



## SUMMARY

This study will address a literary review on the importance of physical activity aimed at the elderly, the effects and benefits, with a focus on quality of life. Therefore, elderly people who practice physical activity become more resistant to diseases and emotional stress, consequently depression, leading to a more active, healthy and independent life. Therefore, what is the importance of practicing physical activities in groups in old age? Quality of life is a personal choice. For some elderly people, practicing physical activity combined with a better quality of life is a pleasurable activity, while others do not think so. The present study is of fundamental importance to prove that physical activity is related to improving the quality of life of the elderly, which contributes to improving functional capacity as well as to preventing the installation, progression or correction of possible dysfunctions that may incapacitate them. Its general objective is to research the relationship between physical activity and maintaining the functional autonomy of the elderly, providing quality of life. The specific objectives are to investigate the contribution of physical activity as a factor in the healthy aging process, to show the contribution of physical activity for the elderly in the prevention and cure of diseases that compromise the elderly's autonomy, and to analyze how physical activity contributes to maintaining quality of life and increasing the level of autonomy. Therefore, this work is descriptive research, since its purpose is to record, describe, observe and compare the various phenomena in the context of old age. The research was to collect bibliographic data.

**Keywords:**Physical. Activities. Elderly.

## ABSTRACT

The study under discussion will address the importance of physical activity aimed at the elderly, its effects and benefits, with a focus on quality of life. Thus, the elderly who practice physical activity become more resistant to illnesses and emotional stress, hence depression, having a more active, healthy and independent life. Thus, what is the importance of practicing physical activities in elderly groups? Quality of life is a personal choice. For some seniors, the practice of physical activity combined with a better quality of life is a pleasurable activity, while others do not think this way. The present study is of fundamental importance to prove that physical activity is related to improving the quality of life of the elderly, which contributes to the improvement of the functional capacity and active work of the oldest old and even to prevent the installation, progression or correction of possible dysfunctions that end up disabling it. The present study has as general objective to investigate the relationship between physical activity and maintenance of the elderly's functional autonomy, providing quality of life. The specific objectives are to investigate the contribution of physical activity as an interfering factor in the healthy aging process, show the contribution of physical activity for the elderly in the prevention and cure of diseases that compromise the autonomy of the elderly and analyze how physical activity contributes to maintain quality of life and even increase the level of autonomy of the elderly. Thus, this work is a descriptive investigation, as its purpose is to register, describe, observe and compare the various phenomena in the context of old age. The research was to collect bibliographic data.

**Keywords:**Activities. Physics. Seniors.

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## THE POSITIVE EFFECTS OF PHYSICAL ACTIVITY PRACTICE ON THE HEALTH OF THE ELDERLY

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## INTRODUCTION

The growth of the elderly population is a well-known fact, demonstrated by research such as the last census conducted by the Brazilian Institute of Geography and Statistics (IBGE) in 2010, which quantified and projected the growth of the elderly population that has been progressively occurring in our country. Population data showed that in 1991 the elderly population was around 4.9%, in 2000 it rose to 7.6%, and in 2010, the year of the last census, it reached 9.7%. Regarding life expectancy in 1991 it was 65.9 years, in 2000 it rose to 69.6 years, reaching the year 2010 with a life expectancy of 74.4 years for the population, still, according to IBGE, it is estimated that it is approximately 13% of the Brazilian population.

This current demographic profile characterized by an increase in the elderly population has brought to the table fundamental questions related to the healthy aging process, which includes aspects focused on regular physical activity, physical exercise and quality of life. Given the above, the question arises: what are the effects that physical activity has on the health of the elderly?

Studies and research carried out in the area of human motor skills and related areas have shown that physical activity has a direct relationship with quality of life, due to changes in lifestyle and daily habits, and can also extend the life of those who manage to maintain regular practice of physical activities and exercises (CAPARROZ, 2008).

