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Theory and Research in Sport Sciences

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İÇİNDEKİLER

Chapter 1

CLASSIFICATION OF CORRUPTION IN SPORTS

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INTRODUCTION

Sports is a school giving joy and hope to millions of people all over the world from the caves of Rio de Janeiro to the streets of London. The relationship of fans with the team they favor and their passion to its colors, their leaping for joy, when their teams win; and their crying, when they lose, are the emotions belonging to sports.

When the competition results, activities, destination to be hosted, and results of sport bids are identified by corruption, not fair competition, we think of that we are betrayed. That corruption becomes widespread in sports jeopardize all gains and joys.

When corruption, in general, and corruption in sports, specifically, are evaluated, it is evident that] the corruption, fraud, and other degenerated activities dating to the early tens of year are not the new phenomena in sports (Tanzi, 1998). Over ten years we passed through, sports had many experiences about corruption (Kihl et al. 2017).

Sports itself has a long corruption pass; including the cases that athlete uses substances increasing performance. There are many examples about the cases that officials in sport administrations organs accepted a bribe that competitions are sold, that the incentives received for a better performance, and that decisions are made under the name of referee fault (Gorse and Chadwick, 2011). Corruption in sports, in all of its forms and degrees, is a global phenomenon forming a difficulty for sport administrators and jeopardizing integrity of sport industry (Kihl et al. 2017).

Corruption in sports emerges in the varying contexts with the various corruption forms. Whether systematic or individual, corruption activities in sports until now, with its effects such as violations, financial costs, decreasing prestige, arrest, and employees dismissed, affected both individuals and sport organizations (Roberts et al. 2018).

Although there are negative effects of corruption in sports, the reason for increase in corruption can be attributed to continuously market share of sport industry (Gorse and Chadwick, 2010). This large market share brings together fraud and other degenerated activities with it (Maennig 2004).

Corruption in sports is a phenomenon so frequently becoming an issue that international organizations (International Transparency Organization and International Center Sport Security), interstate agencies (European Council), and Sport Management Organizations (IOC, FIFA) were met for so many times, in order to discuss the nature, causes, results of sport corruption and how to prevent it and develop principles about corruption in sport and prevent it (Kihl et al. 2017).

International Transparency Organization prepared a global corruption report in sports, in which more than 60 researchers dealt with the subject of corruption in sports for preventing, identifying needs, and eliminating legal gaps (GCRS, 2016). In the report of corruption in sports, many subjects such as fair play, ideals and realities, sports as a power, management in sports, transparency, and international organizations were discussed (GCRS, 2016).

Corruption in sports is an issue considered not only by international organizations and sport management organizations but also by the researchers, politicians, journalists from different aspects. When domain literature is examined, it is possible to say that researchers studying on corruption in sports and how degenerated actions in sports take place are restrained. Researchers generally evaluated corruption in sports in two categories. The first category is related to that competition results are illegitimately impacted and the essential second category, to the case such as allocation of the rights and selection of people, who will manage or organize sport organizations (Maennig 2008). Corruption in sports should be evaluated in the context of these categories. Gorse and Chadwick (2010) classified as bribery, pairing, exploitation of information with pro-betting, and doping.

Albeit there is difference between researchers, classification of the phenomenon "corruption in sports" is generally based on attributing the duties about sports to the reciprocity and interest transfer relationship. These interest relationships, making interest transfer between "athlete -athlete", "athlete –authorized person", "people out of sports- authorized person or athlete", are based on the distinctions such as "illegitimately impacting competition results from inside or outside", and "organizational corruption".(Moser 2007). Setting out the view that the scope of corruption depends on definition of corruption accepted (Nieuwenboer and Kaptein, 2008), in this study, it was aimed to define corruption in sports, explain its features, and later classify,

Corruption

Even not associating it with sports, the literature related to definition of corruption is comprehensive. Albeit there are definitions of corruption changing from culture to culture, all definitions agree on the certain features of corruption (Bac, 1998).

World Bank defines corruption "exploitation of public power for specific interests". This definition is also frequently used by economic literature (Tanzi, 2002). Shleifer and Vishny (1993) as exploitation of public power by officials of government and selling this power for personal gain.

International Transparency Organization defined corruption with the

same viewpoint. Corruption is seen in each state and different frequency.

Certainly, in the countries, where government supervision is less, corruption is more and, in the countries, where government supervision or economic freedoms are more, it is less (Monitor and Outlook, 1997; Akçay, 2000). Corruption is differently defined and classified in domain literature (Klitgaard 1988). The point agreed on in the definition of corruption is to illegitimately acquire a right belonging to other, what it is not deserved.

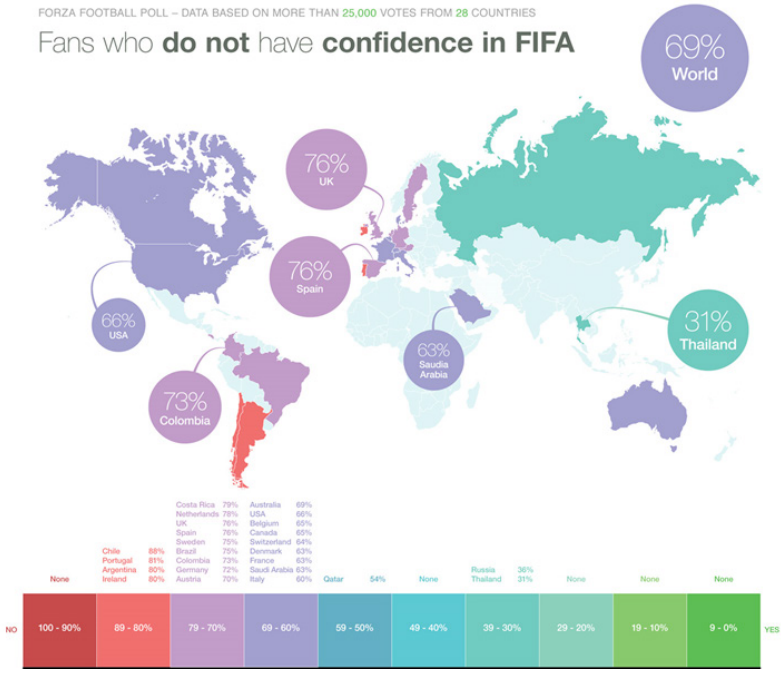
Corruption in Sports

Corruption scandals in the world injure trust to the countries and institutes. This case is under consideration for sport sector as well. Studies in the world indicate that the trust to the institutes such as UEFA and FIFA extremely decreases. Scandals such as vote selling, bribery, and collusive tendering that are valid for federations prove this to us.

From bad governance and pairing to bribery and money laundering, many aspects of corruption jeopardize millions of people and values providing participation in sports.

If wanted for sports to be really ground of a better society and one of cornerstones of human and social developments, sport management rules and representation and accountability criteria should be reconsidered (Chappelet, 2016; Maennig, 2016).

Figure .1: *Fans who do not have confidence in FIFA*



Resource: It is drawn from address of Visual https://www.transparency.org/en/news/global-corruption-report-sport#

The studies carried out show that corruption in sports and lack of confidence reach the degree not to be able to underestimate. On 25,000 fans from 28 countries, the results of the Forza Football study carried out by Transparency International are as follows:

- 69% of fans trust to FIFA.
- 50% utter that FIFA has to recover its prestige.
- 43% has said that scandals affected how they like football.
- 60% did not want any of the existing applicants to be elected in election of FIFA presidency this week.

These crises in the heart of sports shows that well-known problems to science. All of these studies show the need of sportive organizations to apply the necessary and long term reforms

Definition of Corruption in Sports

In general, when corruption is generally mentioned and specifically corruption in sports, albeit bribery comes into mind, the concept "corruption" is a concept that can be limited by bribery in neither generally nor in sports (Moser, 2007). There are specific interests in sports. But everywhere there is money; corruption may more frequently become a current issue. Certainly, sports that have millions of dollar in global markets includes in this (Lojewski, 2005). Corruption in sports can be said to more increase together with increasing commercialization (Streppelhoff, 2015). Corruption in sports can be met in every area from manipulation in international federations to selling vote and stadium bids. Corruption in sports is a broad concept that can be associated with the concepts such as bribery, malpractice, cheating, and blackmail (Maennig, 2004; Streppelhoff, 2015).

When the relevant literature is examined, this so comprehensive phenomenon cannot be enough discussed. Albeit definitions differ from each other, there are common points of them.

Corruption in sports is defined any illegal, immoral or unethical activity, which tries to intentionally disturb the result of a sport competition for personal material gain of one or more than one people taking place in that activity (Gorse and Chadwick, 2010).

Despite institutional and social arrangements making them authorized, it is an accusing directed to those providing interest for themselves against the others (Maennig, 2004).

In managing a sport organization, which incorporates an athlete winning a victory with doping he/she takes without adequately training, what a manager, who does not perform the tasks given to him/her complied with the aims and moral values of sportive organizations, conducts is evaluated as corruption in sports.

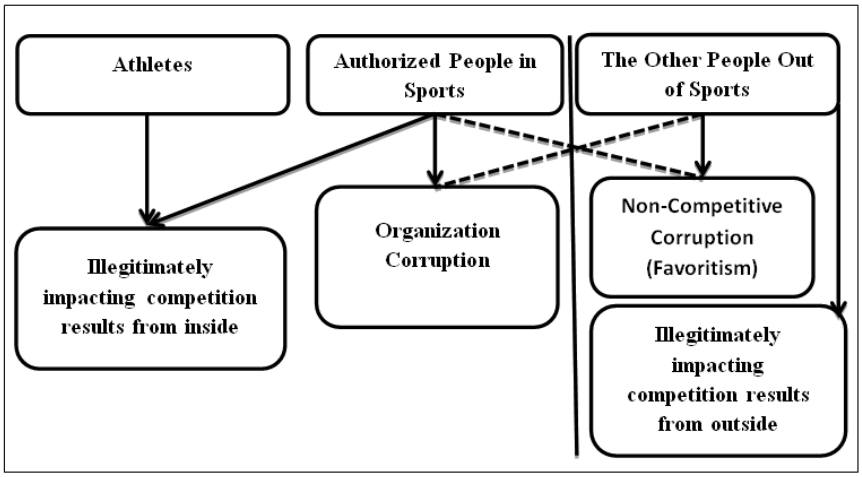
Corruption in sports used to mention about any action such as accepting and giving a bribe, intentionally losing game, which aims to gain money. But today the scope of corruption has enlarged. This case extends from intervening to management of mega sport activities to unethical behaviors such as vote selling, vote buying, and playing a trick in betting (Andreff 2000; Andreff, 2007).

Corruption is a phenomenon almost emerged in all of Olympic sport branches as well as many non-Olympic sport branches in 21st century (Andreff, 2006). The cause of increasing corruption in sports can be accounted for money inlets in parallel with globalization of sports and sport economy (Andreff, 2008). The versatile nature of sport corruption caused it to be differently classified by researchers (Moser, 2007). In the next heading, classification of corruption in sports and examples belonging to this will be dealt with.

Classification of Corruption in Sports

When international literature of domain is examined, although corruption in sports forms a very important area of sports, it was not discussed too much and, especially classification of corruption in sports was very less discussed (Maennig, 2004; Weinreich, 2006; Moser, 2007). When national literature is examined, the studies that are dealt with corruption in sports in detail were not met. In this compilation study carried out, classification of corruption in sports was discussed, reviewing domain literature, and sorts of corruption classified were tried to be introduced with its examples. In the literature related to classification of corruption in sports, albeit there is no consensus, using authorities in sports for personal interest can be classified under some headings.

Figure 2. *Classification of Corruption in Sports*



On the focus of classifying corruption in sports, by whom corruption is made is emphasized. According to this classification, corruption is conducted by the athletes, authorized people, and other people out of sports. While illegitimately impacting competition results from inside and outside and organization corruption are related to all people conducting corruption, non-competitive corruption is conducted by the people out of sports and authorized people (Maennig, 2004; Weinreich, 2006; Andreff, 2006; Moser, 2007).

Illegitimately impacting competition results from inside and outside

This sort of corruption comes to our face as the most known sort of corruption. It is a result arising during meeting of two competitors or two teams. Competitor A gives a bribe for allowing Competitor B to win. Such a corruption was previously planned in its place. It is a sort of sport corruption affecting sport result (Andreff, 2006). The most important effect of this category of corruption is intervention to sport out of that deserved and that it illegitimately the results (Chappelet, 2016).

In this sort of corruption, there is nobody grafting out of sports. Those grafting and getting grafted are the athletes//players, trainers, referees, and sport managers from club level to international club management organizations (Andreff, 2014).

International sport organizations should aim to encourage the participants to fair play and meaningful competition. Encouraging fair play, clear declarations, and development of anti-doping are some of these values. But the evidences of global corruption reports in sports are very different from the targets of fair play. Doping is one of these (McLaren,

2016). With using doping for special interests, competition is unfairly affected (Moser, 2007). Therefore, unfairly exploiting power in such a way that unfair competition through substance can be also evaluated as corruption in sports (Maennig, 2004).The use of doping is highly common not only in professional sports but also amateur sports (Körner et al 2018).

In doping, giving any bribe is out of question but [a person] takes a substance that will form unfair competition from outside, in order to be able to win struggle. Or for enabling him/her to win, a substance is supplied from outside. The examples to be able to given for these sort of corruption is an example of corruption, in which Russia had some athletes government –supported doping use (Nufer and Bühler, 2017). Global doping and corruption problem in sports is supervised by WADA, which developed Law on Struggle with Doping, (Moston and Engelberg, 2016) and doping; corruption often has become a current issue and is seen as the most important element of unofficially preventing results of competition by an athlete.

Illegitimately impacting competition results by the people out of sports from outside

That the other people from sports, politics and economics affect competition results may be possible. The typical case of competition results being externally illegitimate is that the results are affected to get a share of the betting winnings (Borghesi, 2008). Volume of sport bets has rapidly increased and this has become an opportunity. This also led the people out of sports to sport results. Hill (2008), in his book, introduced evidences regarding how organized crimes in football was committed.

As an example of illegitimately impacting competition results from outside, in a competition of college basketball in USA, corruption of point shaving (intentionally score production action) can be given. This sort of corruption can be qualified as an organized sort of corruption. But the root of corruption is based on the people out of sports (Zegers, 2016). The example related to this classification is of course more in basketball branch.

The most famous event of point shaving in university basketball history was a scandal, in which many players of National Power of New York City University intervene, in 1951. This event, known as CCNY scandal, led tens of players to be arrested, in which the players of LIU, NYU, Kentucky, Bradley, Manhattan College and Toledo also took place (Goldstein, 2003).

In 1958, CCNY won NIT and NCAA tournaments, which was something any team could not manage in basketball. However, in 1951, three-star CCNY players, was arrested due to manipulating the scores

during that season. In general, scandal covered 6 different schools, and 86 players impacted the score. CCNY was permanently taken out as a national basketball power and, over tens of years, dangerously impacted national basketball team of New York City. At the end, tens of people were kept responsible, and it was concluded that it was an organized crime. Albeit there were players shaving point, the fact that the people out of sports had this corruption made can be deemed as an example of impacting competition results from outside (Bernhardt and Heston, 2010).

Organization Corruption

In sports, demand for unadjusted international organizations arrived to unseen levels and, about organizing these mega activities, many countries have become competing (Burrow, 2016). Great organizations are huge activities, in which we see the achievements and joys specific to sports such as who will compete better, can run faster, and will jump to higher; which javelins will me more thrown, and which team can score more goals (Müller, 2016).

International Olympic Committee (IOC), every four year, and International Association Football Federation (FIFA), about 7 years ago before organizing activity, bestow to hold activity of interest to host country or city. When Olympiads are under consideration, there is mostly a competition between potential countries to host. This competition of interest has also brought together with it organization corruption (Zimbalist, 2016). Especially in making decision, in which country the mega sport activities such as Olympiads and FIFA World Cup will be organized, the role of somebody important in sport management organs reveal in selling the game or assigning this person (Maennig, 2005).

The news about organization corruption is often disclosed in media. “A member of board of management of International Olympic Committee (IOC) put forward that bribe was given to of IOC members in selection of cities to be held Olympiads”. He said that “for the last 12-15 years, in selection of the city, where Olympiads will be held, 4 mediators, one of whom is the member of Olympic Committee, take role in buying votes”. According to Hodler, 5 to 7 of IOC members were selling their votes in exchange of $ 500 thousand to 1 million. Mediators generally guarantees the block votes of African and Asian members; if selection is realized, $3 million were being taken from the winning city and shared between members. According to the claim of Hodler, from Atlanta Olympiads in 1996 to now, in selection of city in which Olympiads will be held, bribery was effective. In allocating 2000 Olympiads, for which one of publicity campaign of Turkish History is organized to be given to Istanbul, to Sydney, it is considered that corruption is effective (Erişim-1, 2019).

Empirically confirming about this sort of corruptions is very difficult. Being faithful the evidence declared, after a report written by General Secretary of FIFA, with a complaint submitted to court in 2002, it was documented that FIFA president embezzled money for directing some FIFA members (Andreff, 2006).

Bribery about allocation of 2000 Olympic Games to Sydney was also documented. In allocation of 2000 Winter Games to Salt Lake City, a corruption is reached, which will trigger all referents of IOC and IOC execution committee members to be excluded in 1999. In 2010, FIFA suspended authorities of two managers. Members are questioned for selling their votes for Qatar. It was announced that executive members of sport management organs and government ministers were intervened in betting scandal in Taiwan baseball (Lee, 2008).

In February 2013, US Olympic Committee (USOC), sent an invitation to 50 US cities, asked whether or not they host for 2024 Summer Games. In July 2024, USOC selected four cities (Washington, Boston, San Francisco and Los Angeles) as finalist. From among these cities, USOC selected Boston as an official applicant of US, although it never decided as an official applicant (Zimbalist, 2016).

The other problem related to organization corruption is that budget reserved for organization is not transparent and accountable at adequate level. 2018 World Cup forms the major example. Russian government reserved a total of ruble 660 million of budget (US $ 16 billion). International Transparency Organization has some doubts about how this budget was spent associated with Russia, organizations for world cup, and transparency of their activities (Koval and Jvirblis, 2016). Due to this worry, a number of organizations were formed for providing support to the preparation process and following. Although there is legal responsibility, according to website of Ministry, Justice, Bidding Committee and Planning and Monitoring Service did not present their annual reports. It can be said that these cases are the major examples of organization corruption.

Non-Competition Corruption

Non-competition corruption is mostly a problem of management (Chappelet, 2016). It is claimed that organizing and managing style caused corruption in public sector, including wages, compensation system, assigning, regulation for struggling corruption and application mechanisms (Tepav, 2006). Corruption in construction of sport facilities is a typical example of this category (Moser, 2007). For example, collusive tendering of sport facilitates associated with General Directorship of Youth Services and Sport Provincial Directorship under the Ministry of Youth and Sports and Local Governments can be included corruption out of sports.

Possibly, in the recent years, it can be said that this sort of the biggest corruption case known is construction of Allianz Arena in Munich. When contract is jointly submitted by TSV 1860 Münih and FC Bayern-München, Karl-Heinz Wildmoser Junior, one of two general directors of Allianz Arena München Stadion GmbH, accepted that he received about 1% of contract value (Euro 2.8 million) as a bribe (Erişim-2, 2020).

Favoritism (Supporting an unknown person for acquaintance, relatives and interest)

As a specific sort of corruption, favoring acquaintances and relatives can be seen in the various corruption categories of sports (Moser, 2007). Favoritism express applications, in which person from every position makes relationship through familiarity view and, as a result of this relationship, and tries to settle works through informal channels (Özkanan, 2013). Even when a worker will be recruited for sport organizations, expressions such as "Do you have an acquaintance ?" can be given as an example regarding that almost many things, , based on individual and merit, cannot be managed without having an acquaintance (Kurtoğlu, 2012). Considering the shares people will have not only in labor force area but also in or out of club structure in transfers, sport directors, trainers, club shareholders, and agents support the people and transfers even they damage to financial health of club in the transfer of more players and in exchange of more money for their material interests (Poli, 2016). This case represents favoritism aspect of corruption in sports.

Struggle with corruption in sports

According to the results of field studies carried out in Turkey, the negative effects of corruption on the social, political, and economic structures increase (Tepav, 2003). Via corruption in sports, the main values of sports are violated. The damage even a single corruption case that arises will give can be very big. Therefore, it is considered that corruption in sports has a great importance (Moser, 2007).

In many countries, also including Turkey, football clubs, federations or other sport organizations continue their activities without an effective supervision. In Turkey, sport organizations administered by government are devoid of this effective supervision. Preventing corruption in sports is possible with a good governance either at international level or national level. Good governance (Corruption) in sports can be prevented by a transparent framework in which international and national sport organizations and sportive non-governmental organizations make, apply, and supervise common decisions that prevent corruption (Chappelet, 2016).

Another difficulty in struggle with corruption in sports is also not applying effective precautions. One of these is also transparency. Generally, transparency can be defined as the biggest enemy of corruption (Maennig, 2004).

International Transparency Organization, for installing an environment, in which there is not any corruption in sports and honesty prevails, published a report [regarding] preventing corruption in sports. In this report, the suggestions were formed to provide transparency in sports. In this framework, in managing sport system, the actions that will eliminate deficiencies related to task distribution, organizational structures, personnel system, resources, and use of these took place in this report (GCRS, 2016). It is possible to provide transparency and good governance in sport management by forming certain obligations such as the following criteria.

✓ For corruption in sport organizations not to occur, transparency culture can be formed. For providing this, in all stages of organization, the necessary information and document can be publically introduced.

✓ Expenditures, incomes, and payments should be decomposed. For this legal requirements can be formed.

✓ Sport organizations, including financial reports, should be strict declaration requirements. They can adequately transmit their activities through accessible open platforms to their internal stakeholders and public (GCRS, 2016).

✓ Annual financial accounts and activity reports belonging to sport organizations through national websites to public.

✓ Since 2003, FIFA presents annual fiscal tables in accordance with International Financial Reporting Standards. This provides information about financial situation and performance of FIFA The other sport organizations like FIFA can present annual tables in complied with standards.

Struggle with corruption in sports requires encouraging and managing fair play in sports, participation of shareholders, and starting authorized applications. Struggle with corruption in sports requires more than thoughts supporting Olympic spirit and honesty. Revealing corruption, investigating, and preventing undermine the confidence to sports and its values. Unless it exactly struggles with corruption in sports, international organizations will continue a cheating ideal study instead of fair play, honesty, and trueness that place in society together with sports (Bundesrat, 2012).

SUGGESTIONS

In this section, in which classifying corruption in sport is aimed, the following results were reached. Corruption in sports were defined in the form of that the athlete, authorized person, manager, referee, trainer, and individuals out of sports illegitimately impact the competition and organization results. Beside this, corruption in sports is related to not only illegitimately impacting competition results from inside and outside but also to the cases such as collusive tendering in sports and favoritism to sport organization in the area of labor force

Albeit there are different studies classifying corruption, corruption is accounted for a threat impeding honesty of sports. It was attempted to be explained that there were many examples of corruption in sports in the world and Turkey. Nowadays, although some of them are not certain, it is understood that corruption in sport is at the extent that cannot be underestimated (Maennig, 2008). In sports, it is considered that corruption cases introduced to society only represent the visible face of iceberg (Maennig, 2004).

Although corruptions and corruption attempts in sports, revealed all over the world, (Maennig, 2004; Moser, 2007;Weinreich, 2006;) are classified as illegitimately impacting competition and organization results of athletes, authorized people, collusive tendering, favoritism in sport organization in labor force area, and doping, when the literature is examined, classification of corruption in sports is especially a subject that is not adequately emphasized.

In the next studies of corruption in sports, classification of corruption in sports can be discussed in more detail. Also, in the framework of the study, the heading of "Struggle with Corruption" was formed. The researchers, especially about preventing corruption, agreed on the view that there is not transparency at adequate level regarding corruption expenditures in global sports and that there are important impediments about punishing corruption in sports (Maennig, 2008; McLaren, 2016).

Generally in the world and specifically in Turkey, it is considered that there are gaps about corruption in judicial system of many countries. This legal gap causes certain corruption to be judged by an ordinary court or this brings with it danger appropriately mot to be judged. Any sports fan does not want to think of that his/her favorite entertainment is strained or that a stained case remains without punishment. When considered in this context, the actions of struggle with corruption can be discussed in all details of them, and the threat of corruption in sports and elements strengthening worldwide durability of corruption can be eliminated.

If confidence in sports is lost due to corruption, and people do not believe in what they see and in play field and hear from the officials, in any institute, confidence of people can be undermined in unrecoverable way. Therefore, in the next studies, corruption in sports can be classified from different aspects. Struggle with corruption in sports can be made, taking these classifications into consideration.

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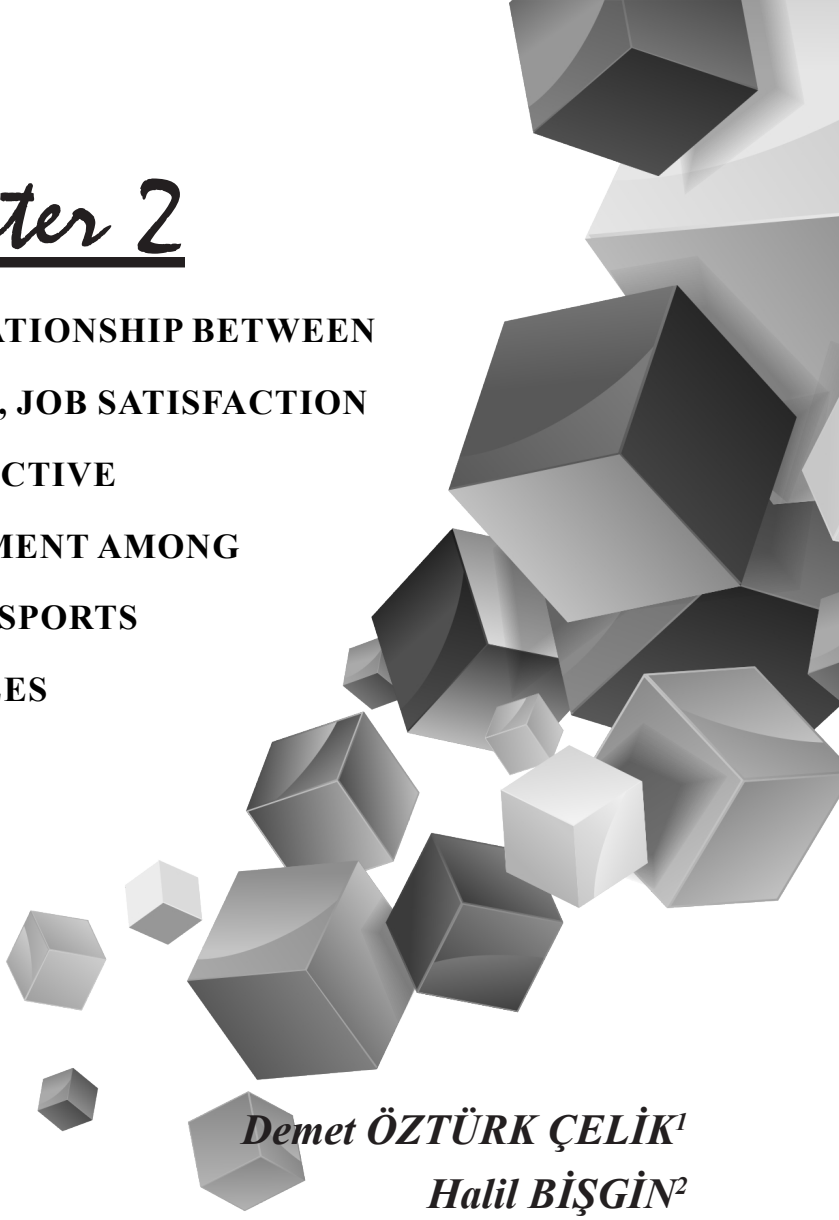
Chapter 2

THE RELATIONSHIP BETWEEN BURNOUT, JOB SATISFACTION AND AFFECTIVE COMMITMENT AMONG TURKISH SPORTS EMPLOYEES



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Sport management is a branch of management dealing with strategic planning and management of human resources in large scales, management of sport organisations and facilities, encapsulating numerous business related fields such as human resources, public relations, finance and marketing. Sport management occupation requires working simultaneously within global networks of international sports federations, media organisations, government institutions and national sport organisations (Hoye et al., 2007). Therefore, the employees of sport management are often intensionally in contact with people. From the sports point of view, apart from its central role in physical, mental and social development of human life, sports also have cultural, economical, political dimensions in modern society. Thus, by the nature of management, the anticipation of success in efficient use of sources in sport organisations is mainly high. This results in an excessive burden and burnout upon sport management employees and consequently affects their job satisfaction levels (Taşgın, 2013).

The concept of professional job burnout was first introduced to literature by Freudenberger (1974) describing the signs of physical and mental exhaustion observed in free clinic workers. Later, the burnout phenomena was comprehensively studied by a social psychologist named Christina Maslach (Maslach & Jackson, 1981; Maslach et al., 1986; Pines & Maslach, 1978). Maslach et al. (1986) introduced a multidimensional definition of burnout which is still widely accepted by professional literature as 'A syndrome of emotional exhaustion, depersonalisation, and reduced personal accomplishment that can occur among individuals who do "people work" of some kind'. According to Maslach, burnout is composed of three dimensions; "emotional exhaustion", "depersonalisation" and "reduced personal accomplishment". The first dimension, emotional exhaustion refers to feeling of being emotionally overwhelmed and exhausted by excessive workload. The second dimension, depersonalisation describes the individuals cynical and negative attitudes towards colleagues and clients as an outcome of emotional exhaustion. The last dimension of burnout as reduced personal accomplishment refers to self-evaluation component of burnout (Maslach, 1998). Reduced personal accomplishment describes the decrease in the sense of accomplishment and individual's feeling of being inadequate to perform the task given at work.

Another important factor affecting the behaviour of employees in work environment is job satisfaction. Employees may develop positive or negative attitudes towards their job in consequence of the incidents that they experience in everyday work life and job satisfaction refers to these common attitudes of individuals towards their job. An employee with low level job satisfaction would generally appear as an unhappy individual who is dissatisfied by her/his job, supervisors and colleagues. Job satisfaction

is one of the most studied variable in organisational behaviour research (Lu et al., 2005). It has been defined by numerous researchers. Locke (1976) describes job satisfaction as 'A pleasurable or positive emotional state resulting from an appraisal of one's job or job experiences'. Schneider and Snyder (1975) defines it as self-evaluation of conditions such as work and supervision that occurs in job or self-evaluation of outcomes resultant of having a job such as social security and wage.

The last variable investigated in this study is affective commitment. Affective commitment is a component of three-dimensional organisational commitment model developed by Meyer and Allen (1991). It is defined as the employee's emotional attachment to their organisation and seeing themselves as part of the organisation and being involved in the corporate process (Bişgin, 2014; Mowday et al., 1982). In studies of employee's organisational behaviours, affective commitment and job satisfaction are common variables and affective commitment generally results in job satisfaction and strong attachment to organisation (Bilgin & Demirer, 2012). Numerous studies have been conducted by researchers among wide range of occupations such as health care workers, teachers, law-enforcement officers in order to reveal the relationship between job burnout and job satisfaction. A great majority of these studies consist of the comprehensive research performed on health care workers such as physicians, practitioners, surgeons and nurses (Happell et al., 2003; Khamisa et al., 2016; Kumar et al., 2007; Prosser et al., 1996).

In terms of sports setting, it is seen that the majority of the studies found in literature on the relationship between job satisfaction, burnout and commitment are carried out on coaches (Caccese & Mayerberg, 1984; Dixon & Sagas, 2007; Koustelios, 2010; Raedeke et al., 2002). According to the results of the research conducted by Caccese and Mayerberg (1984) which is the first study of burnout in sports setting in literature and entitled as "Gender Differences In Perceived Burnout Of College Coaches", the emotional exhaustion levels of women coaches were significantly higher than male coaches and the personal achievement levels of female coaches were significantly lower than the male coaches. In the research performed by Raedeke et al. (2002) in order to asses the commitment and turnover intentions among the US swimming-age coaches the results showed that job satisfaction and investment was positively correlated with commitment. The research of Dixon and Sagas (2007) conducted among 253 university coaches for the relationship between organisational support, work-family conflict and job satisfaction indicated that organisational support was directly affected by job satisfaction and indirectly affected by work-family conflict. In the study of Koustelios (2010) performed among 132 male football coaches in Greece, results revealed that the burnout levels of coaches were low in emotional exhaustion and depersonalisation

dimensions but high in personal accomplishment dimension. The results also showed that there were no significant differences in burnout levels of coaches according to age variable.

In addition to the previously mentioned researches, several studies also have been conducted on burnout and job satisfaction in terms of sports teaching setting. Koustelios and Tsigilis (2005) investigated the relationship between burnout and job satisfaction among physical education and sports teachers. The canonical correlation analysis results of the study indicated that, job satisfaction of physical education teachers in Greece is primarily influenced by the job itself, supervision and working conditions. The results of this study also revealed that personal accomplishment and emotional exhaustion were the important antecedents of burnout among Greek physical education teachers. In their study investigating the relationship between professional burnout and job satisfaction among physical education teachers, Papasotiriou et al. (2018) reported that while the "emotional exhaustion" dimension of burnout is negatively related with job satisfaction, the "depersonalization" dimension of burnout is positively related with job satisfaction among greek physical education teachers. Kroupis et al. (2019) examined the job satisfaction and burnout levels of physical education teachers in relation to existence of sport facilities of the schools they work. The results of the study reveals that physical education teachers in Greece are satisfied by work itself and supervision and dissatisfied by pay and promotion.

Despite the comprehensive literature on job burnout and job satisfaction in sport setting, the majority of the research focus on coaches and athletes. When analysed from the management and organisational psychology perspective of sports, the studies in the literature are still limited. Therefore, in order to address this gap in the literature, the present study is conducted among the sports employees working in eight provincial directorate of youth and sports located in Mediterranean region of Turkey.

In Turkey, Ministry of Youth and Sports is the central policy-making government institution responsible for financial control and management of sports related organisations. According to the "Youth and Sports Services Law" dated May 21, 1986 with no:3289, "Department of Sports Services" affiliated to the "Ministry of Youth and Sports" and as the provincial organisation of this directorate, "Provincial Directorates of Youth and Sports" are primarily responsible for the management and organisation of sports activities and competitions in provincial level. Therefore, in this study the sports employees working in Provincial Youth and Sports Directorates were selected as target population.

Materials and Methods

Participants

The cross-sectional data was collected between 2014 and 2015 through surveys conducted in eight provinces (Adana, Antalya, Burdur, Hatay, Isparta, Kahramanmaras, Mersin and Osmaniye) located in Mediterranean region of Turkey. The target population is composed of 450 sports personnel (163 female and 287 male) that volunteered to participate in the study and working in Provincial Directorate of Youth and Sports as provincial director of youth and sports, department manager, chief, sports training specialist, officer and coach.

Instruments

The demographics of the participants were obtained by participant information form including 6 questions about socio-demographic attributes such as gender, age, marital status, education, job title and year of seniority.

In this study, we utilised the Maslach Burnout Inventory (MBI) instrument developed by Maslach et al. (1986) in order to investigate the burnout levels of sports personnel. MBI is adapted to Turkish by Ergin (1992) rearranging the original 7-point likert type scoring into 5-point scale ranging from 0 to 4 (0=Never, 4=Always). The 22-item instrument consists of three sub-scales covering the three dimensions of job burnout as; emotional exhaustion, depersonalisation and personal accomplishment. The emotional exhaustion sub-scale is targeted to measure the employees level of emotional depletion emerged due to being exposed to psychological stress in work environment. The sub-scale consists of 9 questions and score ranges are defined respectively; 0-16 as low, 17-26 as moderate and scores of 27 and greater as high. As the second dimension of burnout,depersonalisation sub-scale measures the level of depersonalisation which refers to dehumanised responses towards recipients of services and it's generally characterised by the development of negative attitudes. Depersonalisation sub-scale consists of 5 questions and score ranges defined as; 0-6: low, 7-12: moderate and scores of 13 and greater as high. The last dimension of MBI instrument is the personal accomplishment sub-scale which is targeted to measure the individuals level of feeling successful achievement competence in work. Personal accomplishment sub-scale consists of 8 questions and score ranges are respectively defined as; 0-31: high, 32-38 moderate and scores of 39 and greater as low. In emotional exhaustion and depersonalisation sub-scales higher scores refers to high burnout levels. In contrast to emotional exhaustion and depersonalisation sub-scales, higher personal

accomplishment scores indicate low burnout level. In the present study Cronbach's alpha for MBI instrument was .83.

The job satisfaction levels of targeted personnel was investigated employing the Minnesota Satisfaction Questionnaire (MSQ) developed by Weiss et al. (1967) designed to measure the employees level of job satisfaction and adapted to Turkish by Baycan (1985). The instrument consist of 20 questions with all items are 5 point likert type and scored in positive scale as (1= very dissatisfied, 5 = very satisfied). The minimum and maximum scores that can be obtained from the MSQ scale are respectively; 20 and 100. In the present study Cronbach's alpha for MSQ was .95.

In order to assess the emotional commitment levels of targeted sports personnel, we utilised the affective commitment scale which is the sub-scale of organisational commitment questionnaire developed by Meyer and Allen (1991) based on three dimensional commitment model and adapted to Turkish by Wasti (2000). The scale consists of 6 questions with all items in 5 point likert type (1= strongly disagree, 5=strongly agree). In this study the Cronbach's alpha value for the scale was .46.

Statistical Analysis

In analysis of the data, minimum, maximum, arithmetic mean and standard deviation of scores obtained from MSQ, MBI and Affective commitment scale were used as descriptive statistics. Both Shapiro-Wilk and Kolmogorov-Smirnov tests were conducted on dependent and independent variables in order to assess the normality of the data along with visual inspection of Q-Q (quantile-quantile) plots and histograms. Consequently, depending on the fulfilment status of parametric assumptions, both parametric (one-way ANOVA) and non-parametric (Kruskal-Wallis H, Mann-Whitney U) tests were employed to predict the association of burnout, job satisfaction and affective commitment to demographic variables such as education, gender and job title. Finally, a Pearson's correlation analysis was employed in order to examine the relationship between scores obtained from job burnout, job satisfaction and affective commitment scales.

Results

The population of the study consists of 450 sports personnel working in Provincial Directorate of Youth and Sports from eight provinces located in Mediterranean region of Turkey. In terms of gender, the population was slightly dominated by males. Out of 450 participants, 287 (%63.8) were male and 163 (%36.2) were female. The distribution of the participants within the population by age group is respectively as follows; (55 or %12.2

female and 66 or %14.7 male) in 20-30 age group, (70 or %15.6 female and 86 or %19.1 male) in 31-40 age group, (29 or %6.4 female and 83 or %18.4 male) in 41-50 age group, (9 or %2.0 female and 52 or %11.6 male) in 51 and older age group. Majority of the population (%64.4, 105 female and 185 male) hold a university degree (undergraduate and graduate). More than fifty percent (237 or %52.6) of the participants were working as officer, (49 or %10.9) were working as sports training specialist, (137 or %30.5) were working as coach and (27 or %6) were working as provincial director. Finally, %31.2 of the participants had 1-5 years, %26.2 had 6-10 years, %17.8 had 11-15 years, %12.7 had 16-20 years and %12.2 had over 21 years of seniority.

All socio-demographic variables were tested for normality using both Kolmogorov Smirnov and Shapiro-Wilk tests subsequent to calculation of scores derived from emotional exhaustion, depersonalisation, personal accomplishment, Minnesota satisfaction and affective commitment scales. The results of normality tests revealed that, none of the outcome variables met the assumption of normality for gender and job title independent variables ($p < .05$). However, normality assumption was only satisfied for overall job burnout scores according to education variable ($p > .05$). In other words, the overall job burn out scores follow a normal distribution of education (Table 1).

