Music Therapy in Post-Stroke Patient Anxiety Problems: Scoping Review

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ABSTRACT
Disability is the most common problem experienced by patients after stroke because it results in limited ability and dependence on activities and is unable to carry out functions as before, causing psychological, social and spiritual disturbances. One of the most common psychological problems after stroke is anxiety, which if left untreated will have a negative impact on quality of life. One of the interventions to reduce post-stroke anxiety is by using music therapy. This article uses the scoping review method, through a review of articles on music therapy interventions that have been used to reduce anxiety in post-stroke patients. Article searches are accessed through the database: CINAHL, MEDLINE, Academic search ultimate, science direct, and google scholar with a range of search years 2011-2020. Results: Music therapy can be applied to treat psychological problems such as anxiety in post-stroke patients. The results of the review of the article found 3 findings, namely: 1) music genre, 2) duration of music therapy, 3) sessions in music therapy. Music therapy to deal with anxiety problems in post-stroke patients is by paying attention to the music genre, the duration or duration of therapy, and the sessions or stages of music therapy. Music therapy intervention can be carried out by nurses as an independent intervention, which can be applied to both post-stroke patients who are still inpatient and who are undergoing rehabilitation.

Keywords: Music, Anxiety, Stroke

BACKGROUND

Stroke is a global health problem which is the main cause of disability. Stroke is characterized by a persistent neurological deficit that progresses suddenly with the main cause being vascular problems.[1] Post-stroke patients face complex and serious health problems not only in the acute phase but also in the long term or rehabilitation phase and the chronic phase.[2] Disability is the most common problem experienced by patients after a stroke because it results in limited ability and dependence on activities and is unable to carry out functions as before, causing psychological, social and spiritual disturbances.[3,4] One of the most common psychological problems after stroke is anxiety.[5] Anxiety can occur more frequently than other mood disorders after stroke.[6,7] The prevalence of post-stroke anxiety is 6-8 times higher than the prevalence of anxiety in the general population.[8]

Interviews with 5 post-stroke patients who were undergoing outpatient care in Semarang City found that the patient said that every day he felt anxious about the bad things that could happen, such as repeated strokes, more severe symptoms, and changes in the situation. Qualitative research shows that psychological pressure causes post-stroke patients to experience self-loss (patients say they like it when they come back), feel frightened (patients say the stroke occurred without prior warning) and feelings of isolation (patients say their life is very lonely).[9]

Based on interviews with nurses who handle post-stroke patients at the hospital, they said that there were no nursing interventions carried out to deal with anxiety problems carried out in post-stroke patients both in inpatients and on outpatients, and there was no Standard Operating Procedure (SOP) regarding intervention to deal with anxiety especially experienced by post-stroke patients. The nurse said that post-stroke patients who are still being treated in hospital tend to be silent and do not express their feelings. Meanwhile, post-stroke patients who are already outpatient who express feelings of anxiety are treated with medication therapy. However, medication therapy has side effects that may hinder the patient's ability to participate in rehabilitation.[10]

Untreated post-stroke anxiety will have a negative impact on quality of life, as well as increase the burden on the family or the closest people who care for the patient, barriers in motor, cognitive and social functions.[11,12] Prolonged anxiety makes stroke patients longer hospitalized hospital, lack of ability to return to work and has a negative impact on rehabilitation by adding to health problems such as fatigue, headaches, and problems with poor concentration.[13]

The weakness in post-stroke care is that it focuses more on biological (physical) healing, so there is a need for nursing interventions that are also aimed at addressing the patient's psychological problems.[14] Previous studies have stated that music therapy can reduce anxiety levels[10] and even depression in post-stroke patients.[15]

Music therapy is non-invasive holistic so it is hoped that it can be applied as part of the nursing field in dealing with anxiety problems. By overcoming the problem of anxiety means that it has reduced the negative impact on quality of life as well as reduced the burden on the family or the closest people who care for the patient, barriers in motor, cognitive and social functions.[11,12] The aim of this review is to identify music therapy in dealing with anxiety in post stroke patients.

METHODS

This review uses the methodological framework by Arksey and O'Malley in preparing the scoping review. The five stages in this method are: identifying research

questions, identifying relevant articles, selecting appropriate articles, mapping data, then summarizing and reporting data.[16]

Literature Search Procedure

Article searches were conducted on the CINAHL database, MEDLINE, Academic search ultimate, science direct, Google scholar using the keywords music, anxiety and stroke. The articles used are those between the years 2011-2020.

