



Original Article

Effects of Salah Postures on Balance in Geriatric Population; A Descriptive Study

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ABSTRACT

Background: Salah (performing namaz) by Muslims has 119 postures which are performed in one day and these postures require a stable balance to be maintained. Postures involved in Salah aid in the rehabilitation process in patients with neurological deficits and musculoskeletal impairments and have a good impact on the human brain as they aid in the activation of the peripheral nervous system and provide relaxation. **Objective:** To determine the effects of the postures of Salah on balance in the Geriatric Population. Moreover to focus on therapeutic benefits observed with performing various postures of Salah. **Methods:** Written and informed consent was taken from all the participants. Data was collected by employing a questionnaire that was distributed among the participants and was filled and then participants were tested for balance performance and were checked whether performing Salah had a significant role in maintaining balance or not. Participants were asked about their regularity of performing Salah, the regularity of their Salah, position of performing Salah, the presence of feelings of dizziness or any other symptoms by changing Salah postures and feelings of any difficulty in offering prayers. The Berg Balance Scale was employed for scoring balance. The p-value of 0.05 was considered significant. The Chi-Square test was used to determine the association between various variables involved in this current. Results are represented in the form of percentage tables, bar graphs and pie charts. **Results:** The results of our study showed us that there was statistically significant improved balance in the people who perform regular Salah and practice Salah postures correctly. 59.3% were females and 40.7% were male recruited in this study. The mean Berg Balance score was found to be 45.6 out of 56±11.7. **Conclusion:** This current study concluded a significant association between Salah posture and balance among elderly people There is a significant association between the mean of Berg balance score and the frequency of performing Salah per day by the participants. This study concludes that regular practice of Salah postures might aid in maintaining balance and aid in maintaining a good posture.

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INTRODUCTION

Salah is an Arabic word which has been known for prayers which are offered by Muslim worshippers and is also known as the 2nd pillar of the Islamic faith. The numerous aspects of the salah ritual include bowing, standing, prostration and sitting. Before the Muslims start performing the salah, the worshippers are required to brush their teeth, wash their oral and nasal cavities, and face, and raise their hands to their elbows and their feet up to their ankles. All these types of self-care activities are performed regularly and routinely by able-bodied Muslims, but they could become an extraordinary challenge for the elderly population who might also have cognitive, motor or sensory impairments and disabilities.^{1,2} The Muslim worshippers are known to wear loose garments while performing their prayers, which are usually performed in a calm and quiet environment which aids them in concentrating the mind of the person performing the salah. This kind of activity which allows the mind to concentrate has a tranquilizing effect and is very much different from conventional meditation. Salah has been known as a physical as well as a spiritual act which involves obedience and submission to Allah Almighty. This act of praying salah is obligatory for the entire Muslim ummah.³

The major objective of our current study is to focus and emphasize on determining the positive effects of salah and its various postures on balance especially focusing on the elderly population. In the elderly population, the frequency and reoccurrence of falling are very high and suffering from balance disorders is one of the high-risk factors. The falling incidents might result in numerous drastic episodes. Due to fear of falling, elderly people tend to be more immobile, staying in a fixed position, and staying indoors hence, their physical activities are observed to be reduced. One of the

religious activities that is performed by Muslims is salah. Salah is a form of slow and temperate exercise.⁴ Our current study aims to examine the influence of performing regular salah on balance. Over the past three decades, there has been a constant increase in medical interest considering body medicine and mind.⁵

All the religions of the world have been known to have always been beneficial guides to approaching both psychological maladies and physiological illnesses. A study conducted by researchers at the Mayo Clinic reviewed three hundred and fifty studies which examined the influence and impact of religion on the physical and mental health of people and eight hundred and fifty studies investigated the influence of religion solely on mental health. Numerous studies have shown that religious involvement and spirituality have been associated with improved health outcomes, which include greater longevity, health-related quality of life, coping skills, reduced anxiety, depression and suicidal rate. They concluded that religion and performing religious rituals and prayers promote illness prevention, coping with illnesses and improved recovery.⁶

Our current study is trying to prove this conclusion with more authentic evidence focusing on the effects of Muslim salah prayers on balance in the elderly population. Numerous recently conducted studies determined and explored the association between religious practices, spirituality and health. Various studies proved that religious commitment and spirituality are generally linked with better health outcomes. All over the world, millions of Muslims perform salah (prayers) regularly five times a day. Salah is not only a physical activity but it involves recitations of various Quranic verses and performing various postural positions. A large number of studies proved that Salah does

have positive effects on the health status of the person performing it regularly.⁷ One of the major functions of rehabilitation is to provide the patient with the proper therapy that aids in improving the physical activities of disabled and impaired people through improvement in the strength of their muscles. It is always recommended to the rehabilitation team that they should take heed of the mental well-being and social of such patients and, the elderly population. When various aspects of salah are studied, it shows improvement in their heart, memory, concentration, spine and cognitive functions. The entire body gets benefits from the combined beneficial effects of various postures of salah. Our current study is focusing on its positive effects on Balance. Performing regular salah aids in the musculoskeletal and neurological rehabilitation process.⁸ Our current study will add more authentic and reliable evidence to the literature proving the positive effects of performing salah on balance in an elderly population. Very little work has been done on this topic focusing on the Pakistani population. Pakistan is a Muslim country hence our current study will prove the benefits of salah on balance and healthy influences of performing regular salah on the Pakistani elderly population.

METHODS

The data for this descriptive study was collected from Chaudhry Muhammad Akram Teaching and Research Hospital. This included the elderly population both males and females aged 41 to 56 years who were asked whether they performed regularly five times a day salah.⁷ The sample size of our study was calculated to be 27. Sample selection was done by employing a simple random sampling technique. The inclusion criteria of this study were set to be a Muslim population both males and females, who perform regular salah 5 times a day and the

age range for our study was set to be 41 to 56 years. The sample size of our current study was calculated using the formula given below:

$$N = \frac{\sigma^2(z_{1-\beta} + z_{1-\alpha/2})^2}{(\mu_0 - \mu_1)^2}$$

$$N = \frac{(5.7^2)(1.64 + 1.96)^2}{(37.62 - 41.57)^2}$$

$$N = 27$$

μ_0 = population mean
 μ_1 = mean of study population
 N = sample size of study population
 σ = variance of study population
 α = probability of type I error (usually 0.05)
 β = probability of type II error (usually 0.2)
 z = critical Z value for a given α or β

All non-Muslims, those Muslims who agreed not to perform regular 5 times a day Allah and Muslims of age range below 41 and above 56 years were excluded from this study. Muslims who had congenital postural deformity were also excluded from our study.⁹

Twenty-seven elderly people fulfilled the inclusion criteria of our study and they were selected by the researchers who conducted this study. Written and informed consent was taken from all the participants recruited in this study. The informed consent form was in Urdu as well as in English and it included the purpose, objective and goal of our current study. It also stated that the collected data will remain confidential and will only be used under the ethical criteria. After the approval from the participants and getting their consent data was collected. The questionnaire was distributed among all the participants. Balance was tested and all tests were performed to determine whether praying salah has a significant role in maintaining balance or not.

The Berg balance scale was employed to score the balance. The score of the Berg balance scale ranges from 0 to 56.¹⁰ After assessment the participants were given scores on their balance performance and then evaluated the participants who were offering Salah 5 times a day. All the collected data then was entered in the analysis program, Statistical Package for Social Sciences Version 23. The entered data was analyzed. The Berg balance test was employed to determine the participant's ability to safely maintain balance during the series of pre-determined tasks. The p-value of 0.05 was considered significant. Results have been represented in the form of percentages, graphs and tables.

RESULTS

40.7 % were males and 59.3% were females who were recruited in this study. The mean age of participants recruited in this study was 48.4 years. The mean Berg balance score of participants recruited in this study was 45.6, which is relatively better for the participants of this age (Table I). The Chi-square association between the mean of the Berg balance score of the participants and their regularity of praying Salah is in Table II. The p-value of 0.000 indicates that there is a significant association between the mean of Berg balance score and the regularity of the

Table I: Baseline Characteristics of Participants

| Gender | Frequency | Percentage |
|--------------------|-----------|------------|
| Male | 11 | 40.7% |
| Female | 16 | 59.3% |
| Total | 27 | 100.0% |
| Age | Mean | S.D |
| | 48.4 | 4.9 |
| Berg Balance Score | Mean | S.D |
| | 45.6 | 11.7 |

participants praying Salah. Table III represents the chi-square association between the mean of the Berg balance score and the frequency of performing salah per day of the participants. A p-value of 0.000 indicates that there is a significant association between the mean of the Berg balance score and the frequency of performing salah per day of the participants. The mean Berg balance score was found to be 45.611.7 out of a total of 56. A higher score indicates lower balance problems in the elderly population performing salah regularly. The p-value indicates that there is a significant

Table II: Chi-square Association Between Berg Balance Scale and Regularity for Praying Salah

| Berg Balance Rating | Praying Salah Regularly | | Total |
|--------------------------|-------------------------|-----------|-----------|
| | Yes | No | |
| High fall risk (0-20) | 0 | 1 | 1 |
| Medium fall risk (21-40) | 0 | 6 | 6 |
| Low fall risk (41-56) | 17 | 3 | 20 |
| Total | 17 | 10 | 27 |

Table III: Chi-square Association Between Berg Balance Scale and Frequency of Praying Salah

| Berg Balance Rating | Frequency of Salah | | | Total |
|--------------------------|--------------------|-----------|-----------|-----------|
| | 0 | 1-2 | 3-5 | |
| High fall risk (0-20) | 1 | 0 | 0 | 1 |
| Medium fall risk (21-40) | 1 | 5 | 0 | 6 |
| Low fall risk (41-56) | 0 | 7 | 13 | 20 |
| Total | 2 | 12 | 13 | 27 |

association between the mean of the Berg balance score and the regularity of the participants praying salah. The p-value indicates that there is a significant association between the mean of the Berg balance score and the frequency of performing salah per day of the participants.

DISCUSSION

The current study was conducted to determine the effects of Salah's postures on balance among the elderly population aged 46 to 51 years. A significant relationship was determined between salah postures and balance. There is a significant association between the mean of the Berg balance score and the frequency of performing salah per day by the participants. This study concludes that regular practice of salah postures might aid in maintaining balance and also aid in maintaining a good posture. Azam Khan and co-workers conducted a study to determine the impact of regular salah practice on balance and preventing falls among the community-dwelling elderly population. Their study was a case-control study. They recruited sixty-two community dwelling elderly people. Similar to our study they also employed the berg balance scale to assess balance. The results of their study supported the assumption that religious prayers such as salah benefit and positively influence human performance, particularly balance and also aid in preventing falls in the elderly population.

Our study agrees with their results and our results coincide with their results. Therefore, our study and their study agree to the fact that any exercise protocol which proves itself to be beneficial to humans should be considered beyond its religious aspect.^{9,11} Rehana Nayab and her co-workers conducted a study to determine the impact of Islamic Salah on balance and its implication for rehabilitation. Their study concluded that the impact and influence of Islamic salah on balance has been

a topic of discussion and subject of research, with studies demonstrating a rather positive relationship between Salah postures and balance. Our study completely agrees with their conclusion. Their findings suggest that practising regular salah would contribute to improved strength of the muscles, and psychological and cerebral functions as well as have a positive influence on enhanced visual, vestibular and proprioceptive systems. Particularly, individuals who perform salah regularly have demonstrated improved stability indexes and favourable scores for balance tests when compared to the ones who do not practice regular salah. These facts highlight the potential of Islamic salah as a means to improve and enhance balance and its implications for rehabilitation.^{12,13} Our current study coincides with these facts.

Dr Majed Chamsi Pasha and co-workers conducted a review of the literature on determining the health benefits of salah. Their review included a series of studies which were conducted on medicine databases which were published in English between 1966 and October 2020. These keywords were employed, prayer, salah, health and Islam. Their results showed that numerous positive effects of salah are observed on health. The health benefits include psychological benefits, neurological benefits, cardiovascular benefits and musculoskeletal benefits.¹⁴ Their review concluded that salah is a non-pharmacological intervention and a resource and it might be included in the holistic care and rehabilitation program aiming at the well-being of patients.^{7,15} Our study coincides with these facts.

Mohammed Faruque Reza and co-workers conducted a study evaluating a new physical exercise taken from salah as a short duration and frequent physical activity in the rehabilitation of geriatric and disabled patients. Their study concluded that physical

activities involved while performing salah aid in the rehabilitation process in disabled geriatric patients because they tend to improve blood flow and increase musculoskeletal fitness. The salah prayers involve little effort, standing, bowing, prostration and sitting, have a minute duration and are beneficial for mental and physical health.³ Both studies recommend that more work is needed shortly to determine the complete beneficial effects of the salah prayer on the rehabilitative processes.³ Our current study recommends determining the other outcome measures associated with salah postures and balance. Various groups of age ranges could also be included. Future researchers are recommended to work with different age groups, on determining differences between the balanced scoring of males and females separately and might also consider determining the effects of salah postures and balance on the young population.

CONCLUSION

Our current study concluded that there is a significant association between salah postures and balance among elderly people. Our study concludes that there is a significant association between the mean of the Berg balance score and the frequency of performing salah per day of the participants. There is a significant association between the mean of the Berg balance score and the frequency of performing salah per day by the participants. This study concludes that regular practice of salah postures might aid in maintaining balance and also aid in maintaining a good posture.

DECLARATIONS

Consent to participate: Written consent had been taken from patients. All methods were performed following the relevant guidelines and regulations.

Availability of data and materials: Data will be available on request. The corresponding

author will submit all dataset files.

Competing interests: None

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Authors' contributions: All authors read and approved the final manuscript.

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