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Message from the Editors

TOJRAS welcomes you.

I am pleased to announce second issue of The Online Journal of Recreation and Sport (TOJRAS) in 2012. In this issue, our journal diffuses its interdisciplinary perspective through various researches in education field. In order to share valuable researches from different fields, this issue sheds a light to open discussion in the academic platform.

This issue represents dynamic development of the journal and underlines how it is strategically explore its academic performance. I would like to thank to editorial board, reviewers and the researchers for their valuable contributions to the journal and this second issue.

April 01, 2012
Editor in Chief
Prof. Dr. Erdal ZORBA
**Message from the Editor**

I am very pleased to publish second issue in 2012. As an editor of The Online Journal of Recreation and Sport (TOJRAS), this issue is the success of the reviewers, editorial board and the researchers. In this respect, I would like to thank to all reviewers, researchers and the editorial road.

Second issue covers different research scopes, approaches which subjects about recreation and sport by valuable researchers. I and The Online Journal of Recreation and Sport (TOJRAS) editorial team will be pleased to share various researches with this issue as it is the miracle of our journal. All authors can submit their manuscripts to tojras.editor@gmail.com for the next issues.

**Call for Papers**

The Online Journal of Recreation and Sport (TOJRAS) invites article contributions. Submitted articles should be about all aspects of recreation and sport and may address assessment, attitudes, beliefs, curriculum, equity, research, translating research into practice, learning theory, alternative conceptions, socio-cultural issues, special populations, and integration of subjects. The articles should also discuss the perspectives of students, teachers, school administrators and communities.

The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to The Online Journal of Recreation and Sport (TOJRAS).

For any suggestions and comments on the international online journal TOJRAS, please do not hesitate to send mail.

**April 01, 2012**

Assoc. Prof. Dr. Metin YAMAN

Editor
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A TRADITIONAL TURKISH SPORT: HORSEMAN JAREED

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Abstract: Although horseman jareed, which is one of the most important activities in Turkish culture and sport, was very popular in the past, today it is not given its deserved value and is performed only in 11 provinces as a subsidiary branch of Turkish Traditional Sports Federation. This situation results in a difficulty to inherit an important sport of Turkish culture to next generations. The aim of this study is to introduce and make our cultural heritage “horseman jareed” widely known both nationally and internationally. Under the light of past, evaluation and edition method has been used in this study to picture today’s situation. Globalization, technological improvements, increases in mechanization and monotyping of humans lead nations to lose commitment to their cultures. Some branches of sport and similar physical activities are important elements of our culture. These sport branches, which are complementary elements of the culture, may either gain an international interest or be performed as a local traditional activity. Traditional sports are a series of activities where manners and customs are exhibited and winning or glory has no priority over the sense of competition. Indeed, horseman jareed is such a kind of cultural activity in Turkish sports culture where entertainment is turned into a sport and performed traditionally on important days. In this study, suggestions to spread the popularity of jareed both nationally and internationally and introduce the history, rules and gameplay of it are given.

Key Words: Culture, Traditional Turkish Sports, Horseman Jareed

Horseman Jareed

Horseman jareed is one of the oldest sports belonging to Turks and also is an entertainment and sport performed by riding horses on a bounded field with pre-set rules. This sport attracts the attention of Anatolian people since the older times. There are no weather and time limitations to do this sport (Koçan, 2006:86-Tutel, 1998:117-Güven, 1999:228). Jareed is the name of the short javelin made up of hard, solid wood with a metal edge. It is intended to throw at enemies (rivals). Such military trainings done during the peace times were called as the “jareed game”. Jareed sport reflects our cultural characteristics such as agility, competency, skill, intelligence, bravery and amnesty. In this game, as the harmony and adoptability between human and horse, speed, tactics and skill are put together; team spirit and teamwork are united with those as well. The exact starting time of jareed is unknown. According to some sources jareed comes from the older times in Middle Asia. Some others, on the contrary, claim that jareed was never played in Asia but first played in Ottoman and Seljuk times (Yıldırın, 1999: 44-Kahraman, 1995:497).

Taking the nomadic and warrior Turks’ relations between their horses into consideration, it can be said that jareed is a revised and improved heritage from our elders. In Chinese sources it is said that the life of Turks depends on their horses. Indeed, the horse has a different place in Turks’ lives as a symbol rather than being a mount. It is impossible to think a Turk without his horse (İskenderzade, 2007:324). Horseman jareed was the commonest game, which sultans were proud to exhibit it to foreigner ambassadors, played in Ottoman palaces. Jareed players are named as cündi. It was a great pleasure for sultans to exhibit jareed to foreigner ambassadors (Tutel, 1998:117-Kahraman, 1995: 497). In the notes and books of some voyagers there are chapters about jareed games. They say that jareed is a unique, traditional, polo like Turkish sport done on horses rode by players carrying blunt wooden sticks. The aim of the game is to gain points by throwing those sticks and pointing them right on the target. Today, it is mostly played in eastern provinces of Turkey (Sheenan, 2004:113-Lafferty, 2008:65).

Ottomans loved this game so much that they made playing jareed at the city square a tradition where the army rests on Fridays. It has been times when the cündies or the horses were injured or even died. That’s why Sultan Mahmud II forbid Jareed in September 1826 (Kahraman: 1995: 497-500-507-Gezder, 1998:49-Tutel, 1998:117).
Since Ottomans loved this game very much, they found this prohibition unpleasant and kept playing this game in different places of the empire at weddings, fairs and ceremonies.

**Horseman jareed in Ottoman Empire’s Age**

In Ottoman palaces jareed was played by cündies. Cündi word is used for skilled riders only. Cündies played the game by forming two rival teams. When the sultan put a prize for the winner, the game would become very tougher (Tutel, 1998:117-Gezder, 1998:49). According to Ottoman protocol rules, it was a law that Grand vizier’s cündies play jareed at Eskisayar’s (one of the palaces) square on the third day of religious festivals and childbirth celebrations. The aim here is doubtlessly to make palace’s young servants enthusiastic and accustomed to riding and shooting and surely keep them trained (Sakaoğlu, 2002:50- Gezder, 1998:52).

Sultans attended jareed games sometimes. This was told ‘sultan gets on the jareed’. Jareed was the most favorite sport of Ahmet III, Mustafa III, Abdulhamid I, Selim III and Mahmud II. It is known that sultan Osman II, who was a good rider, performed this difficult and dangerous sport. Sultan Murat IV was another successful rider. It has been told that Sultan Murat IV was so skilled and agile that he could jump from one horse to another. In ottoman era there raised a lot of master cündies and they are very appreciated with their competency, bravery and dominances (Tutel, 1998:118, Kahraman:1995: 501).

**Prohibition of horseman jareed in Ottoman Era**

One of the most important rules of jareed is that players do not bear a grudge against each other. Nevertheless, it has been times when the cündies or the horses were injured or even died. Even though such incidents are common, jareed has been played with a manner of respect to jareed until Sultan Mahmud II age. According to Mohammaden calendar in 1231 a cündi intentionally killed a rival during a religious festival celebration. Because of that sultan Mahmud II cancelled and forbid the games in 1826 A.C. He started archery and did not let jareed again (Kahraman, 1995:507). Since Ottomans loved this game very much, they found this prohibition unpleasant and kept playing this game in different places of the empire at weddings, fairs and ceremonies.

**Horseman jareed today**

Jareed has been played since the early years of republic. It has been performed mostly at weddings, festivals and celebrations. Jareed has been played in many Anatolian villages where oil wrestling has a common place as well. Jareed has been exhibited by Dadashs of Erzurum in Üçkümbetler region for Gazi Mustafa Kemal Atatürk’s honour. Jarred games have been exhibited as a part of republic celebrations schedule in Kayseri by city community centre (Şanal, 2004:129/Gezder, 1998:153/Karahüseyinoğlu, 2007:82).

Jareed was accepted as a branch of Federation of Turkish Traditional Sports in 1996 in order to improve and spread our elders’ heritage. Moreover, financial support is being given to jareed players and their horses by the federation. Those jareed clubs, who win titles in local competitions held by the federation, get the right to enter national jareed championship held again by the federation every year and all expenses are covered by the federation. According to January 2011 statistics, there are 74 jareed clubs in 11 provinces and a total of 1450 jareed players in Turkey (Aka, 2010).

**The place of the horse in horseman jareed**

Riding can be described as an art where the rider and his/her horse, which is one of the noblest creatures in the world, are acting together in a complete harmony and esthetics. The relation between man and horse starts from the existence of first human and the horses have been used for several purposes for centuries. Horses have tasted the complete freedom by galloping in the meadows before getting domesticated by humans. It is not difficult to guess that those who were able to sit on a horse properly have raced with each other (Ünver ve Karaküçük, 2003:68-Tutel, 1998:7).

A jareed horse must be older than 4. Medium sized ones are favored since high and long horses are not very agile in the field. Easygoing Arab and Turkish horses are the most suitable ones. Jareed horses are being raised with care (Kahraman,1995:507- Koçan, 2006:85).

Nowadays, jareed horses are being selected from veteran thoroughbred Arab racing horses. Arab horses are mostly preferred because they have a warm relationship with humans and an easygoing nature.
Rules of horseman jareed

Teams are formed with 7 starters and 3 substitutes for each. Minimum of 14 horse riders are needed for the game to start. If the total number of riders and horses of a team drop below 5 then the whole team loses by default. Starting horses and riders cannot get back to game again if they are once substituted.

In every jareed game, there are a total of 7 referees namely a head referee, a recording head referee, 2 recording referees, a midfield referee and 2 sideline referees. Other staffs in the game are drummers and shrill pipers (a trumpet like local instrument), jareed pickers, field organizers, doctors, veterinarians and health officers.

Dimensions of the game field are as follows; a minimum of 30 and a maximum of 50 meters of width, a minimum of 90 and a maximum of 160 meters of length. Sidelines must be at least 15 cm wide. The ground must be covered with at least 5-6 cm deep, non-gravely, raised and loose sand layer.

A standard game field is 40 meters in width and 130 meters in length. There are two 7 meters long areas located at the heads of the field where the horses are put in an order. This area is called as the “regiment station”. In front of each regiment stations, right before the shooting site, there are 5 meters long areas called as the “forbidden site” at where opposite team’s players are not allowed to violate. After the forbidden sites there are 7 meters long areas called as the “shooting site” bounded by dashed lines where shooting is allowed (Fig.1).

Jareed games are played over two halves of 40 minutes. Halftime break is 10 minutes. Time losses during the game are added to the ends. Shot clock is 35 seconds. When 20 seconds pass, the rider is let known by the recording head referee with announce. If the rider cannot manage to use his jareed then he receives a penalty and the referee gives the attack turn to his team and 35 seconds starts counting again.

It is usual that a draw happens. Nevertheless, in elimination and final matches there is no draw. To have a winner, two halves of 10 minutes are consecutively played upon the end of first 80 minutes of regulation time. If the draw lock is not broken again then the winner is determined with coin toss.

Score system in horseman jareed

There are positive and negative points in the score system. The team with a higher cumulative score wins the game. These positive and negative points are given below (Aka, 2010).

Positive moves and their points

- Shooting an opponent located at the midfield +4 points
- Shooting an opponent located at the regiment station +4 points
- Catching and then forgiving (amnesty) an opponent +3 points
- Crossing an opponent’s path +3 points
- Catching a shot jareed in the air +2 points

Figure 1. Horseman jareed game field
Negative moves and their points

- Throwing a jareed from short distance -3 points
- Making an horse intentionally hit opponent -3 points
- Intentionally shoot opponent’s horse with jareed -1 points
- Heading into opponent regiment -1 points
- Intentionally heading into opponent regiment -3 points
- Sideline violation -1 points
- Taking a shot at the opponent regiment from somewhere but the shooting site -1 points
- Not using the attack turn -1 points
- Riding of 2 players from the same team at the same time -1 points
- Starting ride early -1 points
- Falling off the horse -3 points
- Dismounting a horse without permission during the game -1 points
- Existence of 3 or more riders at the forbidden site -1 points
- Entering from the sideline of a rider receiving the attack turn -1 points
- Intentionally throwing a jareed off at the game field -1 points
- Dropping a jareed -1 points
- Forbidden site violations -1 points

Conclusion

Culture is the sum of material and essential moral values, which are formed and developed through the history and creating a nation from a crowd, in accordance with the characteristics of that nation. If these values are not left to next generations, they cannot be named as the “culture” anymore. If the national culture and folklore are substantial, then, correspondingly, the sportive activities increase. Sports and similar activities cannot be demerged from the cultural values of a society. While sport, a supplementary of culture, is being affected by the culture itself as it is affecting it with its popularity and sociality.

Traditional Turkish sports are important organizations where national and religious rituals are included, Turkish customs are exhibited and examples of fair-play are shown.

Horseman jareed is such a kind of cultural activity in Turkish sports culture where entertainment is turned into a sport and performed traditionally on important days. Studies should be made in order to attract attention to jareed and such similar traditional sports which were very popular in the past but not today. Modernizing the traditional sports by taking the traditions into consideration and not changing them, has an integral role in protecting traditional sports culture of all countries in regards to leaving them to next generations. In globalized world, in order to spread and develop tendency towards the traditional sports, using of mass communication tools should be more effective and efficient.

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DETERMINATION OF THE EMPLOYMENT STATUS OF GRADUATES OF RECREATION DEPARTMENT

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Abstract: Today, it is clearly understood that the graduates of Physical Education and Sports Academies face the problem of employment and if the present structure of Physical Education and Sports Academies is maintained and the present understanding of the education is preserved then in the near future this problem shall turn into a crisis of employment.

In preparing the Post Graduate Thesis, common rules and regulations that both The Ministry of Education and The General Directorate of Youth and Sports apply for the employment implementations are analyzed as well as special rules and regulations that these institutions apply for their own employment procedures. As a result while expecting the studies and regulations related with the studies and regulations related with the Physical Education and Sports Academies graduates employment problems from respective public and private sectors, from the first year it is necessary that the preparation of new alternative education programmes must be added to their curriculum, and I want to stress that universities must begin studies and regulations about this subject.

It is also a fact that in our country regarding the field and sector among the biggest employment opportunities Physical Education and Sports Academies graduates come first but the first but as the employment approaches to a point of crisis, I think that as an important Approach we should discuss reasons of the communication break down of Physical Education and Sports Academies graduates, why the Physical Education and Sports Academies graduates working in public and private sector are unable to produce alternative solutions and being sport a popular sector why the people working in this sector don’t want Physical Education and Sports Academies graduates near them.

