Exercise Therapy Joint Mobility (Muslim Prayer Movement/Salat) as a Nursing Intervention for Impaired Physical Mobility in Elderly

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Abstract

Objective: This study aimed to explain the nursing care of the elderly with impaired physical mobility through joint exercise intervention, such as performing the Muslim prayer movement or Salat.

Methods: The quasi-experimental study examined the effect of Muslim prayer movement on elderly with impaired physical mobility. Muslim prayer movements were performed for 5 weeks, once a day, and the materials used were an MP3 player, a stopwatch, and a goniometer.

Results: Evaluation using Berg Balance Test showed an increase in the score from 32 to 47.

Conclusion: This intervention can be performed by the elderly five times a day to maintain joint mobility and balance. The nurses need to provide motivation to the elderly to pray five times a day to maintain their joint function.

Keywords: Elderly, Impaired, Physical Mobility, Prayer

Introduction

People older than 60 years are called elderly. According to the population census data of Badan Pusat Statistik (BPS), Indonesia ranks fourth among Asian countries after India, China, and Japan with regard to the number of elderly people in its population. In the year 2014, the elderly population in Indonesia reached 20.24 million, which was 8.03% of the total Indonesian population in that year. The population census data of BPS in 2010 revealed that 157,405 people out of the total population of East Jakarta (2,791,072), were 60 years and older. The increasing number of elderly people in Indonesia may lead to various health problems in many aspects physically, psychosocially, economically, and spiritually. Therefore, it is necessary to improve the health services for the elderly.

The most common diseases prevalent in the elderly in Indonesia are hypertension, arthritis, and stroke. Based on the study conducted by Putri at Sasana Tresna Werdha Ciracas Budi Mulia, 50% and 41.2% of the elderly suffer from hypertension and arthritis, respectively. Data from the National Institute of Health revealed that an estimated 12.4 million (33.6%) of elderly aged over 65 years suffer from osteoarthritis, which limits their physical mobility.

Therapy for elderly with osteoarthritis can include physical exercises which aim to increase strength and flexibility of joints, reduce joint pain, and help overcome fatigue. Among the Muslim elderly, the
Muslim prayer movement or Salat can be performed as a physical exercise 6. When correctly performed with proper postures, the Salat can be beneficial in improving spiritual well-being and health along with mental and physical health. It can also help in increasing muscle strength, joint mobility, and blood circulation. This physical activity in the form of a prayer is performed 5 times a day for a duration of approximately 8–15 min.

Muslims are a majority in Indonesia. Many Muslim people, including the elderly, do not perform the prayer movement at all, or perform it with incorrect movements or postures. Therefore, the health benefits of Salat have not been experienced by the elderly, especially those who complain of joint pains like those in osteoarthritis. Therefore, the authors have suggested an intervention using the prayer movement as a form of physical exercise in the elderly with impaired physical mobility at Panti Sosial Tresna Werdha Budi Mulia 1 Ciracas.

Methods

Joint mobility exercises with Muslim prayer movements or Salat were used as nursing interventions. Stopwatch, mobile phone containing MP3 guidance fajr prayer (two rak’ah with a duration of 4 min 25 sec), prayer rugs (mattress for lying flat on the ground for salat), goniometer, chair, and walking aids were used.

In the first week, participants with impaired physical mobility were observed and assessed. The author built trusting relationships, conducted physical examination reviews and assessments using a special format for elderly clients, such as Berg Balance Test (BBT). The gait of the participants while performing activities including prayer movements were observed. Based on the author’s observations for 5 days, the participants performed daily prayers 2–3 times a day. Participants determined the prayer times after hearing the prayer calls in their rooms, which were close to the mosque. Based on the observations and interviews, the participants expressed a desire to perform prayer activities. However, they required motivation because their weaknesses and limited physical mobilities made it difficult for them to perform daily activities as well as joint mobility exercises. Therefore, to improve and maintain joint mobility, the authors motivated the participants to perform the exercises and assessed the participants’s level of motivation.

