

UNIDAD EDUCATIVA PARTICULAR JAVIER BACHELOR IN SCIENCE

MONOGRAPH THE EFFECT OF DIFFERENT TYPES OF SPORTS IN HEALTH

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THIRD BACCALAUREATE - COURSE C

2018 - 2019

Acknowledgement

I want to thank my parents who have always been present for me throughout my school year and taught me to value studies, to improve myself every day as a person and thanks to them I am what I am today.

I thank God for giving me health all these years and for giving me the gift of discernment to make the right decisions in my life.

I am sure that my effort given in recent years will bear fruit in the future and that I will continue to be proud of my parents without neglecting my principle.



Summary

The present monograph is a description of the benefits in related to health regarding the different sports as: tennis and swimming, for me these two sports are of great popular interest and of great health to all those who practice these wonderful sports. Tennis and swimming are well known for their benefits to the body as they help cardiorespiratory health, strengthen the bones, give mass to the muscular form, and increase the resistance of the muscles and among many other benefits.

This monograph has three chapters which talks about the importance of playing tennis, practicing swimming, and surveys made to teenagers to know if they have knowledge about the theme.



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Introduction

The present monograph titled "The effect of different types of sports in health" is focused on the importance of people's health. Everyone should practice a sport in order to enjoy a healthy life and for everyone to know the importance of sports in life. Sometimes people do not know what are the benefits that sports offers and that is why they don't do any kind of effort on practicing a sport.

Among the benefits we can recommend are many, but we will focus on highlighting two important facts about two excellent sports that are tennis and swimming; the biological and psychological benefits that these sports provides if you are disciplined and constant.

While playing tennis and swimming most of the biological benefits you get are: improving physical strength and shape, regulates blood pressure figures, increases or maintains bone density, improves insulin resistance, helps maintain body weight, increases muscle tone and strength, improves flexibility and mobility of the joints, reduces the feeling of fatigue.

These sports provide many psychological benefits as well, although no one gives the importance well deserved by these sport and all its benefits. Some of them are: increasing self-esteem, improve self-image, reduce social isolation, reduce tension and stress, reduce the level of depression, helps relaxation, increase alertness, reduce the



number of work accidents, less aggressiveness, anger, anguish, increases the general welfare.

Mainly two aspects are focused on these sports that are the biological and psychological benefits that they offer. The first chapter talks about one of the best sports that is tennis, how this sport is practiced and its benefits. The second chapter is about the importance of swimming, why it is considered the most complete sport and about its benefits. Finally, the third chapter talks about the survey made to adolescents between 17 and 18 years of age about their knowledge of these sports and their personal opinions.

The survey is pretty important in the monograph, with the survey we can know the knowledge that teenagers have in the subject and that's what this monograph is about; to explain the importance of these sports.



Chapter I

Recognize how tennis helps in our health

1.1 Introduction of tennis

Tennis is a sport where you need to use every part of your body to be able to play. You need a racket and a ball to practice tennis. The surface in which you play this awesome sport can be grass, concrete or clay; it has a rectangular form that is branched with lines and with a net that divides the sides in half. A match is played with two players, one against the other, or it could also have four players (two against two). The objective of this game is that the player has to hit the ball to pass it to the other side of the net within the lines, attempting that the other player can't do the same and win the point.

Tennis is a physical activity that has a lot of qualities and it has been proved to help health and live a healthy life. As you can often see people 65 years old competing in a tennis tournament and even worldwide tournaments, this is believed that is thanks to this incredible sport. The media has informed us of the benefits that this sport offers us based on the experience they have in the subject and based on the logical assumption of several cases that have already been seen.

Tennis is a really popular sport that is practiced by millions of people all around the world. Studies show that people between 31 - 55 years old maintain a better and healthier life style rather than those who lead a sedentary life. In the 90's, it was



recommended to practice sports, at least three times a week for 20 minutes of intensive exercises, as tennis in a moderate way to avoid any injuries. Nowadays it is highly recommended to practice at least five times per week for 30 minutes in a moderate way which will depend on the physical state of each person.

1.2 Biological effects while playing tennis

According to König, Huonker, Schmid, Halle, Berg and Keul (2001) affirm that:

During the past decade, the physical and mental stress in professional tennis has been constantly increasing. The overall intensity in tennis ranges between 60 and 70% of maximum oxygen uptake and the energy requirements are mainly provided by aerobic energy metabolism.

This sport improves the aerobic and anaerobic capacity; practicing tennis allows us to increase our aerobic capacity, because when we practice it, we burn fat and help improve the cardiovascular system which gives us more energy. In addition, it helps improve the anaerobic capacity during the short intensive periods of exercise followed by short breaks.

This sport helps strengthen our legs for moves such as: topspin, leaps or fullstops in order to quickly react to hitting the ball. The muscles have to quickly recover



after reacting to each hit and following coming strike; the legs are the support for each movement while playing tennis and always most have them semi-bend.

Since the body has to adjust to the ball and calculate the speed in which it comes to be able to move in time and hit it in a correctly way it increases your general coordination and provides greater agility and flexibility because tennis is a sport that requires constant vigilance. The movement to reach the ball will improve our flexibility, as well as our agility, since to hit the ball we usually change our direction on several occasions, in just a couple of seconds.

1.3 Psychological effects while practicing tennis

As there are so many biological benefits of this sport, there are also many psychological benefits that tennis gives us. It brings us a new ethic, discipline and responsibility, this is a sport that allows us to develop ethics and discipline because you have to behave at time and follow the rules without questioning them. In addition, being an individual sport, it teaches us to accept our successes and mistakes since each one of us is responsible for the achievements or failures that we get during the match.

Tennis helps control the blood pressure is a sport that involves mental, physical and emotional stress. When players have a match, they get really stressed and nervous before the game even starts. Some players vomit or get diarrhea before the game due to nerves; they need to learn to control this emotions and continue playing without thinking what will happen next. If they win or lose because of unnecessary stress and



that is going to be cause for losing points, they should begin to have more self-control. When this happens, players have to concentrate and stop thinking about things that doesn't matter and start thinking what is important which is to plan a strategy that is the one you are going to play with.

When it comes to a strategic sport, the player learns ways to anticipate and account for their adversary. In this manner, the development of preventative strategies become so natural that players can easily manage factors that are out of their control. Factors like these include the weather in general, or more specifically, the sun, wind, or rain.

Tennis teaches us to be competitive because it also teaches us to compete. This means that in this amazing sport we learn a lot of different things but one of the most important things that we learn is to compete with other people, in specific, with your opponent. The main idea of playing tennis is to beat the opponent, which is a great preparation for the competitive world in which we live.



Chapter II

Describe what kind of benefits swimming has

2.1 Introduction of swimming

Swimming is a sport that involves the movement of a person in the water, without touching the ground. This sport takes place in pools or open water, this means that you can practice swimming in pools, oceans, rivers, etc. Swimming is a sport can be practiced individually or with a team. There are a couple of styles of swimming such as butterfly, backstroke, breaststroke, freestyle, and individual medley. Every move you make while swimming, has to be with technique so you can move faster and get to the other side of the pool sooner than your opponent.

This sport is really famous because of the competition that exists in it, for example, the Olympic Game are the most famous event of sports where people from all around the world compete and swimming has had much recognition because of this. There is a great deal of competence in swimming and like any other sport there are some rules that need to be followed like if you want to compete such as the type of swimsuits, caps, jewelry and injury tape, all those things have to be allowed at competition, but if you want to do it just as a hobby you can skip them if you want but if you aspire to do it the right way you should follow all the rules, it is up to you.

Swimming is a really good sport for your health because it is mainly considered as an aerobic sport; it reduces the harmful effects of stress, helps you improve your



posture and helps you get a better physique. Swimming is considered as a complete sport, there is a variety of benefits for the body since all the muscles are exercised at once, when practicing the different styles of swimming.

For cardiovascular work the consensus among specialists is that the advantages depend on the intensity or volume of work done, but with a frequency of two to three times a week, in sessions of one hour or 45 minutes, people will be able to reach a level that will be beneficial to health.

In addition to cardiovascular work, it is emphasized that swimming also serves to lose weight, although it depends on the degree of intensity. If you are more consistent in your practice, you are more likely to lose the extra weight you have but if you are not constant it may be that the results are long-term or you have to increase your practice to see results. This is also one of the main reasons why people want to start practicing this sport.

2.2 Biological benefits if you swim

"Swimming is an exercise modality that is highly suitable for health promotion and disease prevention, and is one of the most popular, most practiced and most recommended forms of physical activity" (Hirofumi Tanaka, 2012). Like any other sport, swimming has a lot of biological benefits but unlike any sport, swimming is the most complete sport that exists and recommended for every type of people.



It helps us to have a great toning of our entire body, this sport involves the vast majority of muscles in each of their styles. While you are swimming there are hundreds of muscles working and getting stronger each second especially because when you are in the water your muscles work 3 more times than if you weren't inside the water, that's why swimming is known as the most complete sport that exists.

Swimming protects the joints and when working in the water they are not receiving the weight of the body, unlike running, the knees are supporting all the weight of the body in each jump thanks to gravity. If we add that we only work with body weight, it becomes an ideal practice for all ages. Swimming it is highly recommended for the elderly to keep healthy.

This sport improves the blood circulation, movement of the entire body in the water provides with the best massages. Our circulatory system is responsible for bringing blood to the cells but sedentary lifestyle, bad habits, hormones or genetic inheritance can deteriorate it. With the practice of regular exercise, the veins are stimulated and pump blood to the higher and lower extremities, obtaining better circulation and healthier legs. Swimming prevents the appearance of varicose veins I our legs because these appears when you don't have a good blood circulation or when you don't do any kind of exercise.



It favors the cardiorespiratory system, our pulmonary and cardiac capacity improves considerably since they are mainly work in aerobics. It increases the flexibility of the spine and eliminates pain. It significantly improves spinal problems, back abnormalities such as hyper-kyphosis, hyper-lordosis and scoliosis include aquatic activities in their treatments.

Swimming reduces blood pressure significantly. Physical activity in the aquatic environment, as we have said before, not only improves the physique but also provides some notable psychological improvements. Swimming lowers blood pressure, and the positive effects may be long-lasting, especially in adults and old people because it can help them prevent more diseases due to their age rather that young people or kids. Nevertheless, it is highly recommended for young people to practice this amazing sport that will help them to have a better physique.

Since the beginning of times, the aquatic environment has been a medium that human beings has struggled to master, and simply being able to master this situation already causes a feeling of happiness of overcoming.

2.3 Psychological benefits while swimming

Swimming is considered as a complete sport and not just because of its biological benefits. In fact, practicing this sport helps you with your brain. Not everybody knows this but it has been proved that swimmers have better memory and



they don't have any kind of problems with their brain at all. This sport also improves brain function and helps repair damaged neurons.

According to Bonnie G. Berger and David R. Owen (1992) affirm that:

The women reported fairly similar mood benefits after swimming and yoga. It seems that aerobic exercise may not be necessary to facilitate the mood benefits. Also, students with greater mood changes attended class more regularly than those who reported fewer psychological benefits. Maximizing the immediate psychological benefits of exercise might be one way to encourage adults to be physically active.

This paragraph is affirming that people who practice swimming have better memory than those who doesn't. They say that people who practice swimming and yoga have a lot of mood changes than the people who are sedentary. People that swim, reported greater decreases in scores on Anger, Confusion, Tension, and depression than people who practice other sports or are sedentary and they are smarter because they attend more to class than the other students.

Swimming Lowers stress levels as you relax, not only the muscles of the body, but also your mind, so that your stress decreases considerably. The practice of swimming lowers the levels of anxiety too, it is a sport in which you can do both, you can swim relaxed and very intense.



It requires great concentration, it is necessary to move and coordinate a large amount of muscles, so you will not have much room in your mind for problems that await outside the pool. With swimming you can have peace of mind. In the water you can experience the incredible sensation of peace that comes from listening to your breath and the flow of water.

Control of breathing, we have to control the so-called 'aquatic breathing' much more slowly than natural breathing movements, therefore it helps us to relax. When we are calmed and relaxed, it helps us in our health and we can have peace.



Chapter III

Survey applied to teenagers

3.1 Practice and knowledge of sport in young people

A survey was conducted to students at Javier school, with an average of 17 years. The first question of the survey ("Do you practice any sport?") The stratified random sampling results: 42.9% YES, 19% NO and 38.1% SOMETIMES.

That is, in theory, our social environment enjoys a culture where sports are practiced. A little less than half do sport always and another considerable percentage practices it from time to time. Hernán (2012) states that: "Motivation is internal when practicing sports because of the pleasure inherent in it. For example, most children initially enjoy physical activity, such as a game, so that such behavior is called intrinsically motivated "(p.22). Following Hernán's argument, within his research on Sport and Adolescence, the following can be deduced: children and adolescents, for reasons of their own biology and psychology, tend to have a great affinity for sports.

Now, according to the knowledge of the interviewees of the benefits of sporst, the following results were shown: three quarters think that their main benefits are only biological, while a fourth is aware of the great psycho-emotional help that sport provides. In another question (Why do you consider sports important?) More than 70% correspond for physical reasons; and less than 5% for mental health reasons.

Morilla (2001) makes a small account of how the sport began to be taken into account from a psychological perspective:



At the beginning of that decade it was detected in the United States that the lack of exercise is involved, along with other unhealthy habits, in the genesis of seven of the ten leading causes of death in that country (Rodríguez Marín, 1991). From that moment, begin to study systematically and deeply the relationships of the exercise not only with the disorders that we could call of a medical nature, such as cardiovascular diseases, obesity or cancer, but also with those of a more psychological nature, such as anxiety, stress or depression. In this context, we can talk about exercise as one more aspect of Health Psychology, because it is presupposed, and many studies seem to corroborate this.

There are two hypotheses, mainly, that support the psycho-emotional benefits on the part of the sport. "Hypothesis of distraction: It is that it is the distraction of stressful events, rather than the activity itself, which explains the improvement of sensations related to physical exercise" (Bahrke and Morgan, 1978). And the Endorphin Hypothesis, explained by Morilla (2001): basically, it states that the brain, the pituitary and other tissues generate diversity and endorphins that has the ability to reduce the sensation of pain and cause a mild state of euphoria; although there are many studies that do not support these arguments.

3.2 Medical benefits for sport

3.2.1 Tennis

The survey asked if there was any benefit of tennis on health. 42.9% answered NO.

That is, almost half. But, in reality, there are many benefits from this sport on the human



body. Fernández Fernández et al. (2009) specified its benefits on three specific issues: Osteoporosis, Balance and Sarcopenia.

Fernández Fernández (2009):

The relationship between bone mass and participation in sports is an aspect of great interest in scientific research. The effect that tennis practice has on bone modeling has been investigated in relation to the differences existing above all between the skillful member and the non-skillful member. There are several studies in this regard and, in general, bone mineral content (BMC) and bone density (BMD) have been consistently higher on the dominant side (skillful arm) than on the non-skillful side. Also, BMC and BMD were higher in the hip and lower back of the tennis players, compared to subjects in a control group. In addition, exercise induced bone growth to a greater extent in young beginners than in adults. It is generally accepted that exercise (especially strength) has a positive influence on bone mass throughout youth, and can prevent and minimize the loss of bone mass at advanced ages, but there are also several studies that demonstrate that the practice of tennis alone is a factor in maintaining and improving bone mass. (p.1)

The second important aspect where tennis has a positive impact is on balance. Fernandez Fernandez et al. (2009) deduces that "it seems important that future studies evaluate the effects of tennis practice on balance and prevention of falls in older people" (p.2). This, since there are several studies that show that exercise can help reduce the risk of death by falling, very present especially in adults over 65 years of age.



Finally, researchers add Sarcopenia to the list. Sarcopenia is the excessive loss of muscle and therefore the strength to perform motor activities of daily life. LaForest et al. (1990) did a study where it was demonstrated that players and tennis had a superior capacity of strength in their knees.

3.2.2 Swimming

In the survey, it was made visible that, unlike tennis, there is a greater knowledge of the benefits of swimming on health. 85.7% had some knowledge of the benefits of swimming.

Among the responses of which were the beneficial ones, they answer the following: "It helps to the sclerosis", "helps with back pains", "helps to develop stronger lungs", "you work almost all the muscles", "helps the heart", among other. This is how Gallego et al. (2012) states: "Swimming improves both psychic and physical and physiological aspects which will result in greater well-being and autonomy for the person, slowing down the deterioration of aging" (p.7). So the authors themselves, among their conclusions, say that more research and implementation of sports projects related to swimming should be carried out.



Conclusions

It was possible to understand the great importance of sport in the physical and mental health of each individual. The two chosen sports, tennis and swimming, proved to be very useful both as maintenance and as treatment of diseases. As it has been throughout history, the psychological studies of sport - something very much connected to only the physical - are few and poor compared to those with medical-biological characteristics.

Swimming turned out to be one of the most complete sports. It is the sport in which the greatest amount of muscles of the human body is used. And not only that. It turns out that it also helps certain internal organs, such as the heart and lungs. In addition, it is a sport with very few risks of injuries and where the body is not mistreated in the long term. Because it was found, both in tennis and other sports, that an excess of exercise and poor accompaniment can bring a number of negative effects.

Through the investigation made it was possible to confirm several important aspects to be highlighted. A *vox populi* is known that swimming has a lot of benefits for our physical state, either in specific cases or for body maintenance. While, surprisingly, with tennis the opposite happens.

It is not only in common living that the benefits of tennis are unknown. The problem lies in the lack of studies and research on the part of academic and research entities. Throughout the documentary research, it was extremely difficult to find compelling information about the benefits of tennis. Even the few researchers who address this issue urge more researchers to be interested in the benefits of tennis.



On the subject of swimming, we realize that it is a very complete sport. Why? Well, not only is it helps in the treatment of different terminal illnesses; but it is recommended for several instances of human life: motor development in childhood, bone growth in adolescence and the improvement of quality of life in old age.

Another present problem is the lack of awareness of the mental health benefits of sport over the human being. It seems that society sub-categorizes the importance of mental health over physics. For the same reason, there are very few studies of the psychoemotional benefits of sports on people, and consequently, the disinformation of the population.

Thanks to the surveys, it was noticed that there is a high level of sport practice in our culture. That is, a large number of respondents have healthy sports habits. This, as could be seen in the research cited, is common in Latin American culture. Although there are certain sociological aspects, which were not the central axis of the research, to improve: for example, the sexist aggression in sport within Latin America.

Thanks to the combination of previous research collection and the collection of latent data, it can be concluded that, although there is a reasonable sports culture and a good use of health, it is necessary to improve certain aspects of basic knowledge about physical and psychological benefits.



Recommendations

At the end of this work it is recommended that:

- People should practice sports regularly to be healthy and don't get problems easily in your body.
- If people know the good things about sports, people will be more inclined to want to practice sports.
- If people keep being healthy, people will get old without health issues.



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