During the aging process, there is a significant need to exercise the upper and lower limbs of the body, and it is therefore necessary to combine various exercises that work on the strength of these muscles, as well as those that involve balance and coordination, together with exercises that involve stretching, flexibility and aerobic training for these people. However, it is also worth noting that the intensity of these exercises that will be performed needs to be adequate taking into account the age group of each practitioner, because there are many elements, such as biological individuality and also the limitations resulting from the disease, that directly influence the creation and prescription of a strength training program (NASCIMENTO, 2017).

The study on the indication of physical activity in groups, mainly thinking about the “Senior Citizens” arose from the need to raise awareness of the importance of practicing physical activity and its benefits in the lives of the elderly who, over time, suffer with changes in their bodies (MATSUDO, 2009).

Thus, this study will address the importance of physical activity aimed at the elderly, its effects and benefits, with a focus on quality of life. According to Jacob Filho (2006), “a healthy elderly person is an elderly person with excellent physical, mental and social condition”.

Therefore, elderly people who practice physical activity become more resistant to diseases and emotional stress, and consequently depression, leading to a more active, healthy and independent life.

Therefore, this study is of fundamental importance in demonstrating that physical activity is related to improving the quality of life of the elderly, contributing to improving physical, functional and work capacity, as well as helping to prevent the onset, progression or correction of possible dysfunctions or pathologies that end up incapacitating them. It also proves the importance of the professional in this transformation process.

The general objective of this study was to research the relationship between physical activity and maintenance of functional autonomy in the elderly, providing quality of life.

Having as specific objectives, namely:

- Investigate the contribution of physical activity as a factor of interference in the healthy aging process.
- Show the contribution of physical activity for the elderly in preventing and curing diseases that compromise the elderly's autonomy.
- Analyze how physical activity contributes to maintaining quality of life and increasing the level of autonomy of the elderly.

This work is descriptive research, since its purpose is to record, describe, observe and compare the various phenomena in the context of old age. The research was to collect bibliographic data. This research is a review, but it is characterized by being a qualitative research, since it considers that there is a dynamic relationship between the real world and the subject, that is, an inseparable link between the objective world and the subjectivity of the subject that cannot be translated into numbers.

## 2 MATERIAL AND METHODS

This research will be a bibliographic review. The systematic survey of the bibliography will be developed first in the databases *Latin American and Caribbean Literature in Health Sciences - Lilacs*, *Brazil Scientific Electronic Library Online - Scielo*, *Electronic Journals Portal in Psychology - PePSIC*, *Google Scholar*, among others, by crossing the following keywords: physical exercise, effects, quality of life, elderly health, physical practice, physical fitness, elderly people. Scientific articles, literature in the area, research based on bibliographies, which discuss physical exercise and its benefits for the elderly. The exclusion criteria are case reports and articles that are not related to the proposed objective.



## 3 RESULT AND DISCUSSION

### 3.1 CHARACTERISTICS OF THE AGING PROCESS

Aging is characterized by being a progressive and differential process, and directly affects the organism that undergoes physiological and biological changes, which can contain three aspects: biological, psychological and sociological, these changes that influence the elderly's lifestyle, interrupting the natural and healthy aging process. (CANCELA, 2008)

According to Cancela (2008), the aging process has several aggravating factors, such as biological, social and psychological age, which can be very different from chronological age. Studies show that it is impossible to contain aging, because depending on the level at which it occurs (biological, psychological or sociological), its speed and severity vary from individual to individual.

Looking old is a characteristic that points to complex mechanisms in our society, which compromise the self-esteem of the elderly, in various everyday situations, including in their emotional state, making them feel useless. (MORAES LIMA, 2010).

According to Neri, quality of life in old age involves several factors:

Assessing quality of life in old age involves adopting multiple criteria of a biological, psychological and socio-structural nature. Several elements are identified as determinants of well-being in old age: longevity, biological health, mental health, cognitive control, social competence, productivity, cognitive effectiveness, social status, income, continuity of family and occupational roles and continuity of informal relationships in primary groups. (NERI, 1993, p.10)

We define social age as referring to a person's habits in relation to other members of society. Social age is determined by culture and the history of the way of life within society. Psychological age is related to the behavioral consequences in response to changes in the environment in which one lives. (GEIS, 2003)

For Cancela (2008) "Aging is the consequence of the passage of time in the organism where the death of somatic cells occurs."

Another aspect that we can point out is that the physiological aging process comprises a series of changes in organic and mental functions due exclusively to effects that can be cited as, for example, loss of muscle tone, decreased flexibility, loss of reflexes, agility, also affecting the body's regeneration capacity.

skeletal muscles, decreasing muscle strength, increasing fatigue, bringing several complications to the elderly, reducing their life expectancy. (CANCELA, 2008).

According to Nahas (2013), physiological and biological changes occur in the body during aging, causing the elderly person's body to undergo mutations that can be harmful to the elderly, developing diseases such as: osteoporosis, lack of balance, diabetes, obesity, poor blood circulation causing varicose veins and several other diseases that accompany the elderly as they age.

As we age, it is natural for our functional capacity to decrease, which is aggravated by a sedentary lifestyle. The impact caused by the passing of time results in changes to the elderly person's daily routine, leading to a sedentary lifestyle and low self-esteem due to complications caused by diseases related to the aging process.(NAHAS, 2013).

As Okuma warns us:

Aging is inherent to every living being; in the case of humans, this process takes on dimensions that go beyond the simple biological cycle, as it can also have social and psychological consequences, causing the elderly to lose self-esteem and confidence in playing their role in society. (OKUMA, 1998, p.45).

The natural causes of aging can be understood from the cell renewal. Our body is made up of approximately 75 trillion cells, and these, except for musculoskeletal cells and neurons, multiply constantly. (DANTAS, 2003)

Due to cell division, their DNA sequences are shortened. After many division cycles, they disappear until, finally, the cells lose their ability to renew themselves. (GASPAR, 2004).

Aging without quality of life is related to several factors that can be harmful to the health of the elderly, such as advancing age, sedentary lifestyle, addictions and bad eating habits, which compromise the elderly's lifestyle. To achieve healthy aging, a balanced diet is necessary, as well as regular physical activity practices, respecting the limits of each elderly person and their needs, having monitoring by health professionals to control blood pressure, in addition to other necessary exams to be able to practice the activity without compromising, leading to a more pleasurable and quality life.( NAHAS, 2013).

As we have seen, increasing age ends up resulting in the emergence of progressive losses in the physical and functional fitness and capacity of the organism, thus influencing the reduction of physical exercise practice. This lack of physical activity acts as an element that accelerates human decline and results in a high lack of functional capacity, loss of quality of life, increase in the number of diseases, obesity and mortality, among other problems, thus evidencing how important physical exercise is for the elderly individual ( NAHAS, 2013).

We can see that the aging process of skeletal muscles is characterized by a reduced number of motor units, muscle fibers and the size of type II fibers, resulting in a loss of muscle strength and power. Furthermore, there is also a deterioration in proprioception and reaction time that becomes evident due to increasing age (GAEDTK and MORAT, 2015). These changes end up causing a decrease in muscle strength, static and dynamic balance and also in joint mobility, thus inducing the occurrence of falls and/or loss of independence (GAEDTK and MORAT, 2015).

It is therefore very clear that regular physical exercise is an extremely important element for healthy aging. Among all age groups, elderly individuals are those who benefit most from exercising, considering that the risk of various diseases and health problems commonly found in old age, such as systemic arterial hypertension, depression, osteoporosis, bone fractures and diabetes, are reduced through frequent physical exercise. It is also worth noting that elderly individuals who undergo physical training are able to take better care of themselves and perform all common daily activities more efficiently. In this sense, taking part in a frequent exercise program should be seen as a type of highly efficient intervention with the aim of reducing and preventing various functional declines related to the aging of individuals (SILVA-GRIGOLETTO et al., 2014).

### 3.2 The BENEFITS OF PHYSICAL ACTIVITY FOR ELDERLY PEOPLE

Physical activity is understood as an expenditure of energy through any voluntary movement produced by skeletal muscles, with the intention of improving the elderly person's physical condition and lifestyle through their needs, capabilities and limitations in performing physical exercises, with the intention of improving or maintaining one or more elements of physical fitness (MAZO, v.15 n.4 p.788- 796, 2009).

According to Nahas (2013), with advancing age, diseases arise that are caused by the impact of aging, such as diabetes, hypertension, osteoporosis, obesity, among others, which can be alleviated through regular physical activity and a healthy diet, contributing to the transformation of social and psychological life and physical structure.

Regular and well-guided physical exercise can be seen as an important contribution to health. This movement, which advocates the idea of lifelong fitness and the development of active lifestyles in people, aims to contribute to improving the health and quality of life of the population. Although this movement can be considered an advance in relation to what has been taught in school physical education, it is not without its critics. Among the main criticisms are the idea of causality between exercise and health and the eminently individual nature of its proposals, which contributes to blaming the victim (MEURER et al., 2009).

Nowadays, common sense accepts and propagates the idea that physical exercise is good for you. health, in fact, the regular and well-guided practice of physical exercise brings countless benefits. Based on this, proposals have emerged aimed at popularizing the practice of physical exercise and, in this way, contributing to the improvement of the health and quality of life of the population. In our opinion, these proposals represent progress, although they adopt an essentially biological approach to the issue, omitting aspects of fundamental importance for adherence to physical exercise, such as socioeconomic aspects. With this in mind, we intend to present here ideas that aim to fill this gap, and thus contribute to the creation of a new perspective when thinking about exercise aimed at the elderly. (MOTA et al., 2006).

Regular physical activity provides benefits such as increased body resistance, muscle strength, flexibility, balance, agility, improved flexibility, reflexes, maintaining body weight and improving the performance of daily tasks, among others. Physical exercise also helps improve memory, as the activity, due to repetition, works on attention, reasoning and motor learning.

Due to the frequency of attending gyms, groups of elderly people who practice physical activities, they return to social interaction, forming a circle of friends, maintaining contact with these people. We can say that dancing provides this to the elderly as well, even preventing depression. Elderly people who practice physical exercises show improved control of diabetes, arthritis, and heart disease, having a better recovery and improving their immune system, reducing the use of medications (MAZO, 2009).

Therefore, the experience of physical activity in the elderly will help control multiple diseases that affect them, and it is also an experience that brings pleasure and is a fun activity. There are many benefits of physical activities for the elderly, preventing numerous diseases, in addition to improving life expectancy and providing socialization and leisure. (BORGES, 2006).

According to Ribeiro et al., (2009) one of the benefits evidenced by the practice of physical activity physical activity is in relation to the components of functional capacity, in a physical activity program for the elderly in Health Centers, improvements were found in coordination, strength, agility, dynamic balance and aerobic resistance.

Analyzing sedentary and active elderly people, it was found that the latter group has greater strength in the upper and lower limbs and better levels of flexibility, contributing to quality of life and healthier aging. Another study evaluating the effects of physical activity in individuals aged 50 to 79 years observed an increase in muscle strength in the upper limbs, while in the lower limbs the increase was for individuals aged 50 to 69 years (PENHA; PIÇARRO; NETO, p. 245-53, 2012).

In a study using elderly people who underwent a program with exercise sessions twice a week for 16 weeks, improvements were demonstrated in the strength levels of the upper and lower limbs, in addition to shoulder flexibility and agility/balance (SIMONS; ANDEL, p.91-105,2006).