Pain levels were assessed before performing joint mobility exercises with prayer movements. Participants did not feel pain while sitting or when their legs were bent. In addition, joint movement limitations were evaluated using a goniometer, and the effect of limited movements on joint function was assessed by observing the participant’s ability to perform the prayer and the time required by the participant to perform the prayer independently, either in a sitting or standing position.

The assessment was performed for the duration of two rak’ah prayers performed by the participants in a sitting position for approximately 4–5 min, and in a standing position for approximately 7–8 min. The standing position was assessed for a comparatively longer duration of time because the participants had difficulty in performing the prayer movements while sitting or
while lying flat on the ground. The BBT score was assessed and determined to be 32 before the nursing intervention. Joint mobility exercises were performed for 5 weeks, once a day, using the MP3 prayer guides. In the last week of training, the participants were able to do one set of the prayer movement exercise. BBT was assessed after the intervention, and an improvement in joint mobility was indicated.

**Results**

The BBT score was 47 at the time of final evaluation of the intervention.

<table>
<thead>
<tr>
<th>Instruction movement</th>
<th>Score before exercise</th>
<th>Score after exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sit to stand</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Stand without help</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Sit back without back support, but feet as a pedestal on the floor</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Stand to sit</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Moving from chair to chair</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Stand up unaided with closed eyes</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Stand up unassisted with the feet</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Reach forward by reaching out when standing</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Take object from the floor from the standing position</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Looking behind right shoulder and left when standing</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Spin 360°</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Placing legs alternately on a footing without help</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Stand unaided with one foot in front of the other</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

| Total | 32 | 47 |

In the fifth week, the participants experienced an increase in BBT scores, and they were able to perform the prayer movement in a sitting and standing position for two rak‘ahs. There was good coordination in the participants’ movements, and they were able to memorize the movements after reading the verses of the Quran and as read by the priest. In a standing position, the participants were able to bow at an angle of 85° and perform two rak‘ah prayers completely including standing, bowing, prostrating, and sitting tahiyat at the end. The participants performed the prayer movement slowly by independently reciting the verses of the Quran without using the imam’s MP3 guide. The participants performed coordinated movements slowly and took approximately 7 min to perform a set of two rak‘ah prayers.

**Discussion**

Nursing interventions in elderly with limited physical mobility can include joint mobility exercises, balance exercises, and muscle strength training in accordance with standards established in the Nursing Interventions Classification 2013. Exercise therapy for joint mobility can be performed with active and passive body movements to improve or maintain joint flexibility. These activities can determine the limits of joint movement and the effects of these limits on joint function and determine the level of patient motivation required to improve or maintain joint movement. Nurses can monitor the location and extent of pain during the activity and assist the patient in the exercises, including prayer movements. A prayer movement if correctly performed with the right postures can help in rehabilitating, preventing, and treating several diseases such as osteoarthritis.

A prayer movement can enable the stretching of various muscles and nerves, providing constant physical therapy in all joints, providing protection against arthritis, and reducing back pain. In addition, prayer movements can help in maintaining body balance in a way similar to yoga and tai chi exercises. Prayer includes spiritual meditation, and physical movement can improve
balance and flexibility of joints and maintain lower extremity performance. Regular performance of Salat, which includes a series of postures, movements, and recitation of Quranic verses, provides both physical and psychological benefits. Joint exercises are a good way of inducing oil production and nourishing the cartilage and produced lubricants help facilitate physical mobility.

**Conclusion**

Data analysis on elderly patients revealed that impaired physical mobility is the main problem. Nursing intervention performed for 5 weeks showed an improvement in joint mobility among elderly participants. The author performed nursing intervention through joint exercise using Muslim prayer movement Salat for 5 weeks, once a day, i.e., for a total of 30 sessions. The BBT score increased from the initial score of 32 to 47. This suggests improvement in balance, ambulation, and mobility of the joints among elderly with impaired physical mobility. Salat can be performed by the elderly to maintain health. In addition, Salat can improve physical function and provide spiritual support. Nurses can provide motivation and support to the elderly in nursing homes by assisting in prayers 5 times a week to maintain joint function.

**References**