

Relationship exercise motivation levels on quality of life during retirement from elite sport Relación entre los niveles de motivación del ejercicio y la calidad de vida durante el retiro del deporte de élite

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Abstract. There is not much research examining the lives of athletes in retirement. This research aims to determine the level of training motivation in retirement, the quality of life in former athletes and the relationship between training motivation and quality of life in former athletes. The subjects in this research were retired athletes aged 25-60 years. The subjects involved in this research were 81 retired pencak silat athletes consisting of 42 men and 39 women. This research is a quantitative descriptive research with a survey approach. The instrument used in this research used the Exercise Regulations Questionnaire (BREQ-3) to determine the level of exercise motivation and The World Health Organization Quality of Life (WHOQOL)-BREF to determine quality of life. Questionnaires were distributed from November 25 2023 to January 5 2024. The data analysis technique uses simple correlation. The results show a significance value < 0.005 , meaning it is correlated or related. The correlation value between motivation to exercise and quality of life is 0.974, the correlation value is $>$ from r table. This means that there is a positive relationship between exercise motivation and quality of life. In this way, it can be concluded that the higher the motivation of retired athletes to train, the better the quality of life of former athletes.

Keywords: training motivation, quality of life, former athlete, pencak silat, martialart

Resumen. No hay muchas investigaciones que examinen la vida de los atletas retirados. Esta investigación tiene como objetivo determinar el nivel de motivación para el entrenamiento en la jubilación, la calidad de vida en ex deportistas y la relación entre la motivación para entrenar y la calidad de vida en ex deportistas. Los sujetos de esta investigación fueron deportistas retirados de entre 25 y 60 años. Los sujetos involucrados en esta investigación fueron 81 atletas retirados de pencak silat, compuestos por 42 hombres 39 mujeres. Esta investigación es una investigación descriptiva cuantitativa con enfoque de encuesta. El instrumento utilizado en esta investigación fue el Cuestionario de Regulaciones de Ejercicio (BREQ-3) para determinar el nivel de motivación para el ejercicio y el The World Health Organization Quality of Life (WHOQOL)-BREF para determinar la calidad de vida. Los cuestionarios se distribuyeron del 25 de noviembre de 2023 al 5 de enero de 2024. La técnica de análisis de datos utiliza correlación simple. Los resultados muestran un valor de significancia $< 0,005$, es decir, está correlacionado o relacionado. El valor de correlación entre la motivación para hacer ejercicio y la calidad de vida es 0,974, el valor de correlación es $>$ de la tabla r. Esto significa que existe una relación positiva entre la motivación para hacer ejercicio y la calidad de vida. De esta forma, se puede concluir que cuanto mayor es la motivación de los deportistas retirados para entrenar, mejor es la calidad de vida de los ex deportistas.

Palabras clave: motivación en el entrenamiento, calidad de vida, ex deportista, pencak silat, arte marcial

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Introduction

A person's motivation comes from within which is then called intrinsic motivation and motivation from outside is then called extrinsic motivation (Mercader et al., 2023; Wah et al., 2023). Athletes' motivation in sports or training is influenced by various things, one of which is goal (Mellano, 2023). Every athlete needs to have a goal or goal setting when carrying out training (Ronkainen et al., 2022). To achieve this, an athlete will certainly use both energy and time to achieve the target that has been set (Durdubas & Koruc, 2021). When you become an athlete, the goal of general training is to improve your physical condition and tactics (Matsumoto et al., 2023). Improving physical and tactical abilities will certainly have a positive impact on athletes' performance in matches so that the targets held by athletes and teams can be achieved. However, after an athlete decides to retire, the athlete's motivation to continue exercising or doing regular exercise tends to decrease (Ferrara et al., 2023).