In another investigation of a 9-week supervised exercise program physical activity consisting of 3 walking sessions, strength and flexibility exercises per week, significant increases were shown in the levels of aerobic capacity and lower limb strength, in addition to positive effects on upper limb strength and agility/dynamic balance (TORAMAN; ERMAN; AGYAR, p.538, 2004).

Study using resistance training for healthy individuals of both sexes, analyzed a statistically significant increase in muscle strength after eight weeks of intervention, in both men and women (DIAS et al., 2005).

Analyzing these studies, we identified that research focusing on the components of functional capacity is directed at elderly individuals, perhaps because these components are impaired with advancing age. Thus, regular physical activity becomes an essential tool for improving and maintaining a good quality of life. However, in addition to functional capacity, other variables also benefit from the practice of physical activity, such as biochemical variables.

In a study aiming to analyze the association between the level of physical activity practice (NPAF) and plasma lipoproteins, a low association was found between NPAF and LDL (Low Density Lipoprotein), while for HDL (High Density Lipoprotein) the correlations were significant for both sexes (PITANGA, p.25, 2001).

Kelley et al., (2011) in a literature review, sought to determine the effects of aerobic exercise - associated with a diet - on lipid and lipoprotein concentrations in adults and the elderly, finding that the combination of aerobic exercise and diet are effective in improving Total Cholesterol, HDL, LDL and triglyceride levels, but do not contribute to benefits in HDL concentrations.

It has been shown that regular physical activity is also efficient in reduction and control of blood pressure, demonstrating yet another contribution to health from physical activity and constituting an important non-drug means for treating chronic non-communicable diseases, such as hypertension. Studies show that aerobic (isotonic) exercises, which should be complemented by resistance exercises, reduce blood pressure and are recommended for the prevention and treatment of systemic arterial hypertension (CIOLAC, p. 15-26, 2002).

This association between resistance exercises and aerobic activities makes up an important combination. According to the Brazilian Society of Cardiology (SBC, 2010), it is essential to practice moderate aerobic exercises for 5 days a week lasting 30 minutes, in addition to resistance exercises 2 to 3 times a week for treatment and control of blood pressure.

Rondom and Brum (2003), in research evaluating physical exercise as a means of treating high blood pressure, point to an interesting fact: regular exercise, being able to reduce or even eliminate the need for medication, helps to avoid the adverse effects of pharmacological treatment and reduces the cost of treatment for the patient and for health institutions.

In a review article, the authors conclude that the beneficial effects of exercise

should be used in the initial treatment of hypertensive individuals, aiming to prevent and reduce the number or doses of medications. In sedentary and hypertensive individuals, a modest increase in the level of physical activity can be effective in reducing blood pressure even in the elderly. (MONTEIRO; FILHO, p.513, 2004).

In another review research it is stated that a healthy lifestyle is important for the treatment and prevention of hypertension, with the integration of physical exercise being a key element. Thus, exercise programs encompassing endurance activities and strength training play a fundamental role in the primary prevention of hypertension and also contribute to the reduction of blood pressure values in hypertensive individuals (RUIVO; ALCÂNTRA, p.151, 2012).

In addition to contributing to blood pressure, physical activity is an important means of glycemic control, making it a powerful ally for diabetic individuals. Regular physical activity is effective in preventing and controlling type 2 diabetes (CASTANEDA et al., 2002), a disease with high prevalence rates in adults and the elderly.

Chronic physical exercise also improves insulin sensitivity in individuals healthy individuals, in non-diabetic obese individuals and in type 1 and 2 diabetic individuals. The benefits of physical exercise on insulin sensitivity are demonstrated with both aerobic and resistance exercise, aiming to contribute to improving the health and quality of life of the population. (MIKUS et al., 2012).

### **3.3 Physical Activity in Aging and Care**

Physical activity is a complex phenomenon, with significant socio-historical values, integrated with the physical adaptation capacity of the human species, the impacts caused by aging and the possible changes achieved through the regular practice of physical activities have positive effects on the preservation and maintenance of health, among them is the control of blood pressure and the preservation of bone mass, allowing the elderly to have an active life (FIGUEIRA JUNIOR, 2009).

According to Gomes Jr et al. (2015), aging is a constant concern for the elderly population throughout the country. Old age is a natural process, and this phase of life involves many physiological changes, which alter the entire metabolism of the elderly body, which can be harmful to health. Moderate physical activity accompanied by a professional can reverse this process, allowing the elderly to have a healthy and active life.

Thus, physical activity in old age has as its main benefit preserving health of the elderly through regular practice of physical activity aiming to contribute to physical and psychological aspects. (FERRETTI, FÁTIMA et al., 2015).

Studies conducted by several descriptors have demonstrated relevant benefits of practicing physical activity in the healthy aging process. However, there are some limitations, both for the development and execution of physical activity developed by health professionals due to the lack of human and physical resources, and for the adherence of elderly people in the regular practice of these activities. (OLIVEIRA, 2011).

They need to know how to carry out such activities safely and efficiently, that is, that they have the minimum autonomy to practice these activities on their own. Finally, it is necessary that they have access to basic content from other fields of knowledge such as physiology, biomechanics, nutrition and anatomy (FERREIRA, p.45, 2001).

For example, when teaching running, the teacher should also explore the importance of heart rate in monitoring physical effort. The same should occur with an activity for seniors, which must be done with the help of a responsible professional who knows how to check each person's limits, respecting the limits of exercise and physical effort, especially when dealing with senior groups.

Physical well-being in the elderly is what makes them have the desire to participate in the group and autonomy to choose it. In a survey carried out in Bahia it was confirmed that the importance of health in older adult life makes a difference in their social life. (SENA, p.58 2013).

Still checking according to what Sena (2013) says about healthy lifestyle practices, involving recreation and sports, such as the ability of each person to bring appropriate eating habits and integral physical and emotional health to optimize quality of life, and understanding the physiological changes associated with aging do not represent health regression.

Studies have demonstrated significant benefits of physical activity in the healthy aging process. However, they present some limitations, both in the development and execution of physical activities developed by health professionals due to the lack of human and physical resources, and in the adherence of elderly people to the regular practice of these activities.

It is concluded that the practice of physical activity in the elderly population leads to an improvement in physical capacity, disease prevention, encourages health promotion, greater integration into society and greater psychological balance. Due to the frequency of gyms,



groups of elderly people who practice physical activities, return to social interaction, forming a circle of friends, maintaining contact with these people (OLIVEIRA, 2011).

### **3.4 Physical Activity: Possible Practices**

#### **3.4.1 Pilates for the Elderly**

The creator of the Pilates Method - MP, Joseph Hubertus Pilates, was born in Dusseldorf, Germany, in 1880. He practiced several sports throughout his adolescence, such as gymnastics, skiing, diving and boxing. In 1912, he became a professional boxer and even began teaching self-defense to Scotland Yard detectives. During World War I, in 1914, he ended up being exiled, being taken to an English island, where he worked in a hospital with exiles and mutilated people. In this hospital, he began to use springs for medical treatment, and this technique was the basis for later helping him develop a system of exercises and equipment.

Taking into account the lessons of Pilates (1927) (apud CAMARÃO, 2004), this method is a procedure for achieving physical conditioning that integrates the individual's body and mind, increasing movement capacity, as well as increasing control, strength, muscular balance and body awareness. It is presented as a system of exercises that enables a more adequate integration of the individual in their daily lives. It then works the body as a whole, correcting posture and realigning the body's muscles, resulting in the body stability that the person needs for a healthier and longer life.

In this process, the person rediscovers their own body, presenting greater coordination, balance and flexibility. So regardless of age, any individual is able to achieve benefits through this method that also improves quality of life and provides beneficial results.

Thus, with this result as the objective, what can be understood is that Joseph Pilates sought to perform exercises that were capable of providing all these advantages. From his research, he ended up arriving at the exercises that are currently part of his method known throughout the world. These are also exercises that must include isotonic, concentric, eccentric and, especially, isometric contractions, emphasizing what he knew as "*power house*" or center of force, being constituted

through the abdominal, gluteal and lumbar paravertebral muscles, which are responsible for the static and dynamic stabilization of the body when it is in balance and encourage the maintenance of good posture (PIRES apud APARÍCIO; PEREZ, 2005).

Observing the results of some research already carried out, the results of the Pilates Method with regard to the treatment of postural deviations and osteomyoligamentous pain are proving satisfactory (GAGNON, 2005).

According to Pilates' conception, which still attributed these achievements to the emphasis on work of the strength center and body awareness, therefore, it is possible to believe in the acceptance of this modality and the evolution of its practice, taking into account the current context of several individuals with musculoskeletal difficulties, also observing a survey carried out by the World Health Organization (WHO), we can highlight the amount of 52 (fifty-two) million Brazilians with back pain, thus representing around 60% (sixty) of the cases that result in absence from work and early retirement (WHO, 2019).

The author also highlights that the concentration and precision with which the exercises need to be done require the practitioner to have great control and perception of their body, thus functioning as proprioceptive stimuli of relevant magnitude, where they are also responsible for taking body awareness, in other words, the person gets to know their own body better, thus seeking harmony in its structures and thus providing a more adequate use of them (GAGNON, 2005).

The relevance of the entire legacy that Joseph Pilates left behind is very clear, as it greatly benefits the improvement of techniques. His method was revolutionary, reaching the third millennium and allowing the use of the techniques and equipment developed by him.

Today, through the evolution of all areas and with greater scientific knowledge, it is still possible to take advantage of the legacy that Joseph Pilates left and add some changes to it that are appropriate for today. We can highlight as examples Hydro Pilates and Pilates on the Ball, which in this case are some of the improvements to the method that Joseph Pilates created.

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Still observing the studies of Camarão (2004), we can see that the original method acted through the "*rectification of the spine, contraction of the abdomen, buttocks and pelvic floor*"—which Joseph Pilates called the power house. Pilates pointed out that all movement must begin with the abdomen, which is correct. However, the

From the moment the spine is straightened, the individual ends up forcing his or her physiology. Through scientific development, modern Pilates does not work with a straightened spine – with the intention of preserving and restoring physiological curves.

Through research that presents a similar association to that of Joseph Pilates, it is shown that a series of 30 (thirty) seconds of stretching 3 (three) times a week is capable of verifying a significant increase in flexibility. It should also be noted that the frequency of training, both flexibility and strength, is influenced by the division of the training routine, which is different between beginners and advanced students (ACHOUR JÚNIOR, 2006).

The Pilates method is being practiced more and more all over the world, one of the reasons for the occurrence of this adherence are its many benefits through frequent practice of this procedure. Highlighting some of these reasons: such as strengthening the body, especially the abdominal muscles, improving stretching and flexibility, developing body awareness, improving coordination, posture, balance, increasing joint mobility, developing the muscles that support the spine, and relieving chronic pain in the region.

Analyzing the studies by Rodrigues (2006), we can see that Pilates also has the objective of stretching or relaxing muscles that have shortened or are overly tense and resulting in the strengthening or increase in tone of individuals who have some stretching or weakening. Therefore, the muscular imbalances that occur between agonists and antagonists and are responsible for some postural deviations and orthopedic and hematological problems are reduced. Referring then to an activity that does not result in joint wear and the number of repetitions of each exercise is not high, it is capable of promoting the prevention and/or treatment of some types of pathologies, mainly occupational ones.

Through the increase in the amount of carried out on human movements and the therapeutic exercises, this procedure has evolved in many different ways, but it is still relevantly based on the perspective and movement patterns of the revolutionary work done by Joseph Pilates. Thus, the Pilates Method is capable of resulting in benefits for the treatment of spinal pain, soft tissue injuries, limitations of joint movements, prevention of injuries resulting from some sport, through dance, by repetitive effort (STANMORE, 2008).

Therefore, we must still highlight the emotional benefits, such as: elevation

concentration, relief from physical and mental stress, increased confidence, among others.

Table 1: Summary of the aforementioned MP benefits.

Exercício do método	Nível	Objetivo
Pilates		
Mermaid	Básico	Alongar cadeia lateral de tronco
Single leg kick	Básico	Alongar quadríceps e abdominais Fortalecer isquiotibiais e paravertebrais
Bouncing while kicking on the ball	Básico	Melhorar equilíbrio, coordenação neuromuscular
Bridging on the ball	Básico à intermediário	Fortalecer abdominais e paravertebrais. Melhorar a coordenação neuromuscular
Rollup	Básico à intermediário	Alongar cadeia muscular posterior Fortalecer flexores de quadril
Spine twist	Intermediário	Aumentar a mobilidade em rotação da coluna vertebral Estabilizar a pelve
Saw	Intermediário	Aumentar a mobilidade em rotação e inclinação da coluna vertebral
Swan on the Ball	Intermediário	Fortalecer de paravertebrais e coordenação
Push-Up on the Ball	Intermediário à avançado	Fortalecer músculos dos membros superiores
Scissors	Avançado	Fortalecer abdominais e Alongar cadeia muscular posterior

Source: PAGE (2010).

As demonstrated, the Pilates Method has as its most relevant objective achieving relaxation, concentration, alignment, breathing, coordination and resistance. It also has exercises both on the ground and on equipment and, observing the words of Camarão (2004), we can also point out the benefits of this method:

Increases strength; Gives greater muscle control; Integrates body and mind; Improves respiratory capacity; Increases energy; Gives greater flexibility; Harmonizes daily movements; Stretches, tones and defines muscles; Improves physical and mental conditioning; Corrects posture; Gives greater body awareness; Restructures the body; Increases balance and coordination; Prevents injuries; Is efficient in post-rehabilitation; Increases self-esteem; Relieves stress; Relieves muscle pain (CAMARÃO, 2004 p. 9).

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Vanicola's studies (2007), regarding the reeducation of body posture, highlights how the elements associated with motor learning are capable of influencing the reeducation of body posture, where these studies show beneficial results due to the use of physical and mental practice, thus, the author still makes very clear the relevance

Physical Education professionals should take into account information on the topic, implementing these strategies in their classes, aiming to encourage the acquisition of a better quality body posture by their students.

## 4 CONCLUSION

In this study, we examine the situation of the elderly regarding the aging process and possible causes that increase the rate of depression and diseases associated with both the environment in which they may live and the diseases and changes in lifestyle habits with the aging process. This topic is of utmost importance for public health, given that the elderly population is only growing and it is socially necessary to seek measures that cause effects in improving functional capacity, generating quality of life and consequently better performance in daily activities in an autonomous and independent manner.

At this point, the importance of physical activity comes into play. We must emphasize that future research is still very necessary to better assess activities in the elderly and how they affect them, aiming to propose ways of improvement and prevention. Establishing self-care measures, working on prevention, promotion and protection of the health of the elderly, encouraging them to incorporate healthy habits into their lives to reduce and compensate for the limitations inherent to age.

Thus seeking changes and innovations that can improve the quality of life of people who are in this phase, whether by raising awareness among the elderly and even those around them about aging and everything it entails in our lives.

In short, it is more than necessary to expand and develop health centers that include the practice of physical activity, as seen in this study, Pilates can be a great ally, equipped with equipment, infrastructure and qualified professionals as a form of public policy for prevention and improvement of the health of the elderly, together with other public policies that promote health promotion actions in conjunction with other health programs and actions and health surveillance.

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