A COMPARISON OF STRESS PERCEPTIONS OF DIFFERENT LEVELS OF SOCCER, ATHLETICS AND ORIENTEERING REFEREES 1

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Abstract: The aim of the paper is to compare the stress perceptions of soccer, orienteering and athletics referees at different levels in order to determine whether they differ in terms of demographic characteristics. “Perceived Stress Scale” developed by Cohen et al. (1983), the validity and reliability of which was studied by Eskin et al. (2013), was used. The research was carried out in different branches with 153 volunteer referees, mean age of whom 30.88 ± 10.97 years. The data were analyzed by using SPSS 15.0 statistical package program. Since the data did not show a normal distribution as a result of Kolmogorov-Smirnov normality test, “non-parametric” test was employed. Kruskal Wallis H test was used for multiple comparisons and Mann-Whitney U test and descriptive statistics were used in analyzing the differences between groups in cases where normality and homogeneity of variances were not achieved. The level of significance for the comparisons was set at p <0.05. When the stress perception scores of the referees were statistically analyzed, a significant difference was found in favor of orienteering referees aged between fifty and forty years, having low stress score, being married, doing licensed sports, using internet less than ninety minutes, and having university graduate mother (p <0.05). Soccer, athletics, and orienteering referees have different stress scores. The highest stress score was seen in soccer referees, followed by athletics and then orienteering referees. Stress occurs when the physical and spiritual limits of the organism are forced and threatened. The referees face with multiple negative factors while making appropriate decisions during the game. These negative factors are thought to increase the stress perception of referees. Considering the factors making them having low stress perception, it is thought that the referees have positive effects on the stress perception when they are married, doing sport besides refereeing, using internet, having university graduate mother, and refereeing in an individual branch.

Key Words: Financial Risk, Livestock, Turkey, Kazakhstan

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INTRODUCTION

The term “stress” originates from “estrica” in Latin and “estrece” in French. It has been used in the 17th century to describe disaster, trouble, problem, sorrow, and bother. In 18th and 19th centuries, the meaning of this term has changed and focused on the objects, persons, organs, and spiritual structure in terms of power, pressure, and difficulty (Altıntaş, 2014:6-10). Lyon (2000) uses the term “stress” to refer to the experiences negatively affecting and destructing humans.

The effort made by an individual beyond his/her physical and psychological limits in response to negative conditions originating from physical and social environment is described as “stress” (Cüceloğlu, 2016). Nowadays, stress has become one of the important parts of modern life. Stress is a condition that affects all dimensions of human life (Eskin et al., 2013:12-20).

Baltaş and Baltaş (2012) defined the stress as the condition originating from any threat or force on physical and emotional limits of organism. It was stated that the organisms initiate a chain of respond to threats and force in order to protect his/her life. This characteristic was explained with “fight or run” response when faced with any danger.

It is necessary to know what stress is and which reasons cause the stress. The pressures and requests from family, business, colleagues, friends, and administration are the external resources of stress. The pressure and expectations that the individual has are the internal resources of stress (Altıntaş, 2014:6-10). The relationship between stress and health is not exactly known yet but the results obtained for the scientific studies related with health would have positive contributions (Schneiderman et al., 2005:607-628).

Selye (1985) reported that the long-term stress emerges in 3 phases. These are the alarm phase, resistance phase, and exhaustion phase. Alarm phase is the increase in level of adrenalin and noradrenalin in blood. Resistance phase is the maintenance of both hormones at high level in blood. Exhausition phase is the destruction of organism as a result of the exhaustion of energy because the organism has remained on the alert. The conditions stimulating stress among people originate from different sources and they are not specific. The situations creating stress vary from person to person (Tiryaki, 2000:11-78). From this aspect, unless the factors creating stress are eliminated on time, the irreversible damages might occur in body (Gencer et al., 2015).
The term “referee” refers to officers objectively directing the games and competitions in accordance with preset rules or fulfilling the tasks such as assessing the skills and making decision about score, time, location, and situation determination, and decisions of referees are compulsory (Şahin, 2006:130). In order for the referees to have a good performance, their psychological and mental needs should be met (Çoban, 2010:1153-1165).