The decline in training motivation of athletes during retirement is caused by several things, such as changes in career targets, boredom, job demands, busyness, lifestyle changes, and the effects of injuries experienced while being athletes (Nilaweera et al., 2023; Haase et al., 2023). This will certainly hurt the athlete's health in retirement. So, it is very important to provide support

and understanding to athletes in retirement so that they remain motivated to sport or train (Hong & Fraser, 2023). Good motivation for a person to do sports will have a positive impact on a person's physical and mental health (Arthuso et al., 2023). Physical health will improve with the good fitness of each individual (Franklin et al., 2023). By doing exercise, fitness will increase because exercise can increase muscle strength and endurance and cardiovascular endurance (Hoevenaars et al., 2023). Apart from that, exercise also affects a person's psychological condition (Ramírez et al., 2024). Because physiologically, exercise can reduce cortisol levels and increase endorphin hormones in a person (Sarshi et al., 2023). This is certainly good for a person's psychological health. Exercise motivation can affect a person's quality of life. Each person's quality of life is influenced by several things, such as physical health, psychological well-being, social relationships, and the environment (Hirayama et al., 2023). Each person's quality of life can change over time. Just like what happens to athletes when they enter retirement (Babakhanian et al., 2023, p. 4). When an athlete enters retirement, many changes occur. These changes include changes in life rhythms, changes in physical activity, and changes in daily activities (Samah et al., 2023). These changes can affect the health conditions of retired athletes in the future (Roberts et al., 2023). Retired athletes are at risk of devel-

oping various health problems, such as cardiovascular disease, osteoarthritis, high blood pressure, stroke, brain cancer, and degenerative diseases (Pillay et al., 2023). Not only physical illnesses, retired athletes are also at risk of experiencing mental illnesses. Mental illness is caused by various factors, such as heredity/genetics, loss of someone, loss of job, and work pressure (Bazargan et al., 2023). The mental illnesses that often occur in retired athletes are eating disorders, anxiety, depression, and bipolar (Godoy et al., 2023; Beable, 2024; Kussman & Choo, 2023). Based on observations made on retired athletes from the pencak silat sport, several changes were found, including a decrease in physical activity and sports. Apart from that, mental illnesses such as anxiety, feelings of regret, depression, eating disorders, and bipolar disorder were also found. This can directly change the quality of life, considering that the disease can affect the components that determine a person's good quality of life (Sella et al., 2023). From the phenomenon of physical and mental health problems affecting the quality of life of athletes in retirement, there is a need for preparatory management towards retirement (Gould et al., 2022). This is to prepare athletes when they are no longer athletes (Brassard et al., 2023). With the hope that the quality of life of athletes remains good. Research that examines the problems of retired athletes in Indonesia is still rare, including the quality of life and training motivation of retired athletes (Thornton et al., 2023). So, to start research related to retired athletes, researchers want to know the level of training motivation and find out the quality of life that athletes have in retirement as well as the relationship between the two. This was done to determine the quality of life and training motivation of retired athletes. So it can be a basis for future research to study the management of retirement preparation and the retirement period. This problem is important to study as a form of concern for the problems that occur in athletes who no longer participate in competitive sports to live a better life.

Materials and methods

Research Type

This research is quantitative descriptive research with a survey approach. The survey was conducted to determine the level of training motivation possessed by retired athletes. The things that will be discussed are activation, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic regulation. Apart from that, a survey was also conducted to determine the quality of life of retired athletes. The domains that will be studied are physical, psychological, social relationships, and environment. Apart from that, this research aims to determine the relationship between the level of training motivation and the quality of life in retired athletes.

Research Instruments

The instruments used in this research were the Exercise Regulations Questionnaire (BREQ-3) and the World Health Organization Quality of Life (WHOQOL)-BREF. BREQ-3 is a questionnaire used to determine exercise motivation. This questionnaire consists of 24 items grouped into 6 domains, namely activation, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic regulation. (WHOQOL)-BREF is the instrument used to measure quality of life. This ques-

tionnaire consists of 26 statement items grouped into four domains. The assessment scale used in this questionnaire uses a Likert scale. Each instrument has been tested for validity and reliability again. validity testing approach and instruments using content validity and test-retest reliability. content validity analysis using Aiken's v formula and questionnaire reliability analysis using Cronbach's alpha. The validity and reliability of The Exercise Regulations Questionnaire (BREQ-3) are 0.82 and 0.86. while the validity and reliability of The World Health Organization Quality of Life (WHOQOL)-BREF are 0.93 and 0.89. Instruments will be distributed from November 25 2023 to January 5, 2024.

Research Samples

The subjects in this research were retired athletes from the pencak silat sport. The subjects in this study were retired pencak silat athletes aged 25-60 years. The subjects in this research were retired pencak silat athletes spread throughout Indonesia. The side collection technique is carried out by incidental sampling. The total number of subjects in this study was 81 subjects consisting of 42 retired male athletes and 39 retired female athletes. Each subject is willing to be a sample in the research.