Retrieval data

This scoping review uses an article that uses music therapy as an intervention carried out by nurses in dealing with post-stroke anxiety problems and was published in the last 10 years (2011-2020) in English and in full text. Respondents are post-stroke patients, namely patients who have survived a stroke with a stable general condition, both who are still in inpatient care and who have been outpatient. Non-English articles, editorials, reports and articles in press are excluded. Of the total 2698 articles found, 7 were obtained for analysis.
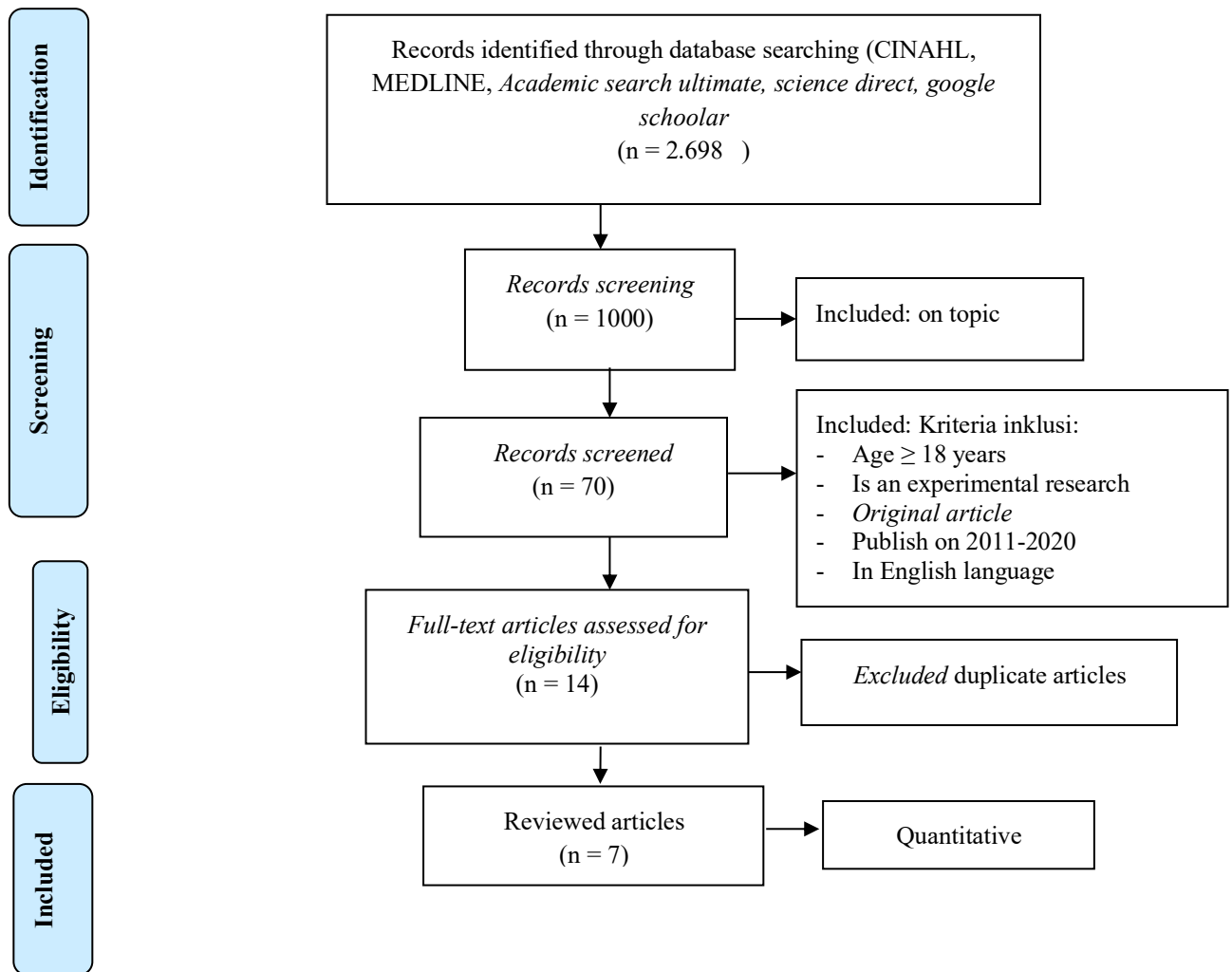
Data Extraction

Diagram PRISMA

Data mapping

Data mapping is done by analyzing the literature that has been collected according to the topic and then the results are presented in the form of a table matrix consisting of: Author, title, methods and data analysis, settings, interventions, measuring tools and results.

RESULTS

There were 10 articles that met the inclusion criteria and were analyzed further. The whole is a quantitative research that is in accordance with the topic, namely using music therapy as an intervention to deal with anxiety problems. The results of the review of the article found 3 findings, namely:

Finding 1: Music genre

There are 2 studies that discuss the genre of music used as therapy to treat anxiety problems in post-stroke patients. 1 study was conducted in the USA, namely by Maureen, et al. In 2017, who said that respondents in the study, namely post-stroke patients who were still inpatient, chose one of the 5 music genres themselves. The 5 music genres are Christian / Gospel music, classical music, rock / classical music, country western, and pop / modern music. The results showed a significant difference in STAI-S (State-Trait Anxiety Inventory-State) scores before and after listening to music in the intervention group, namely P <0.001.[10]

The second study, namely by Esra, et al in 2017 in Turkey, which provided music therapy to post-stroke patients from 0-24 months, in their study 2 music genres were used, namely western music (western music group) and eastern music (eastern music group). , where the respondent determines himself wants to be in the desired musical genre group. Songs included in the prepared western music are: Dañs-Tro Fisel (The Chieftains), The Landlord's Walk (Blair Douglas), Tziganski Tantz (Ibro Lolov), Vecheren Tantz (An Evening Dance), Ibro Lolov, while eastern music is instrumental The Man in the Mosque (Yinon Muallem), instrumental Hüzzam Saz Semaisi (Yinon Muallem). instrumental Changing Moments (Yinon Muallem). Both western and eastern music groups listened to music during the rehabilitation program.[17]

The results showed the BAI (Back Anxiety Inventory) score in the Eastern music group (P value = 0.058) and the Western music group (P value = 0.058). There was no significant difference in BAI scores after being given music intervention. There is a significant difference in the BDI (Back Depression Inventory) score in the eastern and western music groups. (BDI eastern music group P value = 0.017, western music group 0.015).[17]

Finding 2: Duration of music therapy administration

There are 6 studies that discuss the duration or length of time giving music therapy to treat anxiety problems in post-stroke patients. In a study by Dong Soo (2011) in Korea, respondents were patients who were 6 months after stroke and were undergoing rehabilitation treatment. Music therapy in this study was given for 40 minutes and adjusted to the patient's abilities. Music therapy is given 2 times a week and done 8 times. The results showed that the change in the BAI score was not statistically significant, but there was a significant difference in the BDI score, namely P value = 0.048.[15]

Research by Maureen (2017) also states that the length of time for giving music therapy is 1 hour,[10] the same as that done by Esra (2017) also listening to music for 1 hour, namely for 1 rehabilitation session. Music is listened to during training without interfering with the speed of the exercise movement. Alfredo's research (2017) in Italy provides music

therapy for 30 minutes in 3 weeks as much as 20 times of therapy in patients 6-8 weeks after stroke. The results showed that the experimental group experienced a decrease in anxiety and depression (p value = 0.016) .[18]

Luisa (2016) conducted a study in Australia using music therapy in patients who were still being treated in the stroke unit, namely at least 1 hour a day for 6 days in 1 week, and carried out during the first 12 weeks after stroke (≥70 hours) listening to music. When the patient goes home, the patient and family will be trained on how to use an MP3 player to continue therapy at home, by getting phone calls from researchers as a form of follow-up, and getting a notebook to record the patient's feelings after each music therapy. The results showed that at 3 months after stroke, there was no significant mean difference in the treatment group which was significant in the anxiety scores (p value = 0.54).[19] Baylan's (2019) study used music therapy for 1 hour every day for 8 consecutive weeks, but the results were not significant differences in anxiety and depression.[20]

Finding 3: Sessions in music therapy

Dong Soo's research (2017) in Korea clearly states 3 sessions or stages in providing music therapy, namely 1) hello song and sharing events or sharing stories about life experiences accompanied by opening music (lasts for the first 5 minutes), 2) musical activities, that is the respondent listens to music provided by the researcher, when listening to music can be done while singing, writing songs, or expressing songs according to music (lasts 30 minutes), 3) sharing of feelings and goodbye songs, in which respondents tell what they feel after listening to music, to the accompaniment of ending music (lasts 5 minutes).[15]

He Yu's research (2019) in Malaysia did not provide a specific identification of the music used but showed the SAS (Self-rating Anxiety Scale) score of the control group and the intervention group before being given music therapy was p value = 0.225, while the SAS score after TCM intervention is 0.0006, which indicates a significant effect of music therapy on post-stroke anxiety.[21]

DISCUSSION

Music as a nursing intervention has been used in various cultures to change mood, reduce anxiety, and reduce depression, and reduce agitation.[22] When music is used to reduce anxiety, it is important to use music at a tempo or below a resting heart rate (60-80 beats per minute), have fluid melodic movements, pleasant harmony, regular rhythm without sudden changes, and a quality tone.[23] The quality of music according to Seaward, 2007 includes tone, pitch, intensity, timbre, interval and rhythm.[24]

Maureen's (2017) study using 5 different music genres showed that the BAI score after music therapy decreased by an average of 0.2 points in the intervention group but there was no change in the control group. Although the BAI score did not change statistically, there was a significant change in the BDI score in the intervention group, namely p value = 0.048.[10] This can occur because continued anxiety will be a predictor of depression at 6 months post stroke and problems with quality of life.[25] Meanwhile, Esra's research (2017) which used the western music group and the eastern music group resulted in a significant difference in the STAI-S score before and after listening to music in the intervention group, namely P = 0.004.

Each different music genre will combine elements of music differently. Classical music, when compared to other music genres, will have a greater dynamic range, longer duration and better notation precision, jazz has a changing melody and improvisation, while pop music, although varied across eras, usually takes place. about 2 to 5 minutes and often

has a more memorable melody than other music. Chen's research (2018) in the United States found that classical music had a relatively small effect on increasing stress levels compared to other music genres, listening to hip-hop made respondents very uneasy, pop music had little effect on stress, and mood, however , has a greater effect on increasing energy, whereas jazz is able to substantially increase calmness compared to other music genres.[26]

The implementation of music therapy in Indonesia has been carried out by Suhartini in 2008 using gamelan music to reduce anxiety in patients in the intensive care unit Karyadi Hospital, Semarang, Central Java. The results show that music can produce a beneficial physiological response, namely 90% of patients experience a decrease in systolic blood pressure. 95% of patients had a decrease in diastolic blood pressure, 60% had a decrease in respiratory rate, and all patients had a decreased pulse.[24] Patients should be allowed to choose for themselves which music genre they want to increase the likelihood that the patient will enjoy the musical experience they are given. reduce anxiety experienced.[10]

Staum (2000) describes the characteristics of music that can be used in therapy, which is that it is played for at least 15 minutes, is harmonious and not lyrical, mostly consists of low tones, consists of more strings, minimal bass, and has a maximum volume level of 60 decibels.[27] Mauren's (2017) study which discusses the duration of music therapy suggests that groups who listen to music for 1 hour, regardless of which music genre are listened to, have been known to cause much lower levels of anxiety compared to groups who don't listen to music.[10]

Dong Soo's research (2017) which explains about 3 sessions in music therapy is in line with the research of Peri Strongwater (2018) which also states that music therapy should consist of 3 parts, namely the opening part that can be accompanied by songs, the music listening activity section and the closing part that can accompanied by the ending song. Any structured session plan will really help the population to achieve the expected goals. Too little structure can cause a high level of anxiety in the patient, leading to detrimental behavior, but also makes excessive sessions unproductive to implement.[28]

CONCLUSION

This review can answer the research objectives, namely the identification of music therapy that can be used to treat anxiety problems in post-stroke patients, namely by paying attention to the music genre, the duration or duration of therapy, and the sessions or stages of music therapy. Music therapy intervention can be carried out by nurses as an independent intervention, which can be applied to both post-stroke patients who are still inpatient and who are undergoing rehabilitation.

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