INTRODUCTION

Recreation means “relax, entertain, stimulate etc” (Kozak, 2002). People join in activities in the aims of a lot of things like going away, having rest, strolling, health, being together, exciting, getting different lifes in their houses or out in open areas or close areas, actively or passively, in cities or rural areas in their free times. So, recreation is a term expressing these activities people do in their free times.
Relationship between free time and recreation was examined by also famous philosopher Aristotle. Aristotle said he could classify this relationship in three categories in contradiction with each other. First is contemplation (thinking), second is recreation (enjoying) and third is being joyful. Contemplation is reasoning any phenomenon with different point of views. It is a way of active participater of recreation. Being joyful is joining of audience or listener. As a philosopher, Aristotle saw the contemplation (thinking) as part of highest part of philosophical thinking and encouraged the application. Aristotle agree use of leisure time for recreation and said that it was not suitable for other cases. (Soyer, Can, 2003).

Is it a need for recreation? Can sports, going to cinema, theatre or deals with these arts events, participate in tourism be a need for people? Of course, first comes to our mind the answer is yes. But the answer yes does not apply in all circumstances. Interesting in a spor tor a branch of art of an individual having security issue can be expected from the most recent. Maslow’s hierarchy of needs is that maket his phenomenon clearer (Karaküçük, Gürbüz, 2007).

There are also a variety of academic units in universities. Physical education and sports in the higher education institutions is located in these units. Institutions of higher education that the teaching of physical education and sport starting to offer training in their areas as institute of education firstly in 1930s, beginning periods of restructuring in the 1990s generally aim to develop superior quality, academic/pedagogical knowledge and skills formation in young people. Teaching of physical education and sports operates under the umbrella of higher education institutions in various academic units. These units are the faculty of education, faculty of science, faculty of health sciences, school of health sciences and technology, school of sport and physical education and sports school. The departments in these units are listed as ‘physical education and sports teacher’, ‘sports management’, ‘coaching’, ‘recreation’ and ‘sport science’. While these schools having various departments and well-qualified contributing to the development of sport, has brought many problems. At the beginning of these problems, especially a teacher who graduated or will be part of the sections outside the school of physical education and sports is the issue of employment of graduates (Kırımoğlu, 2010).

Recreation has assumed important functions revealed by the application of personal and social purposes. It has personal happiness and comfort as well as recreational applications, important social, economic and cultural values. Recreation leaders assumed the roles and responsibilities of primary importance in performing the functions. (http://www.elitokul.com/neslekiegitim/rekreasyonelliderlik.htm 28.06.2011).
The Aim of the Study

The aim of this study is to meet the requirement of trained personnel who graduate from educational institutions, professional title, in the direction of the Recreation Department graduates as easy as they aren't considered employment, personal development, education, and identify problems when they encountered employment, can be added new titles to the educational process, to be recommended new jobs to Recreation Department graduates in local governments and public spaces in the development of quality and dimension of services in sport sector which grow up and expanding and industrializing with each passing day.

Method

The findings of the research were prepared as frequency tables and percentages are expressed.

The Sample

This research, with screening and application process in three of the University of Turkey (Mugla University, Aksaray University, Sakarya University), a total of 465 students continuing their education consists of the Departments of recreation. to reach all students is not easy agreed that the study is done on the sample. The number of students will represent the nature mentioned in the universe.

Data Analysis

In research, it is aimed to uncover attitudes regarding employment problems of Recreation students in three different Universities in Turkey and to determine the attitudes of some variables in relation. Based on the aforementioned purpose of this study in order to gather data developed by researchers and five-point Likert-type scale "attitude scale" was used. "attitude scale" by investigators after review of literature about the area, this area has been developed making use of previously developed attitude scales. Referred to the scale, the front portion of work for the realization of various recreation pre-study student, 70 people were on the reliability and validity, 57-question survey, academic experts (prof. Reha Alpar, Prof. Dr. Erdal Zorba, Prof. Mehmet Güzlülü, assistant prof. Melih Salman) reduced to taking the opinion of 46 questions, the students applied the Recreation section. To calculate the range of points DA=EBD-EKD/DS (distribution range=the largest value-minimum value) the formula is used (Sümbüloğlu ve Sümbüloğlu, 1993). Positive substances in the form of the scale were scored of 5-4-3-2-1, and the negatives were 1-2-3-4-5. Thus, each data collection instrument is included in the application, the sum of item scores were obtained from the scale total score. The lowest obtainable scale score of 35, while the highest score of 175. A five-grade scale is used, the
distribution range=5-1/5=4/5=0.8. Thus, the arithmetic average assessment interval were obtained. Accordingly, (1) 1.00-1.80 "strongly disagree", (2) 1.81-2.60 "I disagree", (3) 2.61-3.40 "neutral", (4) 3.41-4.20 "I agree", (5) 4.21-5.00 "strongly agree".

Available of scale were applied to (465 people) students in schools located in the prepared sample. After the application is performed on the data analysis using SPSS package program with a low load factor and the six-item data collection instrument issued through 35-item scale were evaluated. Prepared as Likert-type "attitude scale" ratings were made in the quintet.

Findings

Results Of The Research On The Size Of Vocational Qualifications

The first sub-problem of research is determined as ‘problems of employment of graduates of department of recreation’. the department of recreation graduates’ employment problems are dealt with under the situation of the four main attitudes in analysis done to find answers to this sub-problem. These was called as 1) Professional Qualifications, 2)Professional study course, 3) social needs, 4) management and control format. substances that make up each factor, substances arithmetic averages, standard deviations, and levels are as follows;

<table>
<thead>
<tr>
<th>Question</th>
<th>Statement</th>
<th>X</th>
<th>Ss</th>
<th>Level of participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q31</td>
<td>If I have problem about vocational training and employment I think I work in another sector</td>
<td>3.3452</td>
<td>1.276</td>
<td>I agree</td>
</tr>
<tr>
<td>Q37</td>
<td>I think of my job to respond to social needs, social and sporting fields</td>
<td>3.3143</td>
<td>1.143</td>
<td>I agree</td>
</tr>
<tr>
<td>Q13</td>
<td>My department contributes to development and maturation of my personality</td>
<td>3.2940</td>
<td>1.298</td>
<td>neutral</td>
</tr>
<tr>
<td>Q22</td>
<td>I took into consideration when choosing a partition to the possibilities of finding work after graduation</td>
<td>3.2740</td>
<td>1.207</td>
<td>neutral</td>
</tr>
<tr>
<td>Q19</td>
<td>I think my professional title I will have after graduating provides a reassuring future.</td>
<td>3.0961</td>
<td>1.199</td>
<td>neutral</td>
</tr>
<tr>
<td>Q33</td>
<td>I do not find suitable to work in a sector other than my studies, or in any other job</td>
<td>3.0153</td>
<td>1.244</td>
<td>neutral</td>
</tr>
<tr>
<td>Q43</td>
<td>I don’t endorse to myself or my job Professional employment outside the profession in the areas of public space</td>
<td>2.9960</td>
<td>1.172</td>
<td>neutral</td>
</tr>
<tr>
<td>Q23</td>
<td>I think the training I have received is internationally recognised and I have been raised to be sufficient for my sector.</td>
<td>2.9361</td>
<td>1.155</td>
<td>neutral</td>
</tr>
<tr>
<td>Q21</td>
<td>I don’t think I am going to have the problem of employment about my department</td>
<td>2.9243</td>
<td>1.237</td>
<td>neutral</td>
</tr>
<tr>
<td>Q34</td>
<td>I find sufficient to find job of graduates in local government and sports clubs</td>
<td>2.8443</td>
<td>1.244</td>
<td>neutral</td>
</tr>
</tbody>
</table>
Table 1 examined, composing first factor, 'professional Qualifications' size compose of ten items in total. the highest arithmetic average is item of "If i have problem about vocational training and employment I think I work in another sector". recreation section of the university studentsicipated in the three aforementioned article have expressed. Also, “I think of my job to respond to social needs, social and sporting fields.”students have expressed it. students have expressed to participate in mid-level other eight items.

Findings of research's professional working site size

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Level of participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q20 I think that professional title receive after graduation, can provide job opportunities off the public sphere</td>
<td>3,3852</td>
<td>1,3214</td>
<td>I disagree</td>
</tr>
<tr>
<td>Q15 I am following relevant professional publications about my department</td>
<td>3,2657</td>
<td>1,3141</td>
<td>I agree</td>
</tr>
<tr>
<td>Q30 I think that applications areas related to my profession are narrow and insufficient</td>
<td>3,2430</td>
<td>1,4136</td>
<td>Neutral</td>
</tr>
<tr>
<td>Q29 I find insufficient instructional materials that are required for professional studies</td>
<td>3,1753</td>
<td>1,4051</td>
<td>Neutral</td>
</tr>
<tr>
<td>Q28 I find inadequate my friends for professional field</td>
<td>3,0361</td>
<td>1,3796</td>
<td>Neutral</td>
</tr>
<tr>
<td>Q32 I think to work with my professional title in the tourism sector</td>
<td>2,9661</td>
<td>1,3205</td>
<td>Neutral</td>
</tr>
<tr>
<td>Q36 I find adequate of the number of academic publications and studies related to our department</td>
<td>2,8753</td>
<td>1,3382</td>
<td>neutral</td>
</tr>
</tbody>
</table>

Table 2 examined, forming the second factor, "professional work course" size, seen that a total of 8 items. the highest arithmetic average of agent "I think that professional title receive after graduation, can provide job opportunities off the public sphere". students of recreation department of these 3 university have expressed to participate of aforementioned article. Also they participated "I am following relevant professional publications about my department". students have expressed to participate in mid-level other six item
Results of the research on the dimension of social needs

Table 3. Dimension of Social Needs

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Q44</td>
<td>I think I will be success in my job</td>
<td>$\bar{X}$</td>
<td>Ss</td>
</tr>
<tr>
<td>Q26</td>
<td>I think my relationship is good with my school</td>
<td>$\bar{X}$</td>
<td>Ss</td>
</tr>
<tr>
<td>Q27</td>
<td>I think studying with school friend in same work will improving efficiency</td>
<td>$\bar{X}$</td>
<td>Ss</td>
</tr>
<tr>
<td>Q16</td>
<td>my department makes me happy in terms of appreciated, welcoming and dignity from family and environment</td>
<td>$\bar{X}$</td>
<td>Ss</td>
</tr>
<tr>
<td>Q39</td>
<td>taken bvocational training makes me happy, I say luckily I am in that department</td>
<td>$\bar{X}$</td>
<td>Ss</td>
</tr>
<tr>
<td>Q25</td>
<td>I like my friends attitude's with each other in terms of respect, love, loyalty and friendship</td>
<td>$\bar{X}$</td>
<td>Ss</td>
</tr>
<tr>
<td>Q41</td>
<td>depending on which year period of vocational training within the department that I do not change for the emotions</td>
<td>$\bar{X}$</td>
<td>Ss</td>
</tr>
<tr>
<td>Q17</td>
<td>after graduation, I’ll find enough social status created by the community of professional title</td>
<td>$\bar{X}$</td>
<td>Ss</td>
</tr>
<tr>
<td>Q14</td>
<td>my training is sufficient for vocational efficiency</td>
<td>$\bar{X}$</td>
<td>Ss</td>
</tr>
<tr>
<td>Q24</td>
<td>I see my school friends as professional opponents</td>
<td>$\bar{X}$</td>
<td>Ss</td>
</tr>
</tbody>
</table>

Table 3 examined, forming the second factor, “social needs” size, seen that a total of 10 items. the highest arithmetic average is item of ‘I think I will be success in my job’. Also, “I think studying with school friend in same work will improving efficiency.” students have expressed it. On other hand, ‘I see my school friends as professional opponents’ items answering netrual from students and they believe working together not only increase efficiency but also create competition. students have expressed to participate in mid-level other six items.
Results of the research on the size of directors and audit format

Table 4. The Size of Directors and Audit Format

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>( \bar{X} )</th>
<th>Ss</th>
<th>Level of participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q35</td>
<td>I find the positive working of department graduates in the public sphere as a civil servant</td>
<td>3.3152</td>
<td>1.3214</td>
<td>I agree</td>
</tr>
<tr>
<td>Q46</td>
<td>other occupational groups are engaged my professional field</td>
<td>3.2057</td>
<td>1.3141</td>
<td>I agree</td>
</tr>
<tr>
<td>Q42</td>
<td>my job is worried me about the future</td>
<td>3.1930</td>
<td>1.4136</td>
<td>Netrual</td>
</tr>
<tr>
<td>Q45</td>
<td>I am worry about to find work</td>
<td>3.1753</td>
<td>1.4051</td>
<td>Netrual</td>
</tr>
<tr>
<td>Q18</td>
<td>after graduation I believe professional title will offer career opportunities</td>
<td>3.1661</td>
<td>1.3796</td>
<td>Netrual</td>
</tr>
<tr>
<td>Q40</td>
<td>my education is adequate for taking responsibility and authority</td>
<td>3.1361</td>
<td>1.3205</td>
<td>Netrual</td>
</tr>
<tr>
<td>Q38</td>
<td>the current legal arrangements are sufficient in terms of finding a job</td>
<td>2.7737</td>
<td>1.3382</td>
<td>Netrual</td>
</tr>
</tbody>
</table>

Table 4 examined, forming the second factor, "directors and audit format" size, seen that a total of 7 items. the highest arithmetic average of agent "I find the positive working of department graduates in the public sphere as a civil servant ". Also they participated "other occupational groups are engaged my professional field ". students have expressed to participate in mid-level other five item

Results Of The Comparison With Professional Qualification Size Of Research Groups

Table 5. Comparison With Professional Qualification Size

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>I disagree</th>
<th>netrual</th>
<th>I agree</th>
<th>Strongly agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mugla University</td>
<td>number</td>
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<td>30</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>15,0%</td>
<td>10,0%</td>
<td>25,0%</td>
<td>25,0%</td>
<td>100,0%</td>
</tr>
<tr>
<td>Sakarya University</td>
<td>number</td>
<td>16</td>
<td>36</td>
<td>42</td>
<td>54</td>
<td>193</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>8,3%</td>
<td>18,7%</td>
<td>21,8%</td>
<td>28,0%</td>
<td>100,0%</td>
</tr>
<tr>
<td>Aksaray University</td>
<td>number</td>
<td>19</td>
<td>19</td>
<td>42</td>
<td>46</td>
<td>151</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>12,6%</td>
<td>12,6%</td>
<td>27,8%</td>
<td>30,5%</td>
<td>100,0%</td>
</tr>
<tr>
<td>Total</td>
<td>number</td>
<td>53</td>
<td>67</td>
<td>114</td>
<td>130</td>
<td>464</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>11,4%</td>
<td>14,4%</td>
<td>24,6%</td>
<td>28,0%</td>
<td>100,0%</td>
</tr>
</tbody>
</table>

(p<0,05)

Question of "if I have a problem related to vocational training and employment, I think to work in another sector",25% of mugla university students, 28% of sakarya university students and 30.5% of aksaray university students provided a positive contribution. Research group of the standard deviation
value was 1.276. there were found in a significant difference between three group mean scores (p<0.05).

Table 6. comparison with professional Qualification size of research groups

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>I disagree</th>
<th>neutral</th>
<th>I agree</th>
<th>Strongly agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mugla University</td>
<td>Number 14</td>
<td>21</td>
<td>31</td>
<td>35</td>
<td>19</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>% 11.7%</td>
<td>17.5%</td>
<td>25.8%</td>
<td>29.2%</td>
<td>15.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Sakarya University</td>
<td>Number 19</td>
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<td>68</td>
<td>61</td>
<td>24</td>
<td>192</td>
</tr>
<tr>
<td></td>
<td>% 9.9%</td>
<td>10.4%</td>
<td>35.4%</td>
<td>31.8%</td>
<td>12.5%</td>
<td>100.0%</td>
</tr>
<tr>
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<td>36</td>
<td>63</td>
<td>22</td>
<td>152</td>
</tr>
<tr>
<td></td>
<td>% 5.9%</td>
<td>14.5%</td>
<td>23.7%</td>
<td>41.4%</td>
<td>14.5%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>Number 42</td>
<td>63</td>
<td>135</td>
<td>159</td>
<td>65</td>
<td>464</td>
</tr>
<tr>
<td></td>
<td>% 9.1%</td>
<td>13.6%</td>
<td>29.1%</td>
<td>34.3%</td>
<td>14.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

(p<0.05)

Question of "I find insufficient instructional materials that are required for vocational studies", 29.2% of mugla university students, 31.8% of sakarya university students and 41.4% of aksaray university students provided a positive contribution. research group of the standard deviation value was 1.143. There were found in a significant difference between three group mean scores (p<0.05).

The findings concerning the comparison of the field of the size of the professional field of study and research groups

Table 7. the comparison of the field of the size of the professional field of study and research groups

<table>
<thead>
<tr>
<th></th>
<th>s15</th>
<th>I disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mugla University</td>
<td>number 17</td>
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<td>25</td>
<td>47</td>
<td>13</td>
<td>118</td>
</tr>
<tr>
<td></td>
<td>% 14.4%</td>
<td>13.6%</td>
<td>21.2%</td>
<td>39.8%</td>
<td>11.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Sakarya University</td>
<td>number 17</td>
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<td>38</td>
<td>76</td>
<td>17</td>
<td>186</td>
</tr>
<tr>
<td></td>
<td>% 9.1%</td>
<td>20.4%</td>
<td>20.4%</td>
<td>40.9%</td>
<td>9.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Aksaray University</td>
<td>number 11</td>
<td>24</td>
<td>22</td>
<td>71</td>
<td>17</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>% 7.6%</td>
<td>16.6%</td>
<td>15.2%</td>
<td>49.0%</td>
<td>11.7%</td>
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<tr>
<td>Total</td>
<td>number 45</td>
<td>78</td>
<td>85</td>
<td>194</td>
<td>47</td>
<td>449</td>
</tr>
<tr>
<td></td>
<td>% 10.0%</td>
<td>17.4%</td>
<td>18.9%</td>
<td>43.2%</td>
<td>10.5%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

(p<0.05)

Question of “I follow Professional publications about my department”, Mugla University students %39.8 Sakarya University students %40.9 and Aksaray University students %49 provided a positive contribution. Research group of the standard deviation value was 1.314. there were found in a significant difference between three group mean scores (p<0.05).
Table 8. The Comparison of The Field Of The Size of The Professional Field of Study and Research Groups

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>I disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mugla University</td>
<td>number 14</td>
<td>20</td>
<td>35</td>
<td>30</td>
<td>19</td>
<td>118</td>
</tr>
<tr>
<td></td>
<td>% 11,9%</td>
<td>16,9%</td>
<td>29,7%</td>
<td>25,4%</td>
<td>16,1%</td>
<td>100,0%</td>
</tr>
<tr>
<td>Sakarya University</td>
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<td>19</td>
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<td>64</td>
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<td>187</td>
</tr>
<tr>
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<td>% 13,4%</td>
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<td>34,2%</td>
<td>17,1%</td>
<td>100,0%</td>
</tr>
<tr>
<td>Aksaray University</td>
<td>number 12</td>
<td>9</td>
<td>32</td>
<td>64</td>
<td>34</td>
<td>151</td>
</tr>
<tr>
<td></td>
<td>% 7,9%</td>
<td>6,0%</td>
<td>21,2%</td>
<td>42,4%</td>
<td>22,5%</td>
<td>100,0%</td>
</tr>
<tr>
<td>Total</td>
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<td>158</td>
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<td>456</td>
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<tr>
<td></td>
<td>% 11,2%</td>
<td>10,5%</td>
<td>25,0%</td>
<td>34,6%</td>
<td>18,6%</td>
<td>100,0%</td>
</tr>
</tbody>
</table>

(p<0,05)

Question of “I think the Professional title which I will have after graduation will provide opportunity of job.”, Muğla University students %25,4, Sakarya University students %34,2 Aksaray University students %42,4 percentage provided positive contribution. Research group of the standard deviation value was 1.321. there were found in a significant difference between three group mean scores (p<0,05).

The findings about the comparison of research groups on the size of social needs

Table 9. The comparison of research groups on social needs

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>I disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mugla University</td>
<td>number 14</td>
<td>18</td>
<td>23</td>
<td>36</td>
<td>29</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>% 11,7%</td>
<td>15,0%</td>
<td>19,2%</td>
<td>30,0%</td>
<td>24,2%</td>
<td>100,0%</td>
</tr>
<tr>
<td>Sakarya University</td>
<td>number 11</td>
<td>28</td>
<td>34</td>
<td>80</td>
<td>38</td>
<td>191</td>
</tr>
<tr>
<td></td>
<td>% 5,8%</td>
<td>14,7%</td>
<td>17,8%</td>
<td>41,9%</td>
<td>19,9%</td>
<td>100,0%</td>
</tr>
<tr>
<td>Aksaray University</td>
<td>number 13</td>
<td>16</td>
<td>31</td>
<td>61</td>
<td>29</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>% 8,7%</td>
<td>10,7%</td>
<td>20,7%</td>
<td>40,7%</td>
<td>19,3%</td>
<td>100,0%</td>
</tr>
<tr>
<td>Total</td>
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<td>88</td>
<td>177</td>
<td>96</td>
<td>461</td>
</tr>
<tr>
<td></td>
<td>% 8,2%</td>
<td>13,4%</td>
<td>19,1%</td>
<td>38,4%</td>
<td>20,8%</td>
<td>100,0%</td>
</tr>
</tbody>
</table>

(p<0,05)

Question of “I find my relationship with my friends at school good”, Mugla University students %30, Sakarya University students %41,9 and Aksaray University students %40,7 percentage provided positive contribution. Research group of the standard deviation value was 1.314. there were found in a significant difference between three group mean scores (p<0,05).

Table 10. The comparison of research groups on the size of social needs

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>I disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mula</td>
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<td>31</td>
<td>31</td>
<td>31</td>
<td>120</td>
</tr>
<tr>
<td>University</td>
<td>%</td>
<td>12,5%</td>
<td>10,0%</td>
<td>25,8%</td>
<td>25,8%</td>
<td>25,8%</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----</td>
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<td>39</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>6,8%</td>
<td>13,0%</td>
<td>25,5%</td>
<td>34,4%</td>
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<tr>
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<td>50</td>
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<td></td>
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<td>13,9%</td>
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<td>16,6%</td>
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<tr>
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<td>95</td>
</tr>
<tr>
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<td>12,5%</td>
<td>26,6%</td>
<td>31,7%</td>
<td>20,5%</td>
</tr>
</tbody>
</table>

(p<0,05)

Question of “I do not find suitable work in a sector other than education or in other job“, Muğla University students %25,8, Sakarya University students %34,4 and Aksaray University students %33,1 percentage provided positive contribution. Research group of the standard deviation value was 1,413. there were found in a significant difference between three group mean scores (p<0,05).

**Table 11. The comparison of research groups on the size of social needs**

<table>
<thead>
<tr>
<th>University</th>
<th>$44</th>
<th>Strongly disagree</th>
<th>I Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
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<td>25</td>
<td>35</td>
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<td></td>
<td>%</td>
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<td>10,1%</td>
<td>27,7%</td>
<td>21,0%</td>
<td>29,4%</td>
<td>100,0%</td>
</tr>
<tr>
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<td>15</td>
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<td>58</td>
<td>191</td>
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<td>7,9%</td>
<td>22,5%</td>
<td>31,4%</td>
<td>30,4%</td>
<td>100,0%</td>
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<tr>
<td>Aksaray University</td>
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<td>11</td>
<td>31</td>
<td>44</td>
<td>46</td>
<td>152</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>13,2%</td>
<td>7,2%</td>
<td>20,4%</td>
<td>28,9%</td>
<td>30,3%</td>
<td>100,0%</td>
</tr>
<tr>
<td>Total</td>
<td>number</td>
<td>49</td>
<td>38</td>
<td>107</td>
<td>129</td>
<td>139</td>
<td>462</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>10,6%</td>
<td>8,2%</td>
<td>23,2%</td>
<td>27,9%</td>
<td>30,1%</td>
<td>100,0%</td>
</tr>
</tbody>
</table>

Question of “I think I will be successful in my job“, Muğla University students %21, Sakarya University students %31,4 and Aksaray University students %28,9 percentage provided positive contribution. Research group of the standard deviation value was 1,321. there were found in a significant difference between three group mean scores (p<0,05).
The findings about the comparison of research groups on the size of the form of management and audit format

Table 12. The Comparison of Research Groups on the Size the Form of Management and Audit Format

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>I disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Total</th>
</tr>
</thead>
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<tr>
<td>Muğla University</td>
<td>number 20</td>
<td>23</td>
<td>26</td>
<td>23</td>
<td>28</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>% 16,7%</td>
<td>19,2%</td>
<td>21,7%</td>
<td>19,2%</td>
<td>23,3%</td>
<td>100,0%</td>
</tr>
<tr>
<td>Sakarya University</td>
<td>number 26</td>
<td>31</td>
<td>47</td>
<td>43</td>
<td>46</td>
<td>193</td>
</tr>
<tr>
<td></td>
<td>% 13,5%</td>
<td>16,1%</td>
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<td>22,3%</td>
<td>23,8%</td>
<td>100,0%</td>
</tr>
<tr>
<td>Aksaray University</td>
<td>number 26</td>
<td>27</td>
<td>34</td>
<td>26</td>
<td>39</td>
<td>152</td>
</tr>
<tr>
<td></td>
<td>% 17,1%</td>
<td>17,8%</td>
<td>22,4%</td>
<td>17,1%</td>
<td>25,7%</td>
<td>100,0%</td>
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<tr>
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<td>92</td>
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<tr>
<td></td>
<td>% 15,5%</td>
<td>17,4%</td>
<td>23,0%</td>
<td>19,8%</td>
<td>24,3%</td>
<td>100,0%</td>
</tr>
</tbody>
</table>

(p<0.05)
Question of “I think other job groups occupy my Profession field, Mugla University students %21,7, Sakarya University students %24,4 ve Aksaray University students %22,4 percentage erratic attendance. The standard deviation value of the research group was 1.314, there were found in a significant difference between three group mean scores (p<0.05).

Table 13. The Comparison of Research Groups On The Size the Form of Management and Audit Format

<table>
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<th>I disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
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<tr>
<td></td>
<td>% 18,3%</td>
<td>15,0%</td>
<td>20,0%</td>
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<td>22,5%</td>
<td>100,0%</td>
</tr>
<tr>
<td>Sakarya University</td>
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<td>52</td>
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<tr>
<td></td>
<td>% 8,4%</td>
<td>13,1%</td>
<td>27,2%</td>
<td>31,9%</td>
<td>19,4%</td>
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</tr>
<tr>
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<td>41</td>
<td>49</td>
<td>23</td>
<td>152</td>
</tr>
<tr>
<td></td>
<td>% 7,2%</td>
<td>18,4%</td>
<td>27,0%</td>
<td>32,2%</td>
<td>15,1%</td>
<td>100,0%</td>
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<tr>
<td>Total</td>
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<td>139</td>
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<tr>
<td></td>
<td>% 10,6%</td>
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<td>25,3%</td>
<td>30,0%</td>
<td>18,8%</td>
<td>100,0%</td>
</tr>
</tbody>
</table>

(p<0.05)
Question of “I welcome positive that the graduates of my field work in the public sphere as a civil servant”, Muğla University students %24,2, Sakarya University students %31,9 and Aksaray University students %32,2 provided positive contribution. The standard deviation value of the research group was 1.321. there were found in a significant difference between three group mean scores (p<0.05).
Discussion and Conclusion

Graduates' employment problems of recreation department, showed that in order to determine the status of, recreation department of employment problems of the attitudes of students were analyzed under the four dimensions. these are called 1) professional qualifications, 2) professional study course, 3) social needs 4) management and control format. Substances by a factor of each of the items in the arithmetic means, standard deviations, and levels are as follows; examined table 1, composing first factor, "professional qualifications" size, seen that a total of ten items. the highest arithmetic average is "if I have a problem related to vocational training and employment, I think to work in another sector". Recreation department students of the three university are expressed that participated in mentioned item also students are expressed to participate the item of "my job is answer the social needs in the social and sports areas." students participate the other 8 items in mid-level.

Examined table 2, forming the second factor, "professional work course" size, a total of 8 items. I think that professional title receive after graduation, can provide job opportunities off the public sphere". graduate students from the three university's recreation department are participated mentioned item. Also students are expressed participated the item of "I follow the professional publication of my department". students participate the other 6 items in mid-level.

Examined table 3, forming the third factor, "social needs" size, a total of 10 items. the highest arithmetic average, "I think that I will be success in my profession," agent. also students of recreation department are expressed to participate of items "I follow the professional publication of my department" and "I think studying with school friend in same work will improving efficiency". On other hand, ‘I see my school friends as professional opponents’ items answering netrual from students and they believe working together not only increase efficiency but also create competition. students have expressed to participate in mid-level other six items.

Table 4 examined, forming the second factor, "directors and audit format " size, seen that a total of 7 items. the highest arithmetic average of agent" I find the positive working of department graduates in the public sphere as a civil servant " . Also they participated " other occupational groups are engaged my professional field ". students have expressed to participate in mid-level other five item

Question of "if I have a problem related to vocational training and employment, I think to work in another sector", 25% of mugla university students, 28% of sakarya university students and 30.5% of aksaray university students provided a positive contribution. Research group of the standard deviation value was 1.276. there were found in a significant difference between three group mean scores (p<0.05).

Question of "I find insufficient instructional materials that are required for vocational studies", 29.2% of mugla university students, 31.8% of sakarya university students and 41.4% of aksaray
university students provided a positive contribution. research group of the standard deviation value was 1.143. There were found in a significant difference between three group mean scores (p<0,05).

Question of “I follow Professional publications about my department”, Mugla University students %39,8 Sakarya University students %40,9 and Aksaray University students %49 provided a positive contribution. Research group of the standard deviation value was 1.314. there were found in a significant difference between three group mean scores (p<0,05).

Question of “I think the Professional title which I will have after graduation will provide opportunity of job.”, Muğla University students %25,4, Sakarya University students %34,2 Aksaray University students %42,4 percentage provided positive contribution. Research group of the standard deviation value was 1.321. there were found in a significant difference between three group mean scores (p<0,05).

Question of “I find my relationship with my friends at school good”, Mugla University students %30, Sakarya University students %41,9 and Aksaray University students %40,7 percentage provided positive contribution. Research group of the standard deviation value was 1.314. there were found in a significant difference between three group mean scores (p<0,05).

Question of “I do not find suitable work in a sector other than education or in other job”, Muğla University students %25,8, Sakarya University students %34,4 and Aksaray University students %33,1 percentage provided positive contribution. Research group of the standard deviation value was 1.413. there were found in a significant difference between three group mean scores (p<0,05).

Question of “I think other job groups occupy my Profession field”, Muğla University students %21,7, Sakarya University students %24,4 ve Aksaray University students %22,4 percentage erratic attendance. The standard deviation value of the research group was 1.314. there were found in a significant difference between three group mean scores (p<0,05).

Question of “I welcome positive that the graduates of my field work in the public sphere as a civil servant”, Muğla University students %24,2, Sakarya University students %31,9 and Aksaray University students %32,2 provided positive contribution. The standard deviation value of the research
group was 1.321. there were found in a significant difference between three group mean scores (p<0.05).

The students graduating from public institutions to find a job easily with the students graduating from private institutions to find a job easily the factors of status of students and faculty, asserted the degree as a "weak", including evaluating the p<0.001 level, they had found a significant difference. comparisons of Çerez(2004) study about physical education and sport university students in 4. class, he said that after graduation 10% of students certainly would not recommended, 5% would not recommended, and 70% are undecided about the advice. although yıldız and tufekcióglu have stated that this situation stems from the employment limitedness of the students the research we've done cleared that recreation students can work except the public sector which there are no negative thoughts about they can work on the private sector. (Yıldız, Tufekçioğlu, 2008).

Yıldız(2008) also research in public institutions, physical education and sports teacher, coach, training and employment opportunities for graduates in sport management degree, while employment areas for recreation and sports science degree graduates indicates not been seen (Yıldız, 2008in study the question of "if I have a problem related to vocational training and employment, I think to work in another sector"; 25% students of mugla university, 28% students of sakarya university and 30.5% students of aksaray university give a positive answer. Again the question of “I think that professional title receive after graduation, can provide job opportunities off the public sphere”, 25.4 % of Mugla university students, 34.2 % of Sakarya university students and 42.4%of Aksaray university students give a positive answer. After graduating from the ideas of the students live within the employment problems of individual variables can be considered to have responded positively. It was not attained research finding related to this section of graduates' employment problems after graduation. however Kırimoğlu, (2010) physical education and sport university students, after graduation they feel anxiety or not in related to employment problems; 72.37% of student say yes and 6.2% say partially. Light of these findings, physical education and sports university final year students when they graduate they have a high degree of concern and this concern is to find work, the students participated in the survey who expressed increased levels of hopelessness, despair, the level of education in the departments, not a difference in terms of type of education and gender, but the anxiety that carriers of employment, stated that there were high levels of hopelessness (Kırimoğlu, 2010).

Both the research and data to be reached in this thesis, department of physical education and sport university graduates' employability status, the employability of the variables examined for different levels of hopelessness, the view that more needed to show that broad generalizations can be made.

Non-univercity graduates to be employed in the same activity in the recreation field can create problems and pessimism of this area graduates is known to increase.Individuals and organizations
engaged in such activities can increase their dividends by making non-expert people do the same job. This prepare the groundwork for the formation of the employment problem of university graduates. On the one hand economic development doesn’t create opportunities for accumulated labor, on the other hand it increases new labor force employment pressure and the unemployed are increasing in our economy. There are lot of recreation departments in Turkey and not considering of adequacy of the employment areas may be the biggest cause of the employment problem. Sections in the area of Physical Education and Sports as well as raise graduate degree, operation of sport, sport and recreation projects and work to make the creation of areas of activity is required. It can be thought that increase of number of those doing sports impacts positively increase of employment areas of department graduates, because that capital of sports and recreation activities is human can be considered.

Leisure time for people living in all parts of society, activities they can use, they can express themselves are needed. Behind this kind of activities’ organization, for different activities in the management and leadership, names and contents of training courses are needed. (Balcı, 2003).

That higher education graduates having employment problem works in different branches and even with very low costs to continue their lives and meet needs is known. Extracurricular activities that can be considered as the main cause of professional dissatisfaction raise failure and unwillingness. Having the employees with low motivation and poor performance on the profitability of the utility is likely to lead to negative consequences. Reluctant and unsuccessful efforts can impede the participation of individuals in the business areas of human capital. It can be possible to say that positive or negative attitudes and behaviors in the individual and society. In these sense, the employee’s job satisfaction relates closely both organization and society. Decrease in participation in sports and recreational activities of individuals can lead to a reduction in the number of employment areas that already have employment problem.

Non-graduaters of university in sports and recreation activities are in the same activity and this increases the problem of unemployment. Employer search employees who do a lot of work with low cost and this prevents the employment of college graduates or a lot of work with low cost is expected. For this purpose individual discipline- specific businessness, individuals who specialize in taking following take part.. Satisfactions of employees will increase the number and increasing the number of individual will increase lines of business.

Also recreation department graduates have employment problems that graduates of physical education and sport university. However it is a fact that there are areas of significant employment for recreation department graduates. Recreation department students asserted that they see private sector that they can do their jobs as the working area and disagree with not being employed after graduation. the students are understood from the results of survey that they think that they can find
jobs in various sectors. However, there is the presence of the group who wants to work as a clerk in the public area.

Because universities didn't inform the necessary organs of the giants of the universities in recreation, didn't give necessary information about recreation to organization and institutions in the definition, recreation students get too big suffer from all of the areas about both authorized to sign and assignment other organizations and institutions. Universities remains silent in the face of ongoing problems that students who have graduated from recreation department or still studying. (Cerit, 2008).

If viewed from another angle a cause of the problem is determined as generally students’ making false choice because of high probability of not entering a university. A large amount of false choices are constituted of unconscious choices. Especially individuals choose random programs that are out of their interest and capability not to be unemployed. (Fadıloğlu, 1988).

The important factor at the cause of choosing a programme which they do not want is the fact that the points of university pass exam are low. (Gavcar, E ve ark. 2005).

Another area recreation department graduates can be employed is youth leader called 'youth worker', 'dot' and designated through procurement of services. These leaders can have obligation primarily to be recreation department graduates in their employment.

Thus recreation department will be more efficient in terms of producing graduates of high-quality service and play an active role in providing the appropriate environment to grant a asturated response.

It is seen that it is important providing arrangements in recreation department graduates being employed in the units connected to local organizations named club and local that are working within the women's and children's sports and recreation, recreation departments of universities youth worker programs in a way that they will licence arrangements with provinces.

Also it is viewed that municipalities have been constructing open sport and recreation ares and target all people from all ages benefit from these areas.

It is possible for municipalities to employ recreation leaders by purchasing service under the law of Public Procurement Law no.4734. It can be suggested that it is evaluated as an important employment shape and area.

Tourism in our country has been an important potential sector. It is thought that the most important entertainment of local and foreign tourists who come to have holiday especially in holiday resorts are recreation activities. Giving these services by people who graduate from recreation
departments provide possibilities to give these services by more securely, scientifically and by more talented people

It is thought that the obligation of choosing the amateurs from people who graduate from Physical Education and Sport University Recreation Department that is brought by The Ministry of Tourism provides an important employment area.

It is thought that in Physical Education and Sports High Schools in our universities, that they go to the new regulations in parts of the training programs in accordance with developing new demands in industries will provide opportunity not to have difficulty in process of employment. So, that the managers of school and department coming together with possible institutions to rearrange the education programmes for graduates of departments should be applied an terms of precautions which relax eemployment process.

References


GOAL ORIENTATION AND MOTIVATIONAL CLIMATE IN BADMINTON ATHLETES

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Abstract
The purpose of this study is to determine the goal orientation and motivational climate of badminton athletes and research the relationship between these concepts. The research was carried out in Badminton Turkey Clubs Championship where 12 clubs and 87 athletes participated in 2009. 56 badminton athletes that participated in Badminton Turkey Clubs Championship in 2009 whose mean age 18.78±3.46 constitute our research sample. The Task and Ego Orientation in Sport Questionnaire (TEOSQ) and The Perceived Motivational Climate Questionnaire (PMCSQ) were used to gather the data. The data were analyzed by using the techniques such as descriptive statistics and bivariate correlation. Results showed that badminton athletes ego orientation scores X=3.67, task orientation scores X=4.04, mastery climate scores X=4.05, performance climate scores X=3.08 and there is positive and significant relationship between ego orientation and task orientation (r=0.455, p<0.01), ego orientation and performance climate (r=0.320, p<0.05), ego orientation and mastery climate (r=0.365, p<0.01), task orientation and mastery climate (r=0.482, p<0.01). There is no significant relationship between task orientation and performance climate (r=0.143, p>0.05).

As conclusion it may be said that badminton athletes are task oriented, perceive the motivational climate as mastery climate and there are relationships between goal orientation and motivational climate.

Keywords: Badminton, goal orientation, motivational climate.

Introduction

Most of the sports activities are evaluated by means of various criteria of success and sports life is described by such features that exemplifies success such as taking pleasure, development of skills, reaching to fruition and winning. For that reason it is inevitable for man to orient towards various ends or goals. Accordingly there are also goals for a sportsman which he/she has a high opinion of and he/she adopts various behaviour patterns in order to attain these goals (Nicholls, 1989).

The Achievement Goal Theory is one of the main approaches among the social cognitive theories that offers an explanation for the motivation for success in sports and physical exercise environments. (Weinberg, Gould 1995). The Achievement Goal Theory approach emphasizes the importance of examining the fundamental goals of success in determining the behaviour of the individual. According to the Achievement Goal Theory approach there are two fundamental styles of goal achievement and success (Nicholls, 1992).

These two goal orientations called “task” and “ego” oriented goal orientations are related to the self-judgement of individuals in terms of their level of abilities. An individual who has task-oriented
goals focuses on such factors as development of skills, learning new skills, demonstrating one’s mastery in performing his/her task and working hard while ego oriented individual focuses on demonstrating his/her superior abilities and wants to defeat his/her rivals with a less degree of effort (Duda, 1993).

Among these goal orientations, those sportsmen who have task oriented goals consider the competitions as a chance factor to develop their sportive skills, if their task orientation is high. The better the competitor, the more the performance of the sportsman shows (Duda, 2005). Stephens and Bredemeier (1995) have stated that the sportsmen who have a high task orientation sees themselves as skillful and are happy to participate in a branch of sports. Sportsmen who adopt task-oriented goals attribute priority to the development of skills, learning, gaining mastery in the performance of tasks, team harmony and cooperation. Some researchers have stated that task related goal orientation has a positive relationship with the sense of satisfaction, enjoyment and being internally interested in sports (Duda and colleagues, 1992, Vazou, Ntoumanis and Duda, 2005).

There are ego oriented goals in the second dimension of goal orientation. Such aspirations like being the best, being superior to others and pursuing the results are basic features of these goals. It may be said that such internal factors as sense of superiority and inferiority complex direct the behaviour of individuals in this context. For that reason individuals consider it as a disaster to be less successful than the superior and consequently attribute a basic priority to personal success. Not the process itself but the result of the process is important for individuals who attribute priority to the goals directed towards ego (Toros, Yetim 2000).

According to Jagacinski and Nicholls (1984) two independent dimensions of goal orientation exist in every sportsman and the degree to which every dimension shows itself is the goal orientation of the sportsman. In these two independent dimensions such combinations may exist as task/high-ego/high, task/high-ego/low, task/low-ego/high and task/low-ego/low. The degree to which the sportsman has goal orientations in the form of ego orientation and task orientation requires the evaluation and judgement of a form of life (Toros 2002). A teacher, parent or coach motivates the sportsman towards goal orientation by letting him/her feel definite hints and rewards. Such questions as “How was your performance?” and “Did you win?” asked by family members to a child upon his return to home after the game are hints for the value attributed by the sportsman to definite purpose (Toros, Koruc, 2005).

While goal orientation for success is related to irregular features, perceived motivational climate which is the second dimension of goal orientation for success is a situational phenomenal. Perceived motivational climate is based on the perceptions of individuals related to what the teacher, family, coach or any other prominent person supports or expects. Similar to goal orientations, environments may be classified as task related or ego related. In order to avoid confusion, these environments shall
be named mastery-related and performance-related climates respectively (McManus, 2004). Whether the character and structural features of team experiences made during motivation of sportsmen are active is a feature that must be examined from the point of view of motivational climate. Shortly, the environments in which learning, skill development and evaluation of activities by the individuals take place must be taken up (Toros, 2001).

According to Roberts and Treasure (1995), another factor that contributes to the goals of sports and the performance related to is the perceived motivational climate in which the sportsman finds himself/herself. A sports environment does not only mean different coaching and coaching behaviour. At the same time, coaches, managers, families and spectators form such a climate by means of explicit and implicit reinforcements (Toros, 2005).

Motivational climate contains various features like level of competition, styles of directives, and the influence of prominent persons on the team culture. Motivational climate means how the coaching environment is perceived. There are two different motivational climates in a sports environment. The first one is the mastery climate that supports learning and making physical exercises involving development of skills. The second one is the performance climate that facilitates focusing on the abilities and achievements of the competitor and reinforces such features as being a star and defeating the competitor (Roberts, Ommundsen 1996).

It is a feature which is to be examined from the point of view of the perceived motivational climate whether the character and structural characteristics of the team experiences are effective in structuring the motivation of the sportsman. The environments in which the sportsmen learn, develop skills and evaluate their activities must be taken up. Related research studies show that although the individual and situational factors have been examined separately, strong ties have been observed between the two areas and both of these factors had a significant influence on motivation (Toros, 2005).

Solmon (1996) has stated that the perceived motivational climate is a factor in explaining the goal orientation of the sportsman. According to the two factors theory about the form in which the sportsman defines and perceives success, a sportsman achieves success either by comparing his/her abilities with those of other sportsmen or by comparing his/her actual performance with his past performance. A comparison is made in each of these cases. In the first case the sportsman uses the sportsmen who are his/her equivalent as a criterion of comparison while in the second case his/her own past performance values are used as a criterion of comparison.