Procedure

Researchers distributed questionnaires via google forms. The link is then distributed via electronic media. Subjects who have received the direct link fill out the questionnaire by entering their identity first. Next, the subject fills in each questionnaire item until completion, then the subject saves the results of filling in the research questionnaire

Data Analysis Technique

The data analysis technique in this research uses analysis that has been determined in each questionnaire. On the questionnaire exercise Regulations Questionnaire (BREQ-3), the average score for each indicator is multiplied by the predetermined score weighting. After multiplied, the results of each indicator are added up. The meaning of the results of filling out the questionnaire is determined by the sum of each indicator which has been multiplied by the weight. Negative scores indicate more controlled regulation. Positive scores indicate greater relative autonomy.

The score weighting for each indicator can be see in Table 1. Data analysis techniques on the instrument The World Health Organization Quality of Life (WHOQOL)-BREF is carried out by grouping questionnaire indicators in each domain. Each indicator in each domain is added up. The sum results are convert using a predetermined score transformer. The results of the value transformation were then adjusted to the assessment norms in Table 2. Finally, to test the relationship between training motivation and quality of life in retired athletes, a simple correlation test was carried out using the SPSS application.

Table 1.

Weighting of scores for each indicator

Indicator	Weight for each indicator
Amotivation	-3
External regulation	-2
Introjected regulation	-1
Identified regulations	1
Integrated regulation	2
Intrinsic regulation	3

Table 2.

Transformer Score the Quality of life norms

Score transformer range	Category
$X \leq 25$	Not enough
$26 \leq X \leq 50$	Currently
$51 \leq X \leq 75$	Good
$76 \leq X \leq 100$	Very good

Results

Table 3.

Average results of training motivation for retired athletes

Subscales	N	Subscale Mean	Subscale Weights	Multiplication Result
Amotivation	81	3.3	-3	-9.9
External regulation	81	3.6	-2	-7.2
Introjected regulation	81	3	-1	-3
Identified regulations	81	3	1	3
Integrated regulation	81	3.5	2	7
Intrinsic regulation	81	3	3	9
Amount				-1.1

N= number of subjects

Table 4.

Results of training motivation for male and female retired athletes

subscales	N		subscale mean		Subscale weights	Multiplication result	
	M	F	M	F		Male	Female
Amotivation	42	39	1,9	1,4	-3	-5,7	-4,2
External regulation	42	39	2	1,6	-2	-4	-3,2
Introjected regulation	42	39	2	1	-1	-2	-1
Identified regulations	42	39	2	1	1	2	1
Integrated regulation	42	39	1,9	1,6	2	3,8	3,2
Intrinsic regulation	42	39	2	1	3	6	3
Amount						0,1	-1,2

N= number of subjects, M= Male, F= Female

Based on the analysis that has been carried out, the research results are presented in tables 3, 4, 5, 6, and table 7. Tables 3 and 4 will show the results of the level of training motivation in retired athletes in general and the differences according to gender. In tables 5 and 6, the results of the quality of life level for retired athletes as a whole and the quality of life level according to gender will be shown. And in table 7, it will show the correlation between the level of training motivation and the level of quality of life in retired athletes. Table 3 shows the results of the analysis of the level of motivation possessed by retired athletes from the pencak silat sport. From this table, you can see the average training motivation in the six domains. The average for each subdomain is then multiplied by the subscale weights. The multiplication results for each domain are then added up. The sum result shows a negative number. A negative score indicates great regulation while a positive score indicates relative autonomy.

Table 4 shows the results of the analysis of the level of motivation possessed by male and female retired athletes from the pencak silat sport. From this table, you can see the average training motivation in the six domains by gender. The average for each subdomain

is then multiplied by the subscale Weights. The multiplication results for each domain are then added up. The average exercise motivation level of retired male athletes shows a positive score (0,1), while the average exercise motivation level of retired female athletes shows a negative score (-1,2). The sum result shows a negative number. A negative score indicates great regulation while a positive score indicates relative autonomy.

Table 5.

Results of average quality of life for retired athletes

Domain	N	Mean Raw Score	Mean Transformer score	
			4-20	1-100
Physical	81	13	7	19
Psychological	81	11,2	8	25
Social relationships	81	5,4	7	19
Environment	81	14,8	7	19

Table 5 shows the results of the analysis of the level of quality of life of retired athletes from the pencak silat sport. Based on the table above, it can be seen that quality of life is divided into four domains. In physical domain the average value after conversion shows a value of 19, this value is in the poor category. In psychological domain the average value after conversion shows a value of 25, this value is included in the poor category. In social relationships domain the average value after conversion shows a value of 19, this value is included in the poor category. In environment domain the average value after conversion shows a value of 19, this value is included in the poor category.

Table 6.

Results of average quality of life for retired athletes

Domain	N	Mean Raw Score	Mean Transformer score					
			4-20		1-100			
			M	F	M	F		
Physical	42	39	6,8	5,9	5	6	5	6
Psychological	42	39	5,98	5,2	5	6	5	6
Social relationships	42	39	2,86	2,53	5	6	5	6
Environment	42	39	7,89	6,89	5	6	5	6

N= number of subjects, M= Male, F= Female

Table 6 shows the results of the analysis of the level of quality of life of male and female retired athletes from the pencak silat sport. Based on the table above, it can be seen that quality of life is divided into four domains. In physical domain the average value after conversion shows a value of 6, this value is in the poor category. In psychological domain the average value after conversion shows a value of 6, this value is included in the poor category. In social relationships domain the average value after conversion shows a value of 6, this value is included in the poor category. In environment domain the average value after conversion shows a value of 6, this value is included in the poor category.

Based on Table 5 above, the correlation results show a significance value < 0.005 , meaning it is correlated or related. The correlation value between motivation to exercise and quality of life is 0.974, the correlation value is $>$ from the r table. This means that there is a positive relationship between exercise motivation and well-being and quality of life. This means that the better training motivation a person has, the better the quality of

life they will have. Vice versa, the worse a person's training motivation, the worse the quality of life they have.

Table 7.

Relationship between levels of sports motivation and quality of life

		exercise motivation	quality of life
exercise motivation	Pearson Correlation	1	,974**
	Sig. (2-tailed)		,000
	N	81	81
quality of life	Pearson Correlation	,974**	1
	Sig. (2-tailed)	,000	
	N	81	81

** . Correlation is significant at the 0.01 level (2-tailed).

Discussion

Based on the results of research conducted, it is known that the quality of life of retired athletes is in the poor category. This is caused by several factors, one of which is aspects that affect the quality of life (Babakhanian et al., 2023). According to the World Health Organization (WHO), quality of life aspects consist of physical health, psychological aspects, social relationships, and the environment (Totlibayevich et al., 2023). If one of these aspects is in poor condition, it will certainly affect a person's quality of life (Bazargan et al., 2023). Physical health refers to a person's ability to carry out all daily activities without interference (Chun et al., 2021). Good physical health can be obtained by regularly exercising, adjusting your diet, and arranging rest time (Franklin et al., 2023). Psychological health refers to the good mental condition a person has. Good stress management can maintain a person's psychological condition (Read et al., 2022). Remember that stress can occur due to several factors, such as pressure at work, a poor work environment, and poor social relationships. Social relationships and the environment are also factors that determine a person's quality of life (Davies et al., 2024). This is because humans are social creatures who interact with other humans and blend with the environment in living their lives. So retired athletes need to find a positive social and environmental community that can be a factor in stabilizing a person's quality of life (Singe et al., 2023).

Results of data analysis obtained from Exercise Regulations Questionnaire BREQ-3 showed negative results. A negative result indicates good regulation while a positive score indicates greater relative autonomy. Autonomy shows independence that comes from within oneself. Meanwhile, regulation refers to regulation, supervision, and encouragement from outside. The negative calculation results certainly show that the motivation to exercise among retired athletes still does not come from themselves. This condition shows that there is still a need for external regulations such as rules, encouragement, and supervision from outside in carrying out sports (Gould et al., 2022). That means that if retired athletes are not supervised and not encouraged to active exercise, the possibility that retirees will do regular exercise will be low. The low training motivation of former athletes themselves will certainly have an impact on the lack of training carried out. Lack of exercise will affect physical health (Arthuso et al., 2023). As explained in the previous paragraph, quality of life is determined by physical health. So the low motivation of retired athletes to exercise will have an impact on quality of life. Retired athletes' lack of motivation to exercise is caused by several factors (Haase et al.,

2023; Nilaweera et al., 2023). First, the loss of the meaning of sport for athletes who have entered retirement (Flack et al., 2023). The loss of meaning in sports among retired athletes is caused by a lack of provision by related parties before entering retirement. Provision regarding the meaning of sport in the form of benefits and negative impacts that can occur when not doing regular sport after retiring from sport is important to achieve (Wooding & Prior, 2021).

Second, the loss of training motivation in retired athletes is also caused by injuries suffered while they were athletes (Pillay et al., 2023). Every athlete experiences at least one injury during training or a match (Dandrieux et al., 2023). The injuries experienced will result in trauma that often results in the impact until retirement from competitive sports (Vasenina et al., 2023). The impact of the injury experienced can interfere with daily activities due to limited movement. This limitation in movement is what makes it possible for a retired athlete to be reluctant to do sports because his daily activities are disrupted. So it is very important to make preventive efforts to reduce the occurrence of injuries for long-term health (McGlynn & Cassilo, 2023). Third, lifestyle changes when entering retirement can also influence a person's motivation to practice. A sedentary lifestyle makes a person lazy about doing physical activity (Hernández et al., 2024; Nilaweera et al., 2023). Some tend to be lazy, preferring to lie down, play games, and watch TV. This kind of lifestyle is often preferred by retired athletes, considering that during their time as athletes, there were lots of rules and supervision carried out by coaches. A sedentary lifestyle followed by poor eating patterns can certainly increase the risk of obesity in retired athletes (Devi et al., 2023). Where obesity is one of the factors in the emergence of various other health problems (Loux et al., 2022).

Fourth, another factor that causes retired athletes' lack of motivation to exercise is busyness. After retiring from competitive sports, an athlete has other activities such as working and taking care of housework. A heavy and large workload combined with housework makes a retired athlete feel tired and have no free time to exercise (Flack et al., 2023). This busyness also makes retired athletes choose to rest rather than use their rest time to work. Sixth, mental health is one of the factors that causes a retired athlete's lack of motivation to train. Mental problems often occur in athletes who retire due to injury or incident (Furi et al., 2023). The effects of retiring prematurely are feelings of regret, disappointment, anxiety, self-isolation, and depression (Godoy et al., 2023; Beable, 2024; Kussman & Choo, 2023). Trainers and stakeholders need to help minimize these incidents through a program (Wooding & Prior, 2021).

The research results show that there is a positive relationship between training motivation and the quality of life of retired athletes. This relationship can occur because the higher a person's level of training motivation, the more training they will do. Having a lot of exercise will certainly affect your physical health (Hoevenaars et al., 2023). Where physical health is one aspect that determines a person's quality of life (Totlibayevich et al., 2023). Likewise, vice versa, when training motivation is not good, retired athletes are lazy about doing sports. So the weekly exercise recommendation is not fulfilled. Failure to fulfill weekly exercise recommendations will affect the physical health of retired athletes themselves. Which will ultimately affect the quality of life of retired athletes. The physical health of retired athletes is an important thing to study as a form of attention to athletes in retirement (Harrison et al., 2023). There is less research that examines various problems in retired athletes than

research that examines performance improvement. This, of course, can be a new opportunity for researchers to research various problems in retired athletes. As well as helping retired athletes to solve problems faced by retired athletes regarding preparation plans for retirement (Brassard et al., 2023). In this way, it is hoped that the quality of life for retired athletes will be better. Quality of life is also influenced by psychological health, social relationships, and the environment. The results of research that has been conducted show that psychological health is influenced by social relationships and the environment. These three are part of the components that influence a person's quality of life. So there is a need for a more in-depth study regarding the problems that occur in athletes during retirement in future research, including economic problems (Moolman, 2023). Apart from that, a management program to maintain the quality of life for retired athletes needs to be developed as a guide for retired athletes and coaches. Considering that research regarding retired athletes is still rarely carried out.

Conclusions

The level of training motivation and quality of life in retired athletes is in the poor category. The research results show a positive correlation between training motivation and quality of life in retired athletes. So it can be concluded that the higher the level of training motivation in retired athletes, the higher the quality of life of retired athletes. The lower the training motivation of retired athletes, the lower the quality of life of retired athletes. In future research, it is necessary to examine other factors that influence the quality of life of retired athletes, such as economic and social factors. Apart from that, there needs to be a strategy to increase training motivation for retired athletes through various types of fitness training programs. In this way, the quality of life of retired athletes can be controlled.

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