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Reviev Article

Relationship Between Sports and Organic Agriculture

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ABSTRACT

Agriculture is an indispensable economic activity in terms of ensuring the continuation of human life. Sports, on the other hand, is an activity carried out in order to ensure that human life is good physical and mental quality. The main purpose of both is to protect and improve human existence and health. Agriculture and sports are both done in the natural environment and affect the natural balance. The aim of this study is to reveal the relationship between organic agriculture which suggests an environment and human friendly production system and sports activities that serve to protect human health. In this context, the relationship between agriculture and sports is tried to be explained by using secondary data sources such as academic publications, explanations of authorized institutions and organizations. Our study findings show that agriculture and sports activities are closely related in many ways. Accordingly, it was concluded that both sports and agriculture should be done by considering the natural balance, since they are both done in the natural environment and aim to protect, develop and maintain human health.

Spor ve Organik Tarım Arasındaki İlişki

ÖZET

Tarım, insan yaşamının devamının sağlanması açısından vazgeçilmez bir ekonomik faaliyettir. Spor ise insan yaşamının fiziksel ve zihinsel olarak iyi kalitede olmasını sağlamak için yapılan bir aktivitedir. Her ikisinin de temel amacı, insan varlığını ve sağlığını korumak ve geliştirmektir. Tarım ve spor her ikisi de doğal ortamda yapılmakta ve doğal dengeyi etkilemektedir. Bu çalışmanın amacı, çevre ve insan dostu bir üretim sistemi öneren organik tarım ile insan sağlığını korumaya hizmet eden spor faaliyetleri arasındaki ilişkiyi ortaya koymaktır. Bu bağlamda akademik yayınlar, yetkili kurum ve kuruluşların açıklamaları gibi ikincil veri kaynakları kullanılarak tarım ve spor arasındaki ilişki açıklanmaya çalışılmıştır. Çalışma bulgularımız, tarım ve spor faaliyetlerinin birçok yönden yakından ilişkili olduğunu göstermektedir. Buna göre, spor ve tarım her ikisinin doğal ortamda yapılması, insan sağlığını korumayı, geliştirmeyi ve sürdürmeyi amaçlaması nedenlerinden dolayı her ikisinin de doğal denge gözetilerek yapılması gerektiği sonucuna varılmıştır.

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1. INTRODUCTION

Today, living by increasing the quality of life has become as important as living a long life. A natural environment, nutrition and physical activity are the main factors in a healthy aging and to minimize the health risks that may occur due to age with various methods. In accordance with the purpose of the research, the concepts of physical activity, exercise and sports, which have

different meanings from each other, are used in the same sense to mean all activities that affect or are affected by nature, amateur or professional.

In order to create our civilization today, we had two options that were compatible and not compatible with the natural environment, and it is a bitter fact that we chose the option that was not compatible with the natural environment [1]. The use of production techniques that are not compatible with the natural balance in agricultural production, which is the driving force of today's industrialization infrastructure, has caused great damage to the environment [2]. It is a fact proven by scientific studies that food products produced with this technique pose great threats to humans. The most concrete example of environmental disasters caused by agricultural activities is the Aral Lake. During the Soviet Union period, the water needs of the cotton fields were met by cutting the waters of the Amu Derya and Siri Derya rivers that fed the Aral Sea. As a result, the Aral Lake, which has been in existence for hundreds of years, has an area of 60 thousand square kilometers and a depth of 40 meters, has dried up in a process of 40 years and turned into a desert [3, 4]. Besides the devastating social, economic and psychological effects, environmental problems that threaten human life have occurred in the region. Although this effect caused by agricultural activities is not at the same level, it is felt all over the world.

Thanks to the developments in science and technology, many jobs that were previously done with human power are made by machines, and leisure activities, which are generally done outdoors, in parallel with the same developments, in a virtual environment instead of outdoors, people are becoming increasingly inactive. According to the 2017 report of the World Health Organization (WHO), inactive life causes 3.2 million deaths per year worldwide [5]. Today, technology has drastically reduced people's habits of moving. Cars are machines that have minimized our need to walk and do heavy work for people. Devices such as television and computer cause to be inactive for a long time for people [6]. However, the human body was "designed" to move, and for thousands of years, humans lived a lively life by hunting, breeding, and changing places for commercial activities [7]. It can be said that the development and widespread of technology to the present extent occurred in a small period of time in human history [8]. However, human beings get used to comfort quickly. Most people today find it annoying to move more than "necessary". In addition, it has been determined that health problems due to inactivity significantly increase health expenditures. Studies show that regular physical exercise can provide economic benefits, such as reduced healthcare costs and increased productivity [9]. People who are worn out in the face of the difficulties and stress brought by life today; An inactive lifestyle affects work efficiency, health and psycho-social levels.

It has been understood that the situations stated at the point reached are not sustainable. In this case, it is necessary to create an ideal sports activity and a healthy environment for a quality life. There is also a need to ensure a safe food production and supply chain. The purpose of this study is to determine this important relationship and to be a reference for future studies on this subject.

2. SPORT CONCEPT AND ITS IMPORTANCE

The concept of sport has been given different definitions in the literature. Sport is defined in Article 2 of the Council of Europe, European Sports Charter as "*means all forms of physical activity which, through casual or organised participation, aim at expressing or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels*. [10]" SportAccord defines "*sport in a way that includes the clauses that the proposed sport must have an element of competition, sport*

must not harm living things in any way, must not rely on equipment provided by a single supplier and any element of chance designed specifically for the sport" [11]. Sports can be defined as all of the physical activities and exercises that require the participation of amateur or professional and individual or team, and which are done to compete, to reach a determined goal, by using their mental and physical abilities within the framework of predetermined rules. Sports is a group of movements and an important mass education tool that aims to positively affect the physical and mental health of people and to provide social and moral gains [12]. Sport is a new science that not only develops the physical aspect of the human body, but also determines the human character, ego, behavioral quality and psychological structure through games, movements, competitions [13]. The constitution of sports; It is a school of human community based on health, unity and solidarity, brotherhood and friendship. The importance of sports in the development of people is a well-known fact. In addition to the physical development of children who were consciously directed to sports from a young age, their ability to make quick, correct and courageous decisions and their intelligence levels were observed [13]. The ability of a person to live in accordance with the rules of society, to establish good relationships, to behave healthy and honestly depends on the physical and spiritual development [13] as well as the development of thought. Today it is accepted that health has a high relationship with our lifestyle. Depending on WHO [14], health is not only protection from diseases and microbes, but also physical, spiritual and social well-being as a whole. According to the age, health; It can be explained as emotional, spiritual, mental (intellectual), social, professional and physical health [15].

2.1. The Relationship of Sports and Nutrition with Health

Health is in a very close relationship with our environment, which we affect with our lifestyle and behaviour [16]. This is why, over time, changes in our behaviors and lives have led to new dimensions in health.

Centuries ago, primitive people did not have health problems similar to those of today. Depending on the development of technology, it is possible to see the positive and negative aspects of industrialization and mechanization in societies. Especially in the 20th century, developments (television, nuclear energy sources, petroleum products, etc.) changed the pace of life and due to these technological advances, physical activities decreased and mental studies increased [17, 18].

The increasingly crowded population [19], intense traffic, the habit of using transportation vehicles in our world, the monotonous and less mobile working environment brought by technology and mechanization, factors that accustom people to inactivity in social life, increasing unemployment and retirement, coffeehouse and local habits, time spent in front of television, in parallel with these the habit of eating constantly, increased use of alcohol and tobacco products, the stagnation caused by distress and psychological breakdown due to various reasons inevitably pushes human beings to "laziness or little movement", which is described as the biggest disease of age. Long-term inactivity primarily reduces the mobility and ability of the human body [20] and causes an increase in organic debris. As a result, some health problems occur in the body.

Due to all these changes, microbial diseases such as measles, malaria, etc., which were once the biggest health problems of humanity, have been replaced by other health problems. According to the findings of many studies on the subject; those who do not exercise are 5 - 7 times more likely to get cardiovascular diseases than those who do exercise. Evidence suggests that the risk for a sedentary person is about 50 times higher than the risk for someone who exercises about 5 times a week [21]. In addition, other risk factors

are obesity problem and high blood pressure, excessive smoking and alcohol consumption, unbalanced nutrition increase the possibility of getting these risks.

It is the main goal for everyone who does sports to protect their health and happiness and to maximize their performance. It is important how athletes eat and how this diet affects their performance. Although the energy and nutritional requirements of athletes differ in terms of age, gender and sports branches, basic nutrition rules are similar for all athletes [22]. Nutrition; the energy needed by the athlete should include nutrients and adequate fluid intake. There is no miracle diet or food recommended for athletes. In general, it is recommended that athletes eat a diet rich in carbohydrates, while it is recommended that they consume sufficient protein, vitamins and minerals, and that the energy provided from fat should be slightly lower than those who do not do sports [23]. An appropriate training program and a well-organized nutrition program prepared in cooperation with athletes' dieticians and trainers are the most basic factors in increasing performance [24]. It is accepted that adequate and balanced nutrition does not guarantee the success of an athlete, but inadequate and unbalanced nutrition causes some health problems and low performance. It is known that a well-nourished athlete has some advantages compared to a bad-fed athlete.

2.1. Advantages of a Healthy Athlete

Aljaloud [25], stated that the nutritional intake of Olympic athletes can directly affect their performance. Aoi et al. [26] and Williams and Rollo [27], stated that the healthy diet of the athletes is the basic rule for effective performance improvement, increased conduction, overcoming fatigue quickly after intense physical activities, and preventing injuries. Advantages of a dietary for an athlete [26];

- High performance,
- The efficiency of the training is at the maximum level,
- Has a high level of concentration and attention,
- The rate of illness and injury is low, in these cases the recovery period is short,
- Its growth and development is at the expected level.
- Body weight and body fat are within or close to the recommended limits.

The most important goals in sports nutrition; to protect the general health of the athlete and to increase their performance [28]. Our body spends more energy during exercise than at rest, because during exercise, the muscles contract more strongly, the heartbeat accelerates and the heart pumps blood to the body faster, which causes the body to spend intense energy [29]. Recovering this energy loss to the body in a fast and healthy way will only be possible by feeding with healthy and safe foods. Organic agriculture, which adopts environmentally, human and other living creatures-friendly production methods as its basic principle, and whose every process is monitored and documented by independent audit institutions, offers the best alternative to reach healthy and safe food.

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3. ORGANIC FARMING CONCEPT AND ITS IMPORTANCE

Organic agriculture, by Gil et al. [30]; It is defined as "an agricultural production method that does not disturb the natural balance, does not pollute the environment, does not cause harmful effects on humans and other living things, and aims to produce clean products that are controlled and certified at every stage from production to consumption". Studies show that organic products have positive effects on health and environment since they do not contain pollutants [31]. The damages of conventional agriculture have increased the interest in organic agriculture and organic products and made them valuable in the eyes of the consumer [32]. Consumers increasingly prefer organic products because they believe that organic products are healthier and more environmentally friendly [33]. New rules and regulations on the environment and the increase in the number of organic consumers in recent years are also considered as a natural result of this situation [34]. It is stated that, due to the scandals in the food sector and the increase of environmental and health concerns, consumers have started to turn to products that are guaranteed not to use chemicals and additives such as genetically modified products and their derivatives, and this group is called green or organic consumer mass [35].

At the point where agriculture has reached today, ecological, socio-economic, health and ethical concerns have led humanity to new pursuits. Human beings have realized that they have destroyed their own living space as a result of the existing agricultural activities they carry out, and the damage they cause to the living and non-living environment in which they live. New agricultural approaches that are compatible with nature, using resources correctly, aiming sustainable development, considering animal welfare, taking into account the spiritual and sensory satisfaction of human beings in agricultural activities have started to spread all over the world.

3.1. Reaching Safe Food

Organic foods are perceived as more nutritious by some consumers as well as being healthier, safer and more environmentally friendly. Previous studies have shown that consumers perceive higher quality and tastier organic foods as “certified safe products”, as well as are willing to pay higher prices for these foods [36]. It has been shown that organic foods are beneficial due to their healthier and safer properties and some of them satisfy hedonic feelings because they are more delicious [37, 38]. When we look at the factors affecting the consumption of organic products, we generally encounter motivations such as health concerns, environmental concerns, food safety, ethical concerns and value structure [39, 40]. The inclusion of organic foodstuffs, which are claimed to be healthier and safer in the literature, in the nutrition regimes of the athletes will enable them to perform better by creating healthy eating habits in the athletes. According to the results of a survey conducted by Baranauskas et al. [41], reported that 97% of the athletes working in the olympic disciplines who participated in the survey consumed organic food items. In addition, they reported that 80% of the athletes surveyed believed that organic food had a positive effect on health. The widespread use of chemical pesticides and fertilizers in crop production, unnatural production methods such as additives used in animal feeds bring concerns about their negative effects on nature and human health [42]. Especially in developed countries, most consumers consider organic foods to be safer and healthier than traditionally produced foods. Therefore, it can be stated that organic agriculture arises from the desire of the people to obtain safe and healthy food and to realize the long-term sustainability of food production.

3.2. A Healthy Environment

We have stated above that people have been involved in various activities that harmonize nature to create their own civilization. These activities negatively disrupt the balance of nature by polluting the soil, air and water resources and destroying biodiversity [43]. Sports aimed at protecting human health is one of these activities. Many physical sports activities, especially in natural environments, damage nature [44]. It is possible to see this effect more in large sports organizations [44]. Suitable environmental conditions should be created in order to do sports based on many physical activities in nature (For example, mountaineering, skiing, horse riding and golf). This can damage the natural balance. Another aspect of the issue is the environmental pollution caused by the wastes left by those who attend and watch these events [45]. For an ideal sports environment, it is necessary to create a quality environment, that is, sports facilities and activities must be adapted to nature [45]. Agricultural production activities that produce foods that provide with the energy people need for sports have also caused great damage to the environment with practices that are not compatible with the natural balance. The modern world pays the effects of these damages by exposure to a dirty environment that threatens our health and the consumption of poisonous foods and exposure to unknown diseases [46]. Conservation of natural resources about this bad situation, especially in developed countries, has brought the issues of human, animal and environmental health to the agenda and increased public awareness [47]. Consumers' awareness of healthy and natural nutrition also contributes to the importance of organic agriculture. Organic agriculture, a system that aims to produce food with the least harm to ecosystems, animals and humans, is generally considered as a solution [48, 49]. As a result, we can say that all sports and agricultural activities are interconnected and have vital importance in terms of protecting and maintaining human health, which must be compatible with nature.

4. RELATION OF SPORT AND ORGANIC AGRICULTURE

The development and growth of a society is possible with the parallel development of all activities carried out by the society. The healthier people in a society, the stronger than society is economically. Because the health and efficiency of the individual are parallel. Long-term healthy living and working of individuals increase the production and national income level in the country. They become more important because the main purpose of sports and organic agriculture is to protect human health.

Sports ensure people's adaptation to the natural environment and the protection of their physical and spiritual integrity through physical activities in nature. Various threats created by the modern age negatively affect human health such as stress and inactivity. Thanks to sports, people are protected by responding to these threats. For an ideal sport, food produced in healthy conditions and quality environments are needed.

Organic farming activities, on the other hand, are an agricultural production system that aims to produce foods that must be produced in accordance with the natural balance. Thus, organic agriculture ensures both the production of healthy foods and the provision of safe food supply and the protection of the natural environment for a quality environment.

As a result, the continuation of human life depends on the ability to protect and sustain health. The relationship between sports and organic agriculture has a great effect on increasing this ability. Considered basically, we can say that these two activities serve the purpose of protecting and improving people's health.

Apart from this basic common denominator, we can list the relationship between the two activities under three headings as follows.

First of all, the main purpose of sports and organic agriculture is to protect human health and ensure its sustainability. For this purpose, while sports serve human health through physical activities, organic agriculture serves by producing quality food for the continuation of these activities.

Secondly, while sports and physical activities allow people to adapt to the natural environment, organic agriculture ensures the creation and sustainability of a quality environment by producing quality food in harmony with the natural balance for the continuation of these activities.

Third, the vast majority of both sports and organic farming activities depend on the natural environment and affect the natural environment in various ways. Sports are activities performed in nature to create healthy people, except the types of sports performed indoors. Two basic factors are needed for an ideal sports environment. A quality environment and food. Organic farming practices produce the solution to meet this need. In this sense, the common purpose of sports and organic agriculture is to protect human existence and to ensure its sustainability.

5. CONCLUSION

Agriculture and sports are two important activities in terms of protection, development and continuity of human existence. This study was conducted to emphasize the relationship between these two activities and the importance of these two activities in human life. Our study showed that agriculture and sports are two special activities that complement each other, which can be done in the natural environment and can directly affect the natural environment, but also can be directly affected by the natural environment. While agriculture is the source of nutrients necessary for sports, faulty agricultural practices damage both these nutrients and the natural environment necessary for sports. Sports damage agriculture through sports facilities built on valuable agricultural lands and environmental damage during sports events. As a result, the production of the desired benefit for people from agriculture and sports depends on doing it in harmony with the natural balance.

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No conflict of interest or common interest has been declared by the authors. “No conflict of interest or common interest has been declared by the authors.”

The Declaration of Ethics Committee Approval

This study does not require ethics committee permission or any special permission.

The Declaration of Research And Publication Ethics

The author of the paper declare that they comply with the scientific, ethical and quotation rules of ETOXEC in all processes of the paper and that they do not make any falsification on the data collected. In addition, they declare that Environmental Toxicology and Ecology and its editorial board have no responsibility for any ethical violations that may be encountered, and that this study has not been evaluated in any academic publication environment other than Environmental Toxicology and Ecology

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