The soccer referees take important responsibility for the proper functioning throughout the game. They are under remarkable physical and mental load during the competition. In order to bear up with this load, it is necessary for them to perform their exercises in parallel with the scientific knowledge. The referees being capable of successfully using the decision-making mechanism, successfully monitoring whatever occurs in field, and making the accurate decision without being affected form his/her emotions are needed (Asami et al., 1995:2-3).

In the movement analysis of soccer referees in a really high-level soccer game, it was found that almost 19% of referees run approx. 10.2km, most of which is in form of high speed running (>5m.s⁻¹) (Krustrup and Bangsbo, 2001:881-91). Considering the results of this analysis, it can be understood that they should have appropriate physical fitness in order to make accurate decisions during the game (Kızılet Bozdoğan et al., 2016:97-102).

Besides that, regardless of how a good exercise they have, it is known that the referees should improve their physical fitness level. The stress dimension plays an important role while the referee makes the decision. The decisions made by the referees are expected to be objective and reliable.

From these aspects, the objectives of this study are to compare the stress perceptions of soccer, orienteering, athletics referees at different levels, and to determine if their stress perceptions vary depending on demographical characteristics.

**METHOD**

In the present study, the regional and provincial referees participating in regional soccer referees’ athletic test in Van province (n=51), the referees working at the regional athletics in Van province (n=51), and the referees participating in seminar on advancements in orienteering branch organized in Antalya (n=51) were involved. The mean age of 153 volunteer referees were 30.88±10.97 years.

The Perceived Stress Scale (PSS) was developed by Cohen et al. (1983), and its adaptation into Turkish language and its reliability
and validity study were performed by Eskin et al. (2013). Consisting of 14 items, Perceived Stress Scale was designed in order to determine how stressful certain situations during the life of an individual are perceived. The participants give response to each item by using 5-Point Likert scale varying between “Never (0)” and “Very Frequently (4)”. 7 items containing positive statement are scored inversely. The total score of PSS-14 varies between 0 and 56. Higher scores indicate higher stress perception of individual.

Since the test scores didn’t show normal distribution in Kolmogorov-Smirnov normality test, the “non-parametric” test was employed. Since the normality and homogenous variance could not be ensured, Kruskal Wallis H test was used for multiple comparisons, whereas Mann-Whitney U test and descriptive statistics were used in analyzing the differences between the groups. The level of significance was set at p<0.05 for the comparisons. The statistical analyses of data were performed using SPSS 15.0 statistical package software.

**RESULTS**

The findings regarding the stress perceptions of soccer, orienteering, and athletics referees at various levels are presented in the tables below.

**Table 1. Assessment of Referees’ Stress Perceptions by The Marital Status (Mann-Whitney U)**

<table>
<thead>
<tr>
<th>Marital status</th>
<th>N</th>
<th>Mean order</th>
<th>Sum of order</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>62</td>
<td>67.41</td>
<td>4179.50</td>
<td>2226.50</td>
<td>0.027*</td>
</tr>
<tr>
<td>Single</td>
<td>91</td>
<td>83.53</td>
<td>7601.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Considering the marital status of referees statistically, it was determined that there was a significant difference between stress perception levels in favor of married referees (p<0.05).
Table 2. Assessment of Referees’ Stress Perceptions by Doing Exercises
(Mann-Whitney U)

<table>
<thead>
<tr>
<th>Status of doing exercises</th>
<th>N</th>
<th>Mean order</th>
<th>Sum of order</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>120</td>
<td>72.10</td>
<td>8651.50</td>
<td>1391.50</td>
<td>0.009*</td>
</tr>
<tr>
<td>No</td>
<td>33</td>
<td>94.83</td>
<td>3129.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Considering if the referees have any background as licensed athlete, it was determined that there was a statistically significant difference in favor of referees having a background as licensed athlete (p<0.05).

Table 3. Assessment of Referees’ Stress Perceptions by Their Duration of Using Internet
(Mann-Whitney U)

<table>
<thead>
<tr>
<th>Duration of using Internet</th>
<th>N</th>
<th>Mean order</th>
<th>Sum of order</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 hour 30 minutes and longer</td>
<td>64</td>
<td>87.31</td>
<td>5588.0</td>
<td>2188.00</td>
<td>0.015*</td>
</tr>
<tr>
<td>Less than 1 hour 30 minutes</td>
<td>89</td>
<td>69.58</td>
<td>6193.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Considering the referees’ duration of using Internet from statistical aspect, it was determined that there was a difference in favor of referees using Internet less than 1 hour 30 minutes (p<0.05).

