July 7, 2023, involved offering strategies to alleviate anxiety through distraction relaxation techniques. These techniques involve redirecting an individual’s focus away from anxiety-inducing thoughts. During this session, the student guided the client to engage in activities they enjoy, such as watching TV, using their cell phone, listening to music, gardening, or tending to plants. The client expressed a preference for caring for plants and listening to music as effective means to shift attention away from the anxiety they were experiencing.

The third phase of implementation, conducted on July 9, 2023, involved introducing the 5-finger hypnosis relaxation technique to alleviate the client’s anxiety. The goal was to enhance the client’s comfort and induce a calmer mood. Students explained the technique and practiced it collaboratively with the client. Subsequently, the client was encouraged to independently apply the 5-finger hypnosis technique, with the student emphasizing its use whenever anxiety arises.

The fourth implementation, carried out on July 10, 2023, focused on elucidating how to manage anxiety through a spiritual approach. It was explained that when feeling anxious, the client can draw closer to Allah SWT through activities such as prayer, dhikr (remembrance of God), reading the Quran, and engaging in other spiritual practices. The student highlighted the calming effect of these spiritual acts in reducing anxiety. The client and family conveyed their understanding of how to employ spiritual approaches for anxiety control.

Following the implementation of general anxiety interventions, anxiety levels were reassessed using the STAI questionnaire, revealing a reduction in anxiety scores compared to before the interventions. The STAI form Y1 indicated a decrease from a score of 46 (moderate anxiety) to 43 (moderate anxiety), and for form Y2, the score reduced from 57 (moderate anxiety) to 52 (moderate anxiety). In addition to instructing clients on spiritual approach techniques, this session included health education covering various aspects of stroke, including its understanding, causes, signs and symptoms, complications, treatment methods, and the extended effects of stroke.

The fifth implementation, on July 11, 2023, involved educating clients about overcoming anxiety through Slow Stroke Back Massage (SSBM) therapy. The students assessed the client's knowledge about SSBM therapy, provided positive reinforcement for correct responses, and engaged in a discussion covering the meaning, goals, and benefits of SSBM therapy, as well as its indications and contraindications. Practical instruction on Range of Motion (ROM) movements for both extremities was also included in the educational session.

At the sixth meeting on July 13, 2023, an evaluation of the previously implemented general anxiety interventions, including deep breathing relaxation techniques, distraction techniques, 5-finger hypnosis, and spiritual activities, was conducted. The students assessed whether these techniques were performed properly and provided positive reinforcement to the clients.

Subsequently, the session proceeded with Slow Stroke Back Massage (SSBM) therapy to manage anxiety. The therapy, lasting 3-10 minutes following Standard Operating Procedures (SOP), involved the client being in a prone position with the back exposed. A bath towel was placed over the client’s buttocks, and lotion was applied to the hands. The student then performed circular motions with thumbs on the client’s neck, followed by rubbing down the spine to the waist with both hands. Therapeutic actions continued, including movements near the ears, across the shoulders, and applying gentle pressure towards the waist, all in accordance with the SOP.

The seventh implementation, conducted on July 14, 2023, involved providing the second day of Slow Stroke Back Massage (SSBM) therapy. Following the therapy, the client was given an opportunity to discuss and express how they felt after the SSBM sessions. The eighth implementation, on July 15, 2023, marked the conclusion of the SSBM therapy with the third day
of treatment. An evaluation was carried out to assess the client's feelings of anxiety and any changes perceived after the SSBM therapy interventions. Upon completion of the three-day SSBM therapy, anxiety levels were measured using the STAI anxiety assessment questionnaire. The results indicated a decrease in anxiety, with the STAI form Y1 scoring 35, indicating mild anxiety, and the STAI form Y2 scoring 45, indicating moderate anxiety. This assessment reflects the impact of the SSBM therapy on alleviating the client's anxiety over the course of the intervention.

The measurements of anxiety levels before and after nursing interventions demonstrated a notable decrease in the client's anxiety. Initial measurements, prior to any nursing interventions, using the Y1 form questionnaire yielded a score of 46 (moderate anxiety), and the Y2 form scored 57 (moderate anxiety). Following the implementation of general nursing actions, anxiety levels decreased, with the Y1 form scoring 43 (moderate anxiety) and the Y2 form scoring 52 (moderate anxiety).

In addition to general nursing actions, the researchers implemented Slow Stroke Back Massage (SSBM) therapy to address the client's anxiety. After the completion of SSBM therapy, anxiety levels were re-measured using the STAI questionnaire. The results showed a further decrease in anxiety, with the Y1 form scoring 35 (mild anxiety) and the Y2 form scoring 45 (moderate anxiety). This outcome reflects a significant reduction in the client's anxiety level following the combination of general nursing interventions and targeted SSBM therapy.

**Outcome Assessment**

Evaluation serves to gauge the client's response to the implemented interventions and assess the overall success of the determined care plan. The interventions were provided from July 6, 2023, to July 15, 2023. Evaluation occurred after both the generalist implementation and the implementation of Slow Stroke Back Massage (SSBM) therapy.

Prior to nursing care, the client exhibited a moderate level of anxiety, with an STAI form Y1 score of 46 (moderate anxiety). After the generalist nursing intervention, there was a noticeable decrease in anxiety, with the STAI form Y1 score improving to 43 (moderate anxiety). Following the additional SSBM therapy, the anxiety score further decreased to 35, indicating mild anxiety. This progression in anxiety scores demonstrates positive changes in the client's emotional wellbeing over the course of the nursing care provided during the 8 meetings.

Before receiving nursing care, the client experienced a moderate level of anxiety with an STAI form Y2 score of 57 (moderate anxiety). Following the generalist nursing intervention, there was a decrease in the anxiety score, with the STAI form Y2 score improving to 52 (moderate anxiety). After the implementation of Slow Stroke Back Massage (SSBM) therapy, the anxiety score further decreased to 45, indicating a continued improvement in anxiety levels.

During the initial assessment, the client expressed feelings of anxiety, experiencing restlessness, unease, fear, and a pounding heart. Following nursing intervention, the client reported improved understanding of the anxiety and acquired skills to manage it effectively. The client expressed a sense of calmness, reduced anxiety, and an overall more relaxed state. Additionally, the client demonstrated the ability to articulate situations causing anxiety, identify triggers, and employ various techniques, including deep breathing relaxation, distraction, finger hypnosis, spiritual approaches, and SSBM therapy massage.

The client indicated a preference for deep breathing relaxation techniques, a spiritual approach, and SSBM massage therapy, highlighting their effectiveness in providing calmness and eliminating negative thoughts. The client reported using these techniques when experiencing anxiety. After receiving health education about stroke, the client and family demonstrated understanding of stroke care, the importance of a healthy lifestyle, regular medication intake, and the recognition that thoughts and anxiety can impact blood pressure, potentially leading to recurrent strokes.

**Implication for nursing practice**

This study has important implications for nursing practice, particularly in caring for stroke...
patients dealing with anxiety. The results highlight the need for tailored nursing interventions that address both physical and psychological aspects of post-stroke anxiety. The comprehensive nursing process used, covering assessment, diagnosis, planning, implementation, and evaluation, provides a structured guide for nurses to address individual patient needs systematically.

The identification of anxiety as a common nursing diagnosis in stroke patients emphasizes the need for healthcare providers to prioritize mental health alongside physical recovery. The incorporation of various anxiety reduction strategies, including deep breathing, distraction, hypnosis, spiritual approaches, and the innovative Slow Stroke Back Massage (SSBM) therapy, offers nurses a valuable array of options to customize interventions based on individual preferences.

Additionally, the study underscores the crucial role of health education in nursing practice. Positive outcomes in anxiety reduction and increased knowledge about stroke care emphasize the importance of clear patient education. Nurses can leverage this insight to improve communication skills, ensuring patients and their families receive comprehensive information about the disease, its management, and potential consequences of non-compliance.

The successful integration of SSBM therapy as a nursing intervention introduces a novel approach to anxiety reduction in stroke patients, expanding the toolkit available to nurses for patient-centered care. Recognizing the effectiveness of non-pharmacological interventions allows nurses to contribute to a more holistic and patient-centric approach, promoting overall well-being beyond conventional medical treatments.

CONCLUSION

The conclusion of this study indicates that the nursing care provided to clients with anxiety issues in the Pisang district, through the application of Slow Stroke Back Massage (SSBM) therapy to address anxiety in stroke patients, leads to the inference that there is an impact of slow stroke back massage on reducing anxiety in stroke patients.

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