

# The Relationship between Physical Activity Levels and Quality of Life in Menopausal Women

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## ABSTRACT

Physiologically during menopause, women will experience a decrease in the function of the ovaries which causes a decrease in reproductive hormones and increased health problems that have an impact on their quality of life. In general, the quality of life of menopausal women is influenced by several aspects, one of which is the level of physical activity carried out daily. This study aimed to determine the relationship between physical activity level to quality of life in menopausal women. The method used in this research is observational analytics with a cross-sectional approach. The sampling technique used is purposive sampling. The number of samples obtained in this study was 69 samples. Data collection was done by measuring physical activity levels and quality of life. Physical activity levels were measured using the Global Physical Activity Questionnaire (GPAQ) while quality of life was measured by the World Health Organization Quality of Life Questionnaire (WHOQOL-BREF). Based on the non-parametric analysis test of Spearman rho, a value of  $p = 0.000$  ( $p < 0.05$ ) and a correlation coefficient  $r = 0.649$ . Based on the results of the study, it can be concluded that there is a significant relationship between the level of physical activity and menopausal women.

**Keywords:** *physical activity level, quality of life, menopausal women*

## INTRODUCTION

Indonesia's success in improving people's welfare has brought changes in several aspects, one of which is increasing life expectancy (Pebriani et al., 2020). Increasing life expectancy causes an increase in the number of women experiencing menopause so that menopause also has a negative impact. The impact that women may experience when entering menopause beyond the initial complaints felt is an increase in cases of degenerative diseases or non-communicable diseases (Rizky & Nababan, 2022).

Menopause is a period where the menstrual cycle in women naturally stops, accompanied by a decrease in ovarian function, causing a decrease in reproductive hormones such as estrogen, progesterone and testosterone, which is related to their advanced age (Zaitun et al., 2020). Usually, women enter menopause usually

between the ages of 45 and 55 years (Winarni & Dyaswati, 2020). Based on data from the Central Statistics Agency (BPS), it is estimated that in 2025 in Indonesia there will be around 60 million women experiencing menopause (Saimin et al., 2016). In addition, in 2013 in Bali alone the number of women experiencing menopause is at 605,701 residents (Candra & Trisnadewi, 2015).

As they get older, women who are in the menopause phase need attention, especially changes in their quality of life (Noorma et al., 2017). Changes in the quality of life experienced by menopausal women can be caused by health problems they experience, both physical and psychological, such as urinary tract infections, diabetes, kidney disease, hypertension, sleep problems and depression. Of course, due to changes in quality of life, menopausal women tend to experience discomfort and lack of self-

confidence which can lead to social isolation (Tarigan et al., 2019).

In general, a person's quality of life can be influenced by various factors. The level of daily physical activity is one of the factors that can influence a person's quality of life. Evidence shows that engaging in physical activities, such as sports, is associated with improved quality of life and better health status (Sari & Istighosah, 2019). According to a study made by Andayani & Guna in 2023, in their study it was stated that the level of physical activity is one aspect or factor that can influence a person's quality of life. There are many benefits obtained from regular physical activity, such as strengthening the body's immunity, preventing the development of non-communicable diseases, improving body health, reducing the risk of depression, and improving the quality of life (Cicilia et al, 2018). Not only that, in women physical activity can also help improve and improve blood circulation which will influence the increase in estradiol production which can slow the onset of menopause in women.

On the other hand, lack of physical activity can increase a person's risk of exposure to chronic diseases such as heart disease, hypertension, stroke, diabetes and cancer (Ariyanto et al., 2020). It should also be noted that women who lack physical activity can not only put the woman at risk related to her physical and psychological health but also increase problems related to menopause syndrome (Arini, 2018). Therefore, physical activity is very influential in improving a person's quality of life and this is no exception for women who have entered menopause.

Judging from the explanation above, it is clear that a person's quality of life, especially menopausal women, deserves special attention. Therefore, researchers want to explore more deeply the relationship between physical activity levels and quality of life in menopausal women.

## RESEARCH METHODS

The method used in this research is observational analysis with a cross-sectional approach. The research was conducted in Penarungan Village, Mengwi District, Badung Regency, which was carried out from August to November 2023. The population used in this

research was menopausal women aged 45 to 55 years who had stopped menstruating for at least 12 months in Penarungan Village, Mengwi District, Regency. Badung. Sampling was carried out using a purposive sampling method with a total sample of 69 respondents. The sample criteria used include inclusion criteria, namely 1) Aged between 45 and 55 years, 2) Have not experienced menstruation for at least 12 months, 3) Willing to be research subjects, while the exclusion criteria are 1) Women who are in chronic pain, such as stroke. and diabetes, 2) Women who have had ovarian surgery or uterine surgery.

The instrument used in this research consists of the Global Physical Activity Questionnaire (GPAQ) which can be used to measure physical activity levels with a validity value of 0.45 to 0.65. Meanwhile, to assess the quality of life of the sample, the World Health Organization Quality of Life (WHOQOL) questionnaire was used with a validity value of 0.75. Data analysis carried out included univariate analysis and bivariate analysis, with bivariate analysis using the Spearman rho test. This research has been approved by the Research Ethics Commission of the Faculty of Medicine, Udayana University/Sanglah Denpasar Central General Hospital with ethical suitability statement number 1126/UN14.2.2.VII.14/LT/2023.

## RESULTS

### Characteristics of the Research Sample

The characteristics studied in the sample included age, occupation, level of physical activity, and quality of life.

Table 1. Frequency Distribution of Age and Occupation in the Research Sample

Variable	Score
Age (average $\pm$ SD)	51,39 $\pm$ 2,590
Work (n, %)	
Housewife	32 (46,4%)
Trader	21 (30,4%)
Laborer	4 (5,8%)
Other	12 (17,2%)

Based on Table 1, in the age range of 45 to 55 years it is known that the mean value of the

sample age is 51.39 with a standard deviation of 2.590. Furthermore, for the employment variable, information was obtained that the majority of jobs held by the sample were as housewives, 32 people (46.4%), traders, 21 people (30.4%), laborers, 4 people (5.8%), and Other jobs include 3 employees (4.3%), 3 farmers (4.3%), 3 tailors (4.3%), 2 teachers (2.9%), and 1 laundry person (1.4%).

Table 2. Frequency Distribution of Physical Activity Levels by Age and Occupation

Variable	Physical Activity Level		
	High	Currently	Low
<b>Age</b>			
45-50 year	8 (36,4%)	6 (27,3%)	8 (36,4%)
51-55 year	15 (31,9%)	17 (36,2%)	15 (31,9%)
<b>Work</b>			
Housewife	6 (18,8%)	10 (31,3%)	16 (50,0%)
Trader	6 (28,6%)	9 (42,9%)	6 (28,6%)
Laborer	4 (100,0%)	0 (0,0%)	0 (0,0%)
Other	7 (58,3%)	4 (33,3%)	1 (8,1%)

Based on Table 2, the majority of samples in the 45-50 year age group have high and low physical activity, 8 people each (36.4%). In the 51-55 year age group, the majority had moderate physical activity, namely 17 people (36.2%). The distribution of physical activity based on work shows that 4 workers (100.0%), 3 farmers (100.0%), 2 teachers (100.0%), and 1 laundry worker (100.0%) have high physical activity. The majority of employees and seamstresses have moderate physical activity, 2 people each (66.7%), while the majority of housewives have low physical activity, namely 16 people (50.0%).

Table 3. Frequency Distribution of Quality of Life by Age and Occupation

Variable	Quality of Life		
	Good	Medium	Bad
<b>Age</b>			
45-50 year	15 (68,2%)	6 (27,3%)	1 (4,5%)
51-55 year	32 (68,1%)	14 (29,8%)	1 (2,1%)
<b>Work</b>			
Housewife	18 (56,3%)	12 (37,5%)	2 (6,3%)
Trader	15 (71,4%)	6 (28,6%)	0 (0,0%)
Laborer	4 (100,0%)	0 (0,0%)	0 (0,0%)
Other	10 (83,3%)	2 (16,7%)	0 (0,0%)

Based on Table 3, the majority of individuals in the 45-50 year age group, 15 people (68.2%) and 32 people 51-55 years (68.1%) have a good quality of life. Analysis of the distribution of quality of life according to type of work shows that the majority are 18 housewives (56.3%), 15 traders (71.4%), 4 workers (100.0%), 3 employees (100.0%), 3 farmers (100.0%), 2 teachers (100.0%), and 1 laundry worker (100.0%) have a good quality of life. Meanwhile, the majority of tailors have a moderate quality of life, 2 people (66.7%).

### The Relationship between Physical Activity Levels and Quality of Life

The analysis used to assess the correlation between physical activity levels and quality of life is the non-parametric Spearman rho analysis.

Table 4. Relationship between physical activity levels and quality of life.

Correlation Variable	Correlation	p Value
Physical Activity Level	0,649	0.000
Quality of Life		

Table 4 shows a value of  $p = 0.000$  ( $p < 0.05$ ) and a correlation coefficient value of 0.649, which means there is a significant relationship between the level of physical activity and the quality of life in menopausal women. The positive value shown by the correlation coefficient value indicates a unidirectional relationship, namely the higher the physical activity the sample has, the better the quality of life they have. The level of correlation between these two variables is included in the strong category because it is in the value range 0.51 – 0.75.

## DISCUSSION

### Characteristics of Research Subjects

Sample characteristics based on age were selected in the range of 45-55 years and it was found that the majority of the sample was 51 years old. The age of 45-55 years was chosen because the majority of women experience menopause in that age range (Suparni & Yuli, 2016). In addition, at this age women tend to still be able to maintain sufficient physical ability and vitality for activities, thus having a positive impact on their quality of life (Putri et al, 2014).

Judging from the results of measuring physical activity levels in table 2, it was found that there were differences in the levels of physical activity possessed by the research sample. This reflects that when facing menopause, a number of women remain active in physical activity and there are also women who lack this (Sipayung et al., 2017). Based on the age distribution, it was found that those aged 45 to 50 years tend to have high and low physical activity, while women aged 51 to 55 years tend to have moderate physical activity, which of course is influenced by health factors. In addition, based on work, it was found that employment status can influence a person's level of physical activity due to the type and load of work carried out (Macassa et al., 2016).

Meanwhile, when measuring quality of life, it was found that the majority of the sample had a good quality of life. The results of this measurement are supported by a study conducted (Widjayanti, 2022) regarding the description of the quality of life of menopausal women, which

found that in this phase women are still able to maintain a good quality of life. Based on age, it was also found that in the 45-55 year age range women were still able to maintain their quality of life. Apart from that, looking at work, it was also found that the work a person holds, especially women, can also affect the quality of life they have due to the type of work which will affect a person's income and have an impact on the availability of needed facilities (Tarigan et al., 2019).

### The Relationship between Physical Activity Levels and Quality of Life

Quality of life in general can refer to the level of satisfaction a person feels with various aspects of their life. In menopausal women, quality of life can be influenced by several aspects and the severity of the menopausal symptoms they experience (Andayani & Guna, 2023). One factor that can influence a woman's quality of life during menopause is the level of physical activity they do every day.

In this study, women of menopausal age who were regularly physically active or had a high level of physical activity stated that they had a good quality of life. This is because regular physical activity can strengthen the body's endurance (Arini, 2018). In addition, physical activity can also play a preventive and therapeutic role for a person, especially to reduce the risk of exposure to chronic diseases (Puciato et al., 2017). From this, there are several supporting studies which show that the level of physical activity also has an influence on a person's quality of life.

One study that supports these findings is a study conducted by Ariyanto et al (2020) where in their study it was stated that the level of physical activity has a relationship with quality of life. This can be seen from the results of a sample of 15 of the total sample, namely 45 people, who had high physical activity, which was dominated by good quality of life, followed by moderate quality of life. From these findings, it can be said that someone who does physical activity intensively or is in the high category tends to experience a better increase in quality of life compared to those who have a low level of physical activity.



There is another study that also states the same thing carried out by Đošić et al (2021) where in their study they assessed the correlation between the level of physical activity and body mass index on the quality of life in the elderly female population. Based on the results obtained, the study states that there is a significant correlation between the above variables and quality of life, where the physical activity variable contributes to improving physical health in elderly women. The results of this study also show that high and moderate intensity physical activity both have benefits, especially for health.

According to WHO, physical activity plays an important role and this is highly recommended for those who are adults and the elderly. In women, those who are more physically active suffer less vasomotor, psychosocial, physical and sexual symptoms compared to women who are sedentary (Hajj et al., 2020). This is because physical activity can help them increase and improve blood circulation which will influence the increase in estradiol production so that it can slow down the onset of menopause.

It should be noted that when carrying out physical activity, the body experiences movement which triggers the need for energy to move muscles and distribute nutrients and oxygen throughout the body (Purnama & Suaahda, 2019). This process also contributes to maintaining physical fitness, bone density, muscle strength, joint mobility, and overall physiological health of the body, thus having an impact on maintaining optimal quality of life (Motlagh et al., 2024).

On the other hand, lack of physical activity can increase a person's risk of exposure to chronic diseases such as heart disease, hypertension, stroke, diabetes and cancer (Ariyanto, Puspitasari and Utami, 2020). For women who are undergoing menopause, low physical activity can increase problems related to menopausal syndrome such as joint and bone disorders, hot flashes, anxiety, insomnia, depression, and memory loss (Simangunsong & Wahyuni, 2019).

Thus, one of the steps that can be taken by women who are experiencing menopause is to do low-intensity aerobic exercise at least once a week for 30 minutes, participate in religious activities that are regularly held at holy places or residences, daily activities such as caring for

grandchildren and cleaning the house, as well as exercising at home in the morning and evening are considered physical activities that can improve the quality of life (Ariyanto et al., 2020)

However, it should be noted that the level of physical activity in menopausal women can be influenced by factors such as health status and the severity of menopausal symptoms. Health problems such as hypertension, osteoporosis, and cancer can hinder physical activity and affect satisfaction with quality of life. Apart from that, severe menopausal symptoms can also affect mood, ability to do activities, and influence satisfaction with work abilities which ultimately has an impact on quality of life (Putri et al., 2014).

## CONCLUSIONS

Based on the findings from the research and analysis that has been carried out, it was found that there is a significant relationship between the level of physical activity and the quality of life in menopausal women. It is recommended for further research to use a population with a wider area coverage in order to know the characteristics of the population of each region, use other methods, and be able to control more other variables such as the type of severity of menopausal symptoms experienced by women during menopause.

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