Table 1. Results of Shapiro-Wilk test for education.

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Education	Statistics	*df*	*Sig.*	Statistics	*df*	*Sig*
Emotional Exhaustion	High school	.075	104	.179	.978	104	.082
	Undergraduate	.060	290	.015	.984	290	.002
	Graduate	.083	56	.200*	.966	56	.117
Depersonalisation	High school	.107	104	.005	.961	104	.004
	Undergraduate	.082	290	.000	.967	290	.000
	Graduate	.105	56	.184	.959	56	.054
Personal Accomplishment	High school	.073	104	.200*	.975	104	.050
	Undergraduate	.090	290	.000	.963	290	.000
	Graduate	.089	56	.200*	.949	56	.020
Overall Burnout	High school	.068	104	.200*	.989	104	.578
	Undergraduate	.045	290	.200*	.991	290	.093
	Graduate	.075	56	.200*	.976	56	.327
Affective Commitment	High school	.115	104	.002	.972	104	.027
	Undergraduate	.109	290	.000	.975	290	.000
	Graduate	.135	56	.013	.967	56	.123
Minnesota Job Satisfaction	High school	.083	104	.075	.975	104	.046
	Undergraduate	.104	290	.000	.963	290	.000
	Graduate	.081	56	.200*	.975	56	.306

*This is a lower bound of the true significance., [a]Lilliefors Significance Correction.

The Mann Whitney-U test results comparing the affective commitment, job satisfaction and dimensions of job burnout according to gender variable is given in Table 2. The results revealed that there was no significant difference in affective commitment (U = 22702.000, p > .05) and job satisfaction (U = 22244.500, p>.05) scores between female and male sports personnel. However, in contrast to affective commitment and job satisfaction, a significant difference was determined across all dimensions of job burnout (emotional exhaustion, U = 18421.000, p <. 05), (depersonalisation, U = 18421.000, p < .05), (personal accomplishment, U = 18902.500, p < .05) and overall job burnout (U = 16793:500, p < .05) between genders. Further considering the mean ranks, the mean scores for three dimensions of job burnout and overall burnout scores were higher among female sports personnel. Therefore it is concluded that while sports personnel does not differ on job satisfaction by gender, from the burnout perspective, gender had a significant effect on burnout.

Table 2. *Mann-Whitney U test results for job burnout, job satisfaction and affective commitment scores according to gender.*

Scales	Gender	*n*	Mean Rank	Sum of Ranks	*U*	*p*
Emotional Exhaustion	Female	163	260.56	42470.50	17676.500	.000*
	Male	287	205.59	59004.50		
Depersonalisation	Female	163	255.99	41726.00	18421.000	.000*
	Male	287	208.18	59749.00		
Personal Accomplishment	Female	163	253.03	41244.50	18902.500	.001*
	Male	287	209.86	60230.50		
Overall Burnout	Female	163	265.97	43353.50	16793.500	.000*
	Male	287	202.51	58121.50		
Affective Commitment	Female	163	221.28	36068.00	22702.000	.602
	Male	287	227.90	65407.00		
Minnesota Job Satisfaction	Female	163	218.47	35610.50	22244.500	.387
	Male	287	229.49	65864.50		

*$p < .05$

The Kruskal-Wallis and one-way ANOVA test results showing the comparison of affective commitment, job satisfaction and dimensions of job burnout according to education is respectively given in Table 3 and Table 4. The results of Kruskal-Wallis test indicates that, affective commitment ($\chi2=2.671$, $p > .05$), job satisfaction ($\chi2=0.306$, $p > .05$) and the two dimensions of burnout as emotional exhaustion ($\chi2=2.639$, $p > .05$) and depersonalisation ($\chi2=4.392$, $p > .05$) does not differ by education, whereas personal accomplishment ($\chi2=10.397$, $p < .05$) as a dimension of burnout differ by education. Considering the mean ranks, it was seen

that as the education level increased, the personal accomplishment and affective commitment scores of sports personnel also increased. According to ANOVA test results given in Table 4, it was seen that sports personnel does not differ on overall burnout (F=1.852, p > .05) by education level. Therefore we have concluded that education is a significant differentiating factor on burnout levels of sports personnel in personal accomplishment dimension. However, the sport personnel does not differ on job satisfaction and affective commitment in terms of education.

Table 3. *Kruskal-Wallis and post hoc test results for job burnout, job satisfaction and affective commitment scores according to education.*

Scales	Education	*n*	Mean Rank	χ2	*df*	*p*	Post hoc
Emotional Exhaustion	High school	104	228.69	2.639	2	.267	
	Undergraduate	290	219.63				
	Graduate	56	249.96				
Depersonalisation	High school	104	237.10	4.392	2	.111	
	Undergraduate	290	216.43				
	Graduate	56	250.90				
Personal Accomplishment	High school	104	190.16	10.397	2	.006*	HS-UN, HS-GD
	Undergraduate	290	234.22				
	Graduate	56	245.97				
Affective Commitment	High school	104	220.47	2.671	2	.263	
	Undergraduate	290	222.21				
	Graduate	56	251.86				
Minnesota Job Satisfaction	High school	104	227.81	0.306	2	.858	
	Undergraduate	290	223.23				
	Graduate	56	232.96				

HS:High school, UN:Undergraduate, GD:Graduate. $^{*}p < .05$

Table 4. *One-way ANOVA test results for overall job burnout scores according to education.*

Scales	Education	*n*	*M*	*SD*	*F*	*p*
Overall Burnout	High school	104	37.67	12.44	1.852	.158
	Undergraduate	290	35.16	12.60		
	Graduate	56	37.23	12.08		

$^{*}p < .05$

Table 5 shows the Kruskal-Wallis test results comparing job burnout, job satisfaction and affective commitment scores of sports personnel according to job title. The results indicated that, the sport personnel does significantly differ on job satisfaction (χ2=10.129, p < .05), affective

commitment ($\chi2$=22.370, $p < .05$) and all dimensions of burnout as emotional exhaustion ($\chi2$=25.498, $p < .05$), depersonalisation($\chi2$=10.240, $p < .05$), personal accomplishment ($\chi2$=8.222, $p < .05$)) and overall burnout ($\chi2$=16.416, $p < .05$) according to job title. The mean ranks for burnout dimensions and overall burnout was higher among sports training specialists than other job titles. The lowest score for overall burnout and highest scores for affective commitment and job satisfaction was among directors. Therefore we have concluded that job title has a significant impact on burnout, job satisfaction and affective commitment.

Table 5. *Kruskal-Wallis and post hoc test results for job burnout, job satisfaction and affective commitment scores according to job title.*

Scales	Job Title	*n*	Mean Rank	$\chi2$	*df*	*p*	Post hoc
Emotional Exhaustion	Director	27	122.02	25.498	3	.000*	D-C, D-S, D-O
	Coach	137	214.90				
	Sports Training Specialist	49	272.98				
	Officer	237	233.60				
Depersonalisation	Director	27	161.50	10.240	3	.017*	D-S
	Coach	137	224.33				
	Sports Training Specialist	49	260.95				
	Officer	237	226.14				
Personal Accomplishment	Director	27	260.87	8.222	3	.042*	
	Coach	137	215.41				
	Sports Training Specialist	49	266.08				
	Officer	237	218.91				
Overall Burnout	Director	27	170.72	16.416	3	.001*	S-D, S-C, S-O
	Coach	137	215.94				
	Sports Training Specialist	49	286.73				
	Officer	237	286.73				
Affective Commitment	Director	27	327.46	22.370	3	.000*	D-C
	Coach	137	215.98				
	Sports Training Specialist	49	255.71				
	Officer	237	213.14				
Minnesota Job Satisfaction	Director	27	295.13	10.129	3	.017*	D-S, D-O
	Coach	137	233.59				
	Sports Training Specialist	49	213.81				
	Officer	237	215.31				

D:Director, C:Coach, S:Sports Training Specialist, O:Officer., $^{*}p < .05$

The results of Pearson's correlation analysis between, burnout dimensions, affective commitment and job satisfaction are given in Table 6. The findings from correlation matrix indicated that majority of outcome variables were significantly correlated with each other. Highly significant positive correlations between emotional exhaustion and depersonalisation (r=.833, p < .01), emotional exhaustion and overall burnout (r=.840, p < .01) and between depersonalisation and overall burnout (r=.828, p < .01) was determined. Moreover, moderate level positive correlations was also confirmed between personal accomplishment and overall burnout (r=.593, p < .01) and between affective commitment and job satisfaction (r=.434, p < .01). Affective commitment was positively correlated with two dimensions of burnout emotional exhaustion (r=.273, p < .01), depersonalisation (r=.260, p < .01) and overall burnout (r=.162, p < .01) and negatively correlated with personal accomplishment (r=-.130, p < .01). Furthermore, it is determined that job satisfaction was negatively correlated with all dimensions of burnout as emotional exhaustion (r=-.148, p < .01), personal accomplishment (r=-.142, p < .01) and overall burnout (r=-.164, p < .01).

Table 6. *Pearson correlation matrix among outcome variables.*

		M	*SD*	1	2	3	4	5	6
Burnout	1. EE	15.25	7.97	1					
	2. DP	7.82	4.78	.833** (.000)	1				
	3. PA	12.93	6.96	.096* (.042)	.144** (.002)	1			
	4. OB	36.00	12.53	.840** (.000)	.828** (.000)	.593** (.000)	1		
Affective Commitment	5. AC	18.65	4.81	.273** (.000)	.260** (.000)	-.130** (.006)	.162** (.001)	1	
Minnesota Job Satisfaction	6. MS	73.01	15.64	-.148** (.002)	-.050** (.292)	-.142** (.003)	-.164** (.000)	.434** (.000)	1

**Correlation is significant at the .01 level (2-tailed), *Correlation is significant at the .05 level (2-tailed), EE:Emotional Exhaustion, DP:Depersonalisation, PA:Personal Accomplishment, OB:Overall Burnout, AC:Affective Commitment MS:Minnesota Job Satisfaction

Discussion and Conclusions

This study is performed among sports employees working in provincial directorate of youth services and sports located in eight provinces of Turkey. In Turkey burnout and satisfaction in sport setting have been investigated by numerous studies. These studies mainly focused on athletes, coaches, referees, physical education and sports teachers (Colakoglu & Yılmaz, 2014;

Gencay & Gencay, 2011; Sirin & Dosyilmaz, 2017; Ulucan et al., 2014). However, the present study addresses and contributes to the management of sports. The findings of our study is supported by previous studies performed by researchers from both Turkey and other countries. Regarding the gender variable, our findings demonstrate that while gender has no effect on affective commitment and job satisfaction, it has significant effect on burnout in all dimensions which is consistent with the results of the research performed by Koustelios (2001) among Greek sport centre employees. Yet another research supporting this finding is performed by Toker (2011) among Turkish hotel employees where no significant differences were reported in employees' job satisfaction levels in terms of gender.

Furthermore, regarding the education we have determined that while the level of education has significant differentiating effect on burnout in personal accomplishment dimension, the sport personnel does not differ on affective commitment, job satisfaction and burnout in emotional exhaustion and depersonalisation dimensions according to level of education. This finding is in line with the results of the studies conducted by Taşgın (2013) and Ramazanoğlu (2006) among Turkish sport management personnel where no significant differences in job satisfaction reported among employees in terms of education. The possible explanation for this finding is that the sport management personnel working in provincial directorate of youth and sports graduated from fields out of sport management may lack of identifying the appropriate goals for efficient sport management (Taşgın, 2013). Additionally regarding the mean ranks of personal accomplishment scale, we found that the sports personnel holding a university degree (bachelor, graduate) reported higher levels of personal accomplishment than the personnel with high school degree.

In addition to gender and education variables, considering the job title, we found out that the sport personnel does significantly differ on job satisfaction, affective commitment and burnout with all dimensions are according to job title. Moreover, the results of correlation analysis indicate that affective commitment and job satisfaction were positively correlated with each other while burnout and job satisfaction were negatively correlated. Considering the mean ranks, the results of the study indicated that as the job title of the sports personnel vary from managing position to service position the job satisfaction levels of sports personnel tends to decrease. This finding is consistent with the results of the study conducted by Oshagbemi (2003) where it is concluded that job title is a reliable predictor of job satisfaction and employees in higher positions tend to have higher job satisfaction compared to employees in lower positions.

Finally, the results of the correlation analysis showed that job satisfaction is negatively correlated with all dimensions of burnout and

overall burnout. This finding is also consistent with the results of the study conducted by Taşgın (2013) performed among sports employees working in general directorate of youth and sports in Turkey.

The most important strength of this study is that some of the provinces subjected to the research such as Antalya and Mersin are important destinations of tourism and sports in Turkey. Throughout the year, these cities host many important sport organisations as World, Europe and Balkan championships from different branches such as golf, football, and volleyball. Therefore, from the perspective of sport management, these cities are shown among the cities that host sport organisations most intensively and the workload density of the personnel that is responsible in management of these sport organisations are generally higher than the personnel working in any other regions of Turkey. As a consequence of that the sports personnel working in these cities are more likely to experience burnout and low job satisfaction. There is one important limitation of this study worth noting and have to be considered in interpretation of the results. The results of this research are limited with the data obtained from data collection tools. Different instruments used for measuring burnout, job satisfaction and affective commitment may yield different results.

As pointed out by Hoye et al. (2007) even though the sport management consists of management techniques similar to other organisations such as hospitals, goverment departments, banks and etc., there are some unique features of sport management in terms of organisational structure, organisational culture and human resource management. From the organisational culture perspective, Hoye et al. (2007) states that because of the strong traditions in sporting behaviour, it is important for sport managers to be aware of the power of organizational culture and some important factors closely related with organisational culture such as employee's commitment to organisations, employee's job performance and decision making.

From the organisational sports psychology perspective, in their review study discussing the application and future of the organisational psychology in elite sport, Fletcher and Wagstaff (2009) concluded as "Those governing and managing elite sport have a duty of care to protect and support the mental well-being of its employees and members." and for future researches in organisational psychology in sports, Wagstaff and Larner (2015) proposed and organising structure consisting of four categories respectively as emotions and attitudes in sport organisations, stress and well-being in sport organisations, behaviors in sport organisations and environment in sport organisations.

In conclusion, within the framework of the given research structure of organisational psychology in sports, this study investigates the burnout, job

satisfaction and emotional commitment levels of Turkish sports personnel working in provincial directorate of youth services and sports. The study contributes to the literature of sport management and organisational psychology in sport by exploring some important variables related to emotional and attitudinal dimensions of organisational psychology such as employee's emotional commitment to organisation, job satisfaction and burnout. It is hoped that the findings of this study will offer the authorities and policy makers in sport organisations clues to keep and support the emotional, mental status well-being of their sport personnel working in sport organisations. Moreover, it is hoped that the findings of this study will provide base information for the studies to be conducted in organisational sport psychology in sport by researchers. Finally, for further studies, it is recommended to perform nationwide collaborative researches across different regions of Turkey.

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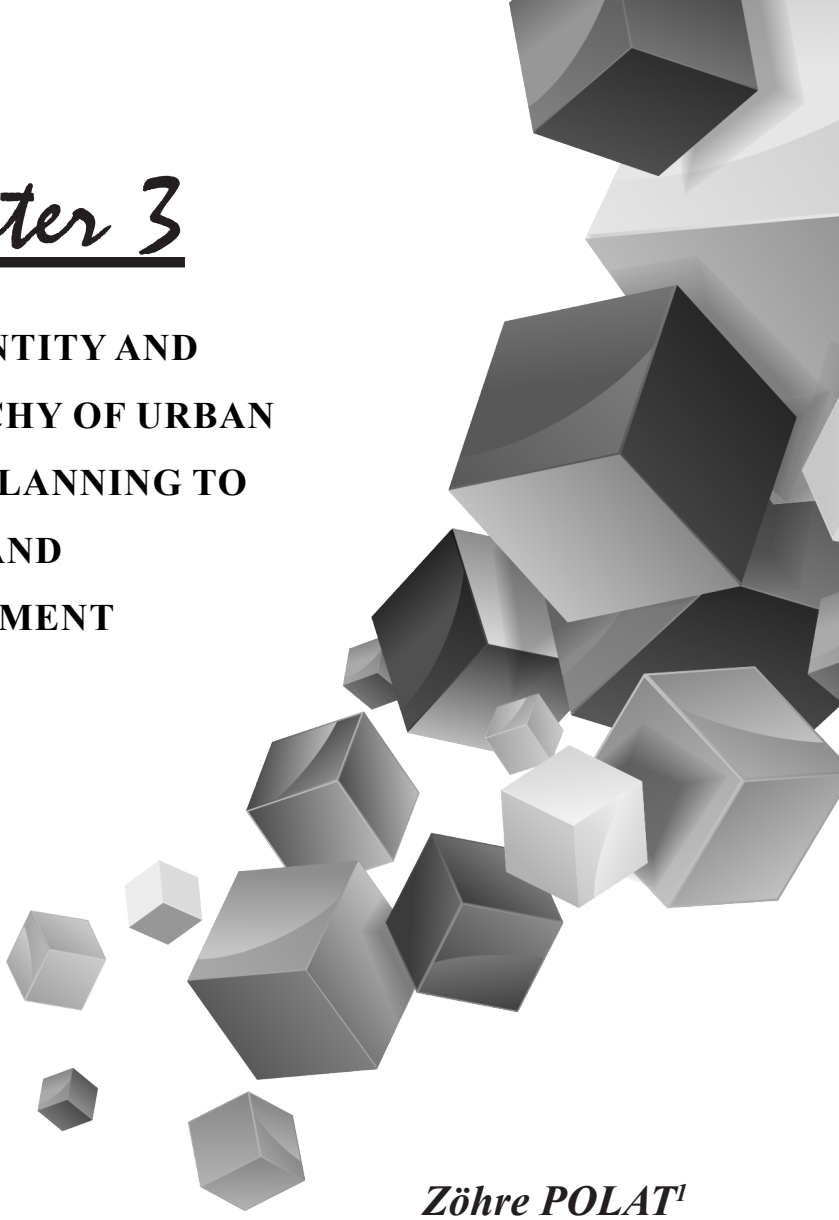
Chapter 3

THE IDENTITY AND HIERARCHY OF URBAN PARKS: PLANNING TO DESIGN AND MANAGEMENT



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This review is based on the results from a systematic review. The central research question for the systematic review was: "What is The Identity and Hierarchy of Urban Parks in Urban Ecosystem, focused on Park Planning to Park Design and Management."

In the study, conceptual information about landscape, landscape and ecology, urban ecosystem, open / green spaces and parks are presented.

The objectives of the study are; (1) to present the structure of the park areas from the rural landscape to the urban landscape by presenting the connection of the urban ecosystem, open / green spaces and parks, (2) to present researches on park areas from history to the present and park identities in various countries and (3) regarding the park system, the proposal, which includes a network from planning, design, implementation and management, is to put forward a park system.

What is landscape?

The origin of the word 'landscape' comes from the Germanic languages. In the Dutch language in early thirteenth century 'lantscap' ('lantscep','landschap') mention a land region or environment. It means in the German 'Landschaft'. Its meaning as 'scenery' is younger than that word. When 'land' mention soil and territory, 'landscape' as 'man-made land' is also the people who made it or man hand (Antrop; 2013).

European landscape Convention defines landscape as an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors' (Anonymous, 2019a). Landscape have two identity; rural and urban landscape by homen hand.

And landscape difined by different researchers in the past, such as ;

For Challenger, (1969) landscape is about "the appearance of the whole, and the interrelationships of all cultural and natural value " (Swaffield, 1991). For Meinig, (1979) landscape is all around us" (Swaffield, 1991). For Beard (1977) landscape "is land and is concerned with the combination, use and manipulation of land and water relationships (Swaffield, 1991). For Soloukhin, (1980),"Landscape is the same as beauty, and beauty is in a sacred category" (Swaffield, 1991).

Landscape and ecology

Natural science and ecology analyzes landscape through a series methods that analyze the different ecosystems. Economists think about landscape as a resource. Sociologist think about landscape social nature – a framework of social relationships. Urban planners think about landscape as a important, specific environment, before and after the improvements they applies (Ventura, 2008) (Figure 1) . Landscape has lineer components

that are planning and design. Landscape planning and design integrate each other like a cells cycle in organism.

Figure 1. - Bernardo Bellotto, Landscape of the town Pirna, 1753-55 (Ventura, 2008)

"Time" is a dimension but also a magic wand

Landscape and time necessary points between archaeology and anthropology (Ingold,1993). The land form of landscape concepts containin as seascape, waterscape, and soundscape etc.

Seascape; in the UK a seascape is defined in planning and land use contexts as a combination of adjacent land, "coastline and "sea within an area, defined by a mix of land-sea inter-visibility and coastal landscape character assessment, with major headlands forming division points between one seascape area and the next.Waterscape; waterscape means is an aquatic land in. Soundscape; a soundscape is a sound or " combining of colors of sounds in environment. The study of soundscape is the topic of acoustic ecology and soundscape ecology (Anonymous, 2019b).

Green insfacture of urban landscape: Urban green spaces

Urban landscape is a cultural ecosystem and have a great hand of human. Natural and cultural researches are combined with, city center, built environments with educational areas, health facilities, social areas, transport system, urban indastrial areas and urban green system. Open green areas are present the ecosystem services to urban area to become an balanced esosystem.

Urban areas consist of the built environment and the open space between buildings. Open space formed two main land form: green space and gray space. Think about the minor differences in the definition of green spaces, it can be characterized as a part of open space (Olsson, 2012)

that to some extent have some form of vegetation either natural or artificial. It is coveing land such as soil, grass, shrubs and trees which are named soft surface in the collation of hard (paved) surface (Mehdi et al., 2017).

The second category of the external environment which is "gray space" covering lands names as "hard" surfaces paving such as mosaic concrete, or asphalt. The gray space derivied two types; "civic space" which is publicly accessible areas designed public use (town squares, walkways and plazas); "functional space" for definite porposes (roads, car parks pavements, and other hard surfaced in built environment) (Swanwick et al., 2003).

Ecosystem services of open green spaces

Ecosystem services of open green spaces are presented in Table 1.

Table 1: Ecosystem services of open green spaces (expanded from Haq, (2011) and edding new services) (Polat et al., 2018).

Ecologic services	**Economic services**	**Recreational,sociologic and public health services**	**Aesthetic services**
Climatic effects	Energy saving	Protection and improvement of physical well – being	Increasing visual quality
Improving air quality	Conserving water reserves	Preventing and improving psychiatric health	Attraction power
Increasing soil quality	Increasing asset values	Stress decreasing effects	Preventing visual pollution
Increasing water quality	Contributing to tourism	Supporting healthy child development	Perceiving nature and create urban identity
Controlling erosion	Increasing productivity and efficiency	Developing perception and learning capacity	
Contribution to biologic diversity	Reduction of the destruction risks(floods, erosion etc.)	Developing the fact of being a society	
Conserviton of natural source value		Reducing vandalism and crime rate	
Green belting, screening and buffering		Preventing noise pollution	
Constituting urban green network		Ensuring traffic security	

Giving urban areas microclimatic characteristics		Contributing education	
Regulating heat and moisture in urban areas			
Conserving ecological sustainability			

Urban parks as an ecosystem

Parks serve green area. Parks are;

*Support urban green system component.

*Parksa are buffer grren in built environment.

*Green lungs and also publig recreation center for all cender, ages, social-economic groups etc.

*Parks are public commen use area. Independent areas for relax, recreation and leisure, sport, play, walking byking, sittng, insolation, passive recreation, lying on the gras, eating and drinking, meeting, smiling etc.

*Parks are gathering areas and safe common use areas.

*Play places for children, sport areas for teenagers.

*Parksa are core scenes for open-air leisure. Historically, urban parks missions connected to leisure and aesthetics (Almeida et al., 2018).

History of park researches

Urban parks are defined as delineated open space areas, mostly dominated by vegetation and water, and generally reserved for public use. Urban parks are mostly larger, but can also have the shape of smaller 'pocket parks'. Urban parks are usually locally defined (by authorities) as 'parks' (Konijnendijk et al., 2013).

Slavyer's (1836) Book, Book of Phillips and Delamotte, 1854, Gould (1888) New York Zoological Park. Than many researches focused on parks:

1899 (Horowitz, 1975), Olmsted and Olmsted Jr (1903), Olmsted and Olmsted Jr (1904), Boutwell (1907), Taylor, (1910), Boutwell and Woolsey, (1912), Mulford (1915), Robbins (1918), Dake (1918), Anders (1922), Harshberger (1923), Christofferson, K (1927), Wells (1933), Mattocks (1937), Tauchen (1938), Herrick (1940), Eppley (1940), Singewald (1942), Shaw (1947), Board (1949), Potzger, (1950), Trotter, (1952), Niering, (1953), Curtis (1973), Wright, (1983), Guy and Farquhar (1991),

Zipperer and Zipperer, (1992), Wicks et al., (1993), Nowak et al., (1996), Young (1996), Yuen (1996), Erkip, (1997), Bolund and Hunhammar, (1999), Ravenscroft and Markwell, 2000), Mowen and Confer., (2003), Oh and Jeong, (2006), Gobster, (2007), Omasa et al., (2008), Kantor and Unger, (2010), Macgregor-Fors and Ortega-Álvarez, (2011), Tse and Chau , (2012), Brown ve ark., (2014), Bae ve ark., (2015), Grêt-Regamey et al., (2016), Gu et al., (2016), Harris et al., (2017), Kicińska and Bożęcki , (2018), Romolinia et al., (2019), Qunyue et al., (2020).

Parks identity and hierarchy

Urban cell

Landscape value typology included 13 landscape values, such as: therapeutic, aesthetic, life supporting, economic, cultural, biodiversity future learning, subsistence, historic, intrinsic, spiritual and recreation (Schnell et al., 2019; Romolinia et al.; 2019). Green areas and park areas have social, ecological, economic, recreational and aesthetic values to present the urban people, urban landscape and ecosystem. The place values are presentes in Table 2.

Table 2. Place value options given to respondents (Biedenweg et al., 2019)

Place value
Recreation (control group only)
Learning
Achievement/Challenge
Fun
Freedom/Self-reliance
Personal Health
Spiritual/Nature Connection
Heritage/Tradition/Culture
Wildness
Aesthetic
Environmental Quality
Social

In the chain of planning, design and management of park areas, researches are carried out in order to provide users with quality living space. The potential of these areas, which offer all the services of open green spaces, is also evaluated with these services.

Urban park systems growth the quality of urban living (Kim et al. , 2019) Parks as green open spaces classification served in Table 3.

Table 3. Identity of parks as green open spaces classification. (Kim et al. , 2019).

Park Type	
Living Zone Park	**Neighborhood Park**
	Children's park
	Small park
Theme Park	**Historic park**
	Cultural park
	Waterside park
	Sports park

Park are efficient esosystems, with having biodiversity with, plants, social diversity with urban people, constructed diversity with presenting recreational units in urban landscape. The landscape architects focused a system about parks.

Firstly they look the urban area as an ecosystem amd also the explore the urban ecosystem. Seconly, they evaluate parks, in the planning scale and design scale. Thirdly in planning scale urban area has a open green system, and parks area part of green area. And parks are have a system too. Park system is another ecosystem in urban landscape.

In planning scale, park systems have, hierarchy and identity. And the system has a diversity county to country. Hierarchy is making a park basement for identity of urban landscape. And in all over the world, local govermants, urban planner, landscape architects and social and economic sciences have cooperation to build open green system and a park system. Open green planning reflects to park planning and it reflects landscape design and management. Samples of some of the countries hierarchy and identity of parks are presented in Table 4.

Table 4. Hierarchy and identity of parks

Park hierarchy and identity	**Research references**	**Research content**
Public Park (District Parks)	(Chandrasiria and Arifwidodob, 2017)	The research serves the characteristics of park use in Benjakitti Park in Bangkok, Thailand.
Adjacent Parks	(Kaczynski et al. , 2010)	The study analyzed whether parks were more likely to be used for physical activity (PA) .
Agro-Industrial Parks	(Nuhoff-Isakhanyan, 2017)	Researches networks in agro-industrial parks.

Amusement Parks	(Wang et al., 2017)	Research on amusement parks.
City Parks	(Grazuleviciene, et al., 2015)	The researche focused on beneficial parks in the cotext of city parks.
Coastal Parks	(Hipp and Ogunseitan, 2011)	Research is focused on psychological restorativeness in costal parks.
Community Park	(Tang, et al., 2017)	Research is focused on Community Park.
Country Parks	(Qi et al., 2017)	The study serve a landscape quality evaluation model for the country parks.
Culture Parks	(Hunter, W. C., 2014)	Research is focused on Taiwan Indigenous Peoples Culture Park located in Pingtung County in southern Taiwan.
Historical Urban Park	(Gąsiorek, et al., 2017)	Research is focused on historical Planty Park and also it is on the UNESCO World Heritage List. The research is focused on Historical urban park.
Historical Park	(Nayan et al., 2016)	The research is on a historical park, which is reintroducing the Sydney Lake Garden as the historical park.
Irrigated Parks	(Halper et al., 2015)	The research is focused on irrigated parks which can contribute to water demand management and urban sustainability.
Line Park	(Jung, et al., 2016)	The research is focused on Gyeongui Line Park is an urban park .
Linear Parks	(Bressanea et al., 2017)	The research is focused on Tiquatira linear park in São Paulo city, Brazil, has high natural values.
Local Park	(Plane and Klodawsky, 2013)	The research is focused on neighbourhood spaces as a local park.
Municipal Parks	(Ye et al., 2012)	The research is focused on plant species diversity in municipal parks.
Regional Park	(Rocchi et al., 2017)	The research is focused on Trasimeno Regional Park (Region of Umbria).
Neighborhood Parks	(Cohen et al., 2016)	The research is focused on neighborhood parks and their role in physical activity.
Neighborhood Park	(Schultz et al., 2017)	The research is focused on parkbased physical activity.
Urban Neighborhoods	(Han et al., 2018)	The study focused on crime rates and use of local parks.
Pocket Parks	(Nordh and Østby, 2013)	The research focuses on small urban public parks.
Provincial Park	(Eagles et al., 2014)	The research is focused on management plans of Ontario Provincial Parks.

Provincial Park	(Ro-Young et al., 2014)	The research is focused on 800 taxa are distributed in the Chilgapsan Provincial Park.
Public Parks	(Kellison et al., 2017)	The research is focused on public parks.
Public Small Park	(Mutiara and Isami, 2012)	The research is focused on public small parks in Jakarta City.
River Park	(Hutcheson et al., 2018)	The research is focused on economic value of the Hudson River Park.
Rural Parks	(Lõhmus and Liira, 2013)	The research is focused on Historic old parks and rural parks.
Safari Park	(Finnegan et al., 2018)	The research is focused on the UK safari in Merseyside, England, which opened in 1971.
Dog Park	(Howsea et al., 2018)	The research is focused on dog park.
Safari Park	(Flack, 2016)	The research is focused on English safari park first appeared in the grounds of Longleat House in Wiltshire's Rolling countryside in the spring of 1966.
Snow Parks	(Carúsa and Escorihuelab, 2016)	The research is focused on snow park (SP) injuries.
State Park	(Joshia et al., 2017)	For the study, public lands such as state parks provide numerous environmental, economic, and cultural benefits.
State Parks	(Whiting et al., 2017)	The research is focused on Georgia state park visitors.
Suburban Park	(López-Mosquera and Sánchez, 2012)	The research is focused on Theory of Planned Behavior and the Value-Belief-Norm Theory, in suburban park.
Theme Park	(Milman and Tasci, 2018)	This study attempts to identify the drivers of satisfaction and loyalty in the context of theme parks.
Thematic Parks	(Nururrohmaha and Suhirmana. 2016)	The research is focused on Thematic Park in smart-livable-sustainable city of Bandung.
Urban Parks	(Almeida et al., 2018)	The research is focused on ecosystem service in urban parks.
Urban Parks	(Douglas et al., 2018)	The research is focused on System for Observing Play and Recreation in Communities (SOPARC) to document age, gender, ethnicity, and PA level of urban park users.
Urban Forest Park	(Chena and Qib, 2018)	The research is focused on Urban forest parks, such as Fuzhou National Forest Park (FNFP).
Water Park	(Anonymous, 2016)	The research is focused on Water Park.
Zoological Park	(Hernández ert al., 2018)	The research is focused on in Zoological Park.

In this study, researches on the park areas were evaluated and in the light of the data, a proposal model has been presented to the park areas, from the park planning to the park design and management of the park system. Suggested "Hierarchy of Park System" classified in a park ecosystem and rural-urban green system (Figure 2).

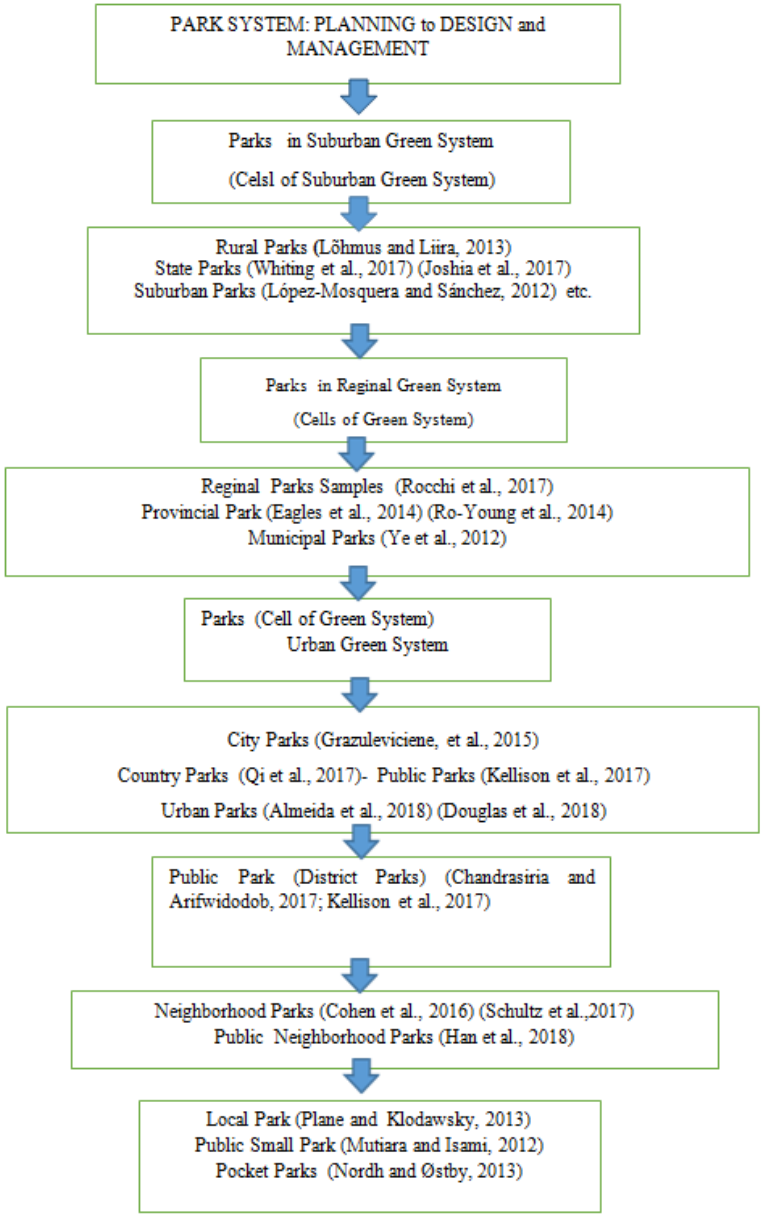

Figure 2. *Suggested Hierarchy of Park System – Park Planning to Park Design and Management*

Conclusion

Frederick Law Olmsted's works has been a guide the creation and evolution of urban parks since the early 1970s. Olmsted and his partner Calvert Vaux created a park system in Buffalo, New York, that consisted of three parks, linked by parkways. And also Olmsted became a champion of parks designed (Schuyler, 2015).

This works are professional works for park planning and park design. The extended way of park planing to design started with expertise. We can see Frederick Law Olmsted's park planning and design system in his works. Park planning has a system and hierarchy. The system is beginning with, urban planning urban green works and proffesions of green infrastructure works which are integrate urban park planning. Then the chain is continue with, landscape design, application and management of parks.

When constructing the green space system of countries, this cycle should be evaluated as a whole. The system established between regions of the country. The systems constructed in the cities are parts of the regional landscape. Then the cosept reach to city green system and park system.

Hierarchical integrity will be the success of the planning system. A wide range of research has been conducted to evaluate this system. The design and management of the elements of the system is also an important part of planning. Hierarchical integrity will form the city's green space identity. The city is a total of identities in structural and green texture. Ecosystem ties that extend from planning to management will also form the basis of urban identity.

Cities are not just living places, but an ecosystem that breathe, contains historical and cultural resources, and offers space for the socio-economic and recreational life cycle of the city. The park areas, which are an important part of the living tissue of the ecosystem, are recreational areas that offer space to public, for all ages, genders, socio-economic groups and social status.

In this context, in urban built environment, park areas should be fistly protected in the urban landscape for not to transformation to other land uses. Then the cellular structure in the planning, park schould be planning with planning principles, whole should be design with landscape design principles and absolutely manage in a managing system.

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Chapter 4

SPORTS MANAGEMENT AND DECENTRALIZATION IN LOCAL GOVERNMENTS

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INTRODUCTION

As science is divided into disciplines and areas of expertise, it is seen that its effectiveness and importance in terms of economy, use of time and operation increase day by day. Studies involving many researchers summarize the current situation (Mete ve Parıltı, 2017). Especially management science takes its place in many fields such as management, leadership, organizational structure, local governments, country management and international unions. If there is an institution, there is definitely a management there. Because there are more than one organizational structure within these institutions. The factor that ensures the coordination and dynamic continuity of these structures is the management.

Management has gone through many changes until today and has taken its current form. While it continues in a unitary structure in some places, it has found a place in an autonomous structure in some places. In the literature, it is seen that both management approaches have specific advantages and disadvantages.

Due to the structures of local governments, finance, technology and human resources are very important. However, there is only one fact that will ensure maximum efficiency from its units, and that is the management (Ulusoy and Akdemir, 2009). Each administration has an ideology within itself. There are specific management phases in sports management (Fişek, 2003). It is likely that rapid results can be obtained in terms of meeting the expectations and needs of the people in sports services and activities with the decentralization structure in local governments. It can be said that there are some delays in the implementation of projects, such as some bureaucratic procedures, decision-making and implementation. The timely implementation of the projects by determining the geographical location, accessibility, surrounding area and facility needs of sports services and activities will constitute an appropriate service concept.

Local Governments

The concept of management is the administration and conduct of the tasks undertaken by individuals or groups that have come together for the same purpose. Those who perform these duties are called managers (Erdal, 2012). The concept of management has an important place in every institution. Management's ability lie at the root of success or failure.

Local governments are also very important, especially as they take part in the public administration of the country. Although it continues to function in decentralization or unitary structure, almost every country's administration is included in its internal mechanisms. However, local governments are organized differently according to countries (Akyıldız,

2012). Regardless of the structure of local governments, they have basic goals. These are to meet the needs and expectations of the local people and to value their wishes and opinions. The areas of influence and success of local governments in the country are also in parallel with the development of that country (Arslan, 2005). As the starting point of local governments, it gained a legal character within the state towards the middle of the 19th century. Although the form of administration in the period of its first emergence was not as it is today, it was important for the first transfer of some powers of the central authority to local governments. At the same time, a new formation was initiated by granting new rights to the local people (Nadaroğlu, 1994). Local governments are legal entities with administrative autonomy for the services undertaken, with their own organizational structure with duties and powers, budget and personnel determined by the constitution of the state which are established with the aim of producing services in order to meet the needs of individuals living in a certain geographical area (neighborhood, district, province, etc.) and decision-making bodies elected by the people living in that region (Parlak and Özgür, 2002). Local governments in Turkey has a tripartite structure as special provincial administrations, municipalities and neighborhoods (Akyıldız, 2012). On one handlocal governments fulfill existing services more effectively and widely, on the other hand, they have to keep up with the developing era. It provides services in the new public sector in order to meet the constantly changing service conditions. It has to have diversity in terms of service to local people. Therefore, it tends to increase the service quality, which develops and diversifies with time, according to the resources available (Ökmen, 2009).

As Bozlağan and Yaş (2007) stated, factors such as social mobility caused by scientific and technological developments, emergence of social, cultural and sportive occupational areas, population increase and due to rise in expectations over time has forced local governments to expand their services and activities. They are institutions established within the constitutional order, within the framework of the order determined by law, in order to meet the common needs of the local people, which maintain their existence within the borders of the country (Nadaroğlu, 1994).

Sports Management

The need for sports management as a professional preparation field emerged in 1957 in a letter written by Walter O'Malley the president of a baseball club in America to Dr. James Mason, an academic at Ohia University. In his letter, O'Malley stated that there is a need for sports managers in many areas from the needs of managers in sports clubs to the needs of managers in organizations, and asked questions about how to solve this problem (Parks, Quarterman and Thibault 2013). Afterwards,

Mason and his friends started the academic sports management education by opening the first sports management master program in the world at Ohio University (Basım and Argan 2009; Chalip 2006; Jones et al., 2008; Parks et al., 2013). After these developments, sports management started to spread rapidly around the world, departments were opened in universities and trainings were were provided. Later, sports managers took part in the clubs.

In Turkey primarly in-service sports managers were trained by the Sports Education Department under the General Directorate of Sports through the panels, seminars and symposiums printed works, videotape and film preparation services related to sports management. In these trainings, information is given on new management approaches, regulations and practices, psychology, nutrition, sports club organizational relations, sports club press media relations, and management principles in sports clubs (Doğu, 2011). In the second approach, sports managers are trained through programs founded by universities. The academic development of sport management in Turkey started with the establisment of "Gazi Teacher Training Middle School" in 1932 and department of "Physical Education" in 1933 (Sunay, 2009).

The rapid increase in the enterprises, organizations, educational institutions, sports institutions and sports activities of sports organizations in the developing world has made sports management a phenomenon that should be emphasized (Yetim, 2018). Developed societies accepted sports as the most important propaganda tool and stated that the athletes who would represent them in foreign countries should be trained in the best way (Yetim and Cengiz, 2016). Contemporary sports management has two forms. The first is a professional field of management in sports-related fields, and the second one emerges as an academic field of study (Basım and Argan 2009; Parks, Quarterman and Thibault, 2013). Sports management comes together with comprehensive and complex problems involving social, economic and cultural dimensions (Doğu, 2014). Sports management is defined as a branch of sports science that examines the establishment and functioning of the elements that constitute the management in sports and tries to find the management techniques necessary for the management and administration of these elements in the best way (Ekmekçi, 2013; Donuk, 2016; Sunay, 2016). When it comes to sports management, it is defined as "The science and art in which the sports organization can achieve its objectives by using the material and human resources it has in order to achieve its goals" (Doğu, 2014). Those who lead and manage the tasks undertaken to fulfill these functions are called sports managers. They are individuals who find themselves in a beneficial activity (Lussier and Kimball, 2008; Barutçugil, 2015). The manager is seen as the person who forms the parts of the management process. A

manager is the individuals who make plans, make decisions, organize, lead, and motivate and also coordinate organizations. The manager is a member of the organization that coordinates, integrates, supervises and manages the work of other people (Asoy ve Akdemir, 2009). Concisely they are seen as people who perform all functions of the management (planning, organizing, commanding, coordinating, controlling) personally or through their assistants (Şimşek and Çelik, 2008).

The human factor is important in the field of sports services. The effects that make this situation important are listed as follows.

• Production of sports services takes place in the same area as the customer.

• Production and consumption of sports services are at the same time.

• Relationships between customers and employees show a high level of impression

• Labor can be produced intensively in sports services (Serarslan, 2005).

Sports Management in Local Governments

In the article 58, was created for the protection of youth, of The 1982 Constitution of the Republic of Turkey, it is stated that all measures are taken to protect young people from bad habits and ignorance such as alcohol, drugs, delinquency, gambling and the like. At the same time, as stated in Article 59, measures are taken to improve the physical and mental health of Turkish citizens of all ages. It enables sports to spread to all masses and supports it in doing it. The state is obliged to protect successful athletes (https://www.tbmm.gov.tr/anayasa/anayasa_2011.pdf). In The Constitution of the Republic of Turkey it is seen that the state protects its nation and adds laws in order to spread sports.

Some changes have been made in the municipal legislation for sports practices and operations in local governments. Within the scope of the amendment, it was stated that metropolitan municipalities and other municipalities give sports equipment to young people in order to encourage sports when necessary, and make aid in kind and in cash to amateur sports clubs. Before the Law No. 6360, metropolitan municipalities and other municipalities could not provide cash aid to amateur sports clubs, they could only provide materials and provide necessary support services other than cash aid. With another amendment introduced by Law No. 6360, metropolitan municipalities and other municipalities have the opportunity to award athletes, technical managers, trainers and students who have achieved excellence success or place in national and international competitions, by the decision of the council. Before the amendment made

by the Law No. 6360, only athletes who showed excellence success or place in the competitions could be awarded. With this change, the number of people that municipalities can award to support sports has been increased. However, within the scope of the same amendment, a limitation has been placed on the cash aid that municipalities can make to support sports. In accordance with the provision of the second paragraph added to Article 14 of Law No. 5393 and Article 17 of Law No. 6360 the cash aid to be provided by the municipalities to promote sports cannot exceed seven per thousand for metropolitan municipalities and twelve per thousand for other municipalities of the amount accrued for the relevant municipality from the previous year's general budget tax revenues. Municipalities are authorized to carry out activities and projects in areas such as culture, arts and sports in order to improve economic and social relations. Within this framework, it has the authority to decide whether to build, have it built, rent or allocate land, buildings and similar facilities (https://www.mevzuat.gov.tr/MevzuatMetin/1.5.5393.pdf). In the law of 5302 Youth and sports health article of Special Provincial Administration, in order to ensure solidarity and participation in the province, in the provision of health, education, sports, environment, traffic and cultural services and services for the elderly, women and children, the disabled, the poor and the needy people to increase productivity, savings and efficiency in services, programs for the participation of volunteers have been specified in the laws (https://www.mevzuat.gov.tr/MevzuatMetin/1.5.5302.pdf)

Decentralization

The concept of decentralization (autonomy) in terms of lexical meaning; It can be expressed as the power of individuals, groups, organizations, institutions, regions and states, without violating the rights of real and legal entities, within the framework of national and international law, by setting targets in areas that concern them, and to make decisions (Bozkurt ve diğ, 1998). Self government is used as the word for autonomy. In the 3rd article of the European Charter of Local Self-Government, autonomy is stated as "the opportunity of local authorities to organize and manage a significant part of public affairs under their own responsibilities and in line with the interests of the local population, within the boundaries determined by law" (Top, 1999).

In this context, there are two situations in the autonomy of local governments. First, it is the examination of local governments' relations with the central state. While it is not possible for local governments to be completely independent from the central administration, the situation here for local governments is that they can manage their own affairs without any interference of the central administration. The second is to examine the relationship between local governments and local people. This situation

has been determined as the ability of local bodies elected by the local people to represent the existing community properly and this method of representation enables such individuals to be selected (Keleş, 1994).

The main conditions for an organization to be autonomous;

- Final decision-making power; an autonomous organization must be able to make precise decisions. The decisions taken by these organizations should not depend on the prior authorization or approval of the higher authorities.
- Independence of organs; The organs of an autonomous administration should be elected. One of the most important conditions of autonomy is the election of its organs.
- Finding financial opportunities; organizations are considered autonomous to the extent that they are provided with sufficient financial resource (Top, 1991; Pirler et al. 1995).

Decentralization is a concept that has broad meanings and based on decentralization and non-adoption of centralization. It involves being somehow autonomous at some extend from the state or government organized at the center. This autonomy may be within the hierarchical structure of the government organization itself, and apart from the central government organization it can also be a form of organization established to meet local and common needs with the principle of decentralization. However it can also be in the form of economic enterprises, associations and non-governmental organizations established within the free market mechanism or within the framework of constitutional rights and freedoms completely outside of the state, central and local administration units (Gül and Özgür, 2004).

The purpose of local autonomy is to increase the quality of services, to ensure that services are made simple, fast and cheap, and to prevent the use of unnecessary personnel and materials. The boundaries of autonomy are specified by the constitution and laws. The autonomy right that cross the line can be abused and may have worse consequences than not being autonomous. In this case, personal interests can replace social interests (Top, 1996).

Decentralization in Local Governments

Decentralization (decentralization, decentralization) is the fulfillment of decision-making and practices regarding public administration by organizations that have a different legal personality than the state legal entity. In this sense, the counterpart of decentralization is not federalism. Decentralization includes the administration of public affairs not only geographically but also in terms of in terms of field of activity and function

that being managed by a unit outside the center within certain rules. This concept includes public legal entities outside the state and this requires a separate budget and decision-making body and a certain administrative autonomy (Parlak, 2011).

In Article 123 of the Constitution titled "Unity of administration and public legal entities" and Article 127 titled line "local administrations" the constitutional limits of local autonomy in general have been determined by establishing the constitutional foundations of local governments. Thus, it is assumed that institutions will be able to organize and implement their own services under their own responsibilities and in line with the benefits of the country (Pirler et al. 1995).

Indigenization is regarded as the best method for dynamic and strong local government system and autonomy. Indigenization is a power and an important factor in the transition to decentralization. Potentially new and more opportunities may arise during the implementation phase, as local actors are free from central control. process (Akalın, 1994).

Decentralization increases participation in management that is it facilitates participation in management. Services can be offered more easily in line with the needs of local people. At the local level, people dealing with their own problems creates the habit of taking responsibility for solving these problems. Thus, indigenization will contribute to the development of local democracy and citizenship consciousness (Ortaylı, 1985). In addition to these, there are some negativities that can be experienced. Differences in fiscal capacity may lead to increased inequalities between regions, thus widening poverty zones within the nation and the emergence of politically destabilizing forces. Since there is a difference in how different regions benefit from natural resources, problems such as the level of economic activities and land values can create uncertainty. While better quality service is provided to citizens who are in good financial condition, others may be deprived of it. The need for an equitable distribution of available resources can raise developments that justify centralization to avoid inequality. Local people may face some restrictions as a result of localization policies (Akalın, 1994).

Decentralization in Terms of Service

Instead of carrying out some public services or activities by public administrations established on the principle of generality, it was preferred to be run by a legal entity established by public administrations. For this reason, decentralization organizations have been established in terms of service. These organizations, which are not affiliated with the central hierarchy, have the authority to make executive decisions on issues related to public services that have been left to them (Nadaroğlu, 1994).

Continuous changes and developments experienced in the process of globalization, significant changes in the characteristics and functions of local governments and cities, which are an important parameter of localization trends, stand out in many areas that determine the appearance of local governments. In this sense, local governments and cities appear as the most affected and changing areas in the transformation from industrial society to the information society, especially in relation to the locality that comes with globalization, and contribute to this process with their tendencies of effective and efficient service provision and democratization. This change from the centralist industrial society to the decentralized information society directly and strongly affects local governments, city structures and therefore local, urban and regional policies (Ökmen, 2005).

TRT and universities can be given as examples of such organizations. Decentralized organizations in terms of service form third group management units in the structure of public administration, after central government and local government organizations. Decentralized organizations in terms of service are spread over a variety of areas. There are decentralized organizations in terms of service operating in the commercial and industrial fields, as well as organizations that provide services in the fields of education, culture, technical, social support and publication (Nadaroğlu, 1994).

Local governments' having insufficient sources of income causes these units to be disrupted in their fulfillment of their duties and at the same time cause them to depend on the resources to be transferred by the central government. This situation significantly limits the ability of local governments to implement the decisions they make through their own organs and to act independently from the central government. However, the survival of local governments, each of which is described as an applied school of politics and allowing democracy to be implemented at the widest scale, depends on their ability to have sufficient and continuous financial resources. In this way, the success of public services in meeting the needs of the local people will increase, and effective and efficient resource use at national and local scale will be ensured. Moreover, by fulfilling the local needs by the administrative units closest to the public, more efficient use of resources will be possible by enabling the control of local people in service delivery. Nevertheless the full realization of the stated benefits will be possible with financial autonomy (Ulusoy and Akdemir, 2009).

Local governments are seen as essential institutions in terms of fulfilling the needs and expectations of the people in all developed and developing countries. The power and efficiency of local governments in a country is closely related to the development and democratic level of that country (Arslan, 2005).

According to Nadaroğlu, the continuation of the existence of local governments depends on the distribution of the income between the central government and local governments on reasonable, rational and fair principles. The following methods can be mentioned in practice in sharing financial resources between central government and local governments. They are; authorizing local governments for unlimited taxation, a share of some of the taxes collected by the central government, earning income through supplementary fractions and surtax, and transfer of some of the taxes collected by the central government to local governments (Nadaroğlu, 1994).

RESULT and SUGGESTIONS

The main element of public administration and Special Provincial Administration Law No. 5302, Metropolitan Municipality Law No. 5216, Municipality Law No. 5393 prepared in the framework of the restructuring of the public administration system in Turkey foresees significant changes in the local government area. In the general framework of performing local common services, local administrations have been made general responsible and have been strengthened in administrative terms. It is seen that local governments and other government units at all levels have important responsibilities in the development of health, peace, trust, education and quality of life of all citizens.

Local governments have been strengthened administratively and financially with the amendments made and tried to expand the sphere of influence of sports services and activities.Although they are strengthened, they are not considered to be completely detached from the central administration. In Turkey, sport services are carried out with centralized management approach. This situation hampers people's benefiting enough from the sport's and development of sports in Turkey.

Acting with an independent organization and decentralization understanding of sports services will allow the development of sports in the local area. With the establishment, branching and training activities for the characteristics of the local regions appropriate results will be obtained since every city in the country can not have the same opportunities and facilities. It is necessary to transfer seven per thousand of the previous year's revenues of municipalities to sports and social services, protect of youth and encourage youth to sports and, to work effectively in local governments alongside with central government. Carrying out the services and activities of sports by having experts trained in the field of sports management in the municipalities will play an active role in the rapid conclusion of the expectations and demands of the society. Sports services are predominantly carried out with a central management system, and intervention may be delayed in terms of regional problems, deficiencies

and meeting expectations. Observing and responding to the problems and needs of the region on site will be beneficial in terms of time and operation and will ease the workload of the central administration. In this case, the executive and decision-making bodies selected by the local people will be able to implement the decisions independently from the center and the service will be activated according to the purpose. Each decision taken and each service to be implemented should have a purpose that can increase the peace and welfare of the society within the constitutional order determined by the state, without being used other than their purposes.

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Chapter 5

EFFECT OF BODY MASS INDEX ON VERTICAL JUMPING PERFORMANCE IN FEMALE VOLLEYBALL ATHLETES

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1. INTRODUCTION

Volleyball is one of the highest participating sports that rised as a result of intructor William G. Morgan's effort in 1895 in Holyoke, Massachusetts, USA. According to predictions, volleyball stages second after football in terms of popularity.(Reeser, Verhagen, Briner, Askeland, & Bahr, 2006) Volleyball has showed up as a team sport consisting of sequential and cyclic actions with specific rules.(Monteiro, Mesquita, & Marcelino, 2009) Volleyball is a sport that is able to be played pleasure by female and male, young and old, disabled and able bodied, athletes and non-athletes both indoors or outdoors. The Federation Internationale de Volleyball (FIVB), the international governing body for the volleyball, estimates that more than 500 million people in the World-wide play volleyball at any level. (Maughan & Shirreffs, 2017)

Volleyball is a sport played by two teams on an 18x9 meter playground divided by a net. The aim of the game is to send the ball over the net to allow the opposing team to touch the playing field and prevent the opposing team from reaching the same goal. (Basandac G, 2014) The game speed has quickened since 1964, when volleyball accepted as an Olympic sport. The pace of the game was lower before 1964, but it has become more quickly game with various game combination of hitters and setters. Volleyball rally in men's or women's collegiate game lasts only 10 – 15 seconds. In todays all volleyball playes must be able to run well, jump well and displacement rapidly without postion difference. Elite volleyball athletes have stronger, faster and better condition now.So, The athletes need good physical fitness and some performance parameters such as good level of jumping, anaerobic capacity and power well to have developed volleyball-specific movements. These requirements are flexibility, strength, power and agilty.(Scates, A. E., Linn, M., & Kowalick, 2003)

Volleyball-specific movements include the jump serve, spike, and block particularly. During the attack, while athlete jump serve, or spike in game, athletes needs to jump highest point and strikes the ball on highest point of ball to send rapidly towards the opposite side of the net. Deffensively, front region players raised his hands against the spike for trying to make deffensive. This movement is called as a block position. Different from offensive jump, defensive jump does not require maximal vertical jump level.(Maughan & Shirreffs, 2017)

Vertical jump height is one of the parameters of functionality in many sports. The vertical jump test is often used to follow-up physical capacity and determine athletes' ability to sport. Besides, the vertical jump test is also used to evaluate and monitor the effectiveness of training programs. Common methods used to estimate vertical jump height are flight time measurement or vertical ground reaction force measurement.

(Cordova & Armstrong, 1996) The evaluation of the vertical jump height by measurement of the vertical ground reaction force was validated in the studies and it was accepted as the gold standard for the assessment of vertical jump performance. The vertical ground reaction force is the monitoring of force which is generated during the vertical jump by the help of a plate placed in jump zone.(Healy, Kenny, & Harrison, 2016) The flight time method is reliable field test method for the assessment of vertical jump performance in both female and male athletes. The flight time method involves measuring the amount of air-time during vertical jump. High correlation was found between the method of measuring flight time and the method of measuring vertical ground reaction force.($p < 0.001$) (García-López et al., 2005)

Flight time is able to be evaluated by Optojump Photoelectric Cells System (OPCS). This system consists of two parallel bars located at floor level. One of these parallel bars acts as a receiver and another one acts as a transmitter. Otherwise, each bar containing 32 light-emitting diodes has a length of 100 x 4 x 3 cm and a weight of 1,5 kg. Furthermore, distance between bars 90 cm when it placed on the floor. (Attia et al., 2017)

Although its reliability and validity is not known, Optojump Photoelectric Cells System (OPCS) has been widely used in field studies and researches since 1995 when it was produced. However, recent studies have shown that the reliability and validity of Optojump Photoelectric Cells System (OPCS) is high on squat jump positon and counter movement position. In addition to high reliability and validity, Optojump Photoelectric Cells System (OPCS) is an easy-to-handle and cost effective system. Likewise, the use of this system on sports-specific grounds except sand also extends the application areas of this system. (Attia et al., 2017)

There are many factors that affect jumping performance in athletes. Body mass index is one of the factors that affect jumping performance. Many studies have found a negative correlation between body mass index and jumping performance.(Abidin & Adam, 2013)

2. RESULTS

35 elite female volleyball athletes with mean age 28.08 ± 4.62 having the inclusion criteria participated in this study. The mean values of weight are 69.45 ± 7.78 kilograms in research group that is elite female athletes. The mean values of height are 179.46 ± 7.80 centimeters in research group that is elite female athletes. The mean values of body mass index are 21.58 ± 1.73 in research group that is elite female athletes.

Table 1. *Demographical data of volleyball athletes*

	N	*Mean ± SD*	*Min – Max*
Age (years)	35	28.08 ± 4.62	21 – 37
Weight (kg)	35	69.45 ± 7.78	53.9 – 91.5
Height (m)	35	179.46 ± 7.80	158 – 190.4
BMI (kg/m^2)	35	21.58 ± 1.73	18.10 – 25.80

The mean values of squat jump are 26.97 ± 3.62 cm in research group that is elite female athletes. The mean values of countermovement are 27.91 ± 4.11 cm in research group that is elite female athletes.

Table 2. *Data of Jump Tests*

	N	*Mean ± SD*	*Min – Max*
Squat Jump (cm)	35	26.97 ± 3.62	18.20 – 32.90
Countermovement Jump (cm)	35	27.91 ± 4.11	18.50 – 36.40

There is a negative correlation between body mass index and squat jump (r = - 0.454). There is a negative correlation between body mass index and countermovement jump (r = - 0.590). These relationships and coefficients are statistically significant. Accordingly, when the BMI is increased, squat jump and countermovement jump are reduced. These relationships and coefficients were statistically moderate.

Table 3. *Correlation between relative squat jump and countermovement jump with body mass index*

		BMI
SJ	r	- 0.454
CMJ	r	- 0.590

A negative regression equation was found between BMI and squat jump. According to this result, there is 1 unit increase in BMI versus 0.951 unit decrease in squat jump and the regression coefficient is statistically significant.

Table 4. *Regression analyze of body mass index capacity and squat jump*

	B	*Std.Error*	*p*
BMI	-0.590	0.324	0.006

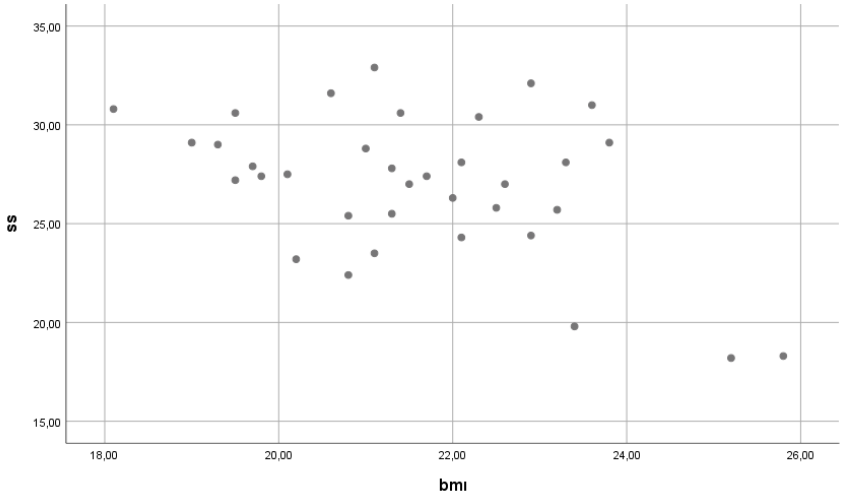

Figure 1. *Regression analyze of body mass index capacity and squat jump*

A negative regression equation was found between BMI and countermovement jump. According to this result, there is 1 unit increase in BMI 1.404 unit decrease in squat jump and the regression coefficient is statistically significant.

Table 5. *Regression analyze of body mass index capacity and countermovement jump*

	B	*Std.Error*	*p*
BMI	- 1.404	0.334	0.001

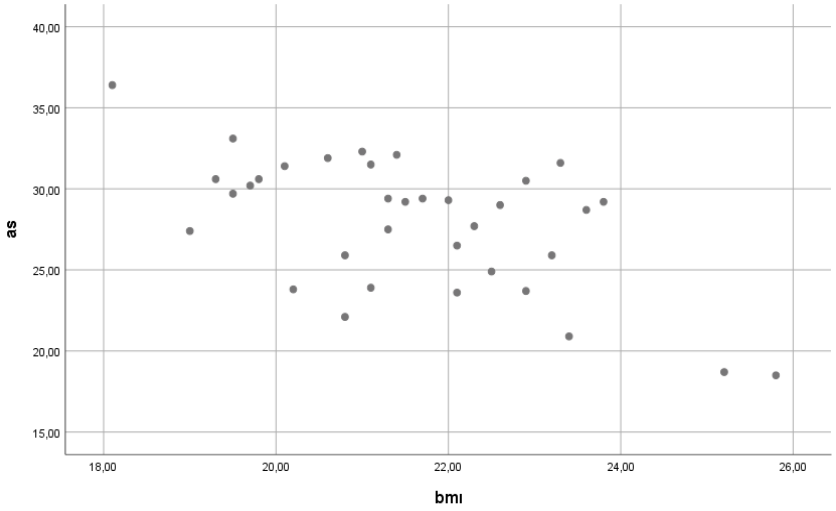

Figure 2. *Regression analyze of body mass index capacity and squat jump*

3. CONCLUSION

In this study, we evaluated the association of body mass index with vertical jump performance in the female volleyball athletes. In conclusion, our statistical analyses delivered the following highlighting conclusions:

• A negative association is available between BMI and squat jumping (r=-0.454), and BMI and countermovement jumping (r=-0.590). These coefficients are statistically significant, but the strength is moderate. As BMI increases, countermovement and squat jumping performces both lower oppositely.

• There is a negative association between BMI and squat jumping. Accordingly, one unit increase in BMI gives a decrease in the squat jumping by a coefficient of 0.951x, and this regressional coefficient is statistically significant.

• There is a negative association between BMI and countermovement jumping. Accordingly, one unit increase in BMI results in a decrease in the countermovement jumping by a coefficient of 1.404x, and this regressional coefficient is statistically significant.

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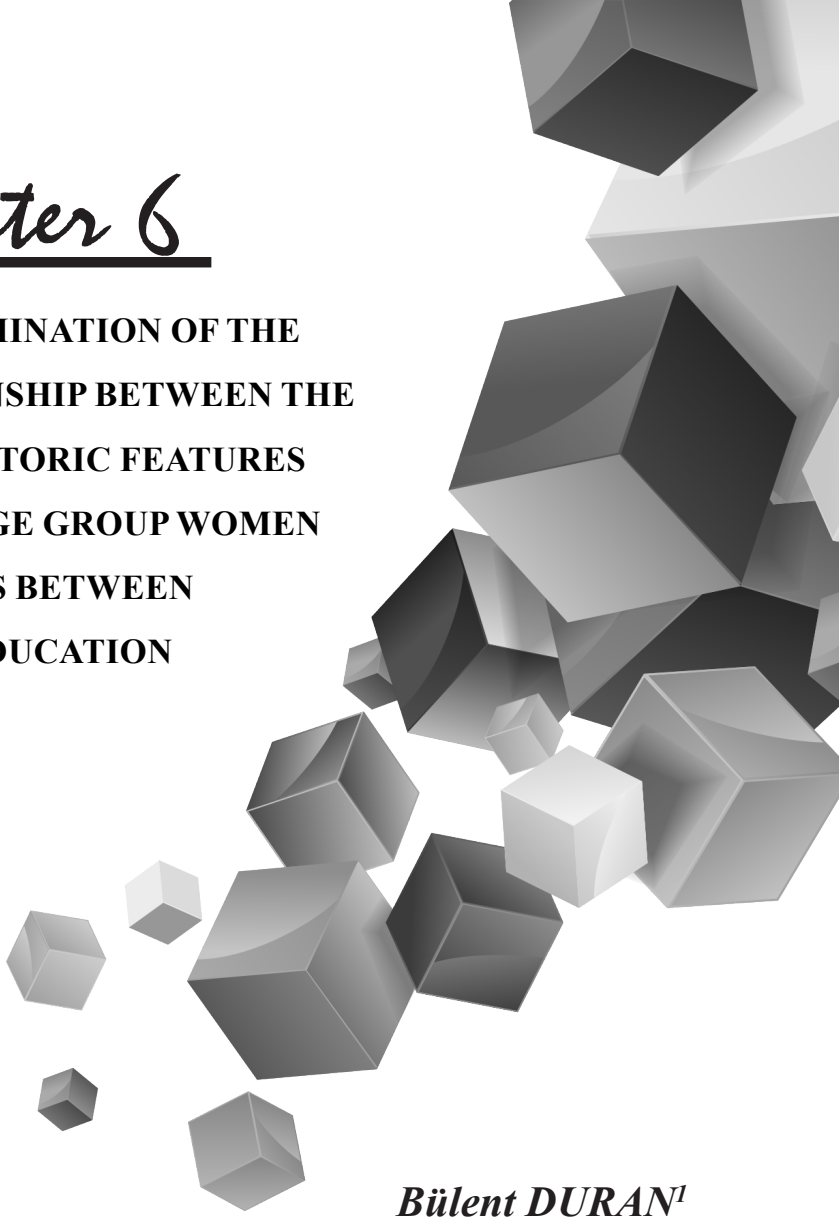
Chapter 6

THE EXAMINATION OF THE RELATIONSHIP BETWEEN THE BASIC MOTORIC FEATURES OF 10-12 AGE GROUP WOMEN ATHLETES BETWEEN TENNIS EDUCATION LEVELS



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INTRODUCTION

Tennis is a sports branch that consists of an effective combination of strength, speed, endurance, mobility, and skill. This combination may lead to a positive or negative result in the transfer of the skills already available during the teaching of tennis-related subjects to the new and desired skill to be taught. The tennis branch, which requires more condition than other sports branches and that needs to be played fast, requires speed to perform a good place and take a hit during defense and offensive positions. Tennis branch has become an anaerobic force sport that is built on aerobic foundations. It is necessary to prepare a training plan for 10-12 age group female tennis athletes in the light of the information obtained as a result of this analysis by analyzing several physical and motoric features suitable for the type of this sport branch. It can be said that these training programs can lead to an increase in the performance values of athletes. The aim of our study is the examination of the relationship between the tennis motoric characteristics of 10-12 age group children who have not done sports before and their tennis education levels.

Model of the Research

The research was designed in accordance with the cause and effect relationship research model. Therefore; 40 female child athletes who voluntarily participated in the study, 30 meters sprint test, Vertical jump test, Rockport 1 mile test, Wall Catch coordination test, Illinois test and Sit Extending flexibility test were applied. ITN (International Tennis Number) Test was applied to determine tennis skills. Following the first tests, the participants were given Basic tennis training to be applied 3 days a week for 2 months. The training content was teaching forehand, backhand, service and volley strokes, and mutual rally exercises. At the end of the 2-month training, the post-test phase was started and after the height and weight measurement of 40 children, a 30-meter sprint test, a Vertical jump test, a Rockport 1 mile test, Wall Catch coordination test, Illinois test and Sit-reach flexibility test were applied. Then, ITN Test was applied to determine tennis skills.

Universe, Sample or Study Group

The study was carried out on 40 female child athletes aged 10-12 years old who had not previously played sports in Istanbul. The differences and relationships between the tennis skills and basic motoric features of the children participating in the study were examined. These tests of the study group have not been applied before. The study was carried out on the tennis court of a private sports club. The first measurements were made in the first week of July 2019, and the second measurements were made in the first week of September.

Tools and Equipment Used to Obtain Data

After measuring height (cm) and weight (kg), 30-meter sprint test, vertical jump test, Rockport 1 mile test, Wall Catch coordination test, Illinois test, Sit-reach flexibility test, and ITN test were performed.

Height and Weight Measurement

Tanita BC 730 brand scale was used for weight measurement. Length measurement was measured with the SECA brand Stadiometer. At the time of the measurement, no clothing that may affect the measurement results was kept on the children.

30 Meter Sprint Test

The purpose of the test is to determine the maximal speed. The children were allowed to run at the highest speed they could run in the 30-meter field, and the time was recorded with the UA Sport Technologies branded Telemetric Stopwatch in seconds. Each child has two right to try and his best degree is recorded (Gelen et.al., 2008).

Vertical Jump Test

In vertical jump measurements, Takei brand digital jump meter with 0,1 cm sensitivity is used. Based on the reliability studies conducted, it was found that the confidence level of the test was between 0,90-0,97. Application content was made as follows; The participants were asked to connect the digital indicator waist of the jump meter and twist their knees 90° and jump upwards with double feet after the rope was adjusted. They attempted to fall into the circular plastic zone on the ground connected to the jump meter after landing on the ground after the jump. If steps forward or backward occur after landing, the leap was repeated as invalid. It was repeated twice and the highest value was recorded (Ross & Marfell, 1991).

Wall Catch Coordination Test

The test was applied to determine the coordination of the child. The application content was carried out as follows; the child was left facing the wall at a distance of 3 meters. The ball was thrown towards the wall with the shoulder fixed from the bottom upwards, provided that it was caught with the hand it threw. The other hand was tested after several trial shots. The scoring is; The scoring of the successful shots was carried out in 30 seconds, for each successful shot, the same was done on both hands. In order to help evaluate the results and to get better results, the side that the child has determined himself has been recorded (Özer, 2007).

Illinois Test

The test track is formed of three cones, which are 5 meters to the width and 10 meters to the neck and are placed on a flat strip at three meters

and thirty centimeters intervals in the middle section. The application of the test consists of slalom runs between forty meters straight and twenty meters between cones, containing one hundred and eighty degree turns at a distance of 10 meters. After the preparation of the test track and above the endpoint, a Telemetric Stopwatch system with a two-door UA Sports Technologies brand with a measurement capability of 0.01 seconds was placed. Before applying the test, children were introduced and informed about the course. They were allowed to do three or four attempts at a low tempo. Following these, the children were given warm-up and stretching exercises for four or five minutes at a non-high tempo determined by their level. The children were laid out on the starting line of the test track, in the supine position, and with their hands in contact with the ground at the shoulder level before exiting. Track completion time is recorded in seconds. The track was repeated 2 times with full rest and the lowest value was recorded (Getchell, 1979).

Sit-Reach Flexibility Test

In order to determine the flexibility levels of the female child athletes included in our study, a sit-and-go flexibility test was applied. A table measuring 32 centimeters high and 35 centimeters long was divided into centimeters and dimensioned. The child sits on the floor, stretches his legs, and places the soles of the feet in the proper part of the coffee table, without shoes. Subsequently, it was provided to extend forward from the trunk to the farthest possible point, without bending the knees, forward to the area divided by the centimeter on the coffee table. The most advanced point with the fingers outstretched was measured in centimeters. The child repeated this test three times and the best degree it achieved was recorded (Hazar & Taşmektepligil, 2008).

ITN (International Tennis Number) Test

The tennis-playing skills of the children were examined and the ITN test was evaluated and recorded in accordance with the ITN test on the subject of the depth assessment of the groundstrokes, the sensitivity of the groundstrokes, the volley hit assessment, and the service assessment.

The evaluation form used for the official evaluation of ITN consists of 3 parts. These are:

1. Player, evaluator, and evaluation details. This section is located at the top of the evaluation form. The person who writes the points writes information about the player and the person who will perform the evaluation to this section.

2. The main part where points are recorded (written). This section is the part where the person who wrote the scores wrote the scores of all

the different strokes, the total scores, and all the ITN evaluation scores. First of all, attention should be paid to record all the strokes in the right place with the start of the evaluation. The evaluator must announce the score received with a clean tone at the height that can be heard after each beat. If a mistake is made, a "Zero" score is written on the error section. At the end of this section, the person who wrote the scores counts all the strokes and scores given and the score that is made up of the semi-total part. Then he counts the strokes with a score greater than zero (p> 0) and writes the number he finds in the "continuity" part of the form. To support this explanation with an example; If a participant scored above zero in 6 strokes, "6" is written in the continuity box. The person who writes the points adds the continuity score with the semi-total score and writes the total score. By summing up the total points of each section, the "total score of strokes" is created. The "total score" is obtained by adding the total scores of the strokes to each other. The assessor will circle the appropriate box on the form, indicating the correct ITN level of the player.

3. Verification of the Scoring Form. The player and the person making the evaluation agree that the evaluation and the points are correct by mutual signing.

The scope of this test includes groundstroke depth, volley shot, groundstroke precision, and service shot studies. The studies within this scope are explained below under the titles.

Ground Stroke Depth

While the child waits in the place previously shown in the depth of groundstroke assessment, the ball feeders, ie the person or assistant of the test, is located at the predetermined point in the opposite area of the court. The ball feeder performed 10 consecutive ball feeds to the point indicated by the signs "x x", on one forehand side, and one backhand side of the child. The child, on the other hand, tried to hit the incoming balls by making forehand and backhand strokes in order to drop them into the opposite field.

Volley Shot

In the evaluation of the volley shot, the children wait at the point indicated for stopping, and the ball feeders wait at the point specified for them in the opposite area of the court. On the condition that the ball feeder is towards the point determined by the "x x" signs just in front of the child, ten consecutive balls were fed to one forehand side, one backhand side, at a height between hip and shoulder level. The children, on the other hand, made volley strokes on these thrown balls in the form of forehand and backhand.

Ground Stroke Accuracy

While performing the groundstroke accuracy assessment, the children waited at the point previously shown to them and the ball feeders waited at the marked place for them in the opposite area of the court. The ball feeder delivered twelve balls in a row to a forehand side and a backhand side of the child, towards the region designated by the signs "x x" in front of the child. The children made the strokes of these balls by making forehand and backhand strokes to drop the ball into the designated areas on the opposite field.

Service Shot

Children made 12 service shots. The first 3 service shots made on the wide-area of the first service box, the second 3 service shots on the middle part of the first service box, the third 3 service shots on the middle part of the second service box and the last 3 service shots on the large part of the second service box (TTF, 2016).

Data Analysis

In statistical analysis; descriptive statistics were made for all data. In order to determine the differences between tennis skills and basic motoric features and various physical variables, both the data show the normal distribution and the 1st sample and 2nd measurement were used in the same sample group, and the paired samples T-test with a significance of 0.01 was used. At the end of the two-month training, Pearson Correlation analysis at 0.05 and 0.01 significance level was used to determine the relationship between children's tennis skills, basic motoric features, and various physical variables.

RESULTS

Table 1: 1st and 2nd Measurement Data of 10-12 Age Female Child Athletes

Variables	N	Min.	Max.	$\bar{x}$	σ
Age	40	10	12	10,98	0,92
Height	40	145,00	161,00	154,63	3,92
Weight	40	40,00	55,00	47,73	3,44
Vertical Jump 1st	40	15,00	20,00	17,94	1,20
Vertical Jump 2nd	40	18,30	26,00	22,18	2,05
30 Meter Sprint 1st	40	6,00	9,00	7,76	0,81
30 Meter Sprint 2nd	40	5,50	8,00	6,34	0,53
Rockport 1 Mile 1st	40	50,00	53,00	50,70	0,82
Rockport 1 Mile 2nd	40	51,00	56,00	53,55	1,01
Wall Catch 1st	40	7,00	9,00	8,03	0,57
Wall Catch 2nd	40	9,00	17,00	11,88	2,42
Illinois 1st	40	24,00	29,00	25,57	1,05

Illinois 2nd	40	20,00	25,00	21,88	1,35
Sit-Reach Flexibility 1st	40	20,00	23,10	20,48	0,68
Sit-Reach Flexibility 2nd	40	23,00	25,00	23,32	0,52
ITN 1st	40	15,00	50,00	29,25	7,56
ITN 2nd	40	85,00	120,00	103,53	9,07

When Table 1 examined, average ($\bar{x}$) and standard deviation (σ) values of the age of female child athletes 10.98 ± 0.92, average and standard deviation values of their height 154.63 ± 3.92, average and standard deviation values of their weight were calculated as 47.73 ±3.44. Vertical jump of children 1st measurement average is 17.94 ± 1.20 centimeters, 2nd measurement average is 22.18 ± 2.05 centimeters. 30-meter sprint 1st Measurement average is 7.76 ± 0.81 seconds, 2nd measurement average is 6.34 ± 0.53 seconds. Rockport 1 mile 1st measurement average value is 50.70 ± 0.82, and the 2nd measurement average is 53.55 ± 1.01. Wall Catch 1st The average measurement value is 8.03 ± 0.57, and the 2nd measurement average is 11.88 ± 2.42. Illinois test 1st The average of measurement values is 25.57 ± 1.05, and the 2nd measurement average is 21.88 ± 1.35. Sit-reach flexibility test 1st Measurement average value is 20.48 ± 0.68, and the 2nd measurement average is 23.32 ± 0.52. ITN, the average of 1st measurement values is 29.25 ± 7.56, and the 2nd measurement average is 103.53 ± 9.07.