Goal orientation of the sportsman may effect his/her perception of the motivational climate. According to the results of a study carried out with 148 students from the physical training and sports department of the University of Norway, the sportsmen who are task oriented in the first instance
perceive the motivational climate as mastery goal oriented and likewise the students who are ego-oriented in the first instance perceive the motivational climate as performance task-oriented (Roberts, Ommundsen, 1996). Besides, significant relations have been found between task orientation/ego orientation and performance climate in a study made on the elite and non-elite basketball players (Toros 2001, Toros 2002).

Parallel features are apparent between the variables of goal orientation and perceived motivational climate. As an individual feature, task oriented goal orientation shall be best realized in the task oriented motivational climate. Again as an individual feature, goal orientation related to the ego is in harmony with performance oriented motivational climate (Toros, Koruc 2004).

There are not so many researchs about badminton which is a branch of sports that has become quite popular in our country in the recent years. In this context, the purpose of our research is to contribute to badminton sport and the science of sport by determining the goal orientation and motivational climate of the badminton players and revealing the relation between these structures.

Method

Participants: The research was carried out in Badminton Turkey Clubs Championship where 12 clubs and 87 athletes participated in 2009. 56 badminton athletes that participated in Badminton Turkey Clubs Championship in 2009 whose mean age 18.78±3.46 constitute our research sample.

Instruments: The Task and Ego Orientation in Sport Questionnaire, developed by Duda (1989) and adapted to turkish sportsmen by Toros (2001) has been used for measuring the goal orientation of sportsmen, while The Perceived Motivational Climate Questionnaire developed by Walling, Duda, Chi (1993) and adapted to turkish sportsmen by Toros (2001) has been used for measuring the perception of motivational climate by the sportsmen. Scale of task and ego orientation in sports is formed of 13 items, seven of which is task oriented and 6 are ego oriented. Those who reply the questions included in the scale scores their participation in each item according to a five step assessment scheme. The structural validity study related to the scale has been carried out with the help of explanatory factor analysis (Duda, 1989) and two factors, namely task and ego orientation, have been found. In the study on the scale (Duda and Whitehead, 1998), internal consistency of the scale has been determined to be 0.79 and 0.81 for task orientation and ego orientation respectively. Duda (1992) has found out that the three weekly “test – retest reliability of the scale” was 0.68 for task orientation and 0.75 for ego orientation. In the adaptation study conducted by Toros (2001) it has been found out that the two factors, namely task and ego orientation account for % 58 of the general variance, that the internal consistency is 0.87 and 0.85 for ego orientation and ego orientation respectively and that the three weekly “test – retest reliability” has been 0.65 and 0.72 for task orientation and ego orientation.
respectively. The scale for the perceived motivational climate in sports is formed of 21 items, 12 of which are related to performance climate and 9 are related to mastery climate. Each of the interviewees who replied the questions included in the scale were asked to assess each item according to a five step assessment scheme. In the original study on the scale, structural validity study has been carried out with the help of both explanatory and affirmative factorial analysis (Walling, Duda and Chi, 1993). In this study it has been determined that there are two factors, namely mastery and performance climate. Walling and colleagues (1993) have found the internal consistency coefficients of the scale as 0.73/0.84(performance climate) and 0.80/0.81(mastery climate). In the adaptation study carried out by Toros (2001) it has been found out that the factors of mastery and performance climate account for 51% of the general variance of the scale, that the inner consistency of the scale has been 0.84 and 0.90 for mastery climate and performance climate respectively and the three weekly “test-retest reliability has been 0.66 and 0.74 for mastery climate and performance climate respectively.

Procedure: Data was gathered from the badminton athletes during the championship.

Data Analyse: The data were evaluated in SPSS 17.0 program and descriptive statistical methods and correlation analysis have been made use of for the analysis of the data obtained.

Results

In this part the findings about the descriptive statistics of badminton athletes, the relationships between goal orientation and motivational climate are given below and shown in tables.

Table 1. Descriptives of Goal Orientation and Motivational Climate of Badminton Athletes.

<table>
<thead>
<tr>
<th></th>
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<th>Min.</th>
<th>Max.</th>
<th>X</th>
<th>Sd</th>
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<td>5,00</td>
<td>4,0459</td>
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<tr>
<td>Mastery climate</td>
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<td>4,42</td>
<td>4,0556</td>
<td>,62361</td>
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<tr>
<td>Performance climate</td>
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<td>2,78</td>
<td>5,00</td>
<td>3,0833</td>
<td>,63032</td>
</tr>
</tbody>
</table>

As seen on Table-1 the mean of ego orientation scores 3,67 the mean of task orientation scores 4.04 the mean of performance climate scores 3,08 the mean of mastery climate scores 4,05.
Table 2. The Relationships Between Goal Orientation and Motivational Climate.

<table>
<thead>
<tr>
<th></th>
<th>Ego orientation</th>
<th>Task orientation</th>
<th>Mastery climate</th>
<th>Performance climate</th>
</tr>
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<tbody>
<tr>
<td>Ego orientation</td>
<td>r = 1.455**</td>
<td>.455**</td>
<td>.365**</td>
<td>.320**</td>
</tr>
<tr>
<td>P</td>
<td>.000</td>
<td>.066</td>
<td>.016</td>
<td>.016</td>
</tr>
<tr>
<td>N</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
</tr>
<tr>
<td>Task orientation</td>
<td>r = .455**</td>
<td>1.482**</td>
<td>.000</td>
<td>.293</td>
</tr>
<tr>
<td>P</td>
<td>.000</td>
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<td>.293</td>
<td>.293</td>
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<td>N</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
</tr>
<tr>
<td>Mastery climate</td>
<td>r = .365**</td>
<td>.482**</td>
<td>1.184</td>
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</tr>
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<td>N</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
</tr>
<tr>
<td>Performance climate</td>
<td>r = .320**</td>
<td>.143</td>
<td>-1.184</td>
<td>1</td>
</tr>
<tr>
<td>P</td>
<td>.016</td>
<td>.293</td>
<td>.174</td>
<td>.174</td>
</tr>
<tr>
<td>N</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
</tr>
</tbody>
</table>

The relationships between goal orientation, motivational climate in badminton athletes was tested by bivariate correlation. As seen on Table-2 there is positive and significant relationship between ego orientation and task orientation (r=0.455, p<0.01), ego orientation and performance climate (r=0.320, p<0.05), ego orientation and mastery climate (r=0.365, p<0.01), task orientation and mastery climate (r=0.482, p<0.01). There is no significant relationship between task orientation and performance climate (r=0.143, p>0.05).

Discussion And Conclusion

In the research it was found that the mean of ego orientation scores of badminton athletes 3.67, the mean of task orientation scores 4.04 the mean of performance climate scores 3.08 the mean of mastery climate scores 4.05. Basing on the findings given above, it may be said that the badminton athletes are task oriented and perceive the motivational climate as mastery climate. In their research on high-school volleyball players, Toros and Koruc (2005) have found out that the sportsmen have a goal orientation characterized by task orientation and perceived motivational climate as a mastery climate. Again, Ariburun and Asci (2005) have found out in their research on American football players that they are inclined to be task oriented and perceived motivational climate as a mastery climate. Toros (2002) have reached similar results in his research studies on elite and non-elite male basketball players.

In the research there is positive and significant relationship between ego orientation and task orientation, ego orientation and performance climate, ego orientation and mastery climate, task orientation and mastery climate. There is no significant relationship between task orientation and performance climate. As the ego orientation scores of badminton players increase, the task orientation, mastery climate and performance climate scores also increase; as the task orientation score increase mastery climate scores increase as well. Badminton sportsmen, who aim at achieving success by
basing on their superior talents and with minimum effort have been observed to have concentrated themselves on developing their skills and showing mastery in the performance of their tasks and are able to show that orientation both in the performance and mastery climate. Besides, it may be said that their orientation towards developing their skills and showing mastery in the performance of their tasks shall arise in the mastery climate that covers the development of their skills. Roberts and Ommundsen (1996) have found out that the volleyball players perceive the motivational environment of sports rather on the basis of mastery climate. Duda (1998) have obtained strong correlations between the variables of the perceived motivational climate and the goal orientations of the sportsmen. Roberts and Ommundsen (1996) have pointed out that the students of physical training with high task orientation have perceived the motivational climate as mastery oriented while ego-oriented students have perceived the motivational climate as performance oriented.

In a research study in which the relation between the goal orientation of the high school and university male basketball players and their coaches were investigated, Chaumeton and Duda (1988) have found that the coaches have shown differences depending on the level of the competition and situational factors. The sportsmen have said that the task orientation is important at every level. In the said research study, it has been found out that winning is more important both for the players and the coaches at the highest level of competition. Goal orientation which one has at the individual level gets stronger, weaker or is sometimes reversed with the influence of the motivational climate factors (Toros, 2002). However it has been observed that the sportsmen who have task oriented goals shall be successful in an environment with a mastery climate and that both features reinforce one another (Roberts, Ommundsen, 1996; Duda, 1992). In the research studies carried out in this field, it has been observed that the level of the competitor and the perceived motivational climate influence the goal orientation of the sportsmen (Ntoumanis, Biddle, 1998). According to a research study conducted by Ames (1992) the students who perceive their motivational climate as mastery climate are more prone to prefer challenging goals that require showing effort and believe that success and effort are very highly significant factors. The research carried out shows that the mastery climate appears to be an important feature of the class structure and cognitive and effective motivational processes diversifies depending on how the students perceive and interpret the class structure. According to Ames (1992), teachers and coaches give open messages related to the value attributed to the processes of the competing environment when they ask questions. If an adult who is valuable for the sportsman asks such a question as “How were you?” instead of “Did you win?”, the sportsman obtains the possibility to express his/her own values. In their research study on high school volleyball players, Toros and Koruc (2004) have found out positive, meaningful relations between task orientation / ego orientation and mastery climate. In her research on professional and amateur football players, Ungur (2009) have observed that the strongest correlation both in the amateur and professional sportsmen existed between ego orientation & performance climate and task orientation & mastery climate.
As conclusion it may be said that badminton athletes are task oriented, perceive the motivational climate as mastery climate and there are relationships between goal orientation and motivational climate.

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INFLUENCE OF THE VARIOUS PER CONTENT PROGRAMS WITH MOTOR ACTIVITIES

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Abstract: At the beginning of 2011, two author’s programmes were created – Body-programme GD-PP and Body-programme GD-MS, with included exercises for different muscle groups of complex influence, presented in a specific order. The aim of the research is to make comparison of the influence of the various per content programs with motor activities, on the physical qualities and morpho-functional indices of female students. With both programs, the building up effect on the physical qualities has been established, as it is higher in Body-program GD-PP.

The morpho-functional indices were positively affected in both programs, but Body-program GD-MS changes are greater. We recommend the application of Body program GD-PP and Body program GD-MS in the mandatory study on physical culture and sports in the higher schools.

Introduction

Higher schools play an important role in the process of creating of intellectual and material values of each society. Highly-qualified and skilled workers are prepared in them, in the various spheres of science, technology, management and culture.

In the environment of global information society, the character of the training process in higher schools is also changing. The educational load of students is constantly increasing, their work becomes more intensive and full of suspense, and it is conducted at conditions of a decreased motive activity, with static tension of a limited number of muscles, mainly for keeping up the working pose.

Of special importance for keeping up the optimum working capacity is the correct observation of labor and rest regimen. Of importance is the wide use of various per content trainings with motor activities, for improvement of the physical qualities and morpho-functional indices [5, 7, 8, 9]. The change of the components of physical fitness reveals the efficiency of every training programme. For the needs of the educational system, it is useful to develop programmes of physical exercises, that would contribute for the development of physical fitness [1, 3, 4].

At the beginning of 2011, two author’s programmes were created – Body-programme GD-PP and Body-programme GD-MS, with included exercises for different muscle groups of complex influence, presented in a specific order.

Body-programme GD-PP methods, has been presented at the International scientific conference “Contemporary Technologies of Education, Control and Assessment of Physical Culture and Sports in
the Training System”, 01-03.09.2011, in Varna [6]. Body-programme GD-MS methods, has been presented at the VI International Balkan Congress for Education and Science: The Modern Society And Education, 30.09-01.10.2011, in Ohrid [2].

The aim of the investigation is to compare the influence of the various per content programmes with motor activities on the physical qualities and morpho-functional indices of female students.

The following tasks have been fulfilled:
- Tests have been conducted prior and after the experiment, on a developed test battery.
- Pedagogic experiment has been conducted with Body-programme GD-M” and Body-programme GD-PP.
- The data got have been analyzed.

The Study

Subject of the investigation is the influence on the physical qualities and morpho-functional indices of female students.

Object of the investigation are 95 female students from the Faculty of Economics, Agrarian Faculty, Veterinary-medical and Medical Faculty of Trakia University – Stara Zagora town.

Pedagogic experiment for a period of 6 weeks has been conducted. In the beginning and in the end of the experimental period, 5 tests have been conducted, for measuring the physical qualities (“standing long jump”, “stand-by (support) hold”, “sitting forward tilt”, “getting up from occipital back position to sitting position” and “step-test duration”).

For measuring the body-mass content, the professional, medical Japanese BODY COMPOSITION ANALYZER BC - 420MA “TANITA” has been used. The following has been measured: body-mass weight, fat mass, fat fee mass, body water content, muscle mass, basic metabolism, internal fats and metabolic age. The pulse at rest and after the step-test has been measured.

With Body-programme GD-PP, exercises included have been conducted with dumb-bells of 2 kg each, without using fitness devices. During the first two weeks, after the fulfillment of each exercise, there is a rest of 1 minute. Exercises are fulfilled twice (two rounds), and there is a rest of 3-5 minutes between the first and second round. During the third and fourth week, the rest is of 1-2 minutes, between the exercises for the various muscle groups, i.e. the exercises for one muscle group are fulfilled without a rest. During the third week, two rounds are conducted, and during the fourth – three rounds. The rest between the rounds is 3-5 minutes. During the fifth and sixth week, the exercises are fulfilled without interruption, i.e. one round is played without a rest. There is a rest of 3-5 minutes between the rounds. Three rounds are conducted. Stretching of 10 – 15 minutes puts the end.
With Body-programme GD-MS, exercises included have been conducted with fitness devices and exercises with dumbbells of 1 kg each. The first two weeks start with three series of 8-10 repetitions each, and 1-2 minutes rest between the repetitions and 3-4 minutes rest, between the exercises. The following four weeks, the loading is increased to three series of 15-20 repetitions each, at the same time, decreasing the time for rest between the series to one minute, and between the exercises – to 2-3 minutes. Both Programmes have been approbated in Trakia University.

Scientific-investigation and mathematics-statistic methods have been used – analysis through bio-electric impedance (Health Monitor – Tanita Version 2.0.1), pedagogic experiment, variety analysis and comparative analysis.

**Findings**

On *Table 1*, the statistic indices, necessary for comparative analysis of data have been presented. Apparent is the increase in the achievements of female students, included in the trainings on the two programmes (column \( \bar{d} \)). Their analysis shows the efficiency of the work on Body-programme GD-PP and Body-programme GD-MS.

The investigated indices are grouped into two groups – physical qualities and morpho-functional indices.

In the first group (physical qualities), “sitting long jump”, “stand-by hold”, “sitting forward tilt”, “getting up from occipital back position to sitting position” and “step-test duration” have been included.
Table 1: Reliability of Growth of Physical Qualities and Morpho-Functional Indices With the Pedagogic Experiment

<table>
<thead>
<tr>
<th>№</th>
<th>Test</th>
<th>Measurement unit</th>
<th>Group</th>
<th>Beginning</th>
<th>End</th>
<th>Growth</th>
<th>α Beg. - End</th>
<th>α GD - MS - GD - PP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sitting long jump</td>
<td>cm</td>
<td>GD-MS</td>
<td>142,06</td>
<td>146,14</td>
<td>4,08</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>144,17</td>
<td>157,82</td>
<td>13,65</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>Stand-by hold</td>
<td>s</td>
<td>GD-MS</td>
<td>30,78</td>
<td>93,37</td>
<td>33,68</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>70,47</td>
<td>191</td>
<td>12,25</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>3</td>
<td>Sitting forward tilt</td>
<td>cm</td>
<td>GD-MS</td>
<td>34,16</td>
<td>36,4</td>
<td>2,24</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>34,34</td>
<td>38,39</td>
<td>4,05</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>4</td>
<td>Getting up from occipital back position to sitting position</td>
<td>(n)</td>
<td>GD-MS</td>
<td>32,62</td>
<td>41,47</td>
<td>8,85</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>32,27</td>
<td>38,26</td>
<td>6,09</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>5</td>
<td>Pulse at rest</td>
<td>b/min</td>
<td>GD-MS</td>
<td>100,35</td>
<td>62,93</td>
<td>-37,42</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>90</td>
<td>9,86</td>
<td>-80,14</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>6</td>
<td>Pulse after step-test</td>
<td>b/min</td>
<td>GD-MS</td>
<td>166,72</td>
<td>115,85</td>
<td>-50,87</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>157,03</td>
<td>162</td>
<td>4,97</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>7</td>
<td>Step-test duration</td>
<td>s</td>
<td>GD-MS</td>
<td>280,45</td>
<td>286,54</td>
<td>6,09</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>190</td>
<td>87,18</td>
<td>-10,51</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>8</td>
<td>Body mass</td>
<td>kg</td>
<td>GD-MS</td>
<td>60,95</td>
<td>60,55</td>
<td>-0,40</td>
<td>0.10</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>60,13</td>
<td>59,37</td>
<td>0,76</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>9</td>
<td>Fat mass</td>
<td>kg</td>
<td>GD-MS</td>
<td>17,37</td>
<td>16,73</td>
<td>-0,64</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>14,8</td>
<td>14,28</td>
<td>0,52</td>
<td>0,10</td>
<td>0.00</td>
</tr>
<tr>
<td>10</td>
<td>Fat-free mass</td>
<td>kg</td>
<td>GD-MS</td>
<td>43,58</td>
<td>43,82</td>
<td>0,24</td>
<td>0,33</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>43,18</td>
<td>42,85</td>
<td>0,33</td>
<td>0,13</td>
<td>0.00</td>
</tr>
<tr>
<td>11</td>
<td>Body water content</td>
<td>%</td>
<td>GD-MS</td>
<td>53,88</td>
<td>53,93</td>
<td>-0,05</td>
<td>0,02</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>54,32</td>
<td>54,53</td>
<td>0,21</td>
<td>0,08</td>
<td>0.00</td>
</tr>
<tr>
<td>12</td>
<td>Muscle mass</td>
<td>kg</td>
<td>GD-MS</td>
<td>51,70</td>
<td>52,15</td>
<td>0,45</td>
<td>0,05</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>42,85</td>
<td>43,18</td>
<td>0,33</td>
<td>0,05</td>
<td>0.00</td>
</tr>
<tr>
<td>13</td>
<td>Basic metabolism</td>
<td>kj</td>
<td>GD-MS</td>
<td>5993,75</td>
<td>5684,06</td>
<td>964,23</td>
<td>0,40</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>5904</td>
<td>753,82</td>
<td>5856</td>
<td>773,46</td>
<td>48,08</td>
</tr>
<tr>
<td>14</td>
<td>Internal fats</td>
<td>kg</td>
<td>GD-MS</td>
<td>3,87</td>
<td>3,75</td>
<td>-0,12</td>
<td>0,05</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>1,88</td>
<td>1,72</td>
<td>0,16</td>
<td>0,05</td>
<td>0.00</td>
</tr>
<tr>
<td>15</td>
<td>Metabolic age</td>
<td>year</td>
<td>GD-MS</td>
<td>20,87</td>
<td>19,95</td>
<td>-0,92</td>
<td>0,05</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GD-PP</td>
<td>16,88</td>
<td>16,77</td>
<td>0,11</td>
<td>0,13</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Through the test “sitting long jump”, we get information about the change of the explosive strength of lower limbs. The average value of the growth, with Body-programme GD-PP is more than three times bigger, than the growth got as a result of the trainings with Body-programme GD-MS (fig. 1).

With the test “stand-by hold”, a very big difference in the growths with both programmes is observed. Data show, that the duration of fulfillment of stand-by hold, with the trainees on Body-programme GD-PP has increased by 53,39 s (very high growth). This is a clear indication for the more successful influence of this programme, in comparison with Body-programme GD-MS on this index (fig. 2).
Analysis of the results with “sitting forward tilt”, shows, that the flexibility of the investigated persons has improved with both programmes, but bigger change has occurred with Body-programme GD-PP (fig. 3.).

The trainings with Body-programme GD-PP have contributed to a greater extent for the improvement of the strength endurance of abdominal muscles with the investigated persons, in comparison with the trainings with Body-programme GD-MS (fig. 4.).
With the modified step-test of Austrand (after I. Iliiev,1989) [10], positive changes have also been observed. Analysis of the results with this test shows a higher growth with the trainees, with Body-programme GD-MS (fig. 5).

In the second group (morpho-functional indices), there are significant results as regards the “pulse frequency at rest” and “pulse frequency after step-test”. The average values of the growths with Body-programme GD-MS - (37,42 beats/min and 50,87 beats/min) are lower (with registered improvement) than these of Body-programme GD-PP, - 4 beats/min and 4,97 beats/min respectively.

With the rest investigated indices: body mass weight, fat mass, fat free mass, body water content, muscle mass, bone mass, basic metabolism, internal fats and metabolic age, there are differences established, but they are not significant, probably due to the comparatively short duration of the experimental period.

**Conclusions**

The results got give us a reason to make the following conclusions:

1. The building effect on the physical qualities with both programmes has been established, but it is higher with Body-programme GD-PP.
2. Morpho-functional indices are influenced positively with both programmes, but with Body-programme GD-MS, the changes are bigger.

We recommend the application of Body-programme GD-PP and Body-programme GD-MS in the mandatory trainings on physical culture and sports in the higher schools.
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SPORT FOR ALL IS THE FIRST GOAL FOR DEVELOPMENT OF STRATEGIC SPORT PLANNING

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Abstract: The purpose of this research is developing perspectives and strategic plans Department of Physical Education of Isfahan through David Model for a five-year period from 2011 until 2015. This study was done for both the quality and quantity. Statistical Sample was 150 senior managers and middle members of sports in the province of Isfahan. For gathering the required information on the quantitative section, a research questionnaire was used, the validity of which was confirmed by experts. In the qualitative section interviews were used. The strategic position & action evaluation (SPACE) matrix and the quantitative strategic planning matrix (QSPM) were used to analysis the required information in the qualitative section. The logical induction method was used in the qualitative section. Findings showed that the department of physical education has 5 long-term goals and 5 grand strategies. Sport for all is first goals for development of strategic sport planning. While the position of the department of physical education's strategies was placed in an aggressive position according to the strategic position & action evaluation matrix, at the end it may be concluded that the perspectives, goals and the organized strategic plan has the capacity to execute the strategies.

Keywords: Sport for All, Strategic Planning, Department of Physical Education

Introduction

In the third millennium, sports organizations, like most organizations of other areas were changed into strategy based organizations to survive in global competition and it was done in such a way that lots of sports organizations of different countries arranged their strategies according to their mission and achieved great success by using then. With the establishment of such thinking in the world, the (International Olympic committee) IOC and some of the country's sports federations arranged their organization strategies to succeed in their mission. For example, in 2009 the (Iranian National Olympic Committee) NOC made 13 strategies and 11 long-term goals, and Keshavarz (2011) suggest 41 long-term goals of strategic plans for Iranian National Olympic Committee (4).

With such a thought the mentioned organizations an addition to having a strategic plan and a clear perspective are looking for a successful presence in the national and international areas as well and hope that by executing these strategies to reach the goals they have determined with the lowest energy and cost possible. For example, the Malaysian Olympic committee with putting its first strategic plan into action (1993-2003) have achieved successes like an increase in their credibility, using information technology, possessing expert human resources, rebuilding facilities, reforming their agenda according new needs, strengthening financial power, acknowledging sportsmen, hosting yearly conferences and finally established national Olympic academy (10). Also, in Australia top sport
managers could achieve remarkable success in most of activates such as participation in several important sport events like Olympic Games through preparing and executive their own strategies (8).

Also, last studies show that usually executing the arranged strategy is not done easily and among arranging and executing the strategies of organizations exists a gap and there is fear that arranged strategies will not be put to action in organizations for numerous reasons, such as: lack of credibility of senior managers, not allocating the needed resources(5). Sajadei Result's (2005) Stands for that, one of the important reasons for do not performance strategic planning in sport organization, have not executive patterns for preparation strategies. In hence it seems, must search for prorate solvation’s that it can deliver executive patterns for preparation strategies and changes mental strategies to objective strategies (2).

According to what was mentioned the experts of management science have given special tools to organizations so that they can execute their organization's strategy by using them. For example one of the managers of arranging strategic plans for different organizations is the Fred R. David strategic planning model. In this model after arranging the vision, vision statement, mission, mission statement and core values with the analysis of the present condition, with attention strengths, weakness, opportunities, threats (SWOT), extracts the related strategies and gathers aligned strategies and internal and external situations analyzed with use internal factors evaluation (IFE) and external factors evaluation (EFE). Than with used Strategic Position & Action Evaluation Matrix (SPACE) the situation of organization designed after that with used Quantitative Strategic Planning Matrix (QSPM), this is technique for select best strategies. With select best strategies organizations moved to Favorite situation (3).

Singapore Sepaktakraw federation with use of strategic management approach, design own strategic planning for 2004 until 2013. This mention federation wants to perform, design strategies, more over management, organizing, marketing and development of international activities and transmute Sepaktakraw to Singapore national sport. In strategic map of this federation coordinate effect and reason relations between stakeholders, costumer’s, internal processing, growing and learning (11). English Decorum association with concern performing Olympic 2012 in London, design strategic for increase people loyalty to sport activates during 2008 until 2011. In order to performing these design strategies use of four parts of financial, costumers, internal processing, growing and learning Balance Scour Card technique (BSC) (9).

So, this present study wants to answer question addendum with development of perspectives and strategic planning in Isfahan's department of physical education.

* What is the status quo in Department of Physical Education?
* Where is the vision or the ideal of Department of Physical Education?
* What are the main goals of Department of Physical Education?
What is the Department of Physical Education Strategic Plan?
What strategies can be used to move the situation toward the desired state?

Methodology

This study was done in both qualitative and quantitative forms regarding its nature to access the perspectives; a questionnaire was used by the physical Education office the validity of which was confirmed by experts. Sample consisted of 150 senior managers and middle members of sports in the province of Isfahan. Required to collect information on the quantitative section of the questionnaire was used to confirm the validity of the experts said. In the qualitative interviews was used. Information collected in a Strategic Position & Action Evaluation Matrix (SPACE) the situation of organization designed after that analyzed Quantitative Strategic Planning Matrix (QSPM). Qualitative data analysis was used for the induction of a logical approach to the building. Data analysis process was as follows: run and edited interviews, code comments, the classification of conceptual ideas in the same group, the interpretation of concepts derived from research, combining the concepts and conclusions. Causal relations were used in the map below to determine the strategic views of experts and scientific analysis of data collected from the interviews.

Results

Table 1. Main Goals Isfahan’s Department of Physical Education

<table>
<thead>
<tr>
<th></th>
<th>Promote health and vitality of social (output sport for all)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Promote social values in society and sports (Cultural Affairs)</td>
</tr>
<tr>
<td>2</td>
<td>Promote the dignity and authority of the National (output elite sport)</td>
</tr>
<tr>
<td>3</td>
<td>Infrastructure development (Hardware for sport)</td>
</tr>
<tr>
<td>4</td>
<td>Help to the sports industry (professional sport)</td>
</tr>
</tbody>
</table>

Table (1) Detailed results of the vision of the sport is huge in terms of five goals. These five goals include improving health and social vitality (output sport), to promote Islamic values in sport society (Cultural Affairs), the promotion of the dignity and national power (output Elite sport), infrastructure development (Hardware for sport) and help. This means that the sports industry (professional sport) is a cut above the five-year strategic plan to realize this vision will be achieved as intended.

Table 2. Quantitative Strategic Planning Matrix (QSPM) Isfahan’s Department of Physical Education

<table>
<thead>
<tr>
<th>Priority</th>
<th>Score</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>2.997</td>
<td>Use of resources and capacities</td>
</tr>
<tr>
<td>Second</td>
<td>2.993</td>
<td>Unity management policy implementation in sport</td>
</tr>
<tr>
<td>Third</td>
<td>2.60</td>
<td>Special attention to training to enhance human capital</td>
</tr>
<tr>
<td>Fourth</td>
<td>2.57</td>
<td>Instituting a program of administrative reform</td>
</tr>
<tr>
<td>Fifth</td>
<td>2.52</td>
<td>Enhance the motivation of human resources</td>
</tr>
</tbody>
</table>
The results (Table 4) prioritize strategies to manage the whole of the first strategy has identified six strategies. According to the results of sports administrators to adopt the above strategy can be a sign of the sport overall goals and vision conditions have been considered to provide researchers.

Figure (1) Strategy Map Department of Physical Education has been considered that the outlook for the big five were considered to interpret the vision and goals to achieve each of this macro-and long-term strategies are considered, the overall strategies that prioritize them in Table 4 are consistent with the objectives of grand strategy is given.

Fig 1. Strategy Map Isfahan's Department of Physical Education

Discussion:

Early in the third millennium, one of the major concerns of the strategy center organizations has been the failure to implement their strategies. This factor is the failure of many organizations (3). Scholars of management, particularly strategic management, strategic planning for overcoming these concerns to management about their organizations. Organizations to use the strategies they developed to become the state of mind to the objective. David Kaplan Norton and Bryson other scientists managed to portray the process of implementation strategies, organizational strategic plans were developed to managers, stakeholders and employees with the benefit of their views on cause and effect relationships developed between the perspectives and objectives, corporate strategy, the road to see if they deviated from the path leading to the vision and strategy to do the appropriate action. First, it is necessary to develop strategic plans with regard to the perspectives and objectives to be determined. The findings are based on the results of Table 3 showed that the overall objectives of Isfahan's Physical Education Department through of vision including five goals are:
1. Promoting health and social vitality (output of sport for all)
2. Promote Islamic values in society, sports (the output of Cultural Affairs)
3. Contribution to the promotion of the dignity and national power (output of Elite sport)
4. Development infrastructure (output of infrastructure Affairs)
5. Help to the sports industry in the Esfahan province (output of professional sport).

The objectives of this strategy provides the Department of Physical Education in the formulation of perspectives are interpreted correctly and in the long term and strategic objectives, measures, quantitative goals, annual objectives and performance measures are designed to field be a proper implementation strategy developed. Unity and in athletics and sports management and public affairs missions consistent with the Office of the vision and strategies arising from the decision that perhaps it was less in the past and explain the appropriate tools to measure and control is provided.

As we interpret the results of Figure 1 can be inferred, the position of the Physical Education office is located in a position to develop service strategies that work in this situation is more compatible with new services and upgrade services to sport by Department of Physical Education as the first trustee Sport is central. Appears to be due to the multifaceted nature of sport as a social phenomenon as the service is service in the proper position is to manage. Results of this study are aligned strategies Singapore Sepaktakraw national Federation (11).

There is cause and effect relationship in the strategic plans of the exercise of a cause and effect relationship between different perspectives, different views of the various objectives of the strategic relationship between cause and effect of exercise of the right of the image suggests strategies to achieve the Isfahan's Department of Physical Education has been adopted. With a glimpse of human capital, knowledge, human resources, operations of various public and private income and the proper place of athletics in the province and championship and professional sports are aligned National Olympic Committee (Iran) (4) Singapore Sepaktakraw national Federation (11). These organizations to be success with implement strategic. It seems Isfahan's Department of Physical education also can take advantage of this feature in the successful realization of vision.
The results (Table 4) prioritize strategies Isfahan's Department of Physical education strategy first to the fifth strategy is clear. The order includes:

1. Use of resources and capacities
2. Management unity implementation in the policy making of Isfahan's physical education department
3. Special attention to training to enhance human capital
4. Instituting a program of administrative reform
5. Enhance the motivation of human resources

What are the implications of these results with a 15 opportunities that the Administration was identified surrounding the use of resources and capacity as the main strategy was considered. The next ranked application in the management of sports policy in the strategy according to four separate areas of the sport inclusive; Sport for all, Sport education, Elitesport and professional sports is a good strategy that can create synergy in all of sports and this ultimately resulted in achieving synergy prospects in the sport.

Special attention to sports donors and Sports partner for the construction of strategies intended for the Department of Physical Education to become a private investigator in the exercise of the share allocated to make appropriate. Indoor, two strategies were considered crucial to a human resources department of internal processes and provide a stunning leap to attack the major goals of exercise in order to realize the vision. General Managers in sports, according to the strategy adopted by major exercise objectives are listed in order to realize the vision of the symptoms and conditions intended to take.

The compilation of perspectives and goals for the Executive Office of Physical Education in the proper exercise of the document provides strategies and strategic plans obtained through long-term goals and causal relationships, for managers and employees of the Department Physical Education and Sport Board creates a clear picture. Finally performing this strategic sport plan and control and evaluation programs, could improve sport in all perspective to best situation in society.
References:


THE EFFECT OF 800M RUNNING IN THE FIELD AND ON THE TREADMILL IN SOME PHYSIOLOGICAL AND KINEMATICAL RESPONSES

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Abstract: The current study aims at finding out the effect of running 800 m in an equal intensity in the field and treadmill on some physiological and Kinematical responses. The sample of the research consisted of (6) athletes. The researcher applied descriptive method due to its appropriateness with the nature of the research. The researchers applied test and measurements as tools to collect the required data. The test was running 800 m twice throw 3 days. The first was running 800m on the field and after 2 days, they applied the second test which also was running 800 m but on treadmill. Then after two tests immediately, the researchers measured the physiological variables which included the measuring of (Hr, Sbp, Dbp, RR) as well as the time of running, the researcher calculated the kinematical variables too which included the length, time, speed, frequency of the step. The researchers applied the following statistical tools: (Mean, Slandered deviation, variance, coefficient, percentage T-test for independent sample). The results show significant differences when comparing the values of physiological and kinematical in pre 800m running using field pre using treadmill.

Introduction and Research Problem:

Sports' exercises are considered the only means to develop the physical work to access a best performance. It is something given that these physical exercises vary in the way of performance whether using certain tools or without using them as well as diversity in terms of utilizing the elements of loads' training. A similar Researches was done like Hall, C., et., al study (2004) : Energy Expenditure of Walking and Running: Comparison with Prediction Equations. This study established the published prediction equations for the energy expenditure of walking and running compared with the measured values. To make this comparison we first determined whether differences exist in energy expenditure for 1600 m of walking versus running, and whether energy expenditure differences occur due to being on the track or treadmill. and Crouter, S. et al., study (2001) : Comparison of incremental treadmill exercise and free range running. The aim of this study was to compare physiological during incremental treadmill exercise and free range running. The importance of the research is in revealing the functional responses and kinimatical variations the act causes on the treadmill when running a certain distance in a certain intense compared with performing the same act in the racetrack reaching to suitable recommendations. Research problem appears when using the treadmill by some trainers in performing running exercises as a substitute of the race track in training unit without being aware that training by using the treadmill has the effect in racetrack by affecting some reflecting functional & kinimatical variables of the outer load, which represents a problem must be considered.
Research Aims:

Revealing some functional and kinematical variables values when running for a distance of 800 m with equal intensity in the track and on the treadmill and Recognizing the differences between them when running for a distance of 800 m with equal intensity in the track and on the treadmill.

Theoretical studies:

Heart Rate(Hr):

Performing a sport act that causes some functional changes in the heart to provide the muscle with the increasing demand of oxygen and food to exert that act, this is done via cardiac output(Co) and blood flowing speed (Divid,1978,199).Heart rate is one of the two basic specifier of cardiac output.Heart rate is considered partially important during medium and intensive exercises .There are a number of factors that affect it such as hormones, ions’ concentration, change of the core temperature , exercises, sex and age .(Shi, 2002, 17)

Respiratory Rate (Rr):

Respiratory rate is considered one of the two basic variables in increasing or decreasing ventilation and breathing size as well. The increase of these two factors together or one of them leads to increasing lung ventilation (Ricci, 1970, 59).Number of breaths per a minute at a rest is (12-20) and raises to (50-60) per a minute at training (Abdullah, 2000, 36).

Systolic and diastolic blood pressures(sBP&dBP):

It can be defined as "the force imposed by the blood on the walls of blood vessels"(Herlihy & Maebius, 2003,30 ). Blood pressure is influenced by two factors, the cardiac output (CO) and Peripheral resistance (PR) .Seeley mentions that arterial blood pressure average = CO*PR and that the increase or decrease of (PR) or the two cardiac output factors (HR,SV) that leads to increase or decrease of blood pressures (BP) .This equation explains the effect of (PR, SV, HR) on blood pressure and that any increase in any of these factors results in an increase in blood pressure , and vice versa (Seeley et al.,1998,680).

Kinematics of the stride:

When the athlete runs, he try s to cover some distance which depends on two important factors , firstly, is the covered stride(stride) distance and secondly, the frequency of the strides (James,1993 , 396), the length of the stride may be affected by the strength when the athlete pushes the ground and the angle of the taking off . As for frequency stride, it represents the number of strides used to cover a specific distance with a certain speed. ( Al-Fadhli et al.,2009) mentions that a stride frequency can be determined by the physiological structure of each athlete and can be controlled by the ability of nerves which stimulates the muscles and kind of fibers from which the muscle is
formed as well as legs length where the more the individual has fast twitch fibers in a muscle (Al-Fadhli et al., 2009, 2)

Research Procedures

Research Sample:

The research sample has been deliberately chosen from the Basic Education college students. The sample consisted of (6) students / Physical Education Dept./ fourth-year. The (m±sd) of the height, weight and age (172,±1.84), (64,±3), (22.1,±0.45) respectively.

Data collecting means:

The researcher has used tests and measurements and he collected information to get his data.

The Used Test:

We used tow tests one of them is 800m maximum speed running test and the other is 800m running test on the treadmill.

Pre-and Post- anthropometrical & physiological measures:

Height and weight measurement.

(Hr) measurement:

It is done by using a stethoscope on the chest after running in the racetrack as well as determining pulse by a pulse sensor which specifies and shows pulse on the treadmill display while running on the device through sitting position for both tests.

(RR) measuring:

It is performed by observing athlete chest immediately before and after physical effort since the first minute duration and at sitting position with the unawareness of the athlete.

(sBP) and (dBP) measuring:

This type is performed by a specialist via using Sphygmomanometer immediately after and before exerting drill and at sitting position of the athlete.

The Main Experience:

The researchers has conducted the two tests shown in (3-5). The first experience has been conducted at 9 o'clock on where the sample has been under the test stress of running 800m in the standard racetrack. After two days the second experience has been conducted through running 800m
on the treadmill as same as the first intensive physical effort in the racetrack, i.e. the same speed that has been calculated by dividing distance on performance time in the racetrack. Post-measures have been conducted directly which were similar to the pre-ones using the same devices and testers who have performed the pre-measures. Afterwards, the post-measures have been written down in data collecting form which also resembled pre-measures except for height and weight ones as well as calculating strides’ number during running through observation. Measures have been completed directly after exerting the physical effort through the athlete sitting on a chair prepared for this purpose close to the end point in the first experience and close to the device in the second one.

**Presenting and Discussing the results:**

**Table 1. Shows the Functional Variables Values Immediately After the Two Exerting Physical Effort.**

<table>
<thead>
<tr>
<th>Physio.variables</th>
<th>Running way</th>
<th>x±sd</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hr</td>
<td>Track</td>
<td>186</td>
<td>7.589</td>
</tr>
<tr>
<td></td>
<td>Treadmill</td>
<td>164.5</td>
<td>7.556</td>
</tr>
<tr>
<td>RR</td>
<td>Track</td>
<td>33</td>
<td>3.098</td>
</tr>
<tr>
<td></td>
<td>Treadmill</td>
<td>28.333</td>
<td>3.670</td>
</tr>
<tr>
<td>sBP</td>
<td>Track</td>
<td>176.667</td>
<td>9.309</td>
</tr>
<tr>
<td></td>
<td>Treadmill</td>
<td>175.83</td>
<td>10.206</td>
</tr>
<tr>
<td>dBP</td>
<td>Track</td>
<td>59.167</td>
<td>8.618</td>
</tr>
<tr>
<td></td>
<td>Treadmill</td>
<td>249.167</td>
<td>5.845</td>
</tr>
</tbody>
</table>

Our research conclusions agree with what (Macardle, 1971) mentions that there is a difference between walking on the treadmill and walking on asphalt or cement in terms of power the body needs (affecting functional variables) which estimated 10% less when walking on the treadmill in comparison with walking on a steady solid ground (Macardle, 1971, 124). Table (1) shows significant differences in post-running (Hr) in the racetrack and running in same intense on the treadmill. The advantage is for running on the treadmill in which (Hr) rate when running on the device is less and with an obvious significant difference . The researcher has ascribed that to running on the treadmill requires less physical effort due to mechanical assistance the device provides its user. It is something given that the more physical effort exerted, the more cardiac output required and consequently heart pulses increase as one of the cardiac output variables to provide a suitable cardiac output to the exerted effort. Heart beating response is due to an escalation and intecity of physical effort (Macardle, 1971, 205). In another place, he mentions that limps muscles contractions result in heart beating and the cardiac output increases in a proportional relation as more effort exerted (Ibid, 211-221). Concerning number of breaths (R.R), table (2) shows that there is a significant difference between its number rate during running on the device and on the ground for the benefit of the device too where number of breaths has been less. The researchers attributes that to the nature of working on the device, as we previously mentioned, which requires less effort and consequently less oxygen to perform the same distance with a same running speed in the racetrack. The more effort you exert, the more food metabolism you need,
which requires more oxygen carried by blood circulation, i.e. more cardiac output. In addition to the chemical effect on the Chemoreceptor in the (Hypothalamus) as a result of the increase in (PCO2) and decrease in (PO2) resulting from the difference between the hardness of the two efforts (Al-Duhoooki, 2007), quoted from (Al-Dori), mentions that a chemical inducer affects the respiratory center in the (Hypothalamus) as a result of the available quantity of CO2 in the blood. If its quantity increased in the blood, breathing accelerated until getting rid of the excess quantity of CO2 and blood reaction gets back to normal (Al-Duhoooki, 2007, 78-79).

As for the significant difference in the diastolic blood pressure (dbp) between running in the racetrack and running on treadmill and in favor of running on the latter, table (1) shows a decrease in (dbp) when running on the treadmill. These results agree with what (Mohammed Tawfeeq, 2005) and (Al-Kali, 2009) reached where they found a significant decrease in (dbp) after a physical effort too (Al-Kali, 2009, 93) (Mohammed Tawfeeq, 2005, 131). The researcher ascribes that to the vasodilation in the Peripheral vascular as a result of the thermal dispersion, where the more the physical exercise or effort is intense, the more body heat is generated and therefore, the need for the mechanisms of heat dispersion to work more effectively arises, which led to more increase in the expansion of vascular when running in the racetrack compared to running on the treadmill in addition to the physiological reflections of cardiovascular which is directly proportional to the intensity of the exerted physical effort as perspiring leads to a decline in body fluids and consequently to a decrease in blood quantity and cardiac output and reduction of heart stroke volume (Al-Hajjar, 1994, 91). It may also be attributed to Potassium quantity resulting from the muscular effort which its released quantity could be proportional to the exerted muscular effort leading to a reduction in the peripheral resistance that might lead to a(dbp) reduction. This fact is supported by what (Berne&Slevy) mentioned in that released Potassium from the contracted muscles is considered one of the elements that extend blood vessels in the working muscles (Berne&Slevy, 2001, 273).

### Table 2. Show of the Kinematical Variables Values

<table>
<thead>
<tr>
<th>Kinematics variables</th>
<th>Running way</th>
<th>x±sd</th>
<th>SIG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stride time/sec</td>
<td>Track</td>
<td>0.584</td>
<td>0.045</td>
</tr>
<tr>
<td></td>
<td>Treadmill</td>
<td>0.700</td>
<td>0.067</td>
</tr>
<tr>
<td>Stride Speed/m.sec</td>
<td>Track</td>
<td>4.686</td>
<td>0.392</td>
</tr>
<tr>
<td></td>
<td>Treadmill</td>
<td>4.643</td>
<td>0.56</td>
</tr>
<tr>
<td>Stride distance/m</td>
<td>Track</td>
<td>2.724</td>
<td>0.068</td>
</tr>
<tr>
<td></td>
<td>Treadmill</td>
<td>3.213</td>
<td>0.01</td>
</tr>
<tr>
<td>Stride rate</td>
<td>Track</td>
<td>293.667</td>
<td>7.256</td>
</tr>
<tr>
<td></td>
<td>Treadmill</td>
<td>249.167</td>
<td>7.757</td>
</tr>
</tbody>
</table>

Concerning kinematical variables, the researcher ascribes the significant differences reason in time, distance and strides number for the benefit of running on the treadmill in comparison with running on the racetrack where time, distance and strides number for the treadmill are (0.7, 3.213, 249.167) respectively. While on the racetrack, they are (0.584, 2.272, 293.667) respectively too. The
researcher attributes that to the strides number rarity the athlete performs to run 800m on the treadmill in comparison with racetrack as shown in table (2). It is also ascribed to the spacing of the fulcrum points on the treadmill compared to racetrack, which led to stride length and increase in its time and that the speed of the athlete is not real because it doesn't represent the athlete's speed only, but also the speed of the treadmill movement. Hence, this explains the decrease of the runner exerted effort on the treadmill in comparison with running in the racetrack although equal distance and performance speed.

Recommendations and Conclusions:

In the light of the statistical processing and conclusion presentation, the researcher has come up with the following findings:

1. There is a decrease in the values of some physiological variables under study (Hr, R.R, dbp) when running a distance of 800m on a treadmill in comparison with the same distance and intensity in the racetrack.
2. The research results have shown an increase in time and stride distance and increase in stride numbers when running 800m on a treadmill compared to running in the racetrack in the same intensity.
3. It is necessary to be aware that using a treadmill doesn't provide the same physiological and kinematical reflections as running equal distances on the ground due to their effects in the results of training.
4. The trainers and researchers must be aware to give an extra physical effort, concerning intensity and size, while using the treadmill to be equivalent to the real effort on the ground.
5. Future researches in the same conditions of the present exercise with controlling different slope degrees when using treadmill are to be conducted.
6. Future researches on different distances with different speeds and slopes are to be conducted.

References:


Al Hathlly, Sareeh et al.,(2009) : Measuring of speed, length and frequency as indicator of some physical power in 400m running, Al-Kadesia Journal for Physical Education Science, Vol. (9), No. (3).


Shi, Jian Rong (2002) Cardiac structure and function in young athletes, Dissertation submitted for the degree of master of applied Science, Department of Human Movement, Recreation and Performance, Victoria University of Technology, U.S.A.
THE IMPACT OF AEROBIC EXERCISE ON SOME MORPHOLOGICAL MEASUREMENTS ON THE ENDURANCE OF CARDIOVASCULAR AND RESPIRATORY SYSTEMS AMONG BOYS AT THE AGE OF (10-12) YEARS

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Abstract: The problem of the study was to investigate the possibility of decreasing the body weight using aerobic exercises and the impact of such exercises on some morphological measurements among boys at the age of (10-12) years. The study aims at examining the impact of aerobic exercises on some morphological measurements, endurance of the cardiovascular and respiratory systems, among boys at the age of (10-12) years. Experimental approach is used for it is appropriate to the nature of the study. The study sample consisted of (20) primary schools obese students with the ages (10–12) years. They were divided into an experimental group (12 students) and a control group (8 students). The study considered the following variables: (Height, Weight, Body Surface Area, BMI, bio-impedance, lean weight, lean weight percentage, the ratio of lean weight to fat weight, weight of total water, weight of fats, percentage of body fat, the predicted weight). The study procedure included pre and post tests including endurance test (Bruce Protocol), bio-impedance measurement. The training program was applied on the experimental group and lasted for two months using 3 training units per week. The researcher used the Mean, standard deviation, paired T test, independent T test, source of variance (CV), relative change, absolute change as statistical tools. The study concluded that aerobic exercises have positive impact on the morphological measurements on the endurance of cardiovascular and respiratory systems.

Introduction:

Obesity is one of the most common diseases that is caused by various factors including less movement, not practicing sports, consuming fatty foods, hormones disorders and genetics.

Reduction of energy intake and enhancement of physical activity is thought to be the key to the prevention of obesity and the reduction of body mass in overweight people.

Over the past 50 years, numerous studies have examined changes in total body adiposity in different ages. Some studies used diet program to get rid of obesity(3). Others adopted physical activity as a way to get rid of obesity(16), (11), (7) and (1). While others combined the two above methods to get rid of obesity (2), and (13).

All the above mentioned studies have dealt with various classes of the society in particular the older people. Children are regarded as an important class and should be targeted in the training programs in order to decrease weight. The problem related to obesity for children is that "body in this stage start to build the fatty cells and when completing this process, the number of cells will be the same in all the other age stages thus generating a natural trend to gain weight" (6: 44-45).
Many studies have been made to examine the changes for children bodies due to physical exercises (22),(14). However, through reviewing other studies, we noted that they use complicated tools and special places to perform exercises. There have been some studies examining physical sports class in the school and its simple exercises that could be scientifically used to be the best way to get rid of the excessive weight in children and reach a typical body composition free of obesity.

The study problem deals with obesity in children through adopting a program consisting of easy and applicable aerobic exercises using simple tools in order to examine the impact of such exercises in treating obesity in boys (10–12 years).

**Aims of the study:**

The study aims at:
1- Examining the impact of aerobic exercises on some morphological measurements among boys at the age of (10-12) years.
2- Examining the impact of aerobic exercises on the endurance of the cardiovascular and respiratory systems among boys at the age of (10-12) years.
3- Examining the differences between the experimental and control groups in some morphological measurements among boys at the age of (10-12) years.
4- Examining the differences between the experimental and control groups in the endurance of the cardiovascular and respiratory systems among boys at the age of (10-12) years.

**Materials and Methods:**

**Study Approach:**

Experimental approach is used for it is appropriate to the nature of the study.

**Study Sample:**

The study sample consisted of (20) primary schools obese students(*) with the ages (10–12) years. They were divided into an experimental group (12 students) and a control group (8 students) after homogeneity in age, height, weight, body surface area (BSA) and body mass index (BMI). No significant differences existed between the two groups. Parents approval was taken and medical examination was made for the selected students (Table 1).

(*) BMI was used as a primary indicator to select the obese students. Bio-impedance results were used in selecting the final sample.
Table 1. Characteristics of the study sample

<table>
<thead>
<tr>
<th></th>
<th>Age (yr)</th>
<th>Height (cm)</th>
<th>Weight (kg)</th>
<th>BSA (m²)</th>
<th>BMI (kg m⁻²)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental</strong></td>
<td>mean ± SD</td>
<td>10.09±0.54</td>
<td>137.92±10.93</td>
<td>44.33±11.28</td>
<td>0.21±1.28</td>
</tr>
<tr>
<td>CV</td>
<td>0.05</td>
<td>0.08</td>
<td>0.25</td>
<td>0.16</td>
<td>0.11</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>mean ± SD</td>
<td>9.65±0.52</td>
<td>135.63±8.37</td>
<td>39.25±7.74</td>
<td>1.20±0.15</td>
</tr>
<tr>
<td>CV</td>
<td>0.05</td>
<td>0.06</td>
<td>0.20</td>
<td>0.12</td>
<td>0.12</td>
</tr>
</tbody>
</table>

Data Collection:

Test and measurements were used as tools for collecting data. In order to measure the endurance, Bruce protocol was used (Evans & White, 2009, 46-47). Weight (kg) and height (m) were measured and body surface area (BSA)(m²) and body mass Index (BMI) were calculated (18: 264, 580).

Morphological Measurements (Body Components):

Bioelectrical impedance analysis (BIA) was used to assess body component. Measurement is done through passing an low intensity electrical current (800 μA) with a frequency (50hz) to measure impedance to current flow. Fat-free mass, due to its high water and electrolyte content, is highly conductive whereas adipose tissue contains little water and is therefore a poor conductor (i.e. higher impedance) (12:34-35). Electrodes are connected as shown in Figure (1).

Prior to testing, all subjects were instructed to adhere to the following traditional BIA guidelines: (a) no food or drink within 4 h of the test,( b) no exercise within 12 h of test, (c) empty bladder within 30 min of the test, and (d) no diuretic medications within 7 d of the test(23: 87-98) (9: 156-157). Subject compliance to these guidelines was confirmed prior to each experimental trial. BIA measurements were determined using a Bio-impedance body fat analyzer model (Vacumed, Model. 17081).

After making each bio-impedance measurement, data (age, height, weight, electrical current value, right arm length, chest, abdomen, right thigh and right leg circumferences) were input into (Health Management System). This system will show the morphological data including: (Impedance (ohms), Lean Body Mass (kg), Lean Body Mass (%), Lean Body Mass to Fat Ratio, Total Body Water (kg), Fat Mass (kg), and Body Fat (%).
**Main Experiment:**

Pre measurements, including Bruce protocol and bio-impedence measurement, were applied on both the experimental and the control groups.

The training program (aerobic exercises) was applied on the experimental group. The training program consisted of aerobic physical exercises and lasted for (8) weeks with (3) units in the week, with (45) minutes for each unit. Graduation in the difficulty of the approach was followed through increasing the consumed calories where a system was used to calculate the approximate consumed calories. This system (http://www.brianmac.co.uk/excel/energyexp.xls) depends on the exercise duration and subject weight where exercise type and intensity are determined thus automatically calculating the consumed calories.

Post measurements, including Bruce protocol and bio-impedence measurement, were applied on both the experimental and the control groups.

**Statistical Means:**

Mean, standard deviation, paired T test, independent T test, source of variance (CV), relative change, absolute change.

**Results and Discussions:**

**Table 2. Means, Standard Deviations for the Study Variables**

<table>
<thead>
<tr>
<th></th>
<th>Experimental (n=12)</th>
<th>Control (n=8)</th>
<th>Control</th>
<th>Experimental</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pre</td>
<td>post</td>
<td>Pre</td>
<td>post</td>
</tr>
<tr>
<td>Impedance (ohms)</td>
<td>602.66+46.37</td>
<td>571.91+48.03*</td>
<td>665+139.33</td>
<td>667+135.31</td>
</tr>
<tr>
<td>Lean Body Mass (kg)</td>
<td>33.49+8.67</td>
<td>33.5+8.61</td>
<td>30.52+6.4</td>
<td>31.17+6.18</td>
</tr>
<tr>
<td>Lean Body Mass (%)</td>
<td>75.71+3.63</td>
<td>80.15+3.46*</td>
<td>77.52+4.16</td>
<td>75.75+4.09</td>
</tr>
<tr>
<td>Lean Body Mass to Fat Ratio</td>
<td>3.19+0.63</td>
<td>4.15+0.8*</td>
<td>3.6+0.85</td>
<td>3.25+0.81</td>
</tr>
<tr>
<td>Total Body Water (kg)</td>
<td>24.7+5.47</td>
<td>25+6.18</td>
<td>22.35+4.45</td>
<td>22.72+4.43</td>
</tr>
<tr>
<td>Fat Mass (kg)</td>
<td>10.84+3.12</td>
<td>8.51+2.49*</td>
<td>8.85+2.61</td>
<td>9.94+2.33</td>
</tr>
<tr>
<td>Body Fat (%)</td>
<td>24.24+3.59</td>
<td>20.02+3.27*</td>
<td>22.47+4.16</td>
<td>24.25+4.09</td>
</tr>
<tr>
<td>Endurance (minute)</td>
<td>8.61+0.91</td>
<td>9.66+0.54*</td>
<td>8.73+1.30</td>
<td>7.84+0.44</td>
</tr>
</tbody>
</table>

All values are mean ± SD. *P< 0.05.
Results:
Table (2) Fig. (2) Shows the following:
- There are significant differences between the pre and post tests for the favor of post tests for experimental group students regarding bio– impedance, lean body mass (%), Lean Body Mass to Fat Ratio, fat mass, body fat and endurance at p < 0.05.
- There are no significant differences between the pre and post tests for the for regarding lean body mass and total body water p < 0.05.
- There are significant differences between the experimental and the control groups and for the favor of the experimental group regarding bio– impedance, lean body mass (%), Lean Body Mass to Fat Ratio, fat mass, body fat and endurance at p < 0.05.
- There are no significant differences between experimental and the control groups students regarding lean body mass and total body water p < 0.05.

Discussions:
The researchers attribute this positive change in some of the morphological measurements to the efficiency of the physical exercises as they have a great impact on body composition. Studies have confirmed the efficiency of various forms of aerobic training in decreasing excessive weights and get rid of fats. (4)(1)(16)(2).

Bio–impedance decreasing value is attributed to the decrease of fats body due to the positive impact of the training program and this confirms with (Bray, 1983) and (Oscai & Miller, 1986).

Lean body mass to fat ratio increasing value is attributed to the increase of muscular mass. Kenrick & Ball pointed out that exercises burn calories thus increasing the muscular mass compared with fats (17:3). The long duration of exercises (45 minutes) for two months increased energy consumption and helped in decreasing fat mass and percentage as large muscle groups (trunk, thighs, shoulders) were the main target of the exercises. Wilmor and Cosfill (1988) indicated that physical
exercises and physical activity help in making some changes that increase fats metabolism with oxygen including adrenalin and noradrenalin secretion (24: 94).

Despite there was no significant difference in total body water, there is an increase in total body water value. This is confirmed with Shierman & Haycock, 1981 where they showed that water resulting fat oxidation will replace fatty cells and the burn of one gram of fat will block three grams of water (21: 29). The increase lean body mass that contain large rate of water compared to the fatty cells.

The decreasing values of the control group is attributed to energy imbalance. Al Hazaa (2000) confirmed that energy imbalance in body that result in positive energy balance (when intake calories are more than consumed calories) and less physical activity will lead to weight increase thus obesity (4: 7).

The positive change of cardiovascular and respiratory systems endurance confirm with (Moyna et al., 1996) and (Al Muzainee, 1999) where they show that medium intensity physical activity develop physical fitness and motor activity for children. Hashim et al. (2005) pointed out that increasing cardiovascular and respiratory systems endurance through medium intensity training for long periods lead to the opening of blood vessels in lungs and increase the amount of blood surrounding the alveolar due to increasing cardiac output (15: 13). This will lead to time increase on the treadmill.

Conclusions and Recommendations:

The study sums up with the following:

1. Aerobic exercise had a role in developing morphological variables (lean weight, the ratio of lean weight to fat weight, weight of fats, and percentage of body fat) and Endurance of Cardiovascular and Respiratory Systems

2. The experimental group was better than the control group as related to study variables.

The study recommends the necessity of adopting aerobic exercises as there is no need for large places and various complicated tools and their positive impacts on the body physiology.

References:


