

# The exploration of elderly condition participating elderly gymnastics in Padukuhan Lemahdadi, Bangunjiwo, Bantul



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## ABSTRACT

**Background:** The aging process makes the sleep quality of the elderly decrease and irregular. Physical activity that can be done by the elderly is gymnastics. Gymnastics in elderly maintain the blood circulation and avoid cardiovascular disease. Elderly gymnastics must begin with the belief and motivation of the elderly in participating the gymnastics. High motivation in the elderly causes a high spirit to participate in gymnastics and improve their sleep quality. Thus, in this study, we identify the motivation of the elderly in participating in elderly gymnastics for their quality of sleep in Padukuhan Lemahdadi.

**Methods:** This study used a qualitative method with a phenomenological approach. Data retrieval is carried out by interviews, observations, and field records. Participants included 7 older people who were determined by a purposive sampling technique. Data validity used a triangulation technique. Furthermore, data analysis consisted of data collection, data reduction, data presentation, and conclusion.

**Results:** In this study evaluate seven elderly. The results of this study showed that the motivation of the elderly to participate in elderly gymnastics affects the quality of elderly sleep quality. It was influenced by several things: elderly motivation in participating in elderly gymnastics, pain reduction measures performed by the elderly, the influence of elderly gymnastics on health, and the positive impact of elderly who participated in gymnastics.

**Conclusion:** The sleep quality in older people who participated in elderly gymnastics can be seen from the motivation given by family and others, quality of sleep after elderly gymnastics, and efforts to maintain the quality of elderly sleep. Furthermore, the researchers are suggested to conduct further research identifying the role of health services in the motivation of the elderly in participating in elderly gymnastics.

**Keywords:** Elderly, elderly gymnastic, motivation, sleep quality

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## INTRODUCTION

The number of older people in Indonesia will reach a transition period as the elderly population aged 60-69 years reaches 7% of the total elderly population.<sup>1</sup> Yogyakarta ranks first for the province with the most older people in Indonesia, with a total of 14.50%.<sup>2</sup> Bantul is ranked 3rd in Yogyakarta. The number of elderly populations in Bantul and the age of elderly life expectancy is increasing. However, older people have health problems that they hardly enjoy their old age. Common issues experienced in old age include disturbances in sleep patterns, anxiety, and lack of physical activity in the elderly. The elderly in Bantul becomes the center of attention in Yogyakarta

district governments as the district has the lowest life expectancy compared to other districts.<sup>3,4</sup> The elderly experience declines the anabolic hormone, which causes the quality of elderly sleep to decrease into poor sleep patterns. Such changes include difficulty sleeping at night, insomnia, frequent early wake-up in the morning, and long nap time.<sup>5</sup>

Stated that some of the elderly are reluctant to participate in elderly gymnastics due to not knowing the benefits for themselves from the elderly exercise and having low motivation from themselves or from their family. Lack of health promotion can be the cause of the low motivation of the elderly so that the elderly become inactive and the problem

of implementation time which is carried out in the morning is also a factor of low motivation to take part in gymnastics.<sup>6,7</sup> The motivation of the elderly to take part in elderly gymnastics is mostly good (64%). The elderly are influenced by family support, information, and emotional support is still lacking, this causes the motivation of the elderly to be two times lower to take part in elderly gymnastics.<sup>8</sup>

Elderly gymnastics must begin with the belief and motivation of the elderly. The motivation is different from one another as it depends on their self-awareness. Motivation is the power that arises in a person who can encourage a person to do physical fitness to fulfill the desire to achieve the goal.<sup>9</sup> Motivation plays

a significant role as the basis of elderly behavior. Positive motivation from the elderly is expected to increase their health and survival ability. It can be seen from the routine of the elderly participating in gymnastics and the way the elderly see or respond to something within themselves and their surroundings.<sup>10,11</sup>

This elderly exercise is useful for reducing various complaints and improving the quality of life and health of the elderly. The more the elderly are routine and good at participating in this elderly gymnastics movement, the more health can be obtained by the elderly. The benefits of elderly exercise are obtained after elderly exercise is routinely carried out. The benefits of elderly exercise include lowering blood pressure, making the body fitter, eliminating pain in the body in certain parts, and making elderly activities more positive. The elderly will feel very satisfied if this elderly exercise is routine and well done.<sup>12</sup> Moreover, elderly people in their old age have various types of illnesses. Diseases that are often suffered by the elderly are hypertension, gout, pain in certain body parts, and high cholesterol.<sup>13</sup> The elderly really need to do various kinds of light activities and maintain their lifestyle to minimize and prevent the occurrence of various kinds of diseases, one of which is elderly exercise. Thus, this exercise is suitable for those populations.<sup>2</sup>

Researchers conducted a preliminary study on September 26, 2020, in the Region of Padukuhan Lemahdadi with a total of 373 older people divided into 3 age groups, namely pre-elderly, elderly, and post-elderly. Based on the data, there are also 80 older people who participated in *Posyandu* and elderly gymnastics. Based on interviews with 9 elderly, 5 of them experienced poor sleep quality, which is 2 to 4-hour sleep per day. The 9 elderly also still participated in the elderly gymnastics in *Posyandu* Padukuhan Lemahdadi. Some elderly stated that they participated in gymnastics as they wanted to maintain their health. The elderly revealed that they had enough sleep quality after participating in the gymnastic, even though it was still irregular. Based on the background of this study was aimed to identify the motivation of the elderly in participating in elderly

gymnastics for their quality of sleep in Padukuhan Lemahdadi.

## METHODS

This study used a qualitative method with a phenomenological approach. The phenomenological approach aims to identify the understanding and structure of a person or group experiencing a particular problem. The inclusion criteria included elderly who actively participated in elderly gymnastics in *Posyandu* in Padukuhan Lemahdadi, elderly who are 60 to 74 years old and live in Padukuhan Lemahdadi, and elderly who can communicate in Javanese and Indonesian. This study was conducted in Padukuhan Lemahdadi, Bangunjiwo, Kasihan, Bantul, Yogyakarta, in February-March 2021. The variables in this study were the exploration of elderly condition participating elderly gymnastics. The research instruments in this study used interviews, unstructured observations, and field notes. Meanwhile, the analysis data in this study used the Miles and Huberman method, namely data reduction, data presentation, and conclusion or verification. Researcher

data reduction is in the form of summarizing, selecting, and focusing on what is important and looking for themes and patterns. Presenting the data, the researcher makes a brief description, of the relationship between categories, charts, or flowcharts using narrative text. Then, at the conclusion and verification in the form of new findings that have not been found in other studies, the findings can be in the form of a description that was previously still in doubt.<sup>14</sup>

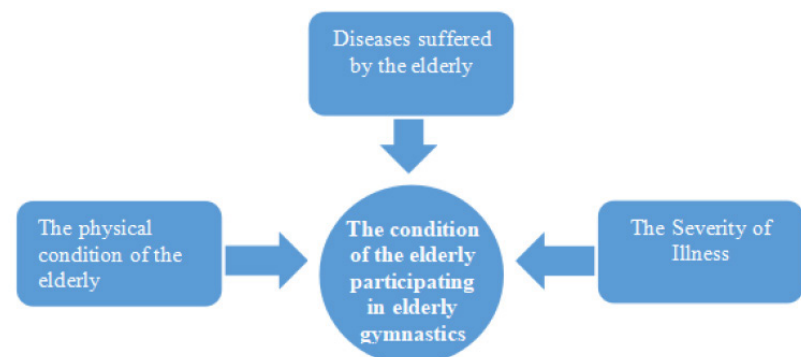
## RESULT

Participants in this study were 7 elderly from Padukuhan Lemahdadi. There were 6 female participants (85.7%), 5 participants aged 70-74 years old (71.4%), 3 participants with primary school education background (42.9%), and 3 participants with junior high school education background (42.9%). There were 4 participants did not work (57.1%), and 3 participants had a history of the hypertension disease (42.9%).

a. The result of this study showed that the motivation of the elderly was related to the participation of the



**Figure 1.** Theme 1: Motivation of elderly participating in elderly gymnastics



**Figure 2.** Theme 2: the condition of the elderly participating in elderly gymnastics

elderly in elderly gymnastics, which the sub-themes can prove as follows (Figure 1):

1. The reason for participating in gymnastics, as explained by the following statement: *"In order to still be able to see posterity and take care of grandchildren as well"* (Participant 1)
2. Reasons to maintain motivation, as evidenced by the following statement: *"Keep in mind my purpose of participating in gymnastics is what, I want to be healthy to accompany grandchildren to play, do clean-up activities as well and so that I can gather with my friends and family."* (Participant 4)
3. The habit of elderly gymnastics, as evidenced by the following statement: *"Because it is not strong, my feet... I can only sit moving my*

*hands and head during gymnastics while my legs cannot be moved. I cannot moving because my legs hurt."* (Participant 3)

- b. The result of the study showed the elderly conditions that affect the participation of the elderly in gymnastics as evidenced by sub-themes as follows (Figure 2):

1. The physical condition of the elderly, as evidenced by the following statement: *"I can not do anything, my feet feel pain, stiffness"* (Participant 6)
2. Diseases suffered by the elderly, as evidenced by the following statement: *"When I firstly participated in gymnastics, I had high blood pressure. It used to be that my blood was 200"* (Participant 5)
3. The severity of illness, as evidenced by the following statement: *"Pain*

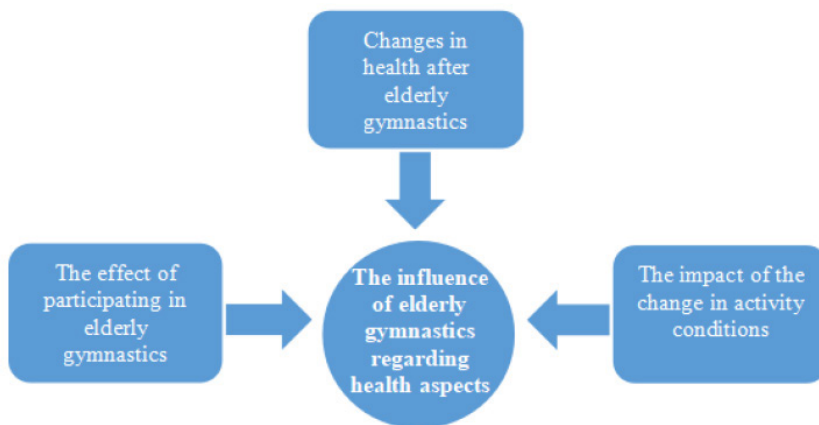
*sometimes. It used to be sore every day, but now it has been reduced. This back pain, because the doctor said there was a nerve clamp in this striped bone, oh.. the spine, so my legs can not move, it feels limp"* (Participant 3)

- c. The results of this study showed the influence of elderly gymnastics on elderly health as proven by sub-themes as follows (Figure 3):

1. The effect of participating in elderly gymnastics, as evidenced by the following statement: *"It is better because my body moves easily so that my blood flow goes smoothly, at night I sleep better"* (Participant 4)
2. Changes in health after elderly gymnastics, as evidenced by the following statement: *"by participating gymnastics, thank God there is a change... even better because my body could hardly move. It only could move when I took papaya leaves and papaya fruit and then went to the market"* (Participant 7)
3. The impact of the change in activity conditions, as evidenced by the following statement: *"There was a change... When I was sick I had to rest continuously by the doctor, so I feel bored, can not wash, sweep in front of the house. But now that I can, I'm healthy."* (Participant 5)

- d. The results of this study showed a positive impact after the elderly follow elderly gymnastics that can be proven by the sub-theme obtained by researchers as follows (Figure 4):

1. Habit before sleep, as evidenced by the following statement: *"Before I sleep I watch tv, my sleep becomes good hahaha. Drink water and take medication if it hurts"* (Participant 3)
2. The quality of sleep after gymnastics, as evidenced by the following statement: *"No, just better for me, especially after gymnastics once a month on the 4th, the night can sleep soundly"* (Participant 1)
3. Elderly condition after sleep disorders, as evidenced by the



**Figure 3.** Theme 3: the influence of elderly gymnastics regarding health aspects



**Figure 4.** Theme 4: the positive impact of older people who follow elderly gymnastic

following statement: *“In the morning my body feels sick and stiff when used to move uncomfortably”* (Participant 2)

4. Efforts to maintain sleep quality, as evidenced by the following statement: *“Sleep must be at 21:00, and should not be tired. The point is that if I don’t get sick or don’t relapse my high blood pressure, I sleep well, my body feels healthy and my sleep is also good”* (participant 5)

## DISCUSSION

### The motivation of the elderly to Follow Elderly Gymnastics

This study explains that the elderly participated in gymnastics for various reasons, such as staying healthy, seeing and looking after the closest family, and filling free time to avoid boredom. The elderly maintained the motivation in various ways, such as always remembering that their families always remind them to be physically and spiritually healthy. In addition, the elderly living by themselves always remember that they aim to stay healthy as they want to meet their own needs and keep in touch with their distant family. In maintaining the motivation, the elderly started getting used to doing regular gymnastic activities by moving their bodies based on their physical ability. Meanwhile, the elderly with physical limitations participated in gymnastics by sitting and doing gymnastics based on their ability. In participating the gymnastics, the elderly have different motivations depending on personal awareness. The elderly with high motivation tend to be more eager to participate. Meanwhile, the elderly with low motivation tend to be lazy and do not understand the importance of health. Thus, motivation is the power that arises in a person who can encourage them to achieve physical fitness.<sup>15,16</sup>

Maintaining the motivation of the elderly is necessary. It takes effort, including maintaining health and physical fitness by exercising regularly; thus, the older people will feel fresher, calmer, and confident in doing daily activities. Another effort is to ask the elderly about their purpose of doing an activity to

increase their confidence to maintain their motivation. Moreover, knowing that people nearby, such as their close family, peers, and loved ones, still need them can maintain their motivation and minimize the desperation in achieving and maintaining their motivation.

### Elderly People’s Condition in Participating in Elderly Gymnastics

The results of this study explained the condition of the elderly participating in elderly gymnastics, such as the physical condition in the elderly. 1 out of 7 older people experienced physical limitations when participating in gymnastics. The limitation included the weakness in one of their legs that made them have to use a stick when walking. Meanwhile, another older person also experienced stiffness in the legs after experiencing severe pain. Furthermore, diseases experienced by older people also varied such as sciatica on the legs, pinched nerves, hypertension, rheumatism, and pain in the hands and feet. 4 out of 7 elderly had experienced the severity of the disease such as hypertension with systole 200, unbearable rheumatism, back pain, and tailbone pain due to the presence of pinched nerves. A person’s health condition can be measured from spiritual health and physical fitness, which significantly affects a person performing actions, especially gymnastics activities.<sup>17</sup> Physical fitness is the ability of one’s body to perform tasks and daily work without causing significant fatigue so that the body still has a stash of energy to cope with the additional burden. Motivation influenced by a person’s physical condition comes within the individual who encourages to act to meet physical needs.<sup>18</sup>

In this case, a stable and healthy physical condition is necessary to prevent or delay degenerative diseases and other metabolic disorders. To maintain the health of the elderly, there must be efforts made in both iron fat care, treatment, and healthy lifestyles such as elderly gymnastics. Based on the results of this research on the influence of elderly gymnastics on uric acid levels, hypertension, and back pain, it showed that the elderly participated in the gymnastics due to health problems such as uric acid, hypertension, and back pain that caused disruption of the body’s

work system and restricted the elderly to do activities.

### The Positive Effect of Elderly Gymnastics on Health Aspects

This study showed that the participation of elderly people in gymnastics influenced the health condition, such as health improvement and the impact of gymnastics in elderly activities. The other effect is that the body felt lighter and healthier, the aches were reduced, and the blood flow became smooth; thus, sleep at night could feel good. The elderly felt the improvement after participating in elderly gymnastics. Their pain had decreased, and activities could be done normally. Furthermore, when experiencing pain due to a decrease in health, older people could hardly do daily activities such as sweeping, caring for grandchildren, and others. They also could not meet their needs when the pain relapsed, such as not harvesting and selling them to meet his daily needs. Regular gymnastics had a positive effect on improving the function of the body’s organs, namely the increase of the immune system.<sup>6</sup> The result of this study showed that it also could improve the fitness of physical activity of the elderly, in addition to making them feel happier for participating the gymnastics. They felt happy as they could gather with other participants and had a better sleep cycle that could lead them to health improvement.

Furthermore, gymnastics can improve muscle relaxation in the elderly to lower the severity of elderly sleep disorders. Not only improve the circulation of the body, elderly gymnastic also bring an adequate oxygen flow for brain consumption. Thus, it improves their quality of lie.<sup>19</sup> According to our research the more often the older people participate in gymnastics, the better the quality of sleep will be. The elderly participating the gymnastics experienced good sleep quality. The body felt fit, and they slept more comfortably and did not often wake up at night. It is because the elderly had their muscle moving when exercising. Furthermore, the elderly felt no fatigue, stiffness, pain when waking up. Their pinched nerves and rheumatism felt reduced. They had their way of maintaining a good sleep quality by doing

regular morning and evening gymnastics, doing activities that make their bodies active, staying consistent, and avoiding sleep disturbance. Prior to bedtime, they practiced religious activities such as dhikr and praying to calm their heart and take medicines to avoid recurrence during sleep.

Habits such as urination before bedtime can prevent the elderly from waking up. In addition, drinking warm water therapy was done to improve sleep quality, calm their mind before bed. Other habits also included reading books and mind-relaxing.<sup>20</sup> In contrast, the habits of the elderly before bed that can worsen sleep disorders such as excessive consumption of mineral water will increase the intensity of urination in the elderly, caffeine consumption that causes insomnia, smoking, and excessive consumption of food.<sup>21</sup>

Another factor is the practice of dhikr therapy performed by some participants. Dhikr therapy is a non-pharmacological treatment that can benefit the elderly with insomnia because it has no side effects.<sup>22</sup> When a person remembers dhikr, it includes and revives the attributes of *Asmaulhusna*, which has infinite strength in the body. Asmaul Husna is the name of Allah SWT in the Al-Qur'an and Asmaul Husna can reduce hypertension and provide peace of mind.<sup>23</sup> In relation to that, a balanced state in the body can restore and normalize the function of organs. The limitation of this study was we did not evaluate in other locations, thus we could not compare the participant with different backgrounds, we do not evaluate other factors that might reduce their willingness or their motivation.

## CONCLUSION

Based on the explanation of the data, it can be concluded that there were several sub-themes, such as elderly motivation to participate in elderly gymnastics, aspects on how to maintain motivation, and habits of elderly gymnastics. Furthermore, the condition of the elderly who participated in gymnastics showed the physical condition of the elderly, the disease suffered by the elderly, and the severity of the elderly. The influence of participating in elderly gymnastics regarding health aspects is

derived from the sub-theme of the effect of participating in elderly gymnastics, changes in health after participating in elderly gymnastics, and the impact of changes in activity conditions. The positive impact of the elderly participating in gymnastics was shown in the sub-themes of elderly habits before bedtime, the sleep quality after gymnastics, the condition of the elderly upon sleep disturbance, and efforts to maintain a good quality of sleep. Moreover, in terms of further research, it is suggested that there needs to be further action in the results of this study to identify the role of health services in the motivation of the elderly to participate in gymnastics. It aims as a reference to prevent the decline in the health status of the elderly by sharing diseases suffered before participating in elderly gymnastics.

## CONFLICT OF INTEREST

The authors declare that there is no any competing interest regarding the manuscript.

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## ETHICAL APPROVAL

This research has been permitted with the ethical approval number from the Health Research Ethics Committee of the Faculty of Medicine and Health Sciences of Universitas Muhammadiyah Yogyakarta: 063/EC-KEPK FKIK UMY/II/2021.

## AUTHOR CONTRIBUTION

All of the authors contributed to this study in data gathering, data analysis, until preparing the published manuscript.

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