Table 2. Co-sampling t-Test (Paired Samples Test) Regarding the Difference Between 1st and 2nd Measurement Data of 10-12 Years Old Female Child Athletes

Paired Samples Statistics	**N**	**$\bar{x}$**	**σ**	**t**	**p**
Vertical Jump 1st	40	17,94	1,20	-15,48	0,00
Vertical Jump 2nd	40	22,18	2,05		
30 Meter Sprint 1st	40	7,76	0,81	10,12	0,00
30 Meter Sprint 2nd	40	6,34	0,53		
Rockport 1 Mile 1st	40	50,70	0,82	-13,54	0,00
Rockport 1 Mile 2nd	40	53,55	1,01		
Wall Catch 1st	40	8,03	0,57	-10,05	0,00
Wall Catch 2nd	40	11,88	2,42		
Illinois 1st	40	25,57	1,05	14,80	0,00
Illinois 2nd	40	21,88	1,35		
Sit-Reach Flexibility 1st	40	20,48	0,68	-19,93	0,00
Sit-Reach Flexibility 2nd	40	23,32	0,52		
ITN 1st	40	29,25	7,56	-49,90	0,00
ITN 2nd	40	103,53	9,07		

According to Table 2, it was observed that there was a statistically significant difference between the results of vertical jump, 30-meter sprint, Rockport 1 mile, Wall Cath, Illinois, Sit-reach flexibility, and ITN values of 1st and 2nd measurements of female child athletes ($p < 0.05$).

Table 3. Correlation Analysis for the Relationship Between the 1st Measurement Data and ITN 1st Measurement Values of Female Athletes aged 10-12

Variables		**ITN 1st Measurement**
Vertical Jump 1st	Pearson Correlation	0,02
	p	0,91
	N	40
30 Meter Sprint 1st	Pearson Correlation	0,13
	p	0,44
	N	40
Rockport 1 Mile 1st	Pearson Correlation	0,03
	p	0,86
	N	40
Wall Catch 1st	Pearson Correlation	-0,19
	p	0,24
	N	40
Illinois 1st	Pearson Correlation	-0,22
	p	0,18
	N	40

In Table 3, there is no statistically significant relationship between ITN measurement values, vertical measurements, 30-meter sprint, Rockport 1 mile, Wall Cath, and Illinois 1st measurements of 40 female children participating in the study ($p < 0.05$).

Table 4. Correlation Analysis for the Relationship Between the Measurement Data and ITN Scores of Children 10-12 Years Old After Basic Education

Variables		**ITN 2nd Measurement**
Vertical Jump 2nd	Pearson Correlation	,500**
	p	0,00
	N	40
30 Meter Sprint 2nd	Pearson Correlation	0,18
	p	0,28
	N	40
Rockport 1 Mile 2nd	Pearson Correlation	-0,06
	p	0,71
	N	40
Wall Catch 2nd	Pearson Correlation	0,59
	p	0,00
	N	40
Illinois 2nd	Pearson Correlation	-,378*
	p	0,02
	N	40
Sit-Reach Flexibility 2nd	Pearson Correlation	,364*
	p	0,021
	N	40

According to Table 4, there is a positive two-tailed relationship between the vertical jump second measurement values of the female child athletes and the ITN second measurement score ($p < 0.01$), and also the positive one-tailed relationship between the sit-and-stretch second measurement values and the ITN second measurement scores ($p < 0.05$). The other variables, 30-meter sprint, Rockport, Wall Catch, Illinois, and sit-and-stretch flexibility variables, did not differ significantly between the 2nd measurement results and ITN 2nd measurement results ($p > 0.05$).

DISCUSSION AND CONCLUSION

Our study was conducted to determine the difference and relationship between tennis technical skills of their basic motor skills after 2 months of basic training in 10-12 years old female athletes who have not played tennis before. As a result of the analyzes, significant differences were found between the first and second measurements. Tennis branch is a sports branch that should be used intensively with characteristically coordinative features. Therefore, it shows the need for a high level of physical fitness. In order to be a successful tennis player, physical fitness values must be at a very high level. Cognition, agility, strength, speed, flexibility, and balance, which are important physical fitness components in tennis, are among the factors that have positive and negative contributions to skill learning in tennis, in terms of age, height, gender, body composition, conditional, bio-motor and coordinative properties (Crespo & Miley, 1998). In the force feature, the jump peak point is used when applying the jump tests used for indirect measurement and evaluation. Today, there is a very intensive study on children and sports. It has been observed that muscle strength has increased significantly from a certain age to a certain age, and the greatest improvement occurred during adolescence (Muratlı, 1997). Ayan and Mülazımoğlu (2010), vertical jump averages were found as 18.03 cm in their studies titled "Examination of Physical Properties and Some Performance Profiles of 8-10 Age Group Boys in Talent Selection in Sport and Orientation to Sports". Ziyagil et al. (1999) in their study, they found the mean vertical jump of 10-year-old male students as 27.54 cm. Gül et al. (2006) found the vertical jump averages of the children between the ages of 10-12 as 31.87 cm for the control group in their studies titled comparison of some anthropometric and motoric features between boys who were 10-11 years old and who did not receive sports training, and they reached the 27,77 cm as a result of the experimental group. Aykora (2019) found out meaningfull differences at a study including 8-10 years sportive climbing children. In our study, the vertical jump of the female child athletes was determined as 1st measurement average 17.94 ± 1.20 cm and 2nd measurement average as 22.18 ± 2.08 cm. Two-month training has improved children's vertical jump. On the other hand, it was concluded

that vertical bounce positively affects children's tennis playing skills. Weber (1982) states that tennis athletes must move in different directions many times during the competition and constantly increase their speed and slow down due to the characteristics of the game. He adds that if he fails to do this at a good level, he will not be able to hit the ball well, and that the speed factor is very prominent. In the study conducted by Koç and Tekin (2011) to examine the effect of physical education lessons on selected motoric features in children, the average of children in the 3rd grade who took elective physical education lessons was 4.87 ± 0.79, while the average of children who did not take the physical education lesson was 6.47 ± 1.03. Yildiz et al. (2018) investigated the relationship between long jump and speed performance in 10-11 age group boy tennis players, while there was a significant relationship between long jump and first 5 meters while standing, 5 meters with long jump, last 10 meters and A significant relationship was found between 20-meter running performances. In our study, the two-month basic education that children received increased their speed effectively. However, no significant relation was found between the 30-meter speed 2nd measurement values of the children and the ITN 2nd measurement score. This shows that the increase in speed is not related to tennis skills. Stolen et al. (2005); In their study, they found that MaxV02 levels of adult male players were in the range of 50-75 ml/kg/min, in addition, they stated that the goalkeepers were in the range of 50-55 ml/kg/min. Rabadan et al. (2011), in their studies titled "Physiological Determinants of Branches of Medium and Long Distance Runners at Elite Level", MaxVO2 values of medium distance runners are 65.90 ± 4.50 ml/kg/min and the values of long-distance runners are 71.60 ± 5.00 They found it as ml/kg/min. Coşkun (2019); In his study titled "The Investigation of the Effect of Basic Motoric Features on Tennis Skill Teaching in 10-12 Years Old Boys Receiving Tennis Training"; A significant correlation was found between 1-mile pre-test (69.38 ± 28.85) and ITN pre-test (20.30 ± 9.39) at p = 0.00 **, r = 0.62. A significant correlation was found between 1-mile post-test (69.92 ± 28.80) and ITN post-test (107.44 ± 19.02) at p = 0.00 **, r = 0.66. MaxVO2 levels of the children participating in our study showed a significant increase after 2 months of basic education. On the other hand, there was no significant relationship between MaxVO2 levels and tennis skills. P = 0.86, r = 0.03 values were obtained between Rockport 1 mile pre-test (50.70 ± 0.82) and ITN pre-test (29.25 ± 7.56), but no significant relationship was found. Similarly, p = 0.71, r = -0.06 values indicate that there is no significant difference between Rockport 1 mile post-test (53,55 ± 1,01) and ITN post-test (103,53 ± 9,07). In both studies, Rockport revealed different results in terms of the meaning relationship between 1-mile pre and post-test values and ITN pre and post-test values. Özer (2007) measured the coordination (hand-eye) ability by using the Wall

Catch test in his study titled the effect of mini tennis training on the development of coordination and reaction time in girls aged 8-11. As a result of these measurements, it was concluded that coordination significantly improved in the experimental group (first measurement 8,66, last measurement 11,16). Yapıcı et al (2018); found the results of the Wall Catch Coordination Test as 9.20. Ertem et al. (2013), When the scores of the "Coordination Workouts Applied to 10-12 Age Female Tennis Players on Dewitt - Dugan and Wall Catch Tennis Tests" were evaluated, no significant difference was found in the pre and post-tests with the control group. However, the first and last tests of the experimental group were found to be significantly different. In our study; The average of the Wall Catch 1st measurement value of the children is 8.03 ± 0.57, and the 2nd measurement average is 11.88 ± 2.42. It showed a significant increase after 2 months of basic education. It was concluded that the improvement in hand-eye abilities positively affects children's tennis playing skills. Nalbant (2018) found the Illinois test result in 18,19 in his study titled "Comparison of Physical and Conditional Properties of Girls and Boys Basketball Players aged 13-14". In the study where Kızılet et al. (2010) investigated the effects of different strength training on the speed and jumping abilities of basketball players between the ages of 12-14, it was determined that the Illinois agility test pre-test value was 18.65 seconds and the post-test value was 17.97 seconds. The Illinois agility pretest value for group B was 18.34 seconds, while the posttest value was found to be 17.95 0.92 seconds. Alp (2016) found the Illinois test result as pretest 19.62 and posttest 19.53 in his study with 20 men with a mean age of 11.30. In our study; Illinois test of female child athletes 1st measurement mean values are 25.57 ± 1.05, 2nd measurement means are 21.88 ± 1.35, and a significant decrease was observed after 2 months of basic education. As children change direction times, their ability to play tennis increases. Kulak et al. (2011) found the Sit-reach flexibility test values as 25,24 in their study. Hazar and Taşmektepligil (2008), reached the result of 23,32 in the Sit-reach flexibility test that they applied to 20 male and 14 female participants in their study titled "The Investigation of the Effects of Balance and Elasticity in Agility Before Pre-Puberty". In our study, the sit-and-stretch flexibility test of the female-child athletes first mean measurement value was 20.48 ± 0.68, the second measurement mean was 23.32 ± 0.52, and the flexibility of the children increased significantly after 2 months of basic education. It was concluded that their flexibility increases positively affects children's tennis playing skills. Yıldız et al. (2017) stated that the explosive power, speed, flexibility, agility and balance parameters are related to each other in their child tennis players, and that the increase in performance in these features also increases the functional motion performance. Baydemir et al. (2018) determined meaningfull differences with power and flexibility parameters. The

results of this study, Yıldız et al. show parallels with the results. It has been determined that basic motoric features such as speed, agility, coordination, strength, endurance, and flexibility are directly related to tennis skills. Tennis is a multifunctional sport. It is predicted that good results will be obtained for the development of athletes in determining the children to be directed to tennis and determining the motoric skills and working with the appropriate training plans while determining the training programs. Further studies with different groups will enable us to reach more detailed results.

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Chapter 7

UNDERSTANDING STUDENTS THAT STUDY AT SPORTS SCIENCES FACULTY: A PHENOMENOLOGICAL RESEARCH

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1. INTRODUCTION

University students have vital experiences between the learning process and the developmental process during the transition to adulthood. In other words, university life, especially for undergraduate students, can be described as an important development process in which young people experience many new academic, personal and social experiences.

Structural reforms are needed in order for our universities to accelerate the development of the country, ensure social solidarity and development, and train intellectuals that will protect the democratic and secular Republic. The Higher Education Law numbered 2547 and the Higher Education Council established by this law should be transformed into a way to meet the conditions of the day (Durukan, 2004).

Universities should also consider some points while performing their functions mentioned above. At the beginning of these; while generating new knowledge it also comes with an evaluation of past information because, unless this assessment is made, there is a vicious circle instead of continuous development. In addition, it is a natural duty and responsibility to guide the university with outward-looking services and publications (Varıs, 1972). University education is the most important process in which behavioral patterns that will continue for years (Zorba et al. 2013).

Although university life is pleasant and enjoyable for students, it is also a period when they face many problems. Therefore, determining the problems faced by university students in a clear and concrete way based on their individual evaluations will provide important feedback in developing programs and services for young people (Lucas, 1993).

University students experience more housing, adaptation and loneliness in the first year they start their education. In the following years, these students have to deal with various problems such as exam anxiety, future anxiety, and relationship with faculty members and classmates, difficulty in the content of the course, and academic problems (Perrine and Lisle 1995). Especially in recent years, increasing student diversity in university campuses, changing academic, personal, social and professional needs and problems of students make programs that will be developed for universities in every sense (Bishop, Bauer & Becker, 1998). It can be said that it is very important in university life in its sportive activities. The importance of sports activities is very significant in terms of increasing the life skills of young people (Cihan & Ilgar, 2018). İn their study ,which examined body composition and quality of life, they stated that students remained inactive at home and at school because of they spent their recreational time using, tv, pc, mobile phone and internet. (Sahin, Sahin, Yildirim & Kirkaya 2019)

However, there are sports science departments in universities. When the literature is analyzed, it is seen that studies are conducted with university students through different departments. However, studies on the problems of sports science departments are limited. Particularly, researches using qualitative methods are almost nonexistent. In our research, qualitative interview techniques and phenomenological analysis method were used.

Relation of the concept of phenomenon used with the phenomenology pattern, especially with the qualitative descriptive research pattern, is necessary for the correct understanding of the purpose of this present study and the research pattern that will serve this purpose. According to Willis, Sullivan Bolyai, Knafl, and Cohen (2016), the main purpose of the qualitative descriptive research pattern is to describe and describe individuals' thoughts about an event or phenomenon.

In the process of solving the problems of the students studying in the sports sciences and raising a healthy young generation, the studies on determining the student problem areas are of great importance. This work was born out of the need to focus on issues covering such interests and goals. Two research questions have been guided by the study below.

1) What is needed for students studying in sports sciences?

2) What do you think about the problems you encounter in your university life?

2. METHOD

2.1. Research Pattern

In this study, it is aimed to examine students studying in the faculty of sports sciences. The research was found appropriate to use qualitative research method and phenomenology pattern. Considering the purpose of a research and the questions or questions anticipated to be prepared according to this purpose and asked to the participants, the most important factor to be considered in determining the method and pattern to be used in the research (Yılmaz and Şahin, 2016). Qualitative research provides a better understanding of perception, attitude and processes (Glesne, 2015). In this frame, it was aimed to reveal the meaning and perceptions of students about university life.

2.2. Research Group

The participants of the research consisted of 12 students studying in physical education departments at a public university in the 2019-2020 academic year. Criterion sampling method, which is one of the purposeful sampling methods, was used in determining the participants. "The basic understanding in criterion sampling is; the study of all situations that cover a predetermined set of criteria" (Yıldırım & Şimşek, 2011). In this context,

while determining the participants in the research, it was determined as a criterion that they took 'University Senior Students' and 'Middle Socio-Economic Income Level'. 5 of the participants were female and 7 were male.

2.3. Collection of Data

The research data were collected through a semi-structured interview form and an open-ended questionnaire developed by the researchers. Interviews were conducted between the 2019-2020 academic year. The data obtained from the interviews were recorded with a voice recorder. In this context, 40 page interview texts were issued. During the creation of the forum, five questions were identified that could reveal their views on Sports Sciences; The form, which was prepared as a draft, was sent to 2 physical education teachers who completed their master's degree with 2 experts in the field of sports science. In line with expert feedback, necessary corrections were made, the way some questions were expressed was rearranged and the form was finalized. The questions in the survey form are as follows: "What is needed for the students studying in the sports sciences? " "What do you think about the problems you encounter in your university life?"

2.4. Analysis of Data

Content analysis was applied in the analysis of the plans prepared by the students with the answers given to the open-ended questionnaire, because the qualitative research data analysis was carried out using the induction method (Özden & Saban, 2017). Content analysis is used in "assembling similar data into a certain themes and concepts framework and interpreted in a way that the reader can comprehend" (Yıldırım & Şimşek, 2011, p.227). Therefore, in the research, firstly, the codes resulting from the detailed analysis of the data, the sub-themes formed by combining the codes, and finally the themes formed by the logical combination of the sub-themes were created. Support was received from a field expert to ensure reliability between coders; the coding of the researcher and the field expert was calculated using the formula Consensus / Consensus + Disagreement x 100 (Miles & Huberman, 1994). As a result of the calculation, the reliability of the analyses was found as 94%.

3. FINDINGS

In this part, the data gathered in the research are arranged according to the concepts and themes. Based on the answers given by the participants to the interview questions, they were gathered under five main themes: "Educational Issues", "Facility Issues", "Social Issues", "Employment Issues" and "Economic Issues". Table 1 is used in order to better present the theme and links where the findings of the research are explained.

Table.1 *Themes Related to Sports Sciences Faculty Students' Thoughts*

Themes	Related Concepts
Education	Attitudes of Lecturers
	Scientific Studies
Thesis	Sports Centers
	Dorm and Harboring
Employment	Future Anxiety
	Sufficiency
Economical	Income Level
	Working Obligation
Social	Friendship Relations
	Adaptation to the City

Sports Sciences Faculty Students' Views related to Education

When we look at the answers of the participants, K2 made the following statements regarding the training theme; *"When I came to the Faculty, I thought that I would encounter a peaceful environment, the teachers would offer them a very "nice" environment, and the knowledge, thoughts and beliefs in our minds would become stronger at the Faculty. However, when I came to the Faculty, I came across with the opposite situation, especially when I heard things that were contrary to the general thought, judgment and opinions of the teachers. "*

Regarding the educational theme, K4 stated that: *"Universities play serious roles in a number of fields such as producing scientific knowledge, making inventions, creating innovations, supporting new company establishments, providing new business opportunities, creating new income streams on an individual and corporate basis."*

The statement of K9 regarding the training theme based on the opinions of the participants is as follows; *"Course selection, exam anxiety, academic competition, evaluation system, relationships with faculty members, difficulty in the content of the course, academic affairs are important sources of stress."*

When the opinions of K1 and K5 are examined; A student who used initiative mentioned the importance of being a group with the following words; *"We anticipate the qualities such as students to be encouraged to ask questions about the topics they cannot understand, to share personal problems with instructors outside the classroom, to be actively involved in courses and to be encouraged to ask questions."*

Looking at the expressions of K7, *"The fact that instructors prefer one-sided communication in the classroom generally causes new problems to be experienced as well as the solution of the problems will not be possible."*

According to ideas of K3; "*In general, we wish from faculty members to be experienced in effective and sufficient interpersonal skills such as being patient and tolerant and to be role models to express their thoughts easily."*

Related to the theme of education K10 said that; *"My expectation from universities was a high level of education and training, however, a very different social life was coming to life in my mind."*

Sports Sciences Faculty Students' Views related to Facility

When the participants' opinions about the facilities were examined, K11 commented as follows; *"Every student who comes to the university has a perfect social life in their dreams. They want to participate in all kinds of activities, go from there to spend the days full of activities. For such activities, the infrastructure of the university should be developed and technologically advanced. "*

K2 stated: *"Our needs are met in terms of physical, social and moral; sports fields, sports halls, dormitories, cafeterias, cafeterias, game halls, music-theater-cinema-video clubs and halls should be available."*

K7 explained as follows; *"The ideal living space of a university should be like a city. Because in a city, just like everyone can reach everything easily, and if there is something that appeals to everyone, they should be in a university"*

K9 expressed as follows; *"The university area should be like a forest. Because the forest is relaxing, soothing, relaxing, it contains all kinds of plants, it should have facilities that include all kinds of people in the university."*

Sports Sciences Faculty Students' Views related to Employment

When the participants' views on employment were examined, K4 made the following statements: *"The modern university gives a high level of knowledge that directs the country and humanity by focusing on rational, effective, efficient and economic development in line with the modern science and technology requirements, development goals of the country and it should be in accordance with the technology and expert people-training institution."*

K8 commented as follows: *"Globalization is affecting almost every area of people's lives. One of these areas is education. The institutions that are most affected by globalization in the field of education are universities.*

The impact of globalization on universities is so great that globalization is the biggest challenge against universities. "

K11, on the other hand, mentioned the following in relation to this theme: *"At the end of the interviews, the question arises from personal problem and most of the students are answered that there are not any personal problems."*

"The establishment of student clubs equipped with contemporary clubs, activity rooms and sufficient infrastructure is among our aspirations."

Sports Sciences Faculty Students' Views related to Socializing

When we look at the expressions of the participants about the theme of socialization, K12 said: *"Establishing effective and productive relationships brings responsibility to both academic staff and students. The student is affected by the behavior of the instructor with whom he communicates. For this reason, in order to provide a qualified education, instructors should be exemplary with their attitudes and behaviors, students should feel that they are valuable in the eyes of the instructors, and they should turn to know their students."*

According to ideas of K5; *"Eventually, university is a different problem in itself in order to show adaptation to the social and academic environment. Coping with this problem means starting a successful and safe university life. My expectation in this regard is a warm welcome."*

K6: *"Warm dialogues with lecturers and other staff at the university are one of the factors that simplifying our adaptation process. It is because students expect the love of family and friends that they left behind at the university. This expectation can be met by providing places and activities where students and lecturers can interact with each other and together."*

K10: *"Adequate grant and services must be provided for the necessary facilities and their operation for nutrition, shelter, entertainment, sports, social and cultural activities."*

Sports Sciences Faculty Students' Views related to Economy

The statements of the participants related to the economy theme are as follows:

K7 stated that: *"Students applying to universities come from many different socio-cultural and socio-economic backgrounds. This difference also differentiates expectations from universities. If I give myself an example, I almost couldn't attend in any activities and neither cinema, concerts nor extra-urban organizations. You can study and travel as much as the financial freedom you have. "*

K5 reported as follows; *"Students who want to read with their own means stated that the cost of living is very expensive, they have difficulties economically. You want to see different provinces and cultures. You want to live as you wish, but not being able to do this is bad."*

K11 mentioned the following complaint; *"We understood that the expenses of university students make the city economy alive, but those in the city see us as a carrier of money, not as a human being. I am very uncomfortable because of this perception"*

K3 expressed his feelings with these words; *"Universities contribute to the society in a very broad framework in terms of economy, social welfare and quality of life. The activities of the universities enter every aspect of daily life. "*

Finally, K10 presented the following ideas; *"The factors that affect the student the most during the university period are school, environment, family, socio-economic status, group of friends, opportunities of the university, motivation, choice of profession and etc."*

4. RESULT

In this research, in which we made effort to determine to what extent the university students had the university life they had established before starting their education life, their problems were collected under certain themes. In the academic field, when students' opinions about faculty members are examined; it is seen that inadequate education in secondary education affects academic success negatively. It was understood from the discourse that the participants expected more understanding from the academics in their discourses. It also confirms the statements of Tezcan (1997) that the most important areas of conflict between students and their teachers stem from teachers' lack of understanding and affinity with their students, avoiding communicating with students, and displaying authoritarian behavior. It has been stated that effective lecturer-student communication and interaction has important contributions to students' academic success (Graunke & Woosley, 2005). In his study, Gizir (2002) has taken into consideration the research findings that faculty members have important communication problems among themselves, to be able to master the academic subjects of faculty members, to communicate with students, to show understanding and closeness, to be willing to answer students' questions, when considering the cognitive level of the student. It has been stated as being able to explain topics with different examples or methods (Brown, 2004). In a study conducted by Schweitzer (1996), it is stated that the subjects related to the courses come first among the problems of university students. Although the content and significance level of the problems experienced are not specified, it has been stated

that these students also have problems in the fields related to vocational and academic staff. It has been frequently stated that university students have important problems in terms of exam anxiety, academic competition, evaluation and grading, relations with teachers, difficulty of course content, academic workload and expectations from students (Perrine and Lisle, 1995; Lee, Kang and Yum, 2005).

Considering the discourses of the participants in the facility area, it has been reached that the facilities are not at the level to train athletes. They determined that universities should be subject to a certain criterion in terms of facilities and materials. Ilgar Araç and Cihan (2019) also mentioned facility problems and solution suggestions in their study on the problems of Turkish sports. Among the problems, the unplanned construction of the sports facilities and the insufficiency of the maintenance and repair of the existing facilities were emphasized. Supporting our research, Pulur and Tamer (2001) concluded that inadequate physical conditions and poor economic conditions cause students to be disinterested in sports and absenteeism in sports activities. When the literature is examined, studies related to both sports facilities and the solution of the problems encountered in the operation of the facilities have been carried out (Yıldırım, 2017). It can be said that facilities are crucial for both universities and faculties of sports sciences.

In the discourses that arise in the field of employment problems, future anxiety is frequently emphasized. Supporting our study, Koplik and DeVito (1986) stated that students have anxiety about not finding a job after graduation and that is why they tend to take preparatory lessons for business life mostly during their university education. The high unemployment rate among university graduates and young individuals across the country causes an increase in the level of hopelessness and anxiety directly (Dursun & Aytaç, 2012). In a study of Bishop, Bauer and Becker (1998), they stated that women are concerned about having a job and career that provides more professional satisfaction than men. In addition to the joy of winning the university, young people at the university; they encounter many problems such as leaving from family, new environment and making friends, fear of being alone, economic difficulties, getting used to social life, anxiety about future profession and working life (Özdel & Açık; 2002).

When we look at the participants' discourses on the theme of socialization; It has been reached out that students who leave their families and the warm environment of their surroundings encounter serious social problems in the school located on campus, which does not resemble the traditional school structure of their friends who come from different cultures to the living conditions of a different city. According to Keçeci

and Taşocak (2009), students generally expect effective and sufficient interpersonal skills, patience and tolerance and role models. Students expect qualifications such as being a source person from faculty members, giving students the opportunity to think independently, perceiving students as individuals, being democratic, encouraging students to actively participate in classes and asking questions. It revealed that university students had more emotional problems. On the other hand, students have never had the least sexual problems. This finding supports the findings of the previous study realized with university students (Erkan, Özbay, Cihangir-Çankaya & Terzi, 2012).

When the views of the participants about the economic theme are examined; it was observed that they generally continue their education with financial support from their families. In terms of contribution, it is stated that the loans partially help the students in solving the problems, but they provide the desired benefit. When the literature is examined; In another study completed by Kacur and Atak (2011), there is a significant difference depending on gender variance in the areas of life, economic and health problems with bad habits, environmental communication problems, family and community problems, self-expression problems and psychological support. . In their research, Şahin and Yıldız (2005) stated that the expectations of university students are to enable the development of individual rights, which we can define as free, responsible, and as an individual who is aware of this, knowing life and struggling. In their study, Cihan and Ilgar (2018) reached the conclusion that the working lives in which people spend most of their lives have a dominant effect on the individual, which affects the quality of life and creates less fatigue.

Consequently, more qualified students in universities, which are the last step of education and prepare students for business life; It should be said that they should be academically equipped, exhibit their lives suitable for their development with adequate facilities, economical scholarship and credit opportunities should be created, students should be provided with guidance and psychological counseling services in order to reduce socialization and adaptation problems and prepare them for life in every sense.

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Chapter 8

NUTRITION AND EXERCISE RECOMMENDATIONS IN THE COVID-19 PROCESS

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Introduction

COVID-19 is a major virus epidemic that affects the whole world and also affects our country. Coronoviruses are a large type of virus that causes a variety of diseases ranging from the common cold to much more serious conditions such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV) (Öztürk and Bayraktar, 2020). Coronavirus Disease (COVID-19), which emerged in the Wuhan region of China in 2019, is also an infectious disease caused by viruses that are members of this family (Coronaviridae Study Group of the International Committee on Taxonomy of, 2020; Lippi, Sanchis-Gomar, & Henry, 2020). Like other members of the Coronaviridae family of which it is a member, it is transmitted to other individuals through respiratory droplets produced by breathing, speech, sneezing and coughing (Guo et al., 2020). The most common symptoms are sudden onset of high fever, dry cough, and respiratory distress, along with shortness of breath, a large positive strand RNA virus associated with symptoms such as shortness of breath, myalgia, headache and diarrhea (Babak Nakhostin-Roohi, 2020). The COVID-19 disease, declared as a pandemic by the World Health Organization (WHO), has infected more than 4.5 million people in 216 countries and caused more than 300,000 deaths, according to WHO data dated May 19, 2020 (World Health Organization, 2020). In our country, it has been announced that more than 150,000 people are infected, and the number of deaths is over 4,000 (World Health Organization, 2020). However, the number of new cases and deaths reported is increasing day by day.

Quarantine, isolation, and social distancing have been proposed by the World Health Organization (WHO) and health authorities around the world to combat the spread of the COVID-19 virus (WHO, 2020). The virus quickly spread across the country and then all over the world, causing an unprecedented epidemic and forcing governments to an almost global quarantine. At the beginning of 2020, our country and the whole world entered an unknown situation (Chen et al., 2020; Jukic et al., 2020). The COVID-19 pandemic has had unusually negative consequences in our lives in many areas such as economic, social, education and health. Its effects still continue in all areas. Ways of protection from the pandemic and warnings have been continuously communicated to the public, and many different measures are implemented by making quarantine, mask and distance rules mandatory, and efforts are made to reduce and control the spread of the virus (TC Ministry of Health, 2020). The fact that the epidemic, which caused our country to suffer in every field, was a sudden and unexpected situation, besides putting sectors such as economy, education and health into difficulties, it also caused a great crisis in terms of sports (Türkmen & Özsarı, 2020). In many countries, sports competitions,

tournaments and training sessions in all branches have been canceled indefinitely. Large communities that came together for major sporting events, millions of international visitors, and host country residents faced the risk of contracting infectious diseases (Yanagisawa et al., 2018).

Breathing Exercise in Isolation

Based on the information obtained in the COVID-19 pandemic; the elderly, hypertensive, diabetic, respiratory and cardiovascular system diseases have been defined as the more risky groups in terms of the mentioned virus infection. Although isolation seems to be the best option to stop the rapid spread of infection, it should not be overlooked that this process can have various effects on the physical and mental dimensions of the health of patients in social isolation or healthy young individuals (Jimenez-Pavon et al.2020; Fletcher et al. 2018). In order to protect and improve health, it is important to ensure that the geriatric population, defined as risk groups for COVID-19 infection, and adults with chronic diseases do not remain sedentary during the home process.

While it is difficult for every individual during the COVID-19 epidemic period, athletes are also experiencing a troubled period in terms of health as well as performance. Low-intensity training by own means affects different physiological systems (neuromuscular, cardiovascular, respiratory or musculoskeletal) and their corresponding physical capacities due to necessities such as the training area, training equipment, training environment, lack of face-to-face contact with teammates and the trainer. Achieving a high level of physical and mental fitness requires submaximal and maximal intensity exercise at relatively high loads (Jukic et al., 2020). Exercising individually at home and outdoors by maintaining social distance prevents the risk of Covid-19 contamination. It is difficult to monitor and ensure that the load used by athletes at home is appropriate to keep physical fitness and performance at the required level. Athletes should pay attention to the intensity and intensity of the exercise. The program can be done as aerobic (at home), strengthening, stretching and balance exercises, or a combination of these (Chen et al., 2020). In addition, moderate-intensity aerobic exercise (such as brisk walking, jogging) can be a suitable alternative in outdoor environments (Halabchi et al., 2020).

Light and moderate exercise affects the immune system positively. After mild and moderate exercise, the efficiency of natural killers (NK) cells increases, neutrophil and macrophage functions are stimulated, T and B lymphocyte cell numbers and activities increase. Therefore, regular moderate exercise increases resistance to upper respiratory tract diseases (Şenışık, 2015). Harris (2011) reported that the probability of upper respiratory tract infection decreased by 20-30% in people who exercise moderately. Prolonged high intensity exercise leads to immunosuppression (Martin et

al., 2009; Ahmadinejad et al., 2014). Following a long-term exercise with high intensity, the lymphocyte concentration decreases and the proliferation ability of cells, moderate cytotoxic activity and immunoglobulin production decrease, resulting in suppression of the immune system (Şenışık, 2015; Nieman et al., 1994). During the few hours following such exercises, the immune system weakens and the risk of respiratory tract infection increases during this period (Ahmadinejad et al., 2014). Accordingly, while vigorous exercise increases the risk of upper respiratory tract infections, moderate intensity exercise decreases the risk of upper respiratory tract infections (Şenışık, 2015; Ahmadinejad et al., 2014).

Almost all living cells need oxygen to survive. One of the important bases in determining work and performance capacity in our daily life is the respiratory system. The efficiency of the respiratory system increases the efficiency of the person (Erkal, 2000). In order to produce the energy that our body needs, O_2 must be supplied to the body cells and the CO_2 generated as a result of metabolic reactions must be removed from the body. The basic function of the respiratory system is realized by taking O_2, which is needed by body cells, from the external environment, giving it to the blood, and taking the CO_2 formed in the cells from the blood to the external environment (Özdal, 2020).

Respiratory muscles are anatomically of the skeletal muscle type. However, they differ from skeletal muscles thanks to their special functions. Skeletal muscles are designed to function to induce movement against mobility. However, respiratory muscles are specialized against resistance and to overcome elastic load (Eston & Reilly, 2001). While the skeletal muscles contract rhythmically only during movement, the respiratory muscles constantly contract rhythmically (Edwards and Faulkner, 1995). Respiratory muscles are vitally important muscles and for this reason they are resistant to fatigue, high oxidative capacity, wide capillary network and high blood flow (Decramer, 1999). Since the respiratory muscles are more specialized than other skeletal muscles, their strength or not can also be considered as an indicator or cause of disease. The most important of these are stated as asthma, cystic fibrosis, neuromuscular diseases and chronic obstructive pulmonary disease (COPD) (Santos et al., 2012). Increasing respiratory muscle strength will help correct the length-tension relationship of respiratory muscles and increase respiratory capacity (İnce, 2009). Skeletal muscles are known to increase their strength and endurance and hypertrophy with the correct loading and resistance (Amonette and Dupler, 2002). Similarly, the strength and endurance of respiratory muscles can be increased like all other skeletal muscles (Pardy et al., 1988).

The importance of muscle strength in exercise is known. The importance of the efficiency of the respiratory system in exercise is an

inevitable fact, especially for aerobic-based exercise types. In the light of this information, the importance of respiratory muscle strength in exercise should be considered. It is impossible to measure respiratory muscle strength directly. For this reason, the air pressure created by the respiratory muscles and respiratory muscle strength can be measured with the help of intraoral pressure gauges or spirometers. Values that inform us with these methods are maximal inspiratory pressure (MIP, PImax), maximal expiratory pressure (MEP, PEmax), and in addition, maximal forced inspiratory flow (PIF), which provides information about a relative part of respiratory muscle strength (McConnell, 2011). Respiratory muscle strength; It can be measured with these non-invasive, economical, easy and comfortable methods and can be expressed as cmH2O or% (McConnell, 2011; Hautmann et al., 2000).

As the O_2 requirement of tissues increases during sports activity, the amount of O_2 coming into the body from the respiratory system must increase. Circulatory and respiratory systems must work in order to increase the need for tissues, to tolerate excess CO_2 and metabolic heat. Minute ventilation increases with the increase in the amount of CO_2 produced in the muscles and the amount of O_2 consumed. Minute breathing does not limit the capacity of the cardiorespiratory system (Fox et al., 2012). During exercise, auxiliary respiratory muscles come into play during inspiration. Especially the muscles that raise the rib cage up help inspiration. Expiration takes place by the pressure of the intercostal muscles and abdominal muscles. The strength of the auxiliary respiratory muscles allows the ventilatory air flow to reach the maximum level (Ergen et al., 2002).

During exercise, the amount of oxygen that passes into the blood and lung blood flow per minute increase. The blood flow increases up to 5.5 lt / min and with the increase of oxygen diffusion from the alveoli to the blood, more oxygen is given to the blood. The amount of oxygen given to 250 ml blood in adult males at rest increases up to 1 lt / min during exercise. This value rises to 3 lt / min for sedentary and 5 lt / min for those who do strength sports. Carbon dioxide excretion increases from 200 ml / min to 8 lt / min (Günay, 1998).

Muscle fatigue is defined as the loss of power and speed / speed-generating capacity of muscles under intense working load and regaining these abilities during rest (Romer & Polkey, 2008). As for the fatigue in the inspiration muscles; it has been stated as inefficiency in contraction force with the decrease of energy stores when the inspiration muscles demand excessive energy. When respiratory muscle fatigue occurs, alveolar ventilation decreases, arterial CO_2 rises, and when this increase reaches dangerous levels, the respiratory task cannot be provided (Roussos et al.,

1980). Breathing load increases with high intensity exercise. While this situation affects the breathing ability of the athlete, it causes the respiratory muscles to fatigue and not enough O_2 to be sent to the tissues. For this reason, fatigue symptoms are observed in athletes. Respiratory muscle fatigue means that up to 15% of the athlete's total energy efficiency is lost (Harms et al. 2000; Lomax & McConnell, 2003).

Many studies have shown that respiratory muscle training has important effects on respiratory muscles. Various studies have reported that respiratory muscles will become stronger within a few days with respiratory muscle exercise, the breathing frequency decreases within three weeks, and performance increases as a result of four weeks of respiratory muscle exercise (Volianitis et al. 2001; Lomax and McConnell, 2009; Kilding et al. 2010). Respiratory muscle exercises also have a rehabilitative feature. It is one of the primary methods used in pulmonary rehabilitation (Weiner et al., 1999). COPD, which is among the top five diseases that cause death worldwide, is in the third place in our country in this ranking (Akıncı, 2008). Due to the effect of respiratory muscle exercises improving inspiratory muscle strength, it reduces the perception of dyspnea caused by decreased inspiratory muscle strength in COPD patients and increases exercise capacity (Lacasse et al., 2006; Hill et al., 2010). Along with the reduction of dyspnea, a decrease in effort spent on breathing work, an increase in exercise tolerance, and efficiency in performing activities of daily living were observed (Lötters et al., 2002).

During exercise, breathing speed and depth increase, requiring the respiratory muscles to contract stronger and faster. When the person is at rest, the expiration muscles are relaxed and the breathing is under the mechanical effect of the inspiratory muscles. Although the mechanics of breathing occur under the influence of the inspiratory muscles in all situations, the expiratory muscles actively participate in breathing in order to increase the tidal volume and expiratory air flow rate during exercise. Considering that respiratory muscles spend 16% of the O_2 taken during vigorous exercise, the importance of an effective respiratory muscle strength in meeting exercise needs can be explained (McConnell, 2011).

When the studies conducted are examined, it can be seen on healthy individuals (McConnell and Romer, 2004), individuals with lung disease (Beckerman et al., 2005), healthy athletes (Arnall et al., 2014), obese individuals (Tenório et al., 2013), Positive effects of inspiratory muscle training have been demonstrated in hypertensive individuals (Ferreira et al., 2013), smokers (Jun et al., 2016), and elderly individuals (Rodrigues et al., 2018). The procedure we use in studies on inspiratory muscle exercises is to determine the MIP and MEP values in order to determine the respiratory strength. An electronic respiratory pressure meter is used

to calculate MIP and MEP (Pocket Spiro MPM-100, Medical Electronic Construction R&D, Brussels, Belgium). Measurements are made in a sitting position using a nasal plug. For MIP; The person is given maximum expiration and the person is asked to make maximum inspiration against the closed respiratory tract and continue this for 1-3 seconds. The measurement is repeated until there is a 10 cmH_2O difference between the two best measurements, and the best result is recorded in cmH_2O (Lomax et al., 2014a).

For inspiratory muscle exercise, an inspiratory muscle training device is used (POWER®Breathe Classic, IMT Technologies Ltd., Birmingham; UK). Two sets of 30 breaths are trained with an inspiratory muscle training device set at 40% of the MIP initial value of each subject and a 1-minute rest is given between sets (Tong & Fu, 2006; Lomax & McConnell, 2009). A separate inspiratory muscle training device is used for each subject. Before the first training of each week, MIP is measured again and 40% of the intensity is determined again. It is also said that respiratory muscle exercises will reduce the symptoms of COVID-19 (Özdal, 2020).

Exercises that focus on the respiratory muscles, such as inspiratory muscle strength, endurance, and warm-up exercises with related devices (Romer et al. 2002), diaphragmatic breathing exercises (Yokogawa et al. 2018), positive pressure breathing (Ubolsakka-Jones et al. 2019), deep breathing etc., may be effective at reducing some of the major and most common symptoms of COVID-19. In addition, it could be considered that more significant improvement may be found in inspiratory muscle exercises with devices. Experiments will be needed to examine the specific impact of respiratory muscle exercise on the course and severity of disease. Given the impact of the current worldwide pandemic, any positive impact afforded by the introduction of respiratory muscle exercises would be rapid and potentially effective intervention (Özdal, 2020).

Natural dietary supplement: Royal Jelly

In the fight against coronavirus, which has a very rapid spread, the most important protection shield besides all personal cleaning measures is the immune system. A strong immune system plays a key role in combating all microorganisms harmful to the body, including viruses (Republic of Turkey Ministry of Health Public Health Directorate 2019; Zhou et al.2020). Those with COVID-19 often have respiratory symptoms such as cough, difficulty breathing, and shortness of breath. As with all viral infections from the common cold to the flu to COVID-19, adequate nutrition is essential to support your body's immune system and aid recovery (Yousafzai et al. 2013). Therefore, a variety of fresh and unprocessed foods should be eaten every day to obtain the vitamins, minerals, dietary fiber, protein and antioxidants your body needs. Sugar, fat, and salt should be

avoided in order to drink enough water, significantly reduce overweight, obesity, heart disease, stroke, diabetes and certain types of cancer (World Health Organization, 2020).

An optimal diet is necessary to cope with the inflammatory and oxidative stress processes associated with the immune system. The relationship between dietary components, nutrition, infection and oxidative stress has been accepted. Dietary and nutritional components known to exhibit anti-inflammatory and antioxidant properties include various phytochemicals such as omega-3 fatty acids, vitamin A, vitamin C and polyphenols, and carotenoids commonly found in vegetables. Dietary fiber, found in vegetables, fruits, legumes and whole grains, has been associated with a variety of health protective effects, including anti-inflammatory properties through the fermentation of the gut microbiota and the resulting formation of metabolic compounds, particularly short-chain fatty acids (SCFAs) (Topuz, 2020).

Royal jelly is secreted from the hypopharyngeal (throat) and mandibular glands (lower jaw) of worker bees and plays an important role in the feeding and development of the queen bee (Tamura et al., 2009). Royal jelly is a homogeneous substance with a creamy consistency. It has yellow, white and beige colors, a phenolic odor and a sour taste. Its viscosity can vary according to the water content and freshness, it becomes more viscous when kept at room temperature or 5oC (Lercker et al., 1992). Royal jelly contains approximately 12-15% protein, 10-16% carbohydrate, 3-6% lipid and the remaining 60-70% vitamins, salt, free amino acids and moisture (Tamura et al., 2009). . It has been demonstrated in experimental studies that royal jelly has an antioxidant (Viuda-Morteks et al., 2008), anti-inflammatory (Kohno et al., 2004), antitumor (Nakaya et al., 2007) and antibiotic (Melliou & Chinou, 2005) effects.

Royal jelly is used effectively against mental and physical fatigue and against wrinkles and acne on the skin. Royal jelly lowers blood cholesterol, total lipid, phospholipid, triglyceride, β-lipoprotein levels, has blood pressure-lowering and vasodilating activity, has hypoglycemic and immunological effects due to its containing insulin-like peptides. In addition to these, it has therapeutic, hormonal regulatory, sexual functions regulating effects in skin and hair diseases, and has cell reparative and rejuvenating effects. In vitro studies have been found that royal jelly has antibacterial properties due to HDA (Hydroxydesignic acid) in its structure (Erem et al. 2006). It has been found that royal jelly causes an increase in white blood cell, neutrophils and lymphocytes in children with leukemia who undergo chemotherapy and radiotherapy (Şahinler, 2000). In addition, royal jelly has been reported to have a role in relieving fatigue, treating weakness, spinal cord injury, arteriosclerosis and lung cancer,

increasing resistance to cold, accelerating blood circulation and carrying more oxygen to tissues (İnci, 1999).

Royal jelly is the most popular among healthy foods. Since royal jelly is believed to have similar effects on humans as it does on bees, it is used as a cosmetic or dietary supplement. Pharmacological activity (such as vasodilatative and hypotensive activity), increase in growth rate, disinfectant effect, antitumor, antimicrobial, antioxidant, immunomodulatory, antihypercholesterolemic and anti-inflammatory activity of royal jelly in experimental animals were studied. In addition, anti-aging, wound healing, hypoglycemic (Antidiabetic) and antitumoral properties have also been attributed to royal jelly (Ramadan and Al-Ghamdi, 2012; Fratini et al.2016). In addition to optimal nutrition with its natural rich content, royal jelly supplements are thought to reduce the symptoms caused by the COVID-19 virus epidemic.

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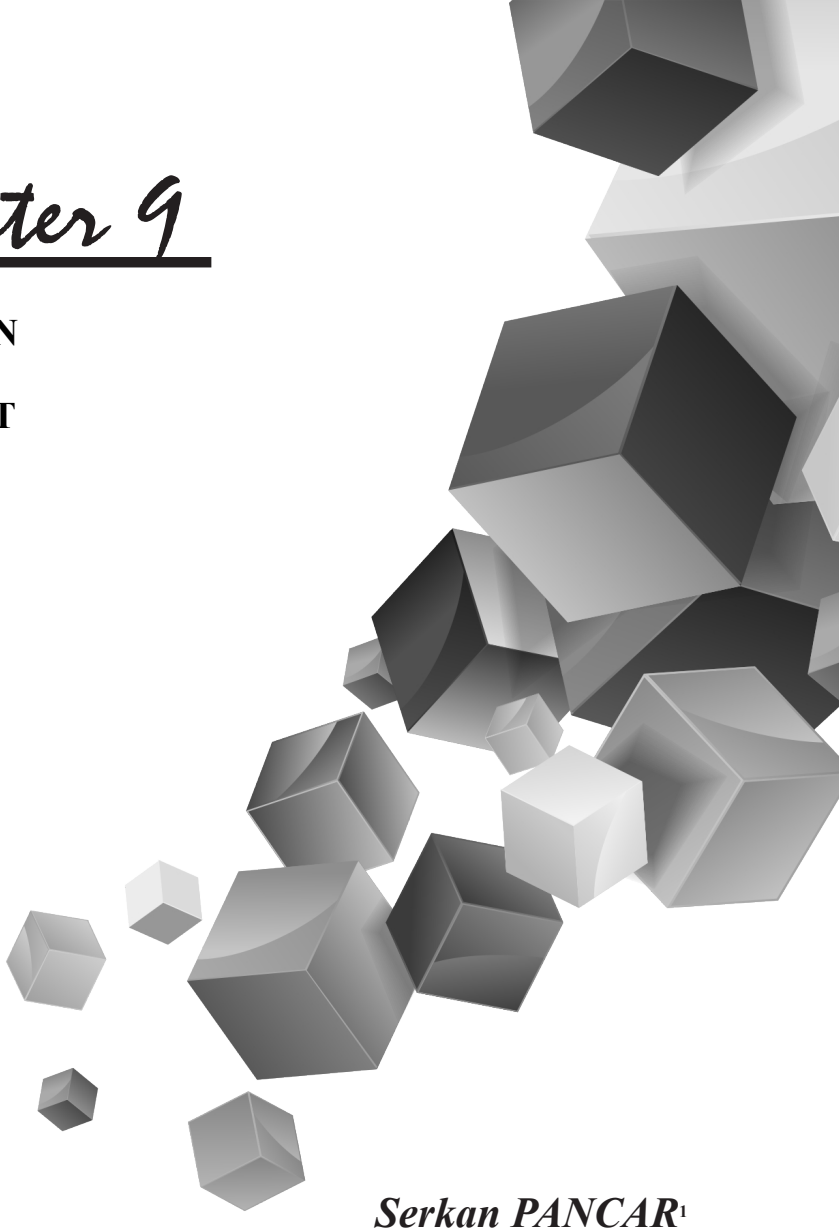
Chapter 9

INJURY IN CROSSFIT



Serkan PANCAR[1]

1 Dr. Serkan PANCAR/ MEB

INTRODUCTION

Crossfit was developed by gymnast and fitness trainer Grek Glassman, in 1995 in the United States (Herz, 2013). In a short time, it reached more than 10.000 branches in 142 countries and also took its institutional form (Clauidino, 2018:4; Beers, 2014:6). CrossFit competitions began to be organized with the sponsorship of Reebok and turned into a sport with high levels of struggle and profit in 2007. Considering this rate of development of CrossFit, no type sport can be compared with the development rate of CrossFit (Dawson, 2017:52; Herz, 2013).

Crossfit is a complex and comprehensive training program based on three basic principles. First; It aims to develop all of the basic motor skills in each training. Secondly; all the energy pathways (phosphogen, glycolytic and oxidative) are used throughout the practice. Finally, various physical skills such as weight lifting, running, ballistic and gymnastic movements are required in each training (Paine,2010; Sibley, 2012:83). Workout Of The Day (WOD) should be performed with high-intensity, repetition and short rest or without a rest at all. (Montalvo, 2017:16)

WODs are performed in three different ways; “For Time, AMRAMP (As Many Rounds as Possible or As Many Repetitions as Possible) and EMOM (Every Minute On the Minute). “For Time” is the first one and the most commonly used training system. It aims to finish the given plan at the specified time. The person, who completes as soon as possible, becomes the winner. During “AMRAP” an athlete completes the specified exercises as many times as possible within the given time frame. Athletes should have a rest only when needed, to keep the intensity high. While doing “EMOM” system, the target given at the beginning of each minute is completed and the rest of the remaining minute is used for rest (Feito, 2018:6).

CrossFit is considered to be high-intensity training models. High-intensity training models are the most common forms of training in the world. Training coverage is short-lived, short rest or without rest and includes high-intensity training. Although positive results were obtained in this training type in a short time, according to American College Sports Medicine (ACSM), it was emphasized that injury rates would be high especially in inexperienced individuals (Thampson, 2014:18: Thompson, 2017:21). In addition, the CrossFit training model requires high technical skills. Due to the high level of technical skill with a maximum reputation in a specific time (Montalvo, 2017:16), oxidative stress increases, the ability to move weakens and the risk of injury occurs. And also, failure to determine the intensity of exercise by the practitioner in crossfit training can increase the risk of injury (Bergeron, 2011:10; Williams, 2017:16).

Despite the widespread use of CrossFit training and positive results, there is insufficient information about the types and rates of injury that it may cause. The first goal of the research was to analyze and to specify if there were any differences between injury rates and age, gender, BMI, length of training sessions (day/week and hours/week), participation in CrossFit competitions, profesional monitoring, the rates of injured regions, coach involvement, rest days and CrossFit practice time (month). The second goal was to investigate the possible causes of injury, injury rates, ways to minimize avoidable injuries and reporting such cases among CrossFit athletes.

METHOD

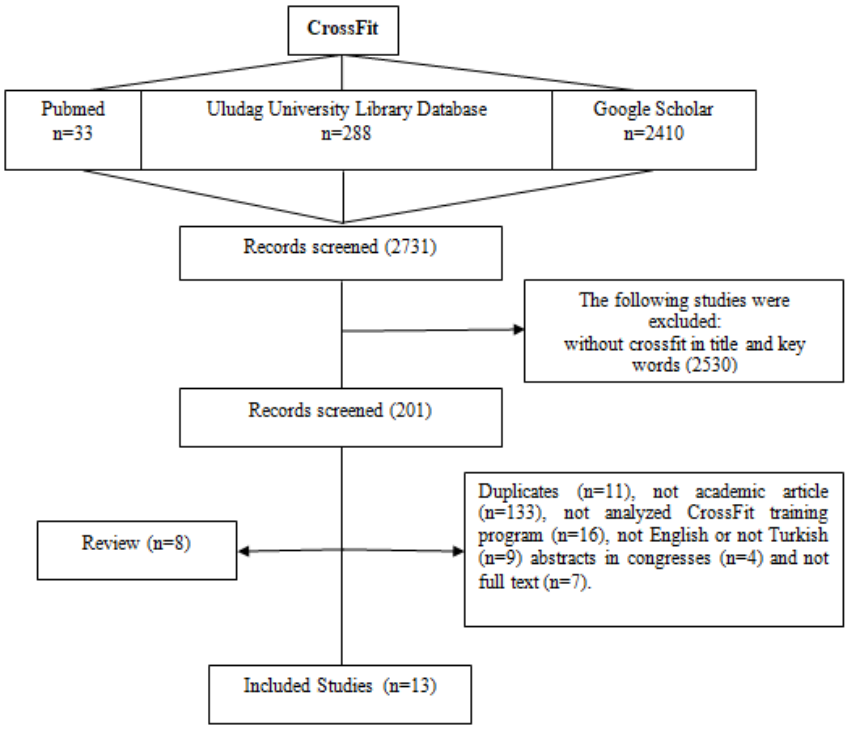


Fig.1. *Study selection The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram*

Literature Search

The keyword "CrossFit, Injury, Injury rates " were used and all literature were collected and applied criteria:

- PubMed,

- Google Scholar,
- Uludag University Library Database which includes Complementary Index, MEDLINE, SPORTDiscus with Full Text, Science Citation Index, MasterFILE Complete, MasterFILE Complete, Scopus®, Academic OneFile, Regional Business News, Directory of Open Access Journals, Business Source Complete, ScienceDirect, CAB Abstracts, Journals@OVID, Newswires, Research Starters, Social Sciences Citation Index and Education Source (Fig. 1).

All crossfit articles were reviewed and only those related to disability were identified which depend on the inclusion criteria.

Inclusion Criteria

- CrossFit, Injury, Injury rates were used as the key words.
- Comparing injury rates to the other sports
- English
- Full text
-

Exclusion Criteria

- Abstracts in congresses, not reaching full text
- Not an academic article
- Review
- Studies that did not provide data on injury incidence in CrossFit.

Thirteen articles were selected in the this study.

RESULT

The first goal of the research was to analyze and to specify if there were any differences between injury rates and age, gender, BMI, length of training sessions (day/week and hours/week), participation in CrossFit competitions, profesional monitoring, the rates of injured regions, coach involvement, rest days and CrossFit practice time (month). The second goal was to investigate the possible causes of injury, injury rates, ways to minimize avoidable injuries and reporting such cases among CrossFit athletes.

Age

Data with age related to injuries of participants among CrossFit athletes are similar but limited. Sprey et al. (2016:4) studied injury incident rates among people doing CrossFit. They found no significant difference ($p=0.505$) between injury incidence rates related to age group. Weisanthal

et al. (2014:2) studied a survey that the mean age was 18-29 (n=162), 30-39 (n=133), 40-49 (n=62), 50-59 (n=17), 60-69 (n=7). According to this study, they concluded that there were no differences in injury rates between groups. Serenko et al. (2018) conducted a research with 41 CrossFit athletes (mean ages: 28.93 ± 6.28 years) and reported that no significant difference (p = 0.92) was found between age and incidence of injury. Hopkins et. al. (2017:89) also reported that the mean age 37.2±8.9 and no significant difference was found between age groups. Along these lines, Feito et al. (2018:6) studied the incidence of injuries in CrossFit with 3049 participants (36.8 ± 9.8 years) and classified the study in eight different groups. No significant differences were found between age groups and injuries. Summitt et. al. (2016:8) also displayed that there was no significant difference (p=0.154) between injury and age groups, which were 18-25 (n=46), 26-30 (n=118), ≥31 (n=23) age. But, Mehrap et. al. (2017:5) showed that there was a significant difference between age groups (p=.009). The older participants are more likely to have injuries than the younger ones. As compared to injury rates according to the ages in CrossFit participants, it can be conluded that no significant diffirence was observed. In line with the studies examined, it is thought that individuals of all ages can do appropriate Crossfit training.

Gender

When compared to the injuries rate according to CrossFit athletes who are males and females; Sprey et al. (2016:4) conducted a study with a total of 566 participants (243 women and 323 men). They found no significant difference (p=0.013) in injury incidence rates with respect to gender. Mehrap et al. (2017:5) studied the injury rates in CrossFit athletes (n=449) and they reported that there is no difference between male (157/266) and female (95/183) participants. Hopkins et. al. (2017:89) studied with people performing CrossFit and reported that there were no significant differences among genders. Serenko et al. (2018) also studied with 21 male and 20 female participants and no significant difference was found (p = 0.63) between gender. Similarly, Feito et al. (2018) reported that 931 (30.5%) athletes had an injury (females n = 436; males n= 495). They determined that no significant differences were found among male and female participants.

Unlike these results, Escalante et al. (2017:13) studied with 88 males (31.3 ± 8.4 yrs, 1.74 ± 0.06 m, 79.45 ± 12.02 kg) and 71 females (31.3 ± 9.1 yrs, 1.62 ± 0.07 m, 60.75 ± 9.37 kg) and reported that there was a tendency between gender and injury, but significant difference was not reached.

Unlike these results, Weisanthal et al. (2014:2) reported that males (n=231) were significantly more likely to injure themselves than females (n=150). Although there are different results, it can be said that there are

no significant differences between genders. But, males probably injure themselves more frequently than females. It is thought that men push their limits more than women and cause more injuries while doing sports.

Body Mass Index

There were four studies investigating the injury rates in terms of BMI within our knowledge. Sprey et al. (2016:4) conducted a study, including 243 women (42.9%) and 323 men (57.1%). Altough 176 participants (31.0%) mentioned suffering injury while doing CrossFit, there was no significant difference between BMI and injury rates. Summitt et al. (2016:8) reported that there was no significant relationship between BMI (mean 25.1 kg/m^2) and shoulder injury rates. In an other study, Mehrap et al. (2017) also reported that there was no significant difference (p=0.243) between BMI (mean: 24.4±2.8 kg/m^2) and shoulder injury rates. Hopkins et. al. (2017:89) also concluded that no significant difference between BMI (mean: 26.8±4.8 kg/m^2) and injury rates were detected. Furthermore, Serenko et al. (2018) reported that no significant difference (p=0.66) was found between BMI (mean: 26.91±4.14 kg/m^2) and injury rates. Consequently, it can be conluded that there are no significant differences in terms of BMI and injury rates. Individuals with high BMI values may get tired quickly and may not be able to perform the movements properly. For these reasons, it may be thought that no difference occurred.

Length of Training Sessions

As compared to length of training session, Escalante et al. (2017:13) studied that compared groups training (5, 4, 3 and 2 or less per week). No significant relationship was found between injury rates and average length of each CrossFit workout. Sprey et al. (2016:4) reported that 8/30 (<3 times/wk) and 168/536 (≥3 times/wk) participants had an injury. They aslo compared the length of training sessions and 5/28 (<1h) and 171/538 (≥1h) participants were injuried. No significant difference in injury rates was observed (p=0.117) regarding weekly sessions and length of training sessions. Mehrap et. al. (2017:5) demonstrated that there was no significant difference (p=0.133) between training days per week and injury rates. Serenko et al. (2018) also concluded that there was no significant difference (p=0.23) among frequency of work outs per week and incidences of injury. Similarly, Weisanthal et al. (2014:2) also reported that training days per week and amount of time spent doing CrossFit did not show any similar trends (n=383; p=0.16, p=0.99, respectively) based on injury rate.

Otherwise, Feito et al. (2018:6) reported that athletes, who train less than 3 days (n=1603) a week or those wo do less work outs than 3 in a week, are at a greater risk of injuries. In an other study, Mantalvo et al. (2017:16) applied a survey to CrossFit athlethes. They reported that the more athletes

train every week, the more they have the risk of injury. They reported that significant difference was observed (p=0.020). Though there was no clear information whether the weekly training period has an influence on injury rates in CrossFit training, it can be said that no difference was found on the length of training according to the most studies.

Participation in Crossfit Competitions

There are limited studies which investigate the effects of being a competitor in CrossFit competitions on injury rates. Escalante et al. (2017:13) reported that 56 participants participated in CrossFit game. But 103 participants (64.8%) reported that they never participated in competitions. There was a significant relationship (p = 0.02) between injury rates and participating to competitions. However, Sprey et al. (2016:4) showed that 382 participants were not competitive yet 185 participants were competitive. They reported that participation in CrossFit competitions was not (p=0.917) a factor for the risk of injury. Mantalvo et al. (2017:16) also demonstrated that competitors had more injuries than non-competitors; however, there was no difference among them. Likewise, Serenko et al. (2018) classified participants as "never/sometimes just for fun/often to track progress or frequently in preparation for major competitions". They displayed that no difference between the history of involvement with competition and incidence of injury.

When investigated the studies, there was no clear evidence between being a competitor and a non-competitor in terms of injury rates.

Profesional Monitoring

When examined the literature, there was only one study to report whether the monitoring used by a health care professional was effective. Sprey et al. (2016:4) reported that 319 participants (56.4%) were monitored by health care professional and 247 participants (43.6%) were not monitored in CrossFit. There was no difference among them.

The Rates of Injuried Parts

Though high-intensity interval exercise is a not a new approach, CrossFit training model with various high-intensity functional movements is rather a novel one. So it is thought to be safe for all people. The first study about the novelty of CrossFit training models was done in 2013 by Hak et al.

Mehrap et al. (2017:5) reported that the most injured body parts were the shoulders; n=87, 28.7%, lower back; n=48, 15.8%, and knees; n=25, 8.3% (18). Escalante et al. (2017:13) concluded that of the 127 injuries reported, the most commonly injured body parts were the shoulders with 33.1%, lower back with 18.1%, knees with 12.5%, wrists with 10.2%, and elbows

with 5.5%. Only 1 case of rhabdomyolysis (0.8%) was reported among the respondents. Feito et al. (2018:6) reported that the shoulders (39%), back (36%), knees (15%), elbows (12%), and wrists (11%) were the most common areas of injury. Mantalvo et al. (2017:16) displayed that the most frequently injured parts of the body were the shoulder; 14/62, knee; 10/62, and lower back; 8/62. Similiarly, Weisanthal et al. (2014:2) demonstrated that the injury rates in CrossFit was nearly 20% and significant difference was observed. The most commonly injured body parts were shoulders (21/84), lower back (12/84), and knees (11/84), respectively. Hak et. al. (2013) also showed that the most common parts of injury were shoulders and spine followed by arm and elbow.

In a different study, Hopkins et al. (2017:89) investigated the types of injuries (n=89) in CrosFit. In this study, spine and shoulder injuries were the most common types (20.9% and 18.3%, respectively). The most common location of injury was the lumbar spine (83.1%) with radicular complaints in 53% (16). Williams et al. (2017:16) investigated 6 competitors and reported the following: knees (two cases); wrists (two cases); lower back (two cases); elbow (one case). The most injured parts for overuse problems were knees, lower back and wrists, respectively. There were only a few studies about CrossFit, but the rates of injury parts were the most investigated**.** According to these studies, injury rates were significantly different across body and shoulder, lower back and knees were the most common injury parts followed by wrist and elbows.

Trainer Involvement

CrossFit requires high technical skills while performing high-intensity interval exercise with limited rest or without a rest at all. So coach supervision and their knowledge can be crucial for reducing the risk of injures**.** Escalante et al. (2017:13) showed that 72 participants rated their trainer. 10 point means excellent knowledge and 1 means poor knowledge. They concluded that there were no differences between injury and coaches quality. In contrast, Weisanthal et al. (2014:2) reported that there was a relation among injury rates and level of coach supervision (All of the time n=32/219; Most of time n=33/135; Some of the time n= 9/29; Never n=0/1) when men and women were considered together. But, females (n=150) were significantly more prone to expect trainer involvement than males (n=231). The effect of trainers on injury rates had a relief effect for males and females, but none of these were at significant levels. There was no difference between presence or absence of coach according to the research. It can be concluded that, training with a coach can reduce the risk of injuries. So it should be examined extensively in the future research.

Rest Day

Escalante et al. (2017:13) investigated the rest day in a week with the participation of 89 people. In the study, individuals who rested for different periods of time (1, 2, 3, 4, 5 days) on a week. No significant relationship was found between suffering an injury during CrossFit with respect to rest days per week. Moreover, Summitt et. al. (2016:8) reported that no difference was found among injury rates and number (1,2,3,4,5 and 6 days) of rest days. Sprey et. al. (2016:4) also reported that 288 injured/417 participants (<3 times rest/wk) and 102 injuried/149 participants (≥3 times rest/wk) had injury and there was no significant difference among injury rates and CrossFit training frequency (p=0.809). As the researche was examined, the effect of rest day duration on injury rates were similiar**.** There was no significant difference between rest and injury rates.

Crossfit Practise Time

The effect of duration of CrossFit exercise on the injury rate can reduce and also increase the risk of injury. Some publications demonstated that short duration of CrossFit participations increase the risk of injury. For example, Mehrap et al. (2017:5) reported that less experience (<6 months) was significantly associated with an increased injury risk (p=0.001) when compared with 0-6 mo; n= 88, 6-12 mo; n= 98, 12-24 mo; n= 128 and ≥24 mo; n= 135. Similiarly, Feito et al. (2018:6) categorized the participants as <1 y (n= 324 male, 348 female), 1-3 y (n= 563 male, 553 female) and >3 y (n= 679 male, 582 female). Participants, who trained more than 3 years reported more injuries compared with those with 1 to 3 years (38.8%) and those with less than 1 year (18.0%) of experience. Significant difference was found between experience and injury rates (p=0.001).

The other ones showed that the longer durations can amp up the injury risk. For instance, Sprey et al. (2016:4) separated participants according to practice duration in their study. They determied that individuals practicing more than 6 months, were 70% more likely to suffer (p=0.013) an injury. Montalvo et al. (2017:16) also concluded that longer duraiton of participation increased the odds (p=0.048) of injury. Likewise, Escalante et al. (2017:13) reported that a significant correlation between injury and length of time in CrossFit.

Unlike the aforementioned studies, Weisanthal et al. (2014:2) reported that no significant difference (n=386; p =0.099) with respect to injury rate depends on length of time in CrossFit (14). Serenko et al. (2017) also compared the duration of CrossFit experience and incidence of injury, no significance difference (p=0.50) was found.

When we investigated the research, there were different findings. We concluded that less experienced may have higher risk of injury in CrossFit;

because CrossFit requires a high technical skill (Olympic and Gymnastic) with or without short rest time.

The Causes of Injury

Research investigated why CrossFit athletes are injured. For example, Mehrap et al. (2017:5) reported that they asked the athletes "What they thought might have caused their injury"; possible causes included bad/ incorrect form (n =75, 20.5%), fatigue (n=74, 20.2%), too heavy weight (n=59, 16.1%), unknown (n=37, 10.1%), relapse of an old injury (n 34, 9.3%), and too little or bad coaching (n=6, 1.6%). The majority of athletes (n=149, 59.1%) reported that they did not feel any discomfort, pain, or stiffness in the week before the injury. In other study, Summitte et. al. (2016:8) reported that 33 of 44 injured individuals attributed their injuries to a certain cause, including improper form (n=11,33.3%), too heavy weight (n= 4, 12.1%), fatigue (n=6, 18.2%), lack of guidance (n=1,3%), and exacerbation of a previous injury (n=11, 33.3%). Eleven individuals chose the option “I don’t know” when asked what they think caused the injury. There was no concensus on the causes of injuries. But, improper/incorrect form was the most certain cause. If the study was analyzed properly, the causes of injury could be seen more clearly.

Injury Rates Per 1000 hours

Research grouped injury rates differently according to the lenght of practicing time, gender (per 1000 training hours) and as percentages. Escalante et al. (2017:13) studied with athletes 56 (35.2%) participating in CrossFit competitions and 103 (64.8%) reported not competing. Injury prevalence of 46.5% and an injury incidence of 3.3 per 1000 training hours were determined. Similiarly, Hak et. al. (2013) determined an injury rate of 3.1 per 1000 training hours in their study. Mantalvo et al. (2017) also conluded that injury incidence of 2.3 of 1000 training hours was determined.

However, Feito et al. (2018:6) investigated the injury rates of participants according to the level of experience in CrossFit training and divided it into three groups as <6 mo (n= 36), 6-12 mo (n=132), 1-3 yr (n=361), 3-5 yr (n=312), >5 yr (n= 90). The injury rate was 0.27 per 1000 training hours for females; 0.28, males; 0.26.

In other study, Weisanthal et. al (2014:2) investigated the rate of injury but not according to the 1000 hours. They applied a questionnaire to 386 atlethes, 75 of those participants reported an injury and the injury rate was 19.4%.

Summitte et. al. (2016:8) only investigated shoulder inury rates and conducted the study among athletes (n=182). They reported that all

shoulder injuries occurred at a rate of 1.94 per 1000 training hours, while "new" shoulder injuries occurred at a rate of 1.18 per 1000 hours training.

Minimizing the Risk of Injury

Williams et. al. (2017:16) conducted a research in order to show the effects of heart rate variability on injury corellation within competitive athletes (n=6; 3 males,3 females). They reported that heart rate variability monitoring, which is monitoring training adaptation and readiness in athletes, can be used by practitioners to adjust and individualise training load prescriptions so as to alleviate the risk of overuse injury. In an other study, Serenko et al. (2018) conducted a research with 41 (20 males and 21 females) participant in order to determine the relationship between total score on the Functional Movement Screen (FMS) and incidence of injury and FMS can be used as a prevention tool to determine areas of weakness or not. They reported that there was no statistically significant relationship between FMS score and incidence of injury in CrossFit athletes in their sample; but they also believed that FMS as a prevention tool to determine areas of weakness and give athletes insight on what areas to address to decrease their risk of injury.

Case Reports

In the literature review, 5 case reports were found. However, after the examination, two of them was excluded from the study because of the injury type. In our knowledge, there are no enough evidence to include three case reports in our study.

Lu et al. (2015:22) investigated a person suffering internal carotid artery dissection. He worked out with 20% more weight than he did before. Lu et al. (2015:22) examined an athlete suffering a proximal cervical ICA dissection. Lu et al. (2015:22) also observed a person having a skull base internal carotid artery dissection. After these investigated cases, it is thought that crossfit training with high intensity can cause dissection, although it cannot be proven definitively.

Friedman et al. (2015:7) reported that a very active 43-year-old man had posterolateral right chest wall and axillary pain. The patient developed acute onset right axillary burning and swelling after CrossFit. After he was examined, a high-grade tear of the right latissimus dorsi myotendinous junction was observed.

Conlusions

It is concluded that there are no significant differences between genders, ages, BMI, being a competitor and non-competitor, rest days and being monitored by a health care professional in CrossFit. Morever, there was no difference between presence or absence of a coach, but it can be concluded

that training with a coach and using heart rate variability monitoring can reduce the risk of injuries. In most studies, it was not possible to observe the relationship between the lenght of training and injury rates. Injury rates were significantly different across the body; shoulder, lower back and knees were the most common injury parts. Altough there were different results, it is concluded that less experienced may have higher risk of injury and improper/incorrect form was the most prevalent reason of injury. Although the data is limited, we can conclude that injury rates are comparable or even lower than other recreational exercises and competitive sports.

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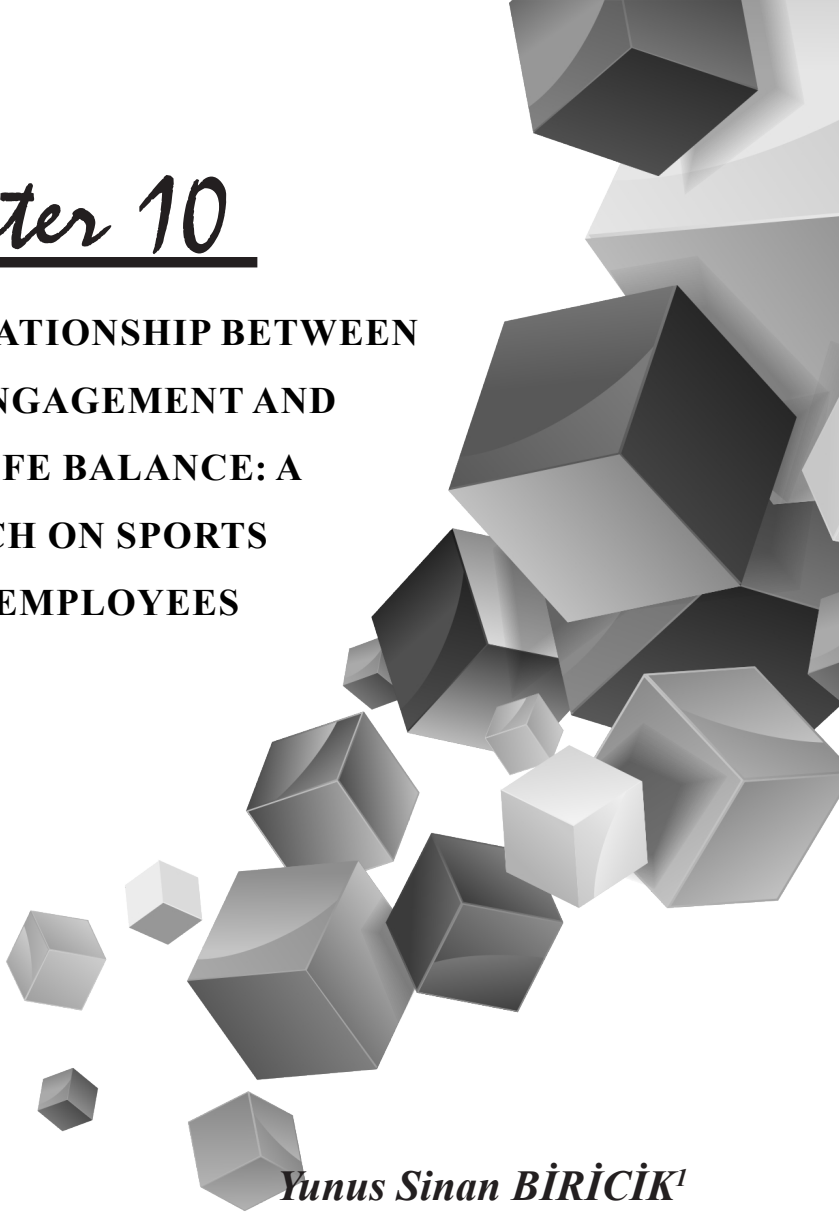
Chapter 10

THE RELATIONSHIP BETWEEN WORK ENGAGEMENT AND WORK-LIFE BALANCE: A RESEARCH ON SPORTS CENTER EMPLOYEES



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1. Literature Review

Although sports facilities have an important role in helping the society become healthy, it is a fact that these facilities have long working hours. These facilities become prominent as an area which differs from other areas because of the opening times in early morning, the closing times at late night, the busy service, the long working hours and tiring workload.

Depending on the work, sports trainers working at fitness and sports centers have extremely busy daily lives. It is important to identify the work engagement levels of these individuals working at sports centers. In addition, determining how much working conditions of individuals working at these facilities affect their work-life balance is an another important issue.

The term of work engagement has been emphasized and regarded as important by researches for the last two decades. This term is generally defined as a person's positive and satisfying mood towards his/her job. It is seen that individuals who are engaged with work regard themselves compotent and feel autonomous in their jobs and establish a bond with their jobs. Besides, the level of positive psychological capital, another term examined often in recent years, is important in terms of work engagement. Positive psychological capital is stated as the positive psychological development of the individual and covers the factors of hope, optimism, self-efficacy and stability. Positive psychological capital is seen as one of the most important individual resources which make work engagement occur (Luthans et al., 2004). The most important characteristic which differentiates the term of work engagement from the other terms of engagement is that it is regarded as a positive psychological and satisfying mood. Work-life balance has also become an important issue for many people in business life. Individuals want to be in environments which will create a better work-life balance and boost their work-life demands to the uppermost level and to lead their lives working in such environments (Naithani, 2010).

1.1. Work Engagement

Today's organizations need employees who are psychologically committed to their businesses, willing to work, exhibit high performance, and show organizational commitment. In other words, they need individuals who feel energetic and work selflessly (Bakker and Leither, 2010). For these special cases, we see the concept of work engagement. The concept of work engagement has been subject to an intense research in the literature, especially in recent years (Schaufeli and Bakker, 2004; Albrecht, 2010; Bakker, 2011). Work engagement is defined as a positive, satisfying, work-related state of mind characterized by vitality, dedication

and assimilation. Employees who are committed to their jobs are full of energy (vitality), participate strongly in their work (dedication) and generally concentrate fully on their work, and also continue their work activities happily (Bakker and Schaufeli, 2015).

Schaufeli et al. (2002) defined work engagement as "a positive, satisfying, work-related state of mind", and stated that it is a more permanent and widespread emotional-cognitive state that does not focus on any object, event, person or behavior. Work engagement is defined as employee commitment to fulfill their roles in physical, cognitive and emotional ways (Kahni, 1990). If we examine these three factors, the physical component refers to "spending all energy while working"; the emotional component refers to "opening up one's heart to his/her job"; and the cognitive component refers to "one's complete engagement of work and forgetting everything" (Ashforth, 1995). There is a myriad of benefits of work engagement related to working life or state. For example, these benefits include higher organizational commitment to work lower material expectations increased customer satisfaction and more positive and supportive organizational climate (Hakanen et al., 2008; Schaufeli and Bakker, 2004; Salanova et al., 2005; Ten Brummelhuis et al., 2014).

Schaufeli et al. (2002) defined the concept of work engagement as a "positive and satisfying mental state related to work, consisting of sub-dimensions of vitality, devotion and concentration." Vigor, which is one of the sub-dimensions of work engagement, means high levels of energy and endurance, one's desire to strive for his/her job, not getting tired easily, and persevering in the face of difficulties. Dedication expresses a strong involvement in a person's work, with a sense of enthusiasm and importance, as well as a sense of pride and inspiration (Schaufeli and Salanova, 2007). On the other hand, the concentration dimension refers to an individual's complete focus on his/her job and keeping maximum amount of concentration on his/her job. Thanks to the concentration dimension, an individual's time at work quickly flies away, enabling the person to get away from his/her current problems and troubles thanks to his/her job (Schaufeli et al., 2002).

According to the results of most studies, it has been shown that work engagement differs from other structures such as job satisfaction and organizational commitment (Albrecht, 2010; Bakker and Leiter, 2010). Work engagement is considered as the opposite of burnout. As opposed to burning out, those who are passionate about working are energetic individuals who think that they can easily fulfill the expectations and responsibilities required by their jobs. However, it is not possible to say that individuals who do not experience a sense of burnout are passionate about their jobs. For this reason, work engagement and job burnout should be evaluated independently (Schaufeli and Bakker, 2003).

1.2. Work - Life Balance

Work-life balance can be defined as to what extent individuals equally take care of their job and family roles, and to what extent they meet these roles. Felstead et al. (2002) define work-life balance as the relationship between institutional and cultural times, and work fields and side jobs in societies where income is mainly produced and distributed through labor markets. In addition to the demands arising from the work space of the individual and the needs of the family, the work-life balance is achieved by harmonizing their personal needs (Pichler, 2009).

According to the concept of work-life balance, "work" summarizes one's career and occupation, and "life" summarizes health, happiness, family and leisure time (Sharma and Nayak, 2016). Kalliath and Brough (2008) propose different definitions for work-life balance, stating that individuals fulfill their job and family roles, thus getting equal satisfaction from both. In addition, it is necessary to allocate resources such as time and energy that must be equally allocated to ensure satisfaction in every aspect of one's life. According to another definition, work-life balance means that people have enough time to meet their responsibilities in work and family life.

1.3. The Relationship Between Work Engagement and Work-Life Balance

Studies in the literature examining the relationship between work engagement and work-life balance are limited, and there are very few studies finding that employees with a high level of work engagement also experience a high work-life balance. However, some research has been done on the relationship between work-life balance and employee well-being and quality of life (Greenhaus et al., 2003).

The relationship between practices of work-life balance and work engagement can be explained by using social exchange theory. This can better allocate the energies and times of employees to the demands they experience, which leads to increased well-being (Whittington et al., 2011). Sonnentag (2003) argued that the recovery, which can be seen as part of the work-life balance, can contribute to employees' level of enthusiasm. In line with this information, the purpose of this research was to investigate the relationship between fitness instructors working in fitness centers and their level of work engagement and work-life balance in terms of different variables.

2. METHOD

The aim of this study is to examine the relationship between the work engagement levels of sports center employees and work-life balance in terms

of various demographic characteristics. This section provides information about the working group, data collection tools and data analysis.

2.1. Participants of the Study

The working group of the research consisted of 92 sports trainers working in sports services such as fitness and wellness centers.

2.2. Data Collection Tools

In the study, as data collection tools, the Utrech Work Engagement Scale (UWES-3) and the Work-Life Balance Scale were used. In addition, in order to determine the demeographic charasteristics of the research participants, a personal information form was created.

Work Engagement Scale: The 9-question scale named as "Utrecht Engagement Scale" developed by Schaufeli et al. (2006) was later reduced to 3 questions in another study conducted by Schaufeli et al. (2019). As a result of the analysis he made, Schaufeli stated that his scale with 3 questions could also measure work engagement without any major loss (Schaufeli et al., 2019). The questions that Schaufeli defined as UWES-3 measuring the vigor, concentration and devotion dimensions of each question were also used in our study. Turgut (2011) adapted this scale to Turkish and conducted its validity and reliability analyses. Five-point Likert-type rating scale is used as a measurement tool and the rating is from (5) always to (1) never.

Work-Life Balance Scale: It is a scale consisting of 4 sub-dimensions (work-life harmony, neglecting life, taking time for yourself, life consisting of work) and 20 items developed by Apaydın (2011). The internal consistency coefficient of the Work-Life Balance scale (Cronbach's Alpha) was calculated as .91. Five-point Likert type rating scale was used in the measurement tool. Ratings are classified as (5) fully agree, (4) strongly agree, (3) somewhat agree, (2) agree very little, (1) fully disagree.

2.3. Data Analysis

The obtained data were transferred to the Statistical Package for Social Science (SPSS 22.0) database and evaluated with the necessary statistical analyses. Firstly, Skewness and kurtosis (normal distribution state) values and Levene's (equality of variance) test results were examined, and these showed that the data did not meet the parametric test assumptions. For this reason, non-parametric tests were applied in our study. Mann-Whitney U test was used for binary groups in order to detect the difference between groups; Kruskall-Wallis H test was used for more than two groups, and Mann-Whitney U test was repeated to determine the source of the difference. In addition, Pearson correlation analysis was performed to determine the relationship between the work engagement and work-life balance dimension.

3. FINDINGS

Table 1. Mann Whitney-U Test Results for the Work Engagement and Work-Life Balance Dimensions of Participants according to the Gender Variable

Sub-Dimension	Gender	N	X̄rank	U	Z Statistics	p
Vigor	Female	18	50.94	586.0	-.954	.340
	Male	74	45.42			
Concentration	Female	18	37.17	498.0	-1.791	.073
	Male	74	48.78			
Devotion	Female	18	51.83	570.0	-1.084	.278
	Male	74	45.20			
Sub-Dimension	**Gender**	**N**	**X̄rank**	**U**	**Z Statistics**	**p**
Work-Life Harmony	Female	18	45.72	652.0	-.139	.890
	Male	74	46.69			
Neglecting Life	Female	18	53.83	534.0	-1.306	.191
	Male	74	44.72			
Taking Time for Yourself	Female	18	44.61	632.0	-.338	.735
	Male	74	46.96			
Life Consisting of Work	Female	18	56.94	478.0	-1.864	.062
	Male	74	43.96			

As shown in Table 1, according to the results of the Mann-Whitney U test, there was no significant difference in the participants' work engagement and work-life balance according to the gender variable.

Table 2. Mann Whitney-U Test Results for the Work Engagement and Work-Life Balance Dimensions of Participants according to the Marital Status Variable

Sub-Dimension	Marital status	N	X̄rank	U	Z Statistics	p
Vigor	Single	70	49.56	556.0	-2.374	.018**
	Married	22	36.77			
Concentration	Single	70	47.04	732.0	-.377	.706
	Married	22	44.77			
Devotion	Single	70	50.16	514.0	-2.689	.007**
	Married	22	34.86			
Sub-Dimension	**Marital status**	**N**	**X̄rank**	**U**	**Z Statistics**	**p**
Work-Life Harmony	Single	70	49.07	590.0	-1.658	.097
	Married	22	38.32			
Neglecting Life	Single	70	43.04	528.0	-2.227	.026**
	Married	22	57.50			
Taking Time for Yourself	Single	70	55.95	562.0	-1.923	.055
	Married	22	43.53			

Life Consisting of Work	Single	70	45.70	714.0	-.517	.605
	Married	22	49.05			

Note. ** It refers to a significant difference at the level of P < 0.05.

As shown in Table 2, according to the results of the Mann-Whitney U test, a significant difference was found in the vigor and devotion sub-dimensions of the work engagement scale according to the marital status variable of the participants, and it was observed that this difference was in favor of single participants (p <0.05). In the work-life balance scale, a significant difference was found in the sub-dimension of neglecting life, and this difference was found to be in favor of married participants (p <0.05).

Table 3. Mann Whitney-U Test Results for the Work Engagement and Work-Life Balance Dimensions of Participants according to the Working Type Variable

Sub-Dimension	**Working Type**	**N**	**X̄rank**	**U**	**Z Statistics**	**p**
Vigor	Part-Time	60	45.83	1020.0	-.397	.691
	Full-Time	32	47.75			
Concentration	Part-Time	60	48.63	832.0	-1.136	.256
	Full-Time	32	42.50			
Devotion	Part-Time	60	51.83	640.0	-3.010	.003**
	Full-Time	32	36.50			
Sub-Dimension	**Working Type**	**N**	**X̄rank**	**U**	**Z Statistics**	**p**
Work-Life Harmony	Part-Time	60	45.70	1050.0	-.396	.692
	Full-Time	32	48.00			
Neglecting Life	Part-Time	60	43.17	760.0	-1.648	.099
	Full-Time	32	52.75			
Taking Time for Yourself	Part-Time	60	54.25	712.0	-2.053	.040**
	Full-Time	32	42.37			
Life Consisting of Work	Part-Time	60	44.37	832.0	-1.057	.290
	Full-Time	32	50.50			

Note. ** It refers to a significant difference at the level of P < 0.05.

As shown in Table 3, according to the results of the Mann-Whitney U test, a significant difference was determined in the devotion sub-dimension of the work engagement scale according to the working type variable, and it was observed that this difference was in favor of the participants working part-time (p <0.05). In the work life balance scale, a significant difference was found in the sub-dimension of taking time for yourself and it was observed that this difference was in favor of the participants working part-time (p <0.05).

Table 4. Kruskal Wallis-H Test Results for the Work Engagement and Work-Life Balance Dimensions of Participants according to the Work Duration Variable

Sub-Dimension	Work Duration	N	X̄rank	x²	sd	p	Difference
Vigor	3 years and below[1]	48	48.71	7.776	3	.041**	**1,2>3**
	4-8 years[2]	28	50.21				
	9-15 years[3]	12	30.50				
	16 years and over[4]	4	42.00				
Concentration	3 years and below	48	44.92	5.077	3	.166	
	4-8 years	28	54.21				
	9-15 years	12	36.50				
	16 years and over	4	41.50				
Devotion	3 years and below[1]	48	48.17	9.893	3	.000**	**1,2>3**
	4-8 years[2]	28	53.93				
	9-15 years[3]	12	35.83				
	16 years and over[4]	4	40.50				
Sub-Dimension	**Work Duration**	**N**	**X̄rank**	**x²**	**sd**	**p**	**Difference**
Work-Life Harmony	3 years and below	48	42.88	3.066	3	.382	
	4-8 years	28	52.21				
	9-15 years	12	43.83				
	16 years and over	4	58.00				
Neglecting Life	3 years and below	48	46.04	3.259	3	.353	
	4-8 years	28	44.79				
	9-15 years	12	57.17				
	16 years and over	4	32.00				
Taking Time for Yourself	3 years and below	48	45.96	1.057	3	.882	
	4-8 years	28	44.79				
	9-15 years	12	51.83				
	16 years and over	4	49.00				
Life Consisting of Work	3 years and below	48	41.33	5.397	3	.145	
	4-8 years	28	55.64				
	9-15 years	12	47.83				
	16 years and over	4	40.50				

Note. ** It refers to a significant difference at the level of P < 0.05.

As shown in Table 4, according to the Kruskal-Wallis test results, a significant difference was found in the vigor and devotion sub-dimension of the work engagement scale according to the participants' work duration variable. According to the Mann-Whitney U test result, this difference was found to be more significant in participants with 3-6 years and 4-8 years of experience compared to the participants with 9-15 years of working experience ($p < 0.05$). No significant difference was observed between the concentration and work-life balance dimensions.

Table 5. Correlation Analysis Between the Work Engagement and Work-Life Balance Dimensions

		1	2	3	4	5	6	7
Vigor[1]	r	1						
	p							
	n	92						
Concentration[2]	r	,667**	1					
	p	,000						
	n	92	92					
Devotion[3]	r	,602**	,457**	1				
	p	,000	,000					
	n	92	92	92				
Work-Life Harmony[4]	r	,435**	,324**	,439**	1			
	p	,000	,002	,000				
	n	92	92	92	92			
Neglecting Life[5]	r	-,615**	-,574**	-,401**	-,521**	1		
	p	,000	,000	,000	,000			
	n	92	92	92	92	92		
Taking Time for Yourself[6]	r	-,534**	-,581**	-,409**	-,438**	,768**	1	
	p	,000	,000	,000	,030	,000		
	n	92	92	92	92	92	92	
Life Consisting of Work[7]	r	-,397**	-,437**	-,452**	-,256*	,430**	356**	1
	p	,000	,000	,000	,014	,000	,000	
	n	92	92	92	92	92	92	92

Note. ** It refers to a significant difference at the level of $P < 0.05$.

A correlation analysis was performed in Table 5 to see the relationship of sub-factors with each other. The work engagement scale had a positive relationship with the sub-dimension of work-life harmony. Similarly, negative relationships were found between the sub-dimensions of work engagement and work-life harmony and other dimensions of work-life balance (i.e. neglecting life, taking time for yourself and life consisting of work). Finally, it was observed that the sub-dimensions of neglecting life, taking time for yourself and life consisting of work were positively correlated among themselves.

4. DISCUSSION

The aim of this research was to evaluate the relationship between the dimensions of work engagement and work-life balance of sports instructors working in fitness centers and to examine this relationship with different variables. In this context, data were collected from 92 sports instructors. As a result of the research, there was no significant relationship between the sub-dimensions of both scales according to the participant gender variable. According to the marital status variable of the participants, a significant difference was determined in the sub-dimensions of vigor and devotion of the work engagement scale, and it was observed that this difference was in favor of single participants. In the work-life balance scale, a significant difference was found in the sub-dimension of neglecting life, and this difference was found to be in favor of married participants ($p < 0.05$). In his study, Küçükusta (2007) concluded that single individuals had higher work-life balance than married individuals. In this context, it can be said that single sports instructors feel more vigorous in the work environment and are more committed to their work. In addition, married sports instructors achieved higher scores in terms of neglecting life than single employees depending on working conditions. Considering that the responsibility assumed by single employees is more flexible and limited than the family responsibilities and obligations of married individuals, this situation can be considered as normal.

According to the variable of the working type of the participants, a significant difference was determined in the sub-dimension of the devotion of the work engagement scale, and it was seen that this difference was found to be in favor of the part-time participants. Turgut (2013) found that there were no notable relationships between age, marital status, childhood and work duration, and work engagement In the work life balance scale, a significant difference was found in the sub-dimension of taking time for yourself, and it was observed that this difference was again in favor of the part-time participants ($p < 0.05$). A highlighted point in the study was that the number of people working part-time demographically is higher than the number of individuals working full-time. This shows that individuals prefer to work part time more in businesses such as fitness and wellness centers. In addition, according to the results of the analysis, it was seen that full-time employees were more limited in allocating time to themselves. Considering the existence of long working hours in these centers, it may be considered normal for full-time employees to encounter this situation. According to the participants' work duration variable, a significant difference was found in the sub-dimension of vigor and devotion in the work engagement scale. According to the Mann-Whitney U test result, this difference was found to be more significant in participants with 3 years and less and 4-8 years of experience compared to the participants with 9-15 years of working experience ($p < 0.05$).

According to the results of our correlation analysis, specific dimensions of the work engagement scale had a positively significant relation with each other and between the sub-dimension of work-life harmony. Schaufeli and Bakker (2004), and Demerouti et al. (2001) showed that individuals with high levels of work engagement have a lower intention to quit their jobs. According to another finding, it was found that there was a negative correlation between the sub-dimensions of work engagement, the sub-dimensions of work-life harmony and other sub-dimensions of work-life balance (neglecting life, taking time for yourself and life consisting of work). Based on this result, it can be said that employees who have negative dimensions of work-life balance feel less vigorous, devoted and concentrated towards their work. In some studies, it was shown that work-life conflict is negatively correlated to the level of work engagement (Anderson et al., 2002; Amstad et al., 2011). Finally, it was observed that the sub-dimensions of neglecting life, taking time for yourself and life consisting of work were positively and significantly correlated with each other. It can be said that increases in work engagement behavior of employees, which includes positive and satisfied moods related to work, increases the feeling of work-life harmony, whereas increases in the negative dimensions of work-life balance decrease the feelings of vigor, dedication and concentration.

As a result, the physical and social climate in the workplace is an important predictor of the feelings that employees feel towards their work, and these climate characteristics should also be taken into account. Individuals working in improved working conditions are motivated, increase their performance, feel more vigorous and devoted to work, and consequently can establish a high level of positive relationship between work-life balance. In this context, the following suggestions can be made according to the result of the study. Businesses that provide sports services can set up regulated working hours and accordingly, offer the opportunity to plan employees' time in order to increase their level of employee engagement for work and provide a work-life balance. Again, businesses can develop tools and practices such as performance feedback, work autonomy and social support in order to increase work engagement and work-life balance.

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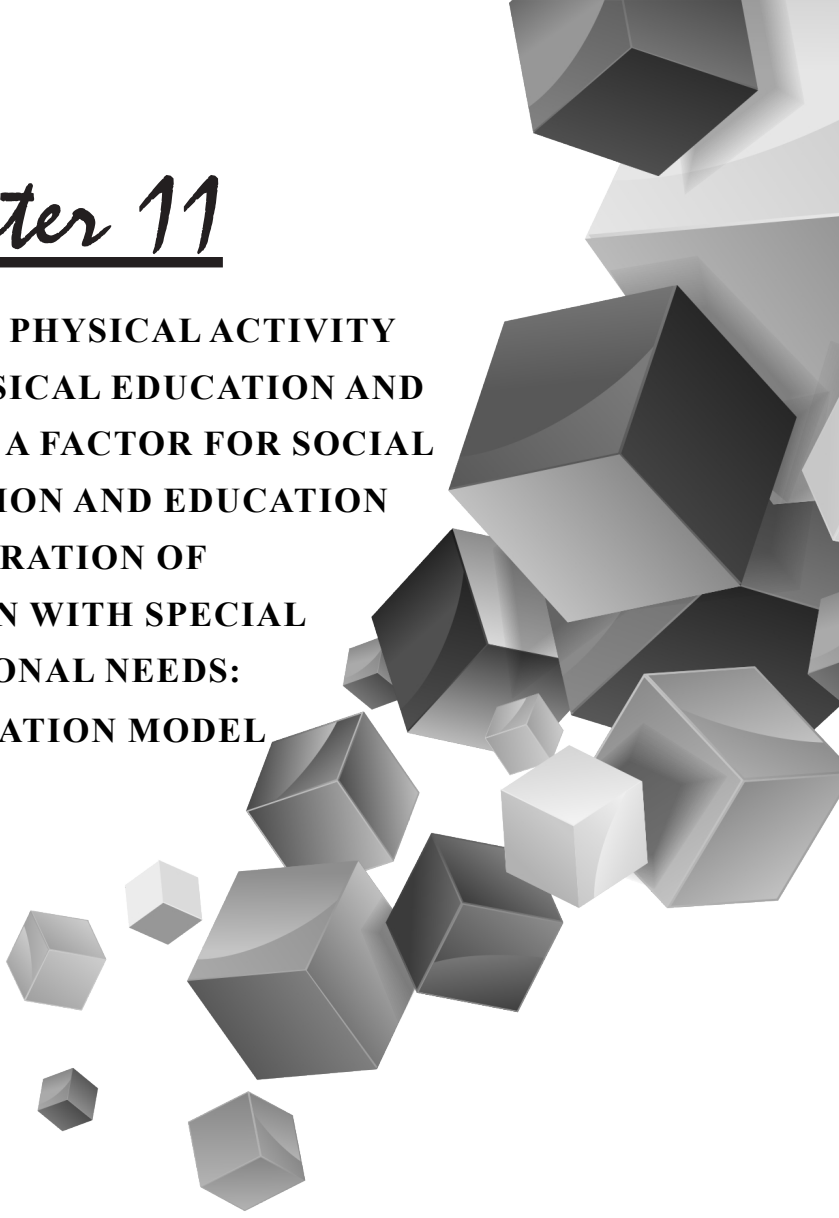
Chapter 11

ADAPTED PHYSICAL ACTIVITY AND PHYSICAL EDUCATION AND SPORT AS A FACTOR FOR SOCIAL ADAPTATION AND EDUCATION AL INTEGRATION OF CHILDREN WITH SPECIAL EDUCATIONAL NEEDS: OMTIMIZATION MODEL



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Introduction

Health-related issues, adapted physical activity, social rehabilitation and integration of people with disabilities are becoming more and more relevant and engage an increasing contingent of people. Disability is a physical or psychological factor that adversely affects people's abilities. Any person may have some kind of damage, such as, impairment of vision, spinal distortion, motor problem that imposes a limitation on the amplitude or speed of movements, etc. This, however, does not always affect this person's lifestyle, and he can get a decent education and be fully realized in different areas of life (WHO 2017). In addition to the obvious musculoskeleton, cardiovascular and neuromuscular benefits, its participative nature offers vital social, cultural and psychological gains at individual and group levels, providing opportunities for self empowerment, self-expression and self-confidence (O'Connor & McNabb 2020; Ross et al. 2016).

A person with a disability or a disadvantaged person is one whose impairment has a negative effect on his / her ability to lead a normal lifestyle. The difference between people with and without disabilities depends on the level of disability. Full participation in family and public life as well as belonging to a particular social group are important elements of the existence of every person. Often, however, people with deficits are deprived of opportunities for full participation in the socio-cultural system to which they belong. Such opportunities are usually lacking due to the presence of physical and social barriers as a result of ignorance, indifference or fear. In many cases, ordinary people underestimate the potential opportunities of those who are disadvantaged to participate in normal social life. Employers often refuse to hire them, although their health problems do not interfere with or have no connection with the duties they will be assigned to. There are many cases where, due to the inability to integrate into society, many people with disabilities reach a state of begging and even suicide (Hart & Drummond 2014).

Especially hard is the situation of disabled children. Often their helplessness does not allow parents to lead a normal life. They are condemned to their children and ready to do everything in the struggle to provide better conditions for their children to receive education and to prepare for independent living. Physical education and sports lesson; It is an integral and indispensable part of general education for children who need special education. The same time; It is an ideal area where cooperation, appropriate competition, personal and social responsibility are taught (Toptaş demirci, Çınar, & Demirci 2014-b). Disabilities and long-term health conditions may limit meaningful participation in mainstream PE, unless proper support is provided. Applying a nondisabled perspective

such as using able-bodied or ableism to describe skills required in PE, may undermine and disrespect the value of disabled identity (Loja et al. 2013; Giese & Ruin 2018).

An important role in this process is the school and the opportunities it provides for the inclusion of children with special educational needs. The structure of PE lessons, both in terms of physical and social adaptations, is important for the participation of SEN in school-based PE (Toptaş demirci & Demirci 2018-a). Different adaptations and modifications are required, depending on the type of disability. Meaningful learning experiences for students with disabilities in PE are extensively dependent on teachers' skills to and attitudes toward communicating and structuring their teaching in an inclusive direction (Neville, Makopoulou, & Hopkins 2020).Teachers' knowledge of adapted training and their ability to apply adapted methods and tools is a guarantee for successful socialization of children with various deficits and enabling these children to cope with the requirements of the curricula of the different disciplines. Special attention should be paid to adapted physical activity and adapted sports. In their totality, they provide children with the opportunity to increase their physical development, improve their physical capacity and develop valuable skills that will be needed both in their training and in their next years of life.

Adapted Physical Activity (AFA)

Physical activity (PA) is a fundamental component of overall well being and most children's experience of this is through Physical Education (PE) classes in school. Global recommendations state that children and young people aged 5–17 years should accumulate at least 60 minutes of moderate-to-vigorous intensity physical activity daily and that children and young people with disabilities should meet this level whenever possible, with appropriate adaptations where necessary (WHO 2018; Demirci et al., 2018). Adapted Physical Activity (AFA) is a new interdisciplinary field of scientific knowledge that is related to motor activity and sport for people with different limitations and disabilities. Adapted physical activity is aimed at people with special educational needs and aims to stimulate the positive reactions in the system and functions of the body, forming physical qualities, skills, coordination and improvement of the person's adaptive skills (Kehayova, 2009, Hadzhieva, 2011). Adapted Physical Activity (AFA) is accepted and validated as a generic term that includes education, recreation and sport (De Pau, Sherrill, 1994; Porretta et al., 1993). The first official use of the term is associated with the founding of the International Federation of Adapted Physical Activity (IFAPA) in 1973. The term "adapted" is related to the adaptation theory, is defined as "Art and science to guide variables so as to achieve the desired results."

According to Hutzler, et al. (2003), any physical activity can be modified and adapted. The term "activity" has been chosen as a generic term in the English language that includes forms of general motor development, from play to sport, from informal forms of sport and recreation to sport of excellence, and covers all age groups - from children to the elderly (Porretta, et al., 1993).

Adapted physical activity covers knowledge and practice in a number of areas, such as physical education, sports, fitness, dancing and recreation of people with permanent disabilities. It combines and is based on information and scientific achievements in the sphere of sport and the sciences of human movements, biomechanics, sports psychology, sports pedagogy, etc., as well as other scientific fields such as medicine, rehabilitation, psychology, etc. related to motor activity and sport for people with different limitations and disabilities (Nikolova, 2006). Physical activity should be in accordance with the specifics of the disabled person and may involve changes in (Djobova, 2013):

- equipment (use of different materials for making devices or differently sized balls);
- the environment (reducing the height of the net and the dimensions of the course);
- Tasks (facilitating the activity, changing the target - for example, volleyball from sitting, basketball the target can be a punch in the board, etc.);
- rules (extension of service time and opportunity for the ball to thump twice before being returned, playing tennis);
- instructions (set short and understandable instructions).

Teaching children with mental disabilities and multiple disabilities requires more patience, persistence and encouragement. Like everyone else, these kids like physical exercise and games as well as contacts during them. Compared to children from general education schools, children with disabilities should have shorter lessons (for example, 20 instead of 40 minutes), but if possible every day. More frequent activities (with partners or with parents) will lead to faster learning of a motor skill (Peneva, 2010). As a professional activity, AFA includes a wide range of professionals (teachers, lecturers, trainers, methodologists, therapists, administrators, researchers, etc., who have acquired qualification and competencies for managing the person) as well as the environmental factors contribute to the participation of persons with limited opportunities in motor and sports activities (Nikolova, 2009). The movement in the broad sense of the word is a major biological stimulus that stimulates the processes of growth

and development and also develops the functional manifestations of the organism. The limited use of movements leads to a certain disharmony between neuro-psychic and physical activities. This is particularly true for people with disabilities. Regular exercises with gymnastic exercises are a serious means of preventing functional and motor problems and overcoming those that have already occurred. The variety of gymnastic means allows them to be used in different groups of people with disabilities, age and level of opportunities (Dimitrova, 2014).

In modern conditions, the most important issues are the issues related to the use of the complex impact of swimming as a teaching-pedagogical activity coupled with the therapeutic effect of adapted aquaactivity as a means of positively influencing the functional state, psychomotor and cognitive abilities and social skills of adolescents with disabilities and application of good AFA practices in out-of-school activity and leisure (Arslan, 2017). According to B. Toumanova, it is an indispensable tool, with a pronounced developmental effect, for adapted physical activity and adapted sport. A similar effect is also observed in the case of water adaptation activities at sea camps for children with special educational abilities (Djobova, S., Dasheva, D., Nikolova, M., Geshev, P., 2009). An interest in the theory and practice is the sport-animation programs developed by Djobova (2013) for adapted physical activity in the conditions of specialized marine camps. In order to increase the motor activity and the opportunities for children with visual impairments to participate in adapted sports, R. Tsarova, (2013) experiment with a specialized methodology for the application of the click technique as a means of improving the orientation and targeting in the space of these children. As a result of the applied effects with the means of the adapted physical activity, presented in the experimental methodology, during the observed period there are significant positive changes in the children's abilities for orientation and direction in space, which is a proof of the effectiveness of the applied methodology.

Taking into account the fact that alternative sport plays an important positive role in the development of human society and the individual, V. Hristova (2017) believes that despite the efforts made for people with different disabilities, our country is in debt to all of them. According to the author, the application of adapted volleyball to people with hearing problems has a positive influence on their motor, sport-technical, tactical, moral-volitional, psychological and intellectual qualities. The Disability Policy in Bulgaria is implemented by the Legislation in the Protection, Rehabilitation and Social Integration of Disabled (1995), which has been amended in the Law on the Integration of Disabled People (2005, AM 2011, 2016) . Data released by the National Statistical Institute (as of 01.02.2011) show that 474 267 people in Bulgaria have permanently reduced working capacity or degree of disability. Of these, 9 039 are children and the

remaining 465 228 are persons aged 16 and over. Statistics in the Republic of Turkey show that 12.29% of the country's population has disabilities, accounting for about 8 million and 500,000 people (Arslan, 2017). The social protection of this group of people is guaranteed by the adoption of the 1997 Disability Decree and the Disability Act in 2005 (Demirci and Toptaş Demirci, 2016). The categories of disability in

Table 1.Turkey's professional life are classified into the following groups

	Disability Groups
1	Individuals with Intellectual Learning Disabilities
2	Individuals with Hearing Impairment
3	Visually Impaired Individuals
4	Individuals with Orthopedic Disabilities
5	Individuals with Language and Speech Difficulties
6	Individuals with Special Learning Disabilities
7	Individuals with Emotional, Behavioral and Social Adaptation Difficulties
8	Individuals with Autistic Traits
9	Individuals with Giftedness and Giftedness
10	Individuals with Attention Deficit and Hyperactivity Disorder (Demirci and Toptaş Demirci, 2019)

A broad understanding in Turkey is that dyslexia should not affect the physical development and performance of tasks in physical education and sports. Dyslexia and dysgraphy are seen as disabilities that reduce the pupil's performance in classroom activities but are underestimated as a problematic condition for physical development. For this reason, there is no specific impact and assisting children with dyslexia in physical education and sports. Despite these perceptions of the disease, many studies (Capellini, Coppede, & Valle, 2010; Okuda, Lourencetti, Santos, Padula, & Capellini, 2011) report delayed physical development of dyslexic children, relative to their peers, as well as lesser performance of motor tasks requiring the use of fine motoring. These data call for a rethinking approach by Turkish sports pedagogues to children with a similar problem.

Similar problems exist in children with cognitive problems. Physical education and sports teachers do not report a specific methodology they apply in the education of children with attention deficit hyperactivity disorder. This is also the reason why children with such problems often remain isolated from work in physical education and sports, "because they interfere with others" and "can not perform tasks". For NVD and dyspraxia, sports pedagogues in provincial cities recognize that they have

limited knowledge. Teachers see the actual results of these problems - especially coordination and balance issues, as well as a difficult realization of the overall job. People with disabilities make up the largest minority group in the world and have specific features that distinguish them from the rest of society and accepted norms of behavior. It is often said that the civilization of society is judged by its attitude towards adults, children and people with disabilities (UN 1994). Disregard, prejudice, discrimination and fear are social factors that have put them in isolation and have slowed their development throughout the history of mankind. Over time, politics has changed from elementary care in social institutions to education for disabled children and the rehabilitation of people who have become disabled in adulthood. It is challenging for society today to provide those disadvantaged citizens with a protected social system with a view to overcoming exclusion, to give them equal opportunities for access to employment and the use of their potential for active participation in all spheres of public activities, including education and sport (Arslan, 2017).

Physical Education and Sport for Children with Special Educational Needs

The trend of intellectualization of human activities, which has been observed in recent years, has led to an increase in the tendency to increase the number of children with intellectual disabilities. The reasons for this are many and sometimes unknown, but they are related both to the state of health and to the social life and psychological development of children. Deepening global environmental problems and the rise in stressful situations accompanying modern lifestyles lead to alarming increases in congenital physical and mental disabilities. This poses the question to the most developed countries: What is the future of children with disabilities - will they become full citizens or will it be a burden on society? An important role in solving this issue is played by the modern school, which tries to seek and apply appropriate correction methods in general education to make the education of children with special educational needs as accessible as possible (Tanova, 2010).

Physical education and sports programs for children with SEN need to be prepared based on their requirements and individual characteristics such as diagnosis, severity of diagnosis and existing performance level. It is known that physical education helps children with SEN to develop self-concept and social competence, develop motor skills, physical and motor adaptation, leisure time skills, playing and creative time skills as long-term objectives. Physical education for children with SEN are required to be competent in terms of improving psychomotor, sensory and cognitive development (Demirci & Toptaş demirci 2016).

Adapted motor activities and sport are applied in practice in a variety of contexts and with a particular focus:

- *rehabilitation (therapy);*
- *school;*
- *community;*
- *sports clubs - recreation (competition, elite sport), sport for all (Doll-Tepper, 1994).*

Depending on the specific content (means, methods and forms) and the most common tasks they solve, there are four types of adapted physical activity:

- *Adapted physical education (education);*
- *adapted sport;*
- *adapted motor recreation;*
- *adapted physical rehabilitation (Evseev, 2000).*

Adapted physical education in the context of the discipline "Physical Education and Sports" at school has a number of peculiarities (Alexieva, 2016),

The most important of which are:

- *by modifying, adapting or simplifying traditional physical exercises, activities and elements of sport, children with an inability to participate in*

the "Physical Education and Sports" classes are given the opportunity, according to their functional capabilities;

- *in the mainstream school it is possible to implement an integrated form of education in the subject of Physical Education and Sport, with the participation of students with inadequate and healthy pupils at the same time and using modified means of physical education;*
- *in the lessons of "Physical Education and Sports" for children with disabilities, teaching is used by stimulating more analysts: auditory, visual, tactile, the demonstration is actively used, while at the same time explaining and, if necessary, helping to guide the limbs and the body of the child so that it can better understand the exercise;*
- *in the "Physical Education and Sport" classes it is extremely important to respect the safety of disabled children, so the child is assisted by the teacher in performing the various activities;*

• *the curriculum content of the adapted physical education as part of the general "Physical Education and Sport" at school is aimed at maximizing the development and effective provision of each student according to the needs of his / her individuality. This means that children should not be underestimated and they should be given accessible but not easily executable tasks;*

• *in every hour of "Physical Education and Sports" for children with special educational needs it is necessary to offer the teacher new knowledge and challenges.*

According to M. Nikolova (2009), adapted physical education within the educational system is implemented in an integrated form through the implementation of modified programs of physical education and sport. The educational content of the adapted physical education, as part of the general physical education and sport in the mainstream school, is oriented towards the maximum development and effective provision of each student, according to the needs of his / her individuality and sociality, to the formation of self-confidence, exercising with physical exercise, overcoming certain physical stresses and creating the basis for an active lifestyle.

The curriculum includes:

• *basic models of adapted motor activity;*

• *introducing group games adequate to the age of children with disabilities;*

• *mass ball games using adapted rules;*

• *aquatic activities (aquatix);*

• *adapted fitness.*

The first set of tasks of adapted physical education are aimed at influencing the health status of children.

They are aimed at:

• *restoring and stabilizing the health of children, as well as preventing further complications;*

• *reducing disability symptoms;*

• *creating conditions for applying individual loads and adapting the children to them;*

• *regulation of lifestyle protection from harmful influences.*

It is the health effect of physical education which is the object of the research by Ch. Kotsev 2003). The second set of tasks of adapted physical

education are so-called. educational and are related to the education of children with special educational needs.

The most important of these are:

- *acquisition of motor skills;*
- *motor improvement;*
- *developing motor skills;*
- *increasing the level of physical capacity;*
- *acquiring specific sports skills for practicing adapted sports;*
- *participation in sports activities;*
- *increasing the theoretical knowledge of the place and role of physical education and sports, the theory and methodology of adapted sports as well as their rules.*

Tasks related to children's social behavior are aimed at developing their abilities to:

- *own identification and self-assessment and proper assessment of others;*
- *self-knowledge and knowledge of others;*
- *adopting and integrating the team;*
- *changing own behavior and appearances;*
- *improving the mental state and developing positive mental qualities;*
- *increasing motivation to participate in adapted physical activities;*
- *complete life and sport development.*

Tasks related to the motor performance of children with special needs are focused on:

- *raising the sense of responsibility and motivation for a dignified representation of one's own personality;*
- *equal participation and dignified representation of the sports team;*
- *successful presentation of the sports club and the nation (Labudov, 2003; Valkova, 2003).*

The training in the discipline "Physical Education and Sports" in the so- special schools are up to 3 hours a week, which are mandatory, incl. 2 hours of Physical Education and Sports and 1 hour of Curative Physical

Education. Other forms of further education, such as compulsory education and self-study, are absent in physical education. As compensation, children with special educational needs have the opportunity to study 1 hour per week in a supplementary form called "Module of Physical Education and Sport". The content of this module is determined by the teacher of physical education and sport, according to his assessment of the students' abilities. Curricula in special schools allow the requirements to achieve a certain level of knowledge, skills, and competencies to be applied flexibly, depending on the needs and abilities of pupils with special needs and according to the school curriculum or the individual curriculum of each student.

The training from the 1st to the 3th grade is 5 hours per week and 4st to the 8th grade in the discipline "Physical Education and Sports" is 2 hours per week. The aim of the training is to optimize the student's muscular regime, increase physical capacity and coordination capacities according to the age specifics of development as an integral part of the intellectual and emotional development and education of students with different degrees of mental retardation and multiple disabilities with the means and the forms of a rich and emotionally rich program of physical exercise and games (Alexieva, 2016).

The program implies:

- *corrective direction of the educational process;*
- *long-term planning of the learning of elementary motor activities and their repetition in the following classes;*
- *regulating the physical load (volume, intensity and complexity) taking into account the individual capabilities of the students;*
- *the transition to more sophisticated exercises and tasks takes place after the previous ones.*

The program is structured in 4 cores. Educational goals and content on the nucleus are differentiated into modules in ascending order, depending on the individual needs and abilities of the students. The modules are a framework for selective orientation of the child with the help of the teacher in the complicated system of ideas, skills, relationships. Framework Program on Physical Education and Sport for Children and Students with Hearing Impairments and Multiple Disabilities (Alexieva and Denev, 2014):

- *provides knowledge and practical skills in the field of physical education and sport, thus contributing to the general education of students;*
- *is characterized by a transition from a complex approach to the development of motor skills to their differentiated and purposeful*

upbringing, with predominant work on speed and power-force abilities;

- *allows for the formation of cognitive and practical skills for students;*

- *facilitates communication between the teacher and the student, through the educational and educational nature of the educational activity.*

The curriculum of "Physical Education and Sport" sets the foundations of the motor culture of students with hearing impairment. Along with its educational and educational functions, the subject "Physical Education and Sport" has anti-stress functions in bringing children to the new environment. The training is up to 3 hours a week. The program is structured in 4 cores. The aim of the training is to improve the naturally applied motor skills, to master new skills and habits, as sensory knowledge plays a leading role. Obtaining knowledge and mastery of elementary terminology concepts to provide a developing effect on the morpho-functional state of the student. Raising personal qualities and shaping the character of adolescents.

The evaluation of the results achieved is directly related to the objectives set and includes:

- *assessment of the correct execution of the learned motor actions (performance quality);*

- *assessment of the level of physical capacity reached (quantitative result);*

- *current, periodic;*

- *annual inspection and evaluation.*

Motor activity plays an important role in the overall development of children with visual and multiple disabilities. The framework curriculum for adapted physical education and sport for children and pupils with impaired vision and multiple disabilities (Alexieva and Denev, 2014; Alexieva, 2016).

supports the solving of very specific cognitive and nursing problems such as:

- *strengthening the general physical condition;*

- *developing coarse and subtle motor skills;*

- *developing individual analysts;*

- *overcoming the fear of moving in a small and large space.*

The program targets two main groups of visually impaired pupils with multiple disabilities, namely:

• *visually impaired students with serious learning difficulties, severe and deep mental retardation, central and / or peripheral nervous system diseases (severe forms), certain syndromes, blind-deaf people with severe visual and hearing loss, etc.*

• *visually impaired students with a moderate degree of mental retardation, autism, diseases of the central and / or peripheral nervous system, hyperactivity, blind-deaf people with moderate visual and auditory loss, etc.*

Conclusion

The program is structured in 4 cores. The aim of the training is to properly develop the body's physical development and growth, improve coordination of movements and balance, encourage space exploration, confidence and activity in movement, participation in collective games specific forms and methods for evaluating achievements are direct observation and situational assessment to address a specific task. The European and national normative documents on the basis of which the ideas for the implementation of adapted physical education outline a modern educational paradigm that brings to the leading positions the requirement to enrich the professional profile of the modern teacher. It faces the challenge of expanding the scope of its professional competence by building on the basic pedagogical skills and competences in a hierarchical way those aimed at adapting the content of physical education and inclusion of children with special educational needs to the educational environment in the mass school practice. Within this context, it is necessary to evaluate the level of all the studied features and on this basis to develop optimization models, allowing the identification of the main accents in the future activities of physical education and sport.

Adknowledge

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Chapter 12

SWIMMING AND NAUMACHIA GAMES IN ANCIENT ROME

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Introduction

Since the invention of writing by Sumerians in 4th Millennium B.C., it rapidly spreaded and the many societies began to use writing for recording their own political events, trade and social lifes, laws and religious beliefs. Although it's a fact that sport activities existed before the invention of writing, the invention also allowed people to record their sport activities. Besides the written sources, sport activities in ancient times also relies on descriptions.

In modern times, the reasons engaging in sportive activities is to become healtier and physically improve the body. Sportive activities also provides both physically and spiritual relaxation and helps in the development of self-confidence. In ancient times, however, sportive activies has been engaged in for different reasons. The ancient people engaged in sportive activies for war preparation, gaining superior body structures over those of their enemies, training soldiers, ritualistic purposes, fun and desire to obtain fame (Crowther, 2007).

Today, sports events take place in all areas of life. Increasing interest in sports, the idea of a healthy life, the idea of getting away from stress, the possibility of meeting new people, and the news that encourages sports in the visual and printed media increase the participation of people in sports activities and cause sports services to gain importance (Çimen & Gürbüz. 2007; Yazıcı *et al*., 2017). The place and importance of sports cannot be denied in being a healthy society, integrating with the universe, advancing, being a society with social justice and a bright environment (Yazıcı, 2014). Playing sports also has beneficial effects on individuals' social and personality character development (Danacı, 2008; Yazıcı *et al*, 2019). Sport has always existed in human life (Murathan and Murathan, 2019). The competitive environment in sports and the fact that winning is always at the forefront should improve the physical and psychological strength of athletes. (Yazıcı *et al*., 2018).

When we look at ancient Egypt, it can be seen that the pharaohs organized the Sed festival in order to renew their legitimacy and effectiveness, renew their physical and magical powers, to strengthen their relationship with their gods and peoples as well as to strengthen their divine position. Unfourtunately, we have little information about the Sed festival (especially when, where and how frequently it was organized). However, the first pharoahs that were known to have celebrated this festival are Den and Qaa from the Early Dynastic Period. One of the activities in this festival is known as "the ritual of territorial claim". In this ritual, the pharaoh ran or strode between two sets of markers, wearing a Sed festival robe, a red, white or double crown; and carrying a flail in one hand, and a baton-like object on the other. The sets of markers represented the pharaohs territory

limits and the area between them is a repsesentation of all Egypt. By doing this, the pharaoh reasserts his claim to the Egypt (Wilkinson, 1999). This festival shows us that one of the reasons of engaging in sportive activities in ancient times was ritualistic causes.

The desire to gain fame in sportive activities can be seen in Sumerian texts. King Shulgi from Third Ur Dynasty is known to have ran from the city of Nippur to Ur (nearly 150 km. distance). After the king arrived to the city of Ur, he visited the temple of the god Sin, Ekishnugal. (Kramer, 1999).

"May my name reach far days, so (people) always speak of my name,

so my fame spreads around the country,

Me, the runner, gathered my strength, starting my path,

From Nippur to Ur,

deciding to finish the road in a ''two hour'' (distance) time,

I roared like a lion who does not know how to tire,

I wrapped a sash (?) around my back,

I opened my arms like a terrified pigeon who saw a snake,

I opened my knees like a Anzu bird staring towards a mountain.

The (people) of the cities i formed around the country surrounded me,

My blackheaded people, numerous as sheep, were surprised at me.

Like a child from a mountain, hurrying to reach his shelter

when Utu radiated his wide light over the homes of the people,

I entered Ekishnugal,

filling Sin's house, large barn with plentifulness,

I slaughtered the ox, multiplied the sheep,

Drums, tambourines loudly sounded,

Sweet, ligi-music was played there"

Based on this text written by the king, it can be seen that sportive activities were carried out to announce one's name and ensure its survival over time. We can also see that notion in the Gilgamesh epic. Similarly to Shulgi, king Gilgamesh told us by killing monster of Huwawa and cutting cedar trees he will show his worth to everyone and by that, immortalize his name (Bottero, 2005). From this point of view, King Shulgi's desire to announce his name comes from the fact that people want their name to be remembered, even long after their deaths. In order to achieve this, the king

must have wanted to do things that would be mentioned about for a long time.

When it comes to the ancient Greek period, it is known that there were athletes interested in sports, and various competitions were also held. The Olympic games were held in Ancient Greece and thought to have first started in 776 B.C., where the victorious athletes competed for gifts such as wild olives crown, palm branches, ritual featured wool belt and flowers made from the holy tree in the temple of Zeus. Victorious athletes were also expected to receive financial rewards the from their home-cities. Ancient Greece, where the sports became an important part of culture, every male citizen engaged in sports, regardless of their social class that he was from. Ancient Greek people who competed to win, considered losing as a form of "dishonor" (Crowther, 2007). In this period, besides the military and religious characteristics of the sport, it could be seen that sportive activities gained entertainment and competitive values. The presence of athletes that were interested in sports and the awards given to the winners show us the importance of these games, as well as the value given to the winners and winning.

In addition to these reasons to engage in sports within Ancient Greece, we can also see that there were militaristic purposes as well. In Sparta, which has a military structure, athletics had an important place in the physical training for soldiers. Also, in Athens there was an opinion that the victories against the Persians were a partial result of the training brought by engaging in sports. However; despite all these, there were also authors who did not defend this viewpoint. While Spartan poet Tyrtaeus questions the military values of athletes, Plato also said that specialist athletes have very tight programs for military expeditions, so athletic competitions that will prove beneficial in battles must be preferred. Some generals were also known to support sports that contributed to the agility of the soldiers, such as jogging and wrestling (Crowther, 2007). The generals' view of some sports shows that there were also some sports that were forbidden to practice as well.

Swimming in Ancient Rome

The sport of swimming has existed since the first existence of humanity as the beauty of the body, defense areas in war, escape and escape from wild animals in past ages. Archeologists say that swimming dates back to 9000 BC in their research. The oldest ruins were obtained from cave walls in the Saori valley in the Libyan desert. However, in the relief paintings of the Persian and Athenian civilizations, the forms of teaching swimming to young children were encountered. (Bozdoğan ve Özüak A, 2003: 13).

Url 1, Cave of swimmers

Swimming in Ancient Rome had become a sports activity that both the army and civilians attached great importance to, and swimming skill was regarded as one of the most important skill that a individual could have (Yegül, 1992). It's not known when the Romans built the first swimming pool; however, Roman statesman and writer Cassius says that it was Maecenas, who lived during the Augustus' reign, has built the first hot water swimming pool in the city of Rome (Cassius, 1916).

In the period that the hot spring baths first emerged (2'nd Century B. C.), we have some indications that they, while a symbol of Roman civilization and which were frequently encountered in many parts of Rome, were only for men and women were not allowed to enter. This situation remained the same until some changes in the hot spring bath entry rules during the 1st century AD. After some changes made during this period, both men and women started to bath together. However, this new situation changed once again during the reign of Hadrianus. After Hadrianus took over the Roman Empire, he put an end to this situation by ordering men and women to bathe separately. Archaeological excavation results show that separate thermal springs were built for men and women in Rome during his period (Ward, 1992). In addition, some Roman hot springs had a cold swimming pool besides hot water springs (Cunliffe, 1976).

The Romans, developed the hot spring architecture and made great innovations in their time, renewed the heating system and applied the floor heating model, provided water supply to the hot springs and developed water discharge systems. Thus, the hot springs spread throughout the Roman empire and had an important place in the daily life of every Roman.

A Roman hot spring consists of the following sections: apodyterium (upper changing room), frigidarium (cold room, cold water filled pools are available; pools were called natatio and piscina), tepidarium (warm room), caldarium (hot room), sutorium (hell-high heat), praefurnium (oven) (Başaran, 2007). With reference to the mosaics unearthed in Villa Romana del Casale, we can also say that the clothes used for swimming were almost the same as today for women.

After this summary of the Roman hot springs that we tried to give briefly, it is seen that the natatio pools were built in Roman hot springs. However, although these pools were long enough for swimming, they were not deep enough, since even the Imperial Thermae's natatio pool, which is largest of these pools, have a depth of 1 to 1.2 meters. But a few known to had deeper pools (Yegül, 1993). With the except of Herculaneum and Pompeii, Legionary fortress baths at Isca had a natatio that reaching a depth of 1.6 meters (Yegül, 1992). Since adult people could not swim at a depth of 1 to 1.2 meters, except for having a pleasant time, it can be thought that these pools may have been used to give children swimming training, who can swim at this depth.

Training of athletes and competitions were held in deeper swimming pools. For example, the cities of Herculaneum and Pompeii had swimming pools in their palaestra, independent of the hot springs, with depths exceeding two meters. The pool in the Herculaneum palaestra was 30 meters long, 3 meters wide and 2.35 meters deep. But these pools was a part of a regular "gymnasia" that used for athletic trainings and competitions, therefore not connected with hot spring baths (Yegül, 1992).

Swimming was also important for Roman emperors as well. We know that one of the things the first Roman emperor Augustus taught his grandchildren was swimming (Suetonius, 1979). Piscina publica, which was first mentioned in 215 BC and remained in Porta Capena, where Romans exercised and swimmed for a time, lost its function according to the Verrius Flaccus in his time. The region is located roughly, via Appia, almost at the southern end of Circus Maximus, and in the area where the Servian walls lie today. The structure, which was built to meet the water need of the region when it was first built, lost its function when the aqueducts reached its maximum capacity to provide enough water and instead became a place where people engaged in swimming and various other types of exercises (Richardson, 1992).

In the Roman army, swimming was one of the important training. The reason for this given importance was that there were situations such as crossing the river beds by swimming to reach the target objective. However, heavily armed Roman soldiers might have been afraid of swimming, while Germanic soldiers who were tall and have lighter weapons were better

swimmers. The horse guards, which's core was formed by Germanic and Batavian horseman, was well atswimming. It is known that Caesar's horse guards swam the Nile River, Caligula's the Rhine River, Hadrian's guards the Danube River, and the Tiber River. Roman horseman would never wet their weapons and armor in uncontested crossings; as they crossed the river by making a makeshift raft and placing their weapons and armor in it, and swam with their horses (Speidel, 1994). Although their weapons slowed them down, the horse guards could cross the rivers by swimming while keeping their weapons ready, without breaking their formation. However, the fear of Roman soldiers towards swimming was not an obstacle for them. Suetonius wrote that when the Roman soldiers attacked a bridge in Alexandria, many soldiers jumped into the sea and swam to the closest ship (The author states that the soldiers swam a distance of about 200 steps) (Suetonius, 1979).

During the Republican regime in the Roman State; Campus Martius, which was close to the Tiber river, was a chosen area for military training, and newly trained soldiers would go to the river for swimming after finishing their military training. During the imperial times of Rome, the ability to swim was celebrated in the army. Apart from military training; Campus Martius also a place for various recreational and training activities, and swimming in the nearby Tiber river was a routine activity (Campbell, 2012). On the importance of swimming in the army, Vegetius says:

"Every recruit without exception should in the summer months learn the art of swimming, for rivers are not always crossed by bridges: and armies both when advancing and retreating may frequently be forced to swim. Torrents often tend to flood after sudden falls of rain or snow, and ignorance of swimming incurs risk not only from the enemy but the water as well. Therefore the ancient Romans, who were trained in the whole art of warfare through so many wars and continual crises, selected the Campus Martius next to the Tiber in which the youth might wash off sweat and dust after training in arms, and lose their fatigue from running in the exercise of swimming.' It is highly advantageous to train not just infantry but cavalry and their horses and grooms, whom they call gulearii? to swim as well, lest anything should happen to them on account of their inability in the hour of need" (Vegetius, 1993).

The importance given to swimming in Rome can be understood from what Suetonius said about Emperor Caligula:

"Moreover he devoted himself with much enthusiasm to arts of other kinds and of great variety, appearing as a Thracian gladiator, as a charioteer, and even as a singer and dancer, fighting with the weapons of actual warfare,and driving in circuses built in various places. So carried away by his interest in singing and dancing that even at the public performances;

he could not refrain from singing with the tragic actor as he delivered his lines, or from openly imitating his gestures by way of praise or correction. Indeed, on the day when he was slain he seems to have ordered an all-night vigil for the sole purpose of taking advantage of the licence of the occasion to make his first appearance on the stage. Sometimes he danced even at night, and once he summoned three consulars to the Palace at the close of the second watch; and when they arrived in great and deathly fear, he seated them on a stage and then on a sudden burst out with a great din of flutes and clogs, dressed in a cloak and a tunic reaching to his heels, and after dancing a number went off again. And yet varied as were his accomplishments, the man could not swim." (Suetonius, 1979).

Suetonius, in this paragraph where he described Emperor Caligula's talents and skills, especially wrote in his last sentence that the Emperor could not swim, clearly shows us the importance of this sport in Rome. Suetonius also referres Julius Caesar's ability to swim in the river, while recounting his skills (Suetonius, 1979). Cato taught his son "to swim with power between the waves and whirlpools of the Tiber river" (Url, 2020), Cicero also mentions that young people go swimming in the Tiber river (Cicero, 2009), (While swimming in Rome was also carried out in swimming pools; it was seriously done in rivers and the sea, with swimming being one of the skills the Romans valued the most, and a form of education for the wealthy Roman youth (Yegül 1992; Horace, 2015).

The swimming styles that we know people used in ancient Rome were underwater swimming, stroke and breaststroke swimming (Crowther, 2007). As an example, apart from explaining the breaststroke swimming technique in the text below, butterfly swimming style also comes to mind.

"When the sea-dark Dolphin ascends from Ocean to the heavens and emerges with its scales figured by stars, birth is given to children who will be equally at home on land and in the sea. For just as the dolphin is propelled by its swift fins through the waters, now cleaving the surface, now the depths below, and derives momentum from its undulating course, wherein it reproduces the curl of waves, so whoever is born of it will speed through the sea. Now lifting one arm after the other to make slow sweeps he will catch the eye as he drives a furrow of foam through the sea and will sound afar as he thrashes the waters ; now like a hidden two-oared vessel he will draw apart his arms beneath the water ; now he will enter the waves upright and swim by walking and, pretending to touch the shallows with his feet, will seem to make a field of the surface of the sea ; else, keeping his limbs motionless and lying on his back or side, he will be no burden to the waters but will recline upon them and float, the whole of him forming a sail-boat not needing oarage. Other men take pleasure in looking for the sea in the sea itself: they dive beneath the waves and

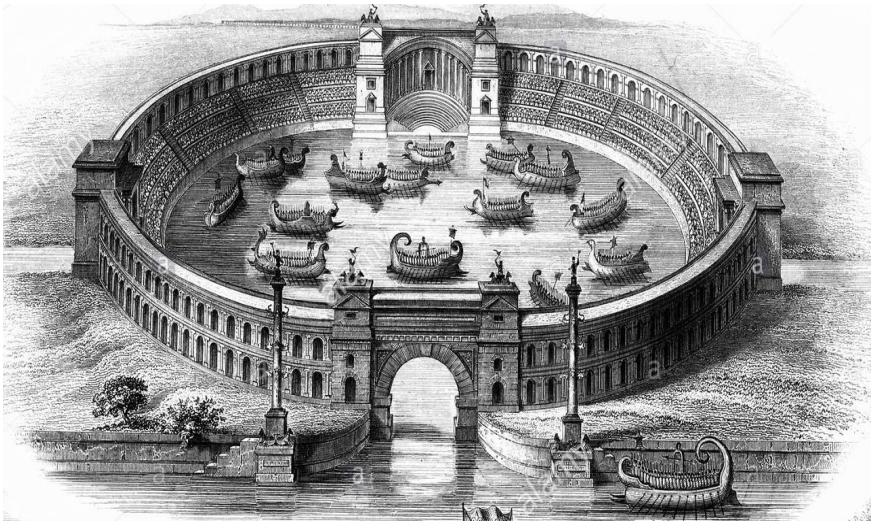
try to visit Nereus and the sea nymphs in their caves; they bring forth the spoils of the sea and the booty that wrecks have lost to it, and eagerly search the sandy bottom From their different sides swimmers and divers share an equal enthusiasm for both pursuits, for their enthusiasm, though displayed in different ways, springs from a single source. With them you may also reckon men of cognate skill who leap in the air, thrown up from the powerful spring-board, and execute a seesaw movement, he who was first lifted on high now finding himself on the ground and by his descent raising the other aloft; or hurl their limbs through fire and flaming hoops, imitating the dolphin's movement in their flight through space, and land as gently on the ground as they would in the watery waves: they fly though they have no wings and sport amid the air. Even if the Dolphin's sons lack these skills, they will yet possess a physique suited to them; nature will endow them with strength of body, briskness of movement, and limbs which fly over the plain" (Manilius, 1978)

Naumachia Games

It is a known fact that seafaring has been done since the start of human history. However, in this period, people benefited from ships in the fields of transportation, naval warfare and trade. As accepted, Seafaring as a sport was first started by the Dutch in the earliest 1660 s, thus forming the foundation of modern sailing sport (Levinston & Christensen, 1999). But the first foundation of todays sailing sport can be traced back to the Roman era.

Sport is based on mutual struggle within certain rules and a winner is determined as a result of the match. The rules can vary from society to society, from geography to geography and historically. These different rules and conditions adds a different value to the sport.

The term 'Naumachia games' refers to the naval war demonstrations that the Romans made by filling the colosseum, pools or arenas with water in order to entertain the masses (Richardson, 1992; Fried, 2010). In these demonstrations, the sides tried to sink each others' ships and drown the other teams' members. As we mentioned above, the conditions and conditions of the sport may be different in every period. Although the outcome of these games is rather bloody and may not be considered in any sport category in that time, today we can classify these games as first examples of sailing sports, based on the mutual struggle and winners.



Url 2, Naumachia (arena of naval battles)

In Roman history, Naumachia games were first organized by Caesar, in 46 B. C. (Kyle, 2015). For this game, an artificial lake was built in a certain region in Campus Martius (which we mentioned earlier) and was filled with water. As far as we can see from the ancient writers, at least the first Naumachia game, (organized by Caesar) was played mainly by war prisoners and convicts with a death sentence. About the subject, Cassius says:

"Finally, he produced a naval battle, not on the sea nor on a lake, but on land; for he hollowed out a certain tract on the Campus Martius and after flooding it introduced ships into it. In all the contests the captives and those condemned to death took part; yet some even of the knights, and, not to mention others, the son of one who had been praetor, fought in single combat." (Cassius, 1916).

Another ancient writer who provided information about the Naumachia games is Suetonius. He says the following about these games:

"For the naval battle, a pool was dug in the lesser Codeta and there was a contest of ships of two, three, and four banks of oars, belonging to the Tyrian and Egyptian fleets, manned by a large force of fighting men" (Suetonius, 1979).

"He gave entertainment of diverse kinds: A combat of gladiators and also stage-plays in every ward all over the city, performed too by actors of all languages, as well as races in the circus, athletic contests, and a sham sea-fight." (Suetonius, 1979).

As we understand it, the Romans must have loved this new type of game; because it can be seen that these games continued during the reign of Augustus, who succeeded Ceasar. Augustus organized his own Naumachia in the 2nd century BC by digging a 1,800 ft long, 1,200 ft wide pool on the shores of the Tiber river. In this game, 30 war ships, additional little ships and 3000 people were known to participate (except the rowers) (Augusti, 1967: Kyle, 2015).

After the emperor Augustus, Emperor Cladius also organized a Naumachia during his reign. In the game he organized, Suetonius writes that the contestants said "they who are about to die salute thee" (Have imperator, morituri te salutant!) However, there is no other indication and evidence comes from ancient writers that whether of these words of the participants were said before starting the game:

"Even when he was on the point of draining out the water from Lake Fucinus he gave a sham sea-fight first. But when the combatants cried out: " Hail, emperor, they who are about to die salute thee," he replied, "Or not," a and after that all of them refused to fight, maintaining that they had been pardoned. Upon this he hesitated for some time about destroying them all with fire and sword, but at last leapt from his throne and ran along the edge of the lake with his ridiculous tottering gait, he induced them to fight, partly by threats and partly by promises. At this performance a Sicilian and a Rhodian fleet engaged, each numbering twelve triremes, and the signal was sounded on a horn by a silver Triton, which was raised from the middle of the lake by a mechanical device." Suetonius, 1959).

There may be a slight change in games during Nero's time, because Suetonius says that "sea monsters" were placed in the pool where the games were held.

"He also exhibited a naval battle in salt water with sea monsters swimming about in it" (Suetonius, 1979).

The Roman emperor Titus also presented a Naumachia game during his reign. (Suetonius, 1959, s. 331). During the reign of Emperor Domitian, a new pool for Naumachia games is known to have been built (Suetonius, 1979).

Conclusion

As we mentioned from the information provided to us by classical writers, the Naumachia games first started in Rome during the reign of Caesar and continued throughout the Imperial period. Unfortunately ancient authors do not provide much information about the clear rules and features of this game. Based on the ancient writers, it is known that prisoners and people sentenced to death were mainly used in these games.

Although these games invented for the entertainment of the Roman people; it was a bloody game where many people lost their lives.

If we look at the history of physical education, it can be seen that sports is an activity that can be traced back to when writing was first invented. However, as far as it's understood; the purpose of physical activities, which are within the scope of physical education, has changed with every passing century and has gained different qualities. The long history of physical activities shows that people still know and care about the importance of sports activities.

Seafaring has been an area that has preserved its importance throughout human history. In this content, swimming in both civil and military fields has become one of the most important physical activities. Although the origin of swimming sports cannot be exactly determined; it can be seen that the there are pools suitable for swimming with a depth of 1-1.2 (the natatio of legionary fortress baths at Isca, which had a 1.6 depth can show us depth is varied in natatio pools according to the it's purpose) in the hot spring baths built by the Romans, when we look at the examples from ancient Rome that we studied in our work. Although it's clear that adults cannot swim at this depth, it can be assumed that children were given swimming training in these pools.

When we look at the palaestras of the cities Herculaneum and Pompeii in Italy, the pools with the necessary depth for swimming, shows that this activity is given great importance. With a depth of the pool in the Herculaneum palaestra was 30 meters long, 3 meters wide and 2.35 meters deep, Herculaneum palaestra's pool used for professional swimming, athletic trainings and competitions. Apart from civil activities, swimming was also a very important activity for the training of Roman soldiers. Because, during war times (in the absence of a bridge), it was sometimes necessary for Roman soldiers to cross bodies of water (such as a river) to reach their objectives. Therefore the Roman soldiers were subjected to strict training on swimming in cases where they might have needed to cross said bodies of water. Among the swimming techniques known and practiced in the Roman period, underwater swimming, stroke and breaststroke swimming styles were known to be among the practiced methods.

We do not have detailed information about the emergence and rules of the Naumachia games, which are believed to have first started in the time of Caesar's reign. (according to the classical authors) What we know about this subject is mainly based on classical authors. For the Naumachia game, sometimes the colosseum was filled, and sometimes private pools were built. Although prisoners of war and criminals sentenced to death are known to be among those who participated in these games, it is not

known whether Roman citizens had the right to participate in this game. The speeches given before starting the games as well as the process of the opening ceremony, is still unknown to this day. The words "they who are about to die salute thee "(Have imperator, morituri te salutant!), quoted by Suetonius, is only known to us in Emperor Nero's period, and it is not known whether such sentences were used in the naumachia games that took place during the reign of Caesar or his successors.

When we look at the history of physical activities (or sports), it is seen that there are many reasons for doing sportive activities. Although the rules and conditions of the Naumachia game are not known and the Romans did not considered it as a kind of sport, we can today say that these bloody games should be evaluated within the context of a sport. Although the formation of sailing sport is genereally accepted by many to have originated from the Dutch, the sport's true origins lies within the ancient Roman naumachia games.

As we mentioned earlier, the origins of sports can be traced back to ancient times and various sport types can be seen. The reasons for participating in sports also somewhat differ from those of today. It should not be forgotten that as the reasons for engaging in sports changes throughout every period and in every society; sport rules can also change. For example, while archery is a sport today, it was once used as a manner to kill people in combat until the invention of firearms. After firearms became more developed over time and became more powerful, archery lost its importance and was gradually transformed into a sport type. In this aspect, Naumachia games should be considered as a type of sport and can also be considered as the ancestor of sailing.

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Chapter 13

RELATIONSHIP OF BADMINTON PLAYERS WITH THEIR COACHES

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Introduction

Interpersonal communication is the main determinant of people's relationship with each other. Communication plays an important role in the individual's ability to express himself/herself as a result of interaction with people and his/her environment and to act in harmony with the society. Communication is a process of interaction that aims to associate and share the meaning of knowledge, ideas, attitudes, emotions, thoughts and skills in order to bring about a change in behavior between the source and the target (Çetinkaya, 1998).

The individual must have the effective communication skills needed in the professional life as in his/her private life and learning process to express himself / herself in the best way,to understand the other person, to prevent conflicts with the other person that is, in order to be able to communicate with his/her environment (Uzuntaş, 2013).

Communication, which plays a major role in human life, has an important place in the sporting life of individuals. Sports environment mainly consists of the relationship between coach-athlete and training -relations in the competition environment. Since these relations have a social and dynamic structure, they are extremely complex and their interpretation requires a special effort (Lyle, 2007).

Communication between the coach and the athlete plays an important role in the physical, psychological and social development of the athlete in sports especially in the training environment (Jowett & Cockerill, 2003). Moreover, the good relations between the trainer and the athlete can be important in increasing the concentration, work discipline, pleasure and success of the athlete. Coach-athlete communication, which takes place in an environment where positive communication processes take place and relations are established, helps to increase the motivation and skills development of the athletes to the desired level (Altıntaş, Çetinkalp & Aşçı, 2012). The relationship between the coach and the athlete is known to be decisive in achieving performance success in competition-based sports. In the sports environment, both athletes and coaches can be mutually dependent to each other. From the athlete's point of view, this reciprocal commitment is to benefit from the coach's competence, knowledge and experience; from a coach's point of view, it tells the need to transfer its competence and skilsl into performance and success through the athlete. Therefore, the athletes and coaches can develop a professional relationship or partnership between themselves and they need to spend time together and collaborate in order to achieve performance success (Philippe & Seiler, 2006). From this perspective, the positive coach-athlete relationship that occurs in an environment where positive communication processes are experienced and positive relationships is established provides an

appropriate environment for the athletes to improve their skills as well as increasing the motivation and satisfaction of the athletes (Altıntaş et al., 2012).

Method

Research Model

This research, which aims to evaluate the relationship between athletes and coaches in terms of different variables, is designed according to the screening model. Screening models are research approaches aiming to describe a past or present situation as it exists (Karasar, 2012).

Study Group

The study group consists of 445 badminton players aged 19 and under. 223 of the participants are female and 222 are male. In addition, 139 of the badminton players in the current group compete as national athletes. The determination of the study group was based on the principle of accessibility and voluntary participation among non-random sampling methods.

Data Collection Tools

"Personal Information Form" and "Athlete-Coach Relationship Questionnaire (ACRT-Q)" were used as data collection tools.

Personal Information Form: The personal characteristics of the participants were collected through the Personal Information Form. In the Personal Information Form; there is information about age, gender, nationality, sporting experience and weekly training load.

The Athlete-Coach Relationship Questionnaire-ACRT-Q: The questionnaire is a self-assessment tool developed by Jowett and Ntoumanis (2004) to assess the nature of the relationship between the coach and the athlete. The questionnaire has two forms of 11 items for both the athletes and the coaches. The questionnaire consists of 11 items, where the judgments are made according to 7 evaluation steps (1: I strongly disagree – 7: I strongly agree), and it includes three sub-dimensions defined as closeness (4 items), commitment (3 items) and complementary (4 items). Descriptions and item examples of the three sub-dimensions are given below:

Closeness: Effective bond between the coach and the athlete, high trust and respect towards each other, giving mutual value. "I'm close to my coach." / "I'm close to my athlete."

Commitment: Showing commitment without expecting it in return, continuity, desire for the relationship, make positive intentions "I am committed to my coach"/ "I am committed to my athlete."

Complementary: Taking responsibility, desire to win together, being friendly." In training I approach my athlete in a friendly way"/ "In training I approach my coach in a friendly way"

Data Analysis

In the analysis of the data collected over the sample group, firstly, whether the data were suitable for normal distribution was examined by taking Skewness and Kurtosis values into account. Having met the parametric assumptions of the data, meaningful statistics were introduced. Descriptive statistics (mean, ss, and frequency values), independent groups t test and correlation analysis were performed accordingly. Significance value was determined as 0.05.

Findings

Table1. Correlation results according to the age variable

		Age	*Closeness*	*Commitment*	*Complementary*
Age	Pearson Correlation	1	-,217**	-,213**	-,203**
	Sig. (2-tailed)		,000	,000	,000
	N	445	445	445	445

** p<0.01

When Table 1 is examined, there is a negative relationship between the sub-dimensions of closeness(r: -,217; p <0.05), commitment (r: -,213; p <0.05) and complementary (r: -,203; p <0.05)), and the age variable at low-level. In other words, the increase in the age variable causes a decrease in three sub-dimensions.

Table2. Independent groups t test results according to gender

	Gender	*N*	*Mean*	*Std. Deviation*	*Sd*	*t*	*p*
Closeness	Female	223	26,5022	3,14496	443	1,769	0,078
	Male	222	25,8514	4,50244			
Commitment	Female	223	18,2556	3,57571	443	1,723	0,086
	Male	222	17,6261	4,11375			
Complementary	Female	223	24,5471	3,76042	443	0,711	0,478
	Male	222	24,2793	4,17745			

According to Table 2, no significant difference was found between the female (26.5) and male (25.85) scores in the sub-dimension of closeness (t_{443}: 1,77; p>0,05). Similarly, no significant difference was found in the sub-dimensions of commitment (t_{443}: 1.72; p> 0.05) and complementary (t_{443}: 0.71; p> 0.05) according to the gender variable.

Table3. Correlation results according to sporting experience variable

		Closeness	*Commitment*	*Complementary*
Sporting experience	Pearson Correlation	,012	,028	,031
	Sig. (2-tailed)	,802	,561	,516
	N	445	445	445

When Table 3 is examined, there was no significant relationship between the participants' sporting experience and the sub-dimensions of closeness (r: ,012; p> 0.05), commitment (r: ,028; p> 0.05 and complementary (r: ,031; p> 0.05).

Table4. Correlation results according to weekly training load variable

		Closeness	*Commitment*	*Complementary*
Weekly training load	Pearson Correlation	,086	,141**	,071
	Sig. (2-tailed)	,071	,003	,136
	N	445	445	445

When Table 4 was examined, a significant, positive relationship was found between the participants' weekly training loads and the sub-dimension of commitment at low-level (r: 0,141; p<0,05). However, no relationship was found between the participants' weekly training loads and the sub-dimensions of closeness (r: 0.086; p> 0.05) and complementary (r: 0.071; p> 0.05).

Table5. Independent groups t test results according to the status of being a national athlete

	The status of being a national athlete	*N*	*Mean*	*Std. Deviation*	*Sd*	*t*	*p*
Closeness	National Athlete	139	25,5755	4,55717	443	2,21	**0,028**
	Non-national athlete	306	26,4510	3,52218			
Commitment	National Athlete	139	17,6547	4,34009	443	1,05	0,291
	Non-national athlete	306	18,0719	3,62433			
Complementary	National Athlete	139	23,5108	3,93308	443	3,26	**0,00**
	Non-national athlete	306	24,8235	3,92740			

According to Table 5, there is no significant difference in the sub-dimension of commitment according to the status of being a national athlete (t_{443}: 1,05; p>0,05). However, there was a significant difference in the sub-dimensions of closeness and complementary according to the status of being a national athlete. In both sub-dimensions there is a significant difference in favor of non-national athletes.

Discussion and Conclusion

In this study, which aims to evaluate the relationship between athletes and coaches in terms of different variables; A significant negative correlation was found between the age variable and the sub-dimensions of closeness, commitment and complementary at low-level. In addition, a significant positive, relationship was found between the participants' weekly training loads and the sub-dimension of.commitment at low-level. Significant differences were found in the sub-dimensions of closeness and complementary according to the status of being a national athlete. In both sub-dimensions there is a significant difference in favor of non-national athletes.

In the relationship of badminton athletes with their coaches, a significant negative correlation was found between the age variable and the sub-dimensions of closeness, commitment and complementary at low-level. In other words, the increase in the age variable causes a decrease in three sub-dimensions. This situation can be interpreted as there is a differentiation in the expectations of athletes based on their relationship with their coaches as their age increases. It was concluded that the relationship between the coach-athlete did not differ according to age and the scores obtained by the participants in different age groups were close to each other in the sub-dimensions of complementary, commitment and closeness in the study on student-athletes studying at university by Selağzı and Çepikkurt (2009) and in the study on athletes engaged in individual and team sports by Altıntaş et al. (2012). These studies in the literature and the findings from current research differ from the findings of this study.

No significant difference was found between the participants and their coaches according to gender. It is seen that there is no difference in the relationship between the athletes and their coaches in terms of whether they are male or female. Selağzı and Çepikkurt's (2009) study with student-athletes studying at the university, Karademir and Türkçapar's (2016) study with individual and team athletes and the findings obtained by Savcı and Abakay (2017) are consistent with the findings of this study. There are also studies in the literature that contradict the findings of our research. In a study conducted by Ramazanoğlu (2018) with coaches, it was found that gender variable had a statistically significant effect on coach-athlete relationship.

No significant relationship was found between the participants' sporting experiences and the sub-dimensions of closeness, commitment and complementary. This can be interpreted as the trust and respect towards the coach does not change as the athletes gain experience, and there is no difference in the desire to continue to win together. Findings obtained from the studies of Ağduman (2018) with athletes engaged in winter sports, Yücel (2010) on wrestlers and Abakay and Kuru (2011) with footballers are in consistent with the findings of this study.

A positive, significant relationship was found between the participants' weekly training periods and the sub-dimension of commitment at low-level. However, no relationship was found between the participants' weekly training periods and closeness and complementary sub-dimensions. This shows that as the training time of the athletes increases, the commitment between the athletes and coaches increases, as well. It can also be interpreted that as the time spent with the coaches increases, they will get to know each other better and increase the communication in the way of unification for common purposes. Selağzı and Çepikkurt (2009) have showed in their study with student-athletes that the relationship established with the coach will develop depending on the duration of the training. Therefore, this situation contradicts the results of Abakay and Kuru (2011) have obtained. However, in another study by Abakay (2010) on football players, it was found that there was a significant increase in the level of communication when the duration of the training was increased.

There was no significant difference in the sub-dimension of commitment according to the status of being a national athlete. However, there was a significant difference in the sub-dimensions of closeness and complementary according to the status of being a national athlete. In both sub-dimensions there was a significant difference in favor of non-national athletes. This finding can be expressed as the possibility that national athletes may work with a different coach in each category can negatively affect their relationship with their coaches. In other words, the fact that national athletes work with more than one coach in the process of preparing for international competitions can be interpreted as having a negative impact in terms of athlete-coach relationship. Ağduman (2018) found no significant difference according to the status of being a national athlete in his study with athletes engaged in winter sports. There is no difference in the interpersonal behaviors and motivation in sports according to their status of being a national athlete. It is concluded that there is no difference between successful and unsuccessful athletes in terms of competence and autonomy needs in the study conducted by Bilge (1990) in order to determine the psychological needs of athletes from different branches.

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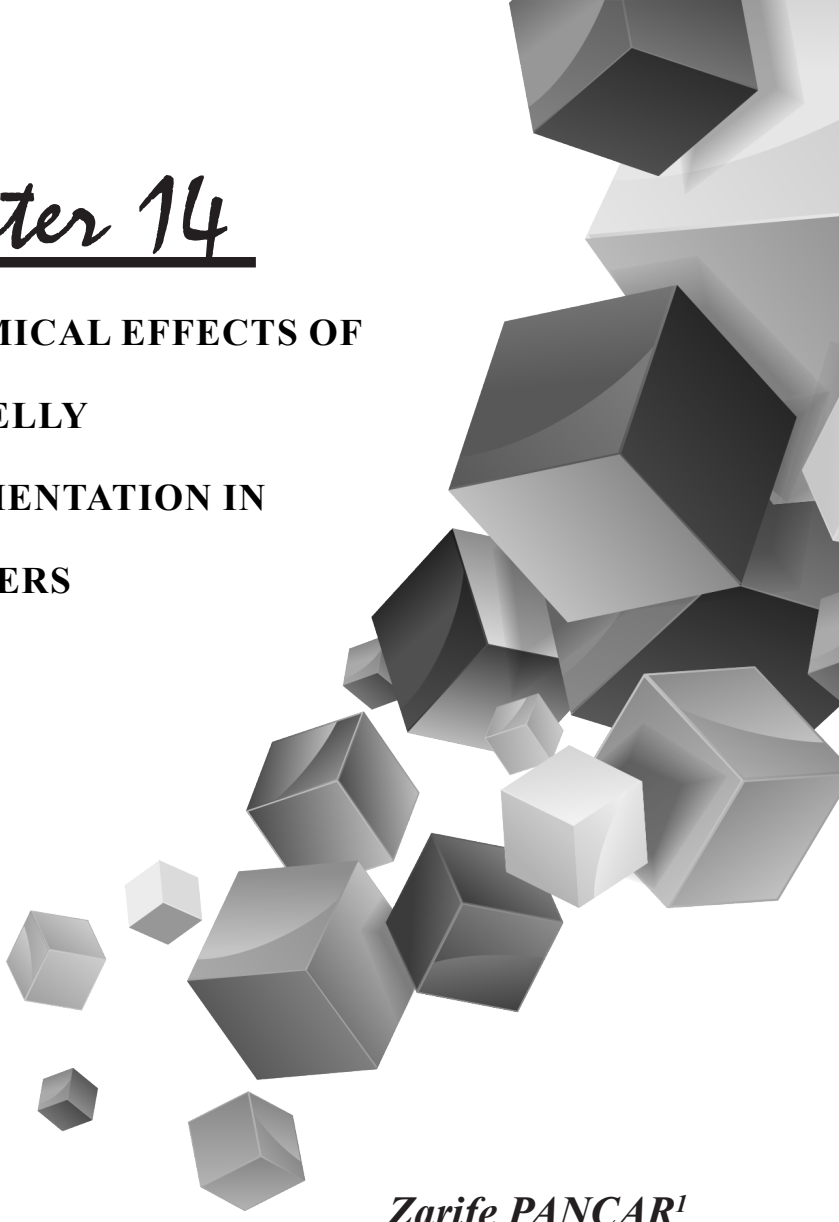
Chapter 14

BIOCHEMICAL EFFECTS OF ROYAL JELLY SUPPLEMENTATION IN EXERCISERS



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Introduction

Today's conditions tend to reduce health quality by negatively affecting human life. Although individuals understand the importance of exercise and physical activity better, individuals prefer a sedentary life without exercise due to the increase in environmental factors such as negative eating habits, increased consumption of fast and snack type foods, the intensity of work life and stress. The effects of sedentary life make individuals susceptible to diseases. It has to struggle with many chronic diseases such as cardiovascular diseases and metabolic disorders. There are many positive effects of exercise and living an active life, proven in the literature. It is possible to count the psychological, physical, physiological and dynamic effects of an active life on the individual. (Bosnak-Güçlü et al. 2008; Turgut and Sarıkaya 2020; Sarıkaya et al. 2016; Çınar et al. 2018). Regular exercise causes more oxygen consumption in active muscles and with this consumption, reactive oxygen species are released in the body and can damage many tissues and systems. These free radicals increase during exercise and return to their previous levels after exercise. Due to the excess production of various anti-inflammatory cytokines with exercise, the acute phase response is developed by the body (Kaspais and Thompson, 2005).

One of the issues that is much more important than exercise in the protection of human health is nutrition. Nutrition is one of the main points in growth, development and survival. The importance of nutrition and sports for a healthy life has long been known. Hippocrates BC. In 480, he explained the basic principle of healthy life as follows. "Healthy life requires knowledge of the individual's body structure (heredity) and the effects of various foods. However, nutrition alone is not enough for a healthy life, it should be done in exercise " (Ersoy, 2004). However, the importance of the relationship between nutrition and strength was stated by scientists in the early organization of sports as in the ancient Greeks, and the subject was emphasized (Kasap and Çobanoğlu, 2009). The concept of nutrition means a magic wand for some, and a compulsory education and practice process for some within the concept of sports. Considering that the organism needs more than 50 kinds of nutrients per day, we come to the conclusion that if the nutrients are not consumed for a certain period of time or a few of them are not consumed, health and performance will be negatively affected. Nutrition is holistic and there are no magical foods and drinks to maximize the athlete's performance. The important thing is to ensure that the athlete has adequate and balanced nutrition within the rules of sports nutrition (Ersoy and Hasbay, 2000). Studies have concluded that athlete performance, which improves with a balanced diet, will decrease with malnutrition (Fox et al. 1999). The

information supported by researches, on the other hand, causes inadequate and unbalanced nutrition, negative effects on physical development and disruption in mental developmentDaily nutrition may be sufficient to meet their mental and physical development in individuals who do not exercise. However, when individuals start doing daily activities or exercise, daily eating and drinking activities cannot meet their needs. In this case, individuals who do sports primarily need vitamins, minerals, essential amino acids and a number of biological substances to meet their body needs. For this reason, the daily needs of individuals who exercise are more than those who do not do sports. To meet these needs, nutritional supplements or supplements are available under different trade names in the markets today. These differ in content and quality. Some of them are more harmful to the body than good. But it is royal jelly in a natural product presented in nature without any additives (Joksimoviç et al. 2009).

Royal Jelly

Royal jelly 5-15 days of young worker bees' upper jaw (mandibular) and throat glands (hypopharyngeal). The importance of royal jelly, one of the bee products, in the 1600s noticed and excellent food in English. It is named "Royal Jelly" which means. All larvae are in their first three days of life, queen bee and the larvae that will be they all feed on royal jelly. Royal jelly the natural thimbles that will be 3-4 days old queen from the eyes where the larvae or the queen bee from the inoculation of 1-2 days old larvae to the eyes 48- Jelly-like bone collected after 72 hours a unique fragrance in its color and a burning taste can be defined as having food. Worker bees emerge from the honeycomb cells as adults within 4 days after the hypopharyngeal glands. There is a big increase in protein synthesis. This the increase continues until the 8 th day, then gradually increasing to a maximum on day 14. It reaches the level and decreases from the 17 th day begins. Royal jelly; pollen, and nectar in the digestive organs of young worker bees puppies found on their heads after ingestion from alimentary glands (mandibular and hypopharyngeal) is secreted. Royal jelly is quite fluid and with the consistency of yogurt together it is a homogeneous substance. Light beige and yellowish white to color, pungent phenolic odor and it has a characteristic sour taste. Its density is approx. It is 1.1 g / cm3 and is soluble in water (Lercker et al. 1981). Its viscosity depends on the water content and it depends on time. At room temperature or 5 ° C slowly more viscous when kept in the refrigerator (Lercker et al., 1984; Arslan and Bayraktar, 1988). Proteins, lipids in the structure of royal jelly, carbohydrates, ash, P, Na, K, Ca, Mg, pollen, C, D and vitamins E and all B vitamins and other there are some vitamins. 1.3-2 µg / g B1 in royal jelly Vitamin 7.5-10 µg / g Vitamin B2, 2-8 µg / g B6 Vitamin, 2-3 µg / g Vitamin H and 3-5 µg / g Vitamin C (Benfenati

et al., 1986). Recently, many studies have been carried out in terms of fat content, sugars, sterols, phosphorous compounds and nucleic acids in the structure of royal jelly. In studies conducted, royal jelly also It has been determined that there is a substance that is defined as 10-hydroxy-α-2-deconoic acid and has an antibiotic effect against many bacteria and fungi (Lercker et al. 1981). With this feature, the bee Escherichia coli, Salmonella, Proteus, Bacillus development of subtilis and Staphlococcus aureus prevents. In the structure of royal jelly proteins have antioxidant properties and are reactive as a result of an imbalance between oxygen species cancer that develops due to oxidative stress, atherosclerosis, hypertension, infertility, asthma, diseases such as depression and diabetes It is used in the treatment and anti-aging.

The biggest feature of royal jelly is the cell in the body effective on regeneration, production and metabolism that is. Strength and vitality to the organism allowing him to renew himself gives. In these matters, insects, poultry and life expectancy in studies on mammals It has been found to increase significantly. Royal jelly; cholesterol in the blood, total lipid, phospholipid, triglyceride, beta-lipoprotein levels drop; lowering blood pressure and vasodilating It has activity. Also insulin and so on hypoglycemic due to containing peptides (blood lowering sugar) and immunological effect, antimicrobial property, skin and hair diseases therapeutic, loss of appetite, chronic illness, irregular and caused by malnutrition It is used as a regulator of abnormalities.

Royal Jelly Supplements and Effects

Many studies on royal jelly prove that it is a miraculous nutrient. Considering its effects, it is considered as a treatment and supportive food. Its antibacterial effect, anti-inflammatory effect, immunomodulatory effect have been attributed to the physiological effect of the 10-HDA substance in its content (Gasic et al. 2007).

Royal jelly is the most popular among healthy foods. Royal jelly is used as a cosmetic or dietary supplement because it is believed to have similar effects on humans as it does on bees. Pharmacological activity (such as vasodilatative and hypotensive activity), increase in growth rate, disinfectant effect, antitumor, antimicrobial, antioxidant, immunomodulator, antihyper cholesterolemic and anti-inflammatory activity of royal jelly in experimental animals were studied. In addition, anti-aging, wound healing, hypoglycemic (antidiabetic) and antitumoral properties have also been attributed to royal jelly (Ramadan and AlGhamdi, 2012; Fratini et al. 2016). In studies examining the effect of royal jelly on growth and development, it has been reported that components such as 10-HDA, antibacterial protein and 350 kDa protein stimulate genital

organ development and human monocyte proliferation in male mice (Ramadan and AlGhamdi, 2012). Studies on the activity of royal jelly with neuromodulators and neurogenesis are available in the literature. Terada et al., in their studies with 10-HDA and 10-hydroxydecanoic acid found in royal jelly, revealed that it can act as a potent agonist of human Transient Receptor Potential Ankyrin 1 (TRPA1) and Vanilloid Receptor 1 (TRPV1) receptors and that energy expenditure may increase with thermogenesis (Terada et al. 2011). Although royal jelly is known to prolong the life of bees, it is thought that this property is partly owed to royalactin and its antioxidant activity. It has been revealed that royal jelly contains flavonoids such as cinnamic acid, quercitin, kaemferol, galangin, fisetin, pinocembrin, naringin, hesperidin, apigenin, acacetin, chrysin and luteolin (Ramadan and AlGhamdi, 2012).

Antioxidants protect tissues from harmful oxidative damage. Diet is the most important source of antioxidants. The combined activity of dietary antioxidants is probably superior to the individual effect of each antioxidant drug, supporting the hypothesis that royal jelly shows strong antioxidant properties due to the additive effect of its antioxidants (Kocot et al. 2018; McKeever et al. 2002). Our literature review showed that there are many studies reporting positive effects of royal jelly on the lungs. Waleed et al. (2015) found that royal jelly and propolis had a positive anti-inflammatory effect on allergic asthma and pulmonary fibrosis in albino rats. Arajua et al. (2012) also showed that 1 gram/kg/day royal jellyled to a decrease in the number of Th1-mediated cells and an increase in the number of Th2-mediated cells in the peripheral blood and lungs in people with asthma. Studies argue that royal jelly does that by scavenging free radicals. Zargar et al. (2017) investigated the effect of royal jelly on pulmonary fibrosis induced by bleomycin. Zargar et al. (2017) showed that TGF-β level decreased in royal jelly consumers. Kamiya et al. (2018), conducted an intracellular study of the proapoptoticactivities of royal jelly and reported that HPO-DAEE, a fatty acid of royal jelly, induced apoptosis of A549 cells. They argued that intracellular ROS activated by HPO-DAEE played a role in the destruction of cancer cells. Further research is warranted detailing the chemical structure and clinical application of HPO-DAEE in royal jelly. In conclusion, proteins, proapoptoticfatty acids, vitamins, and numerous antioxidants in royal jelly can prevent smoking-induced airway obstruction and fibrosis in the early period, and PFTs can yield positive results before there arises a shift in the balance between oxidants and antioxidants in favor of oxidants.

In a study investigating the effects of royal jelly supplements on blood lipids; when compared with the levels of cholesterol in the blood samples taken before royal jelly administration, a significant decrease was found

in the cholesterol levels in the blood samples taken after four weeks of royal jelly administration ($p < 0.001$). Similar changes were also present in triglyceride levels and a significant decrease in triglyceride levels was observed in samples taken after four weeks of royal jelly application ($p < 0.001$). A decrease of approximately 10% in serum cholesterol levels and a decrease of 38% in triglyceride levels were detected (Yıldız and Umudum, 2000). Various studies conducted to date show that lipid-lowering therapy reduces the progression of coronary lesions and increases the frequency of regression. Cholesterol and triglyceride levels lowering it will effectively prevent hyperlipidemia. Experimental studies have shown that royal jelly is an effective factor in preventing atherosclerosis (Vittek et al. 1995; Butcher and Baird 1968). It has been reported that the use of royal jelly may also be effective in the treatment of atherosclerosis in humans (Madar et al. 1965; Hammerl and Pichler 1957). Animal experiments have shown that royal jelly significantly reduces serum and liver total lipid and cholesterol levels (Vittek et al. 1995). Shen et al. Found a significant decrease in serum cholesterol levels by administering royal jelly of 700 mg / kg daily to experimental hyperlipidemia rats for six weeks (Shen et al. 1995).

In general, natural products are advantageous because they are easily obtained and relatively safe. In addition, various natural compounds have been reported to be useful to improve the anti-cancer effects of certain chemotherapeutic agents. In recent years, the consideration of natural products as anti-cancer treatments has grown worldwide (Bommareddy et al. 2018; Miyata et al. 2018). Royal jelly (RJ) is of interest for the improvement of health and medicines. RJ contains water, sugar, proteins and lipids and approximately 90% of RJ lipids are free fatty acids, containing 8–12 carbons that are usually either hydroxyl or dicarboxylic forms (Melliou and Chinou, 2006). 10-hydroxy-2-decenoic acid (10-HDA), known as a major component of RJ, plays important roles in various biological activities, including inflammation and oxidative stress (Honda et al. 2015; Chen et al. 2016).

The effects of royal jelly supplements on the liver enzymes in smokers have also been positive (Taşdoğan and Pancar 2020). It has been emphasized that cigarette smoke increases liver enzyme values as a result of changes in the permeability of the liver membranes, and alanine aminotransferase and aspartate aminotransferase may also be common markers of hepatocellular injuries (Watanabe et al. 1995) Liver functions are often impaired by the effects of chemicals, medicines, alcohol and cigarettes that the body is exposed to many times, or by infections. In addition, the liver is constantly responding to the ability to remove harmful molecules taken from the body and to reorganize and repair tissue damage

caused by them (Zimmerman and Maddrey, 1987; Crawford, 2002). It is said that the treatments applied in cell damage are not possible because the liver is the organ where all the foodstuffs and chemicals taken are changed. In this respect, it is seen that natural nutrients have come to the forefront in the treatment of liver organ or tissue, which is deteriorated due to alcohol, excessive nutrition due to nutrition, exposure to chemicals and their damages, poisoning, viral infections, bacterial infectious diseases (Akarca, 2007). In particular, it prevents liver and kidney damage and protects the functions of these organisms in patients receiving intensive antibiotics, receiving radiotherapy and chemotherapy. It is emphasized that royal jelly can be prevented from fatty liver, because it contains plenty of acetyl choline. Bee milk is used in the treatment of chronic hepatopathy, hepatic cirrhosis, gastroduodenal ulcer, chronic constipation, chronic bronchitis of the elderly and atrophic rhinitis, renews the skin tissue, balances keratinization, nutritional, biological stimulating, revitalizing effect has been supported by the studies. It was also emphasized that it provides support for rapid and high-quality recovery after anesthesia during the healing process (Strant, 2015; Strant et al. 2016).

RJ is a potential alternative for the treatment of hepatic and renal dysfunctions. Dietaryadministration of RJ (200 mg/kg) for seven days as a hepato-protective agent could improve the severe liver damage induced by paracetamol in mice (Kanbur et al. 2009). The treatment with RJ, before and after cisplatin-induced renal stress in rats, remarkably ameliorates the levels in serum of uric acid, urea nitrogen, bilirubin, and total protein, suggesting a protective response to the harmful effect of cisplatin (Karadeniz et al. 2011). RJ administration may be the potential preventive agent to hepatic toxicity induced by cisplatin causing histological changes in hepatic tissue through free radical scavenging, anti-oxidant properties, and anti-apoptotic stimulation (Yıldırım et al. 2012). RJ could be considered as beneficial to inhibit liver toxicity induced by side effects of oxymetholone (OXM) and azathioprine through reducing the activities of serum hepatic enzymes and MDA formation (Nejati et al. 2016; Ahmed et al. 2014). RJ has a hepato-protective effect against oxidative impairment, decreasing lipoperoxidation and corticosterone, and enhancing total antioxidant capacity in liver tissue after stres induction in rats (Caixeta et al. 2018). In addition, RJ treatment ameliorates the renal ischemia/reperfusion injury in rats via reducing blood urea nitrogen, kidney MDA, leukocyte infiltration, creatinine, adhesion molecule-1 expression, glomerular diameter, the level of TNF-α, and increased the tissue ferric reducing/antioxidant power (Salahshoor et al. 2019).

The positive effects of short-term royal jelly supplements made in human experiments have been determined. In the study; the effects of

royal jelly on testosterone levels were investigated. A placebo-controlled experimental design was used and a total of 20 men were randomly divided into two groups. The placebo group (n = 10) took corn starch mixed with 1000 mg/day of water in glass vials for 15 days between 08:00 and 10:00, while the experimental group (n = 10) took a 1000 mg/day of pure royal jelly supplement during the same hours. In the findings obtained; the pre-test value of the experimental group was 453.74 ng/dL and the post-test value was 510.25 ng/ dL. According to the statistical analysis, the difference between the pre-and post-test values was 56.51 ng/dL. The pre-test value of the placebo group was 459.93 ng/ dL and the post-test value was 466.03 ng/dL. According to the statistical analysis, the difference between the pre-and post-test values for the placebo group was 6.10 ng/dL. Statistically, the increase between the pre- and post-test for the experimental group was found to be significant at $p<0.05$ level, whereas the values of the placebo group were not found to be statistically significant ($p>0.05$). Also a statistical significance was found between the groups in favor of the experimental group ($p<0.05$). In conclusion, intake of short-term royal jelly, which is used in many areas, is effective in increasing testosterone levels in sedentary healthy men. Royal jelly supports the development of bee larval cells and maintains the ovulation capacity, and this increases its possibility of having an important role in fertility. It is assumed that the possible physiological mechanism responsible for this effect works through polyunsaturated fatty acids and phospholipids contained in royal jelly protecting the sperm cell membrane from oxidative damage, interacting with testosterone receptors, causing cell proliferation and increasing testosterone levels (Taşdoğan et al. 2020).

Another study investigated the effects of royal jelly supplementation at a dose of 1000 mg on aerobic and anaerobic performance. Our studycame up with two major findings. Firstly, Royal Jelly was positively affect the aerobic power], and secondly anaerobic power values. In the analysis of the data of the experimental group, a statistically significant difference was found in the parameters VO2, relative VO2, VE, RR, VCO2 and RER in favor of the final test in the analysis of the difference between the pre- and post-test in aerobic measurements. In the anaerobic measurements of the experimental group, a significant difference was found concerning the FI value in favor of the final test. According to the results obtained by this study, using royal jelly supplements for 15 days can have a positive effect on aerobic and anaerobic power in sedentary men. It can thus be argued that royal jelly taken at a dose of 1000 mg for 15 days has positive effects on aerobic and anaerobic capacity in sedentary healthy male subjects. On the basis of the research results, it can be argued that the increase in the aerobic and anaerobic values of the subjects is due to the positive effects

of royal jelly on physical performance, overall health and fatigue, and to the presence of highly nutritious components in royal jelly (Taşdoğan and Vural et al. 2020). Studies have shown that royal jelly has positive effects on physical performance (Meng et al. 2017), muscle strength and the fat-muscle ratio (Joksimovic et al. 2011).

Studies on royal jelly continue to be investigated in terms of all its effects. With its rich and natural content, its positive effects on physiological, hormonal and performance production in the human body have been supported by studies. Physical activity is the involvement of people from an inseparable age in human life in any branch of sports. Sports and exercise have physical and mental effects apart from intense exercise. Although many people are aware of the benefits of sports, it is still easy for some of us to do sports. However, the positive effects of gaining the habit of doing sports on our lives.

Regardless of whether we are sedentary or athletes, the most important point you should pay attention to while doing sports is how we eat while doing sports. Long-term use of poor quality and disputed powders and other supplements can do more harm than good for the body. These situations led to a new understanding of the value of natural products in sports nutrition. When it comes to natural food products, bee products are evaluated in a separate place. Humans have been benefiting from the benefits of raw honey products, propolis products, bee pollen products and royal jelly products for centuries. Recent researches make royal jelly more important in sports nutrition. If we summarize the effects of royal jelly on people who do sports; It affects the work by stimulating the metabolism. Losing weight and maintaining ideal weight is very important for athletes. Royal jelly supports the absorption and transformation process of the food we consume by our digestive system. In this way, it contributes to the energy production of the body. A healthy metabolism burns calories quickly, making it easier to lose weight. Intense training, physical activity and sports can cause severe muscle fatigue. Included in the daily diet of athletes, royal jelly can reduce the effects of muscle fatigue and can be a source of energy. Seasonal changes cause the immune system to strain and our immune system is under the threat of external factors in summer and winter. Keeping the immune system strong and healthy is essential for athletes. Royal jelly supports the immune system by helping to strengthen the immune system thanks to its high protein, vitamin and mineral content. Royal jelly is recommended to athletes especially before competitions. The road to success for athletes is through a strong physique and a strong mind. Strength and stamina alone are not enough for success. Athletes should be able to control their minds as well as their bodies for success. Valuable organic components such as 10-HDA and royalactin

in the content of royal jelly both protect brain health and improve brain activities. According to researches, royal jelly has a positive effect on the protection and therapy process against some neurological disorders such as depression. Our immune system is always under the threat of harmful bacteria and viruses. These harmful bacteria and viruses prevent our body from performing its daily activities in a healthy way, causing various diseases. Royal jelly is a natural antioxidant that protects against harmful bacteria and viruses. In addition, our body needs extra energy and strength due to intense exercise. Royal jelly naturally provides the extra energy and power that athletes need. The results of the studies have revealed the benefits of royal jelly. The use of RJ, whose positive effects are known every day is increasing among people.

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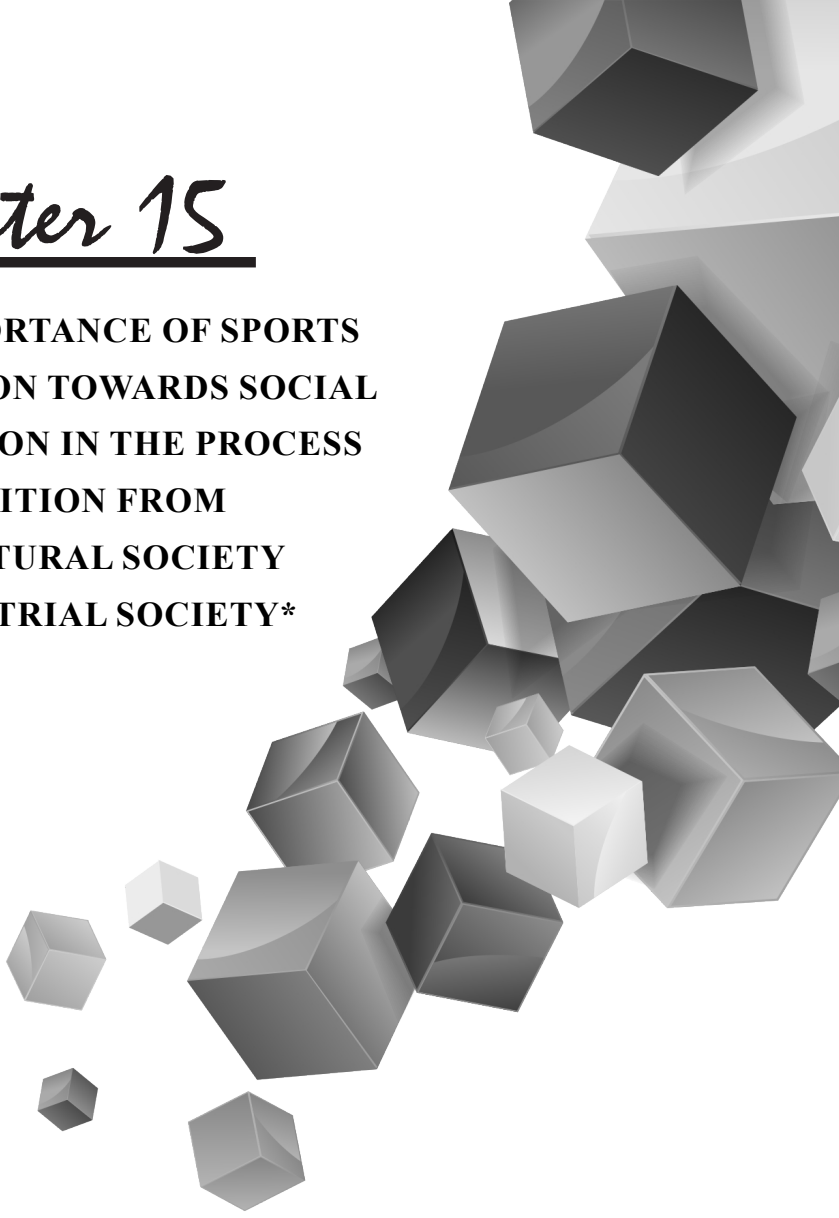
Chapter 15

THE IMPORTANCE OF SPORTS EDUCATION TOWARDS SOCIAL ALIENATION IN THE PROCESS OF TRANSITION FROM AGRICULTURAL SOCIETY TO INDUSTRIAL SOCIETY*



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* This study was presented as a paper at the 4th International Academic Congress of Sports Studies.

Introduction

There is a strong relationship between sports and health. In addition, it can be said that there is a relationship between sports and education level, sport and income, sports and intelligence, and sports and social alienation (Tezcan, 1998). Social alienation occurs as a result of the urbanization and industrialization process. Individuals in this situation need to be socialized. One of the important tools of socialization is to communicate with teammates and rivals while doing team or individual sports.

Individuals who have advanced in social alienation, on the other hand, spend their time doing sports. Sport is a motivation tool for them. The society's obligation to do sports is due to the fact that sports is extremely important for physical and mental health. The main reasons of individuals who do sports at amateur level are based on reasons such as healthy living, losing weight and feeling good. When the preferred sports are analysed, it is understood from the statistics that a significant portion of them play primarily football and fitness comes second.

Agricultural Society

Agricultural society is a society whose economy is based on agriculture and the majority of the population works in the agricultural sector. Soil cultivation is the main source of prosperity in the agricultural society. The agricultural society comes after the hunter-gatherer society and leaves its place to the industrial society (Barth, 2001). The transition to the agricultural society started in the Neolithic Age and it continues today. It has been the most common form of socio-economic organization throughout most of human history (Johnson, 2000).

The development of agriculture about 5000 years ago brought about revolutionary changes in societies. People cultivate the land and take advantage of the power of animals within agriculture. Moreover, productivity has increased substantially compared to the past. Individuals have taken roles in new economic fields such as blacksmithing, tool making, animal husbandry and construction. Towns were formed with the development of agriculture and linked with each other by networks of food, livestock and other merchandise merchants. The four factors as agricultural technology, efficient specialization, settlement and trade have been key elements in a revolutionary transformation of the economy (Macionis and Plummer, 1998). However, agricultural societies are mainly based on agricultural production obtained by cultivating the soil. Additionally, farmers have greatly increased their production with the introduction of technological innovations such as plows. Furthermore, it became possible to cultivate larger pieces of land for generations (Url 1, 2020)

Industrial Society

Industrial society is a form of social organization dominated by the factory production system (Hirszowicz, 1985). The industrial revolution - if we express it following the famous historian Toynbee - first appeared in England in the middle of the 18th century.

The industrial age has been called **the age of most changing and most altering**. According to Freyer, the industrial society in England has developed in six waves. These are:

- Weaving wave,
- Iron and steel wave,
- Transport age wave,
- Chemistry age wave,
- Electricity industry wave,
- The age of gasoline engines (Freyer, 1954).

Later, some authors added the atomic age and the age of information technologies to these waves.

These changes occurred everywhere, not just in factories, cities and mines. The social structure has changed drastically where industrialization emerged.

We can list the changes that have occurred with the emergence of the industrial society with their main titles as follows:

- Industrial production has come to the fore.
- New social classes have emerged.
- Division of labor, specialization and standardization have increased.
- Community life declined as urbanization emerged.
- Secularization and rationalization have become the hallmarks of the industrial society.
- Capital accumulation and bureaucratic organizations have increased.
- Technological development and modernization both influenced the emergence of industrial society and was influenced by its results
- While individualization and social differentiation have increased on the one hand, mass consumption and education have increased similarity on the other hand.

- Pluralist societies have emerged parallel to the development of the industrial society.
- The skill level of the workforce has increased; science has been applied to all areas of social life, especially working life.
- Industrial societies are also societies in which money and the domination of the nuclear family increase (Url 1, 2020).

Social Alienation

Communal alienation or social alienation is a condition in social relationships that is reflected in a low degree of integration or common values and a high degree of distance or isolation between individuals or between an individual and a group of people in the community or business environment (Ankony, 1999). It is a sociological concept developed by several classical and contemporary theorists. The concept has many disciplinary uses and can refer to both a personal psychological situation (subjectively) and some kind of social relationship (objectively) (Url, 2).

Industrialization and Alienation process caused the working class to grow gradually and living conditions gradually reached the level of misery with this growth (Göksal, 2003: 43-44). There are two main forces in the formation of the working class (Oğuz, 2001: 50). These are the removal of the peasants from the land with industrialization; the wide-ranging development of capitalist production, modern industry and agriculture. Aron states that in the industrial society that emerged as a result of industrialization, the first thing is that the business leaves the family. In the industrial society, family type enterprises have been replaced by large enterprises formed by workers who do not know each other. The increase in the number of large enterprises resulted in the growth of the working class, with the same increase in different attitudes, behaviors and personal goals within the enterprise. The emergence of large enterprises also developed the original model of division of labor. In other words, industrial society necessitates not only the cooperation between peasants, traders, professionals, economic segments, but also technological cooperation within the enterprise (Aron, 1997).

The production technology that developed as a result of industrialization moved the workers away from being side by side and caused each of them to work in different parts of the factory. The worker is no longer the person who realizes the production completely, but has become a small part of the production process. Even the worker has come to be seen as an excess as a result of the use of machines. The slow conquest of the industry by the machines has created a destructive effect on the worker (Oğuz, 2001: 139-140). According to Göksal (2003: 76), the devaluation process of human has also started with the industrial

revolution. The mentality of equating everyone to each other has been adopted with a uniform understanding of human beings. Although the desire to create people who look alike or resemble work facilitates factory production, it restricts creativity and freedom in the outside world. Oğuz (2001: 161–162) lists negative consequences of using the machine in the production process with industrialization, as the workers' distancing from the work tool and job knowledge, the workers who are called skilled and educated workers cease to be the general need of the industry and all the educated, uneducated, skilled or unskilled workers come to the agenda as an element of the capitalist labor force. Thus, the worker is alienated from the intellectual value of the production process and became a part of the machine. Urbanization and Alienation Urbanization is perhaps one of the most comprehensive and important social phenomena observed in developed and underdeveloped, Western-Eastern contemporary societies (Tolan, 1996: 147).

The strict stratification system that define the social structure of the pre-industrial city show the existence of a strong social control over family, economic structure, religion and educational organizations. Social organization is suitable for economic life based on organic energy. The most important mechanisms that constitute social control can be listed as religion, family institution and guild organizations. These institutions reflect a closely related social and economic order. Personal life in the pre-industrial city is controlled by social institutions (Aslanoğlu, 2000: 32–37). Within the industrial revolution, the systematic and widespread application of mechanization and rationalization, and the adaptation of mentality and behavior to the demands of this new capitalist mode of production caused the traditional urban structure to change (Keleş, 1994). Economic life in the industrial city is well developed. There is an effective organization, rational work and standardization. The excess production obtained due to the advanced technology is sufficient to keep the semi-producers and groups that do not contribute to production alive. Industrial society consists of the peasants who work the land and those who work in industry or services, which outnumber them, and the upper layers that have control over these classes (Url, 3).

Unlike the pre-industrial city, this social stratification system is suitable for vertical mobility (Aslanoğlu, 2000: 43-44). With the industrial revolution, cities expanded unhealthily beyond any social control. The urgent requirements of industrial production, such as the intense demand for labor, and the principles of profitability, which give rise to cheap and lack of minimum conditions, are the determining factors in this direction. Thus, the pathological features peculiar to the big cities that were formed gradually gained importance and the city lost its soul to a great extent (Tolan, 1981: 259). Urbanization, which has accelerated with industrialization, has

also caused an increase in the number of people migrating from rural areas to cities. Urbanization not only provides new opportunities for migrants to find jobs, but also causes social and cultural problems. One of the most important problems in this context is that people become increasingly lonely in the crowd and alienate themselves from the society they live in or themselves. Therefore, people who migrate from rural to urban are not only affected by the alienation experienced by the society as a whole, but also become a new member of the big city, which is under the influence of a deep alienation and rapidly transforms in this direction (Tolan, 1981: 256). Technology and Alienation Technology can be defined as all of the tools and equipment that people use in order to survive and meet their needs. Shepard (1977: 2) discussed technology in two dimensions: material and spiritual. Material dimension includes mechanical tools such as machinery and energy resources used to transform material size, natural resources into products or services. Spiritual dimension includes the knowledge and technical skills required to produce these products or services. Technology that meets the needs of people and increases production, wealth and prosperity has settled in every place. At every moment of human life, the individual lives with technology and benefits from its all aspects that it provides. However, this technology, which exists in every field, eventually made people dependent on them and took them under their control. Technology has narrowed the area of taking initiative and caused the loss of abilities. The individual can no longer live the happiness of producing a product, he/she is alienated from his/her product resulting from his/her labor. As a result of technology, there has been a change in the division of labor, and working life has become increasingly monotonous (Demirer and Özbudun, 1998: 89–91). Before technological development, workers used the tools for production and could add their own mental and physical abilities to the work. The machine was used dependent on the worker. As a result of technological development, the worker's task seems to have been transferred to machines. This time the worker has become dependent on the machine. The business process has accelerated and the important work has been undertaken by the machine. The worker sees himself/herself only as a manufacturing robot and cannot reach his/her expectations in the life of the organization. However; technology is the transmitter of human activity, the mediator of the relationship between man and nature in the conceptual framework of the business process. (Esin, 1982:80– 88). Pappenheim(2002:31–33)

Nevertheless, the tools and equipment used by the worker for this purpose have been replaced by machines in today’s world (Esin, 1982: 80-88). Pappenheim (2002: 31–33) also says that technology does not allow people to shape their own lives. Although business life has become more efficient and smooth with technological development, it deprives people

of personality. Pappenheim also states that the lack of personality leads to increasing insensitivity and that people can no longer express themselves in their work. In addition, the increasing mechanization of life creates a calculated perspective towards nature and society and destroys the unity bond between the individual and them. According to Pappenheim, people living in the age of technology are alienated from work, self and society. Fullan (1970) analyses the effects of technology on various aspects of employees' commitment and adaptation to the company in his study. According to Fullan, although technology is not the only determinant of employee engagement, technology is still a factor that reduces loyalty. As a result of the research, different levels of commitment or alienation have emerged in industrial enterprises with the same technology level. Shepard (1977: 15–16) also claims that technology is effective in the nature of the work at every stage. He also adds that the type or level of technology is not important, the division of labor that changes as a result of technological development causes alienation on the employee.

On the other hand, Susman (1972) concludes that automation emerging in the production process as a result of technology leads to alienation in the employee. However, Susman adds that the alienation of the employee from his / her job cannot only be explained by the automation that technology creates in the work process, and that different organizational features are also effective. The increasing level of mechanization of production as a result of technological development is one of the main factors contributing to alienation, although it does not lead to alienation of the employee alone or directly (Ofluoğlu ve Büyükyılmaz, 2008).

Undoubtedly, we can say that while humanity has reached the potential to get more shares without participating in production during transition from agricultural society to an industrial society, social alienation has come with some social and psychological problems such as social, cultural, demographic, economic, etc.

Ritzer listed the social factors that cause this alienation around the following headings.

- Social class disorder
- Social demographic transitions
- Industrialization
- Social cohesion and integration problems,
- Social polarization
- Social Injustice (Ritzer, 2014).

We can say that sports is the most important social institution that will facilitate the transition and integration of the traditional agricultural-type social feature to the industrial-type society within this social mobility and events, which cause social alienation as a social case that Ritzer brought to literature with his research and analysis.

Analyzed by Ritzer within the framework of classical social theory, it can be involved in the transition from traditional society type to modern society and can be a factor in social alienation; social events such as social disorder, demographic transitions, industrialization, adaptation and integration process, polarization and injustice can cause social disorder and cause social alienation and thus social trust problems between types of society into privilege over other classes while social differentiation should not actually cause social alienation or social trust problems.

And again, we can say that sports is the provider of social integration process with its social and personal dimensions, which will eliminate the effects of social diversity and stratification, separation and social insecurity by bringing sports club supporters and individuals together with different economic, demographic, cultural, etc. characteristics, status and roles, representing the strata of different types of society, in a stadium, solidarity, cohesion, meeting around a common sportive common beyond social differences and irregularities.

Sports

The word "sport" has been translated into Turkish and has the same meaning in French. The origin of the word is based on the word *desport*, which means "fun, physical and mental pleasure" in Old French. (Hubscher 1992; 58). The place and importance of sports cannot be denied in being a society with social justice and a bright environment (Yazıcı, 2014). Exercising sports also has beneficial effects on individuals' social and personality character development (Danacı, 2008; Yazıcı et al, 2019).

Social Dimension of Sports

Sport has always existed in human life. The interaction of sports, which is affected by every development in the world, with different disciplines is inevitable. (Murathan and Murathan, 2019). Sport shows a typical management with its sincere and intimate wishes with those who make up its world. It does not allow athletes to be drawn into their own fantasies similar to the game. In other words, the sincere desire of the individual becomes very important. On the other hand, the boredom of society cannot, or at least not, do not eliminate the freedom of the game for the individual. The limits of sports have been determined by the institutions. When the player gains permanent status, he/she does not waste time participating in person. The person becomes a part of the group

of players. Weber (1972) mentions the existence of absolute rules for social games that were previously required. Without them, it is inevitable that the games will end in chaos and despair. The success of the game always requires the ability to tolerate when the needs of the individuals are least met, the social sensitivity of the generally conflicting goals of the players, their knowledge about the role and the influence (Lenk, 1980). In intra-group relations, it should be regulated without pressure, social feelings should be stated necessarily, the individual's dignity should be defended by a society as a duty (Weber, 1972). This contributes to the formation of social time. In order to create an emotional structure and commitment within the group, the participants should be given frequent advice. Basically, the principle of unity and democracy is similar to that achieved through informal games. These games, however, threaten their relationships in the form of subversion and rebellion. The boundaries of relationships are very weak and complex. If great stagnation and continuity is reached, it is inevitable to shape the structure of the game, this is important. Habit cannot divert the source of mutual affirmation and mutual tolerance. When official games are denigrated and condemned, this is often ignored. The expansion of the regional and national borders of the sports world is possible by finding a suitable method. As the degree of organization increases in sports, spontaneous formation and transformation is always required. As the rules of each official game change, more or less mutual relationships affect. Sports, which has become an integral whole with human life, plays an important role in keeping a person healthy, successful and happy throughout his life (Ramazanoğlu et al, 2005).

It is clear that sports, which has an important role in organizing the relations of individuals and society, plays an important role in organizing the relations between the societies in the field of industry, commerce and culture, and this is increasingly important today. (Özan, 2002). The goal of education in all countries is to enable people to have a healthy and vivid life, also to reinforce the humanistic view. Since the curriculum is quite centralized and does not supply the students with cognitive emotional and social abilities in teaching-learning process, development and enrichment of athletic and artistic activities can be a response to our agile time (Talebzadeh and Jafari, 2012). Physical activity has always been a part of the social and individual life of human beings throughout different ages. It has a big role in social activities and family connections. Physical activities through multi-purpose ceremonies, entertainment and leisure bring satisfaction and happiness for people. Another valuable achievement of physical activity is providing people with mental and social health (Fathi, 2009).

Playing sports, especially in the healthy development of young people, avoiding bad habits, psycho-social in their strengthening in terms of their

strength, protection from various chronic diseases at later ages or significant differences in the treatment, in other words, in improving the quality of life throughout the life. can create (Erkan, 1992; Alp and Süngü, 2016).

In this context, in healing and healthy life; Free time sports activities for health people Its importance in development should not be ignored. The most important reason for physical development is motoric is activity. As in individual development, movement is an indispensable part of human development. is the criterion. In addition, a mobile or active lifestyle, universal thinking, social participation and emotional thinking are also other important elements in human development (Kale and Erşen, 2010; Murathan et al.,2015).

Result

Undoubtedly, the most important problem that comes to the fore in the transition from the traditional agricultural society type to a more modern industrial society is the problem of social harmony and integration. Sports is one of the most important social institutions that will minimize the negative effects of social differences, polarization, injustice and irregularities in this interregnum process.

Sports is a social institution that is as old as human history and continues to develop with the history of humanity. In the primitive first social cores, we can take the basis of the characteristics that will form the basis of today's modern sports in terms of movement and struggle, even if it does not come to the fore with the discipline of sports. In the early ages, in the first human and social dynamics, people who exercise movement and struggle based on physical, mental and psychological struggle, which will constitute the basis for sports and various branches in the future in order to survive and meet daily needs have reached a socio-economic process that has started to take a greater share in production by making a lot of effort and struggle to meet their needs by the discovery of iron, bronze similar minerals and the agriculture, animal husbandry and military equipment they provide while the individual was trying to meet his/her needs in a long time before, he/she was faced with the concept of leisure time for the first time in history with the potential to obtain more products with less effort and struggle after the Neolithic period in order to make use of effort, energy and struggle in leisure time and to divide the notion of time into social, cultural, physical, and mental activities that can keep itself more qualified, strong, fit and dynamic, representing various tools, equipment, machines and factories that replace human labour from the agricultural society in the future. It has based the transition to the industrial society.

Especially, social and cultural adaptation and integration problems brought about by demographic transitions from villages to cities can bring

alienation to the new social environment in the transition from agricultural society to industrial society.

In a process where rural life and the environment can turn into behaviour and life with personality and personality traits within the framework of socio-cultural, economic and demographic values and disciplines specific to the region, educational and employment purposes generally provides transition of values, characteristics, behaviours from village to city.

Sports, which is valid for everyone, has its own philosophy, social and universal quality, language, culture, applicability, rules. Those who have values and behaviours in conflict with the new environment in question have a common sportive purpose. Sports enables people to have a common behaviour and life outside of stereotyped behaviours around, in the neighbourhood, in the district, in the district, in the gymnasium and stadiums by integrating, merging and meeting foreign individuals and values through accepting each other as they are over time. We can say that sports are the antidote to alienation with its dimensions that will positively affect the adaptation and integration process of individuals to each other and their social and physical environment.

Within the framework of these results, we propose to investigate the determining, developing and discipline dimensions of social and social life of sports, social and human events, cases, and especially the following social cases, which are the main problems of social change and transformation for further research and analysis.

- Social class disorder and Sport
- Social demographic transitions and Sports
- Industrialization Process and Sports
- Social cohesion and integration issues and Sports
- Social polarization and sports
- Social Injustice and Sports

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