Table 4. Assessment of Referees’ Stress Perceptions by Their Mothers’ Educational Level
(Kruskal Wallis H)

<table>
<thead>
<tr>
<th>Mother’s educational level</th>
<th>N</th>
<th>Mean order</th>
<th>SD</th>
<th>P</th>
<th>Significant difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literate</td>
<td>67</td>
<td>87.33</td>
<td>3</td>
<td>10.42</td>
<td>LİT-ÜNİ PM-ÜNİ</td>
</tr>
<tr>
<td>Primary school</td>
<td>49</td>
<td>74.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td>21</td>
<td>69.95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>16</td>
<td>49.63</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Considering the educational levels of referees’ mothers, it was determined that there...
was a statistically significant difference between the stress perceptions in favor of referees, whose mothers are university graduates (p<0.05).

Table 5. Assessment of Referees’ Stress Perceptions by Their Branches (Kruskal Wallis H)

<table>
<thead>
<tr>
<th>Branches</th>
<th>N</th>
<th>Mean order</th>
<th>SD</th>
<th>P</th>
<th>Significant difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletics</td>
<td>51</td>
<td>78.28</td>
<td>2</td>
<td>6.13</td>
<td>0.046*</td>
</tr>
<tr>
<td>Soccer</td>
<td>51</td>
<td>87.16</td>
<td>2</td>
<td>0.01</td>
<td>0.916</td>
</tr>
<tr>
<td>Orienteering</td>
<td>51</td>
<td>65.56</td>
<td>2</td>
<td>0.01</td>
<td>0.916</td>
</tr>
</tbody>
</table>

Soc: Soccer; ORY: Orienteering

Considering the refereeing branches statistically, it was determined that the lowest stress perception belongs to orienteering referees and the difference was statistically significant (p<0.05).

Table 6. Assessment of Referees’ Stress Perceptions by Their Ages (Kruskal Wallis H)

<table>
<thead>
<tr>
<th>Ages</th>
<th>N</th>
<th>Mean order</th>
<th>SD</th>
<th>P</th>
<th>Significant difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤30 year-old</td>
<td>99</td>
<td>80.32</td>
<td>2</td>
<td>6.76</td>
<td>0.034*</td>
</tr>
<tr>
<td>≤40 year-old</td>
<td>26</td>
<td>85.15</td>
<td>2</td>
<td>0.01</td>
<td>0.916</td>
</tr>
<tr>
<td>≤50 year-old</td>
<td>28</td>
<td>57.70</td>
<td>2</td>
<td>0.01</td>
<td>0.916</td>
</tr>
</tbody>
</table>

Considering the ages of referees statistically, it was determined that the lowest stress perception belongs to referees aged ≤50 years and the difference was statistically significant (p<0.05).

Moreover, it was also determined that there was no significant difference between the stress perceptions of referees in terms of educational level, father’s educational level, license programs, administrative tasks, income levels, refereeing experience, regularly reading books, occupation, and person that directed them into refereeing (p>0.05).

DISCUSSION

The present study was carried out in order to compare the stress perception levels of soccer, athletics, and orienteering referees, and to determine if there is a significance origi-
nating form demographical characteristics. Level of stress perception is one of the most important factors indicating the anxiety level. The most basic effect of anxiety is its negative effect on decision-making, learning, and success. This effect appears in various forms. Among the referees, the leading forms are angeriness and unease (Onem, 2012:65-82).

The angeriness and uneasiness that are widely seen in sportive activities might be linked to pre-game anxiety and psychological stress factors. Within this context, the players, audience, managers, and executives as the parts of game show negative attitudes towards the referees, and also the comments made in media news also contribute to this situation (Taşmektepligil et al., 2004). Stress factor was reported to reduce the efficiency, to decrease the performance, and to have negative effect on the sense of satisfaction (İrge, 2016:61-78).

In the study of Zelyurt and Şaşmaz Ataçocugu (2017) examining the social pressure factors on soccer referees, soccer referees reported that players, club executives, national sports media, trainers, fans, local media, and insufficient security measures create stress. According to Mellick (1999), as the level of psychological stimulants increases, then the referees’ ability of making accurate decision is also influenced negatively. If the negative attitudes before and during the game increase, then the level of stress and various behavior disorders in body also increase (Taşmektepligil et al., 2004).

In this research, when the marital statuses of soccer, orienteering, and athletics referees were examined, it was determined that there was a statistically significant difference in stress perception level in favor of married referees (p<0.05). It is thought that the family concept improves the social networking of married referees. In literature review, it was determined that marital status of referees plays significant role in stress level and it varies from person to person (Çakmak, 2011:43-48; Uzunoğlu et al., 2009:32-36; Chingte, 2013:963-970). In their study, Kaisidis et al., (1997) reported that there were individual differences in basketball referees’ ability to cope with and control stress.

When considering the marriage in terms of factors influencing the level of stress, it is thought that the stress level would be low if the individual has a happy marriage and peaceful family life. Otherwise the stress level would be negatively affected. Moreover, a married individual takes an important responsibility and is expected to be mature for sustaining this responsibility. This matu-
rity gained in the course of time is believed to offer significant contributions for the individual to be capable of coping with stress.

Considering the participants’ background as licensed athletes, it was determined that there was a statistically significant difference in stress perception in favor of referees having background as licensed athlete (p<0.05). This indicates the relationship between referees actual position as referee and their previous position as licensed athlete. It is known that many athletes continue their lives as referees after years of experience as athletes. Hence, in a study carried out on basketball, handball, and volleyball referees, it was reported that the reasons for preferring refereeing were to like the branch and to have background as an athlete in that branch before (88%) (Karaküçük and Ermihan, 1996:59).

In literature, it was reported that the referees actively doing sports are affected from stress at lower levels and have better life satisfaction, and also it was emphasized that the gender (Planinsek et al., 2014:1-10), age, and educational level are not effective on stress perception (Tsorbatzoudis et al.,2005:821-830).

In their study on soccer referees, Pepe et al. (1992) reported that, while making decision, the referees made use of their background as licensed athlete and their experience gained during their sports life. It was observed that most of the participant referees (n:120) had background as athlete. For referees, it is very important to interpret the game rules and to make decision immediately. Having sufficient ability in this point might be linked to their previous experience as player. From this aspect, having a background as athlete is believed to positively contribute to referees’ ability of coping with stress.

In the present study, the lowest level of stress perception among the refereeing branches was observed to belong to orienteering referees and there was statistically significant difference (p<0.05). The highest level of stress perception was observed among soccer referees. When considering the reasons for observing the lowest stress perception among orienteering referees, the reasons are thought to be that the orienteering is an individual branch, that the referees are not under significant psychological and physiological pressure, and that it is a sport branch performed in nature.

In team sports such as soccer, in addition to the physical fitness, also the psychological condition is important for the performance of referees when considering the duration of game, movement character of game, and environmental conditions. The soccer ref-
Referees are exposed to physiological and psychological pressures during 90 minutes of game. Moreover, since the physical fitness is strongly related with advancing age, it is very important to carefully observe the physical fitness levels of referees (Kızılet et al., 2010:80-84). For this reason, the soccer referees are regularly taken into physical fitness tests. On the other hand, in the study of Zelyurt et al. (2015), it was reported that the referees participating in physical fitness test stated that they feel stressed due to concern of having no game until the next test and the possibility of not advancing to superior class in case of failure in test. In order to decrease the effect of this stress factor, the physical fitness of referees should be reinforced with trainings suitable for the game. In planning the abovementioned trainings for the soccer referees, the intensity of physical activities during the game is analyzed by recording the heart rates during the game (Krustrup and Bangsbo, 2001:881-91; Kızılet Bozdoğan et al.2017:63). In a study on this subject, Kızılet Bozdoğan et al. (2016) reported that the mean heart rates of soccer referees for the super league equal to 86.8% of their maximal heart rates and to 86% for the first league games. Even though the results obtained for super league seems to be higher, it is known that there was no statistically significant difference in both halves. In another study carried out on domains other than physical characteristics, it was reported that there is no significant difference between the stress perceptions of referees and side referees in a soccer game (Gencay, 2009:865-868).

In the present study, when statistically examining the referees’ duration of using Internet, it was determined that there was a statistically significant difference in stress perception level in favor of referees using Internet for less than 1 hour 30 minutes (p<0.05). The Internet is a worldwide and constantly enlarging communication network connecting the computers to each other. In a previous study, it was reported that spending time in chat rooms and interactive games while using Internet negatively affects the lives of individuals (Young, 2004). From this aspect, since many referees have another job, they might need to use Internet because of their other jobs. The point here is that it might be necessary for them to decrease their time spent in Internet after working hours in order to decrease the stress levels.

In the present study, when statistically examining the educational levels of referees’ mothers, statistically significant difference was observed in stress perception levels in favor of referees, whose mothers are univer-
In parallel with these results, it is very important in daily life for an individual to be able to express his/her feelings, to understand others, to enable others to understand him/her, to understand, interpret, and analyze others’ feelings, and to control his/her feelings. From this aspect, the educational level of mother is considered to be important. Higher educational level of mother is believed to significantly contribute to referees’ ability to cope with stress.

In the present study, when statistically examining the ages of referees, it was determined that the lowest stress perception level belongs to ≤50 year-old referees and the difference was statistically significant (p<0.05). Within this context, it is thought that the refereeing experience gained in the course of time would help the referee in estimating the negative factors to be faced under the game conditions and also in coping with the factors leading to stress. Given the studies in literature, Ching-te (2013) reported that the age, class, seniority, marital status, and business stress of referees play effective role but the occupational satisfaction is not effective. Uzunoğlu et al. (2009) stated that it varied depending on the occupation, income level, class, marital status, and age group of referees. But, on the contrary with present study, Rainey and Hardy (1999) reported that the referees feel more stressed during first 3 years of refereeing and the physical negativities are not related with the stress.

From a general perspective, Ekmekçi (2007) reported the factors constituting the stress to be various factors such as physical status and lack of concentration of referees, environmental factors, anxiety, concern, and lack of communication. Sayiner et al. (2009) and Gürpinar (2015) reported that the most important stress source is the incoordination with the partner.

Similarly, in the study of Erdem (2015) on wrestling referees, the author reported the most important stress sources to be verbal attack of trainer, miscalling, intervention of the referees from upper category, constantly changing rules, in-field instructions, and insufficient regulations. In another study, Anshel and Weinberg (1996) stated that the acute stresses and cultural differences of Australian and American basketball referees are similar.

CONCLUSION
In conclusion, the psychological factors play an important role for not only the players but also for the referees. These psychological factors cover pre- and post-game period and the game period. In the present study, the stress perception levels of soccer, athletics, and ori-
Enteering referees measured by the branches were found to differ from each other. In parallel with this finding, the highest stress perception was found to belong to soccer referees, followed by athletics and orienteering referees. Given the ages and marital statuses of all the referees, it was observed that the lowest stress perception belongs to ≤50 year-old and married referees and the difference is statistically significant. This might be explained with that the maturity and experience gained as a result of advancing age and being married might enable them to be affected less from stress. Moreover, given the background as licensed athlete, duration of using Internet, and educational level of mother, the lowest stress perception level was observed among the referees having background as licensed athlete, using Internet for less than 1 hour 30 minutes, and having university graduate mother. The difference was statistically significant. From this aspect, if the athletes, managers, trainers, and audience behave in accordance with the principles of Fair-Play, the pressure and stress on referees would decrease and their ability to make accurate decision would increase. Thus, the referees would be able to better perform their tasks.

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Physiological characteristics on the physical and physiological performance of Turkish soccer referees and assistant referees. In SHS Web of Conferences, Vol. 37: 01032 S.63). EDP Sciences


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**FARKLI DÜZEYDEKİ FUTBOL, ATLETİZM VE ORYANTİRİNG HAKEMLERİNİN STRES ALGILARININ KARŞILAŞTIRILMASI**


olarak değerlendirildiğinde stres algı seviyesi geçmişte spor yapan hakemlerin lehine anlamlı farklılık olduğu görülmüştür (p<0.05). Bu durum, hakemlerin daha önce yapmış oldukları sporculuk ile yapmakta oldukları hakemlik görevindeki farklı bir ilişkiyi ifade etmektedir. Birçoğumuzun belirli bir dönem spor yaptığını ve hakemliğe geçtiğini belirtmektedir. Çalışmamızda, hakemlik branşları istatistiksel olarak değerlendirildiğinde stres algı seviyesinin en düşük olarak, Oryantiring hakemlerin lehine anlamlı farklılık olduğu görülmüştür (p<0.05). En yüksek stres algısı ise futbol hakemlerinde görülmüştür. Oryantiring hakemlerinde stres algısı düşük çıkmış nedenini incelediğimizde, oryantiring branşının ferdi olması bu acıdan hakemlerin hem fizyolojik ve psikolojik olarak çok zorlandıkları ve doğada yapılan bir spor branşı olduğu etkili olduğu düşünülmektedir. Çalışmamızda, hakemlerin internet kullanım süreleri istatistiksel olarak değerlendirildiğinde stres algı seviyesi, 1.30 saat-daki karan hakemlerin lehine anlamlı farklılık olduğu görülmüştür (p<0.05). İnternet, birçok bilgisayar sisteminin birbirine bağlı olduğu, dünya çapında yaygın olan ve sürekli büyümekte olan bir iletişim ağıdır. Bu bağlamda, hakemlikle uğraşanların birçoğunun bu mesleği seçmesi ve bu mesleğin gereğini internet kullanımı gerekmektedir. Asıl önemli olan ise, mesaisinin dışında zamanı verilmesi, internet kullanım süresini azaltmaları, onların stres düzeylerinin düşmesinde etkili olacaktır. Çalışmamızda, hakemlerin anne eğitim düzeyleri istatistiksel olarak değerlendirildiğinde stres algı seviyesi anne eğitim düzeyi üniversite olan hakemlerin lehine anlamlı farklılık olduğunu (p<0.05). Bu sonuçlar doğrultusunda, bir çocuğunuzun bu durumun fark etmesi ve bu durumun etkili olduğunu söylemek. Çalışmamızda, hakemlerin yaşları istatistiksel olarak değerlendirildiğinde stres algı seviyesi en düşük olarak, 50 yaş ve altı olan hakemlerin lehine anlamlı farklılık olduğu görülmüştür (p<0.05). Bu bağlamda, hakemlik görevinde yıllar geçtikçe bireyinצפייה koşullarında karşılaşacağı olumsuz faktörleri önceden tahmin etmesi ve yillarda kendisine kazandığı deneyimden dolaylı strese neden olan faktörlerden fazla etkilenmeden üstesinden gelmesi düşünülmektedir. Sonuç: Sonuç olarak, sporda psikolojik faktörler sadece oyuncular için değil aynı zamanda hakemler için de geçerlidir. Bu psikolojik faktörler, maç öncesi, maç esnası ve maç sonrasıını kapsamaktadır. Çalışmamızda futbol, atletizm ve oryan-
tiring hakemlerin branşa göre ölçülen stres algı düzeyleri birbirlerinden farklı çıkmıştır. Bu sonuç doğrultusunda stres algısının en yüksek olarak birinci sırda futbol hakemleri, ikinci sırda atletizm ve üçüncü sırada ise oryantiring hakemlerinde görülmüştür. Tüm hakemlerin yaşları ve medeni durumları ele alındığında stres algı düzeyi en düşük, 50 yaş ve altı olan, evli olan hakemlerin lehinde anlamlı farklılık olduğu görülmüştür. Bu durum evli olmanın ve yaşın ilerlemesine bağlı olarak kazanan olgunluk ve deneyim sayesinde stresden daha etkilendiği ile açıklanabilir. Ayrıca, tüm hakemlerin, geçmişteki hayatlarında spor yapmaları, internet kullanım süreleri ve anne eğitim düzeyleri ele alındığında stres algı düzeyi en düşük, geçmişte lisanslı olarak spor yapan, interneti 1.30 saat-dakikadan daha az kullanan ve anne eğitim düzeyi üniversite olan hakemlerin lehinde anlamlı farklılık olduğu görülmüştür. Bu bağlamda tüm mürsabakalarda, Fair-Play ilkelere bağlı davranış sporcular, yöneticiler, antrenörler ve seyirciler olursa, hakemlerin üzerindeki baskı ve stres azalacak, doğru karar verme yetkiniği artacaktır. Böylece hakemler de görevleri çok daha iyi yapma imkanı bulacaktır. Ayrıca hakemlerin; eğitim düzeyleri, baba eğitim düzeyleri, lisans programları, meslekleri, yönetsel görevleri, gelir düzeyleri, hakemlik yılları, düzenli kitap okuma alışkanlığı, hakemