Identification of foot position during prayer and hamstring muscle flexibility in male congregants of the Walidah Dahlan Mosque, Aisyiyah University, Yogyakarta

Asyhara Naela Arifin*, Agus Riyanto, Lestari Nur hidayah, Sonia Oktaviani

Physiotherapy Study Program, Faculty of Health Sciences, Universitas 'Aisyiyah Yogyakarta, Indonesia
*Email: Asyharafisio@unisayogya.ac.id

Abstract
Standing is one of the pillars of prayer. Incorrect standing can lead to decreased hamstring flexibility. Many people unintentionally assume the wrong position during prayer. This study aims to provide an overview of the effect of foot position during prayer on hamstring flexibility. The research method was descriptive. The measurement instruments were a questionnaire and a physical examination with Kinovea is a video annotation tool designed for posture analysis. This research method is This research is a type of non-experimental research, the research design used in this study is analytical observation, the approach used in this study is a cross-sectional approach, sampling in this study uses a non-probability sampling technique with a purposive sampling model. The instrument used to collect data in the study uses a closed questionnaire instrument. The data analysis technique in the study uses a qualitative-quantitative descriptive statistical analysis technique with a percentage. The results of this study indicate that there is a relationship between hamstring flexibility and prostration movements. So that the flexibility of this hamstring has an important role in the movement of prostration during proper prayer.

Keywords: foot; flexibility; hamstring; position; trunk

1. Introduction
Standing is one of the pillars of prayer. Incorrect standing can lead to decreased hamstring flexibility. Many people unintentionally assume the wrong position during prayer. This study aims to provide an overview of the impact of foot position during prayer on hamstring flexibility. The research method was descriptive. The measurement instruments were a questionnaire and a physical examination.

Prayer positions influence muscle flexibility. One example is when standing and then moving on to the ruku' position, which affects the hamstring muscles. It's common to see people standing incorrectly during prayer. The recommended foot position when standing in prayer is facing the Qibla (straight forward), not facing sideways (angled outward) (Purnama, 2013).

Medically, the correct foot position, when viewed from behind, is straight forward (Trew, M., Everett, 1997). Straight forward foot positioning affects the flexibility of the hamstring muscles, which are used during the ruku' position. Most people don't position their feet straight forward when praying. Based on this, researchers were interested in understanding how a person's foot position during prayer and its impact on hamstring flexibility.

Foot Positioning During Prayer and Its Impact on Hamstring Flexibility Hamstrings can be seen and measured using the sit and reach test, and foot position can be measured using Kinovea anthropometry.

Scientific development will produce data on flexibility and foot position during prayer, which is related to the quality of a person's worship and will be published in the accredited journal.

2. Method
This research is a non-experimental type of research, the research design used in this research is analytical observation, the approach used in this research is a cross-sectional approach, sampling in this research uses a non-probability sampling technique with a purposive sampling model. The instrument used to collect data in this research uses a closed questionnaire instrument. The data analysis technique in this research uses a qualitative-quantitative descriptive statistical analysis technique with a percentage The data analysis technique in this research uses a qualitative-quantitative descriptive statistical analysis technique with a percentage.

3. Results

3.1. Univariate Analysis

Table 1. The Characteristics of the Research Subjects

Gender	Total	%
Man	97	97.0
Age		
15-19 years old	90	90
20-45 years old	7	7

The data in Table 1 shows the characteristics of the research subjects in Walidah Dahlan respondents, most of whom were male, 97 people (97%). Based on the age of respondents at the Walidah Dahlan Mosque, the majority were aged between 20-45 years, 90 people (90%), and only 7 people (7%) were aged 15-19 years.

Table 2. The Hamstring Flexibility of Respondents

Hamstring Flexibility	Total	%
Above average	15	15.0
Average	9	9.0
Below Average	13	13.0
Excellent	54	54.0
Poor	6	6.0
Total	**97**	**100.0**

Based on Table 2, the hamstring flexibility of respondents at the Walidah Dahlan Mosque was described as follows: 15 (15%) were above average, 9 (9%) were average, 13 (13%) were below average, 54 (54%) were excellent, and 6 (6%) were poor. The results of this study indicate that the majority of hamstring flexibility fell within the excellent criteria.

Table 3. The Description of the Position

Foot position	Total	%
Correct	54	54
Wrong	43	43
Total	**97**	**100.0**

Based on table 3. regarding the description of the position of the feet when praying for respondents at the Walidah Dahlan Mosque, 54 people (61%) were correct and 43 people (39%) were wrong.

Table 4. The Distribution of Ruku Movements with Hamstring Flexibility

Variabel	Average		Above Average		Below Average		Excellent Average		Poor Average		Total	Value
Foot Position	N	%	N	%	N	%	N	%	N	%		
Correct	7	11.5	2	3.3	0	0.0	52	85.2	0	0.0	61	0.000
Wrong	8	21.1	7	18.4	13	34.2	5	13.2	6	15.8	39	

The data in table 4 regarding the distribution of ruku movements with hamstring flexibility, shows that the statistical test results obtained a p-value of 0.000, so it is concluded that there is a significant relationship between hamstring flexibility and foot position during prayer in respondents at the Walidah Dahlan Mosque because the p-value is less than 0.05 (0.000 <0.05).

4. Discussion

The position of the feet during prayer, such as the ruku' position, is a prayer movement that is beneficial for health. A perfect ruku' is characterized by a straight spine, so that a glass of water placed

on the back will not spill. The head is aligned with the spine. This movement is beneficial for maintaining the perfect position and function of the spine (vertebral corpus), which supports the body and the central nervous system. The heart is aligned with the brain, maximizing blood flow to the core of the body. Resting the hands on the knees helps relax the muscles from the shoulders down. Furthermore, ruku' provides urinary exercise, thus preventing prostate problems.

The ruku' movement stretches the vertebrae, stretching the postural muscles. Ruku' is excellent for preventing diseases affecting the spinal column, which consists of the backbone, cervical vertebrae, lumbar vertebrae, and tibia. Ruku' stretches and moves the back and groin muscles, relaxing the nerves in the brain, back, and other parts of the body (M. Jamaludin, 2017).

Biomechanically, the forward bend occurs in the thoracic and lumbar spine, leading to stretching of the muscles and paraspinal structures. The core and lower extremities are at approximately 90 degrees to each other. The hip joints are flexed, the knees extended, and the ankles at 90°, with the lower legs as if standing (Osama et al., 2019). Ruku' involves an 80-90° forward movement of the spine at the lumbar joint above the hip joint, with both arms straight and hands clasping the knees.

After a few seconds, the worshipper gradually returns to a standing position. The flexed position stretches the extensor muscles of the spine, hamstrings, and calves. Holding the stretch for a few seconds will increase the flexibility of the stretched muscles. Previous research has shown that hamstring flexibility is a core component in maintaining postural stability and balance (Al Abdulwahab et al., 2013).

The study found a correlation between foot position during the ruku (bowing) movement during prayer and hamstring flexibility among respondents at the Walidah Dahlan Mosque (0.05).

5. Conclussion

Based on the data obtained from the research conducted at the Walidah Dahlan Mosque, the following conclusions can be drawn:

a. The hamstring flexibility of respondents at Walidah Dahlan Mosque generally falls within the excellent criteria. However, some respondents still fall below average and into the poor criteria.
b. The foot position during the ruku (bowing) movement among respondents at the Walidah Dahlan Mosque generally falls within the correct criteria. However, some respondents still fall within the incorrect criteria.
c. The results of this study indicate a relationship between hamstring flexibility and foot position during the ruku (bowing) movement. Therefore, hamstring flexibility plays a crucial role in the correct foot position during the ruku (bowing) movement during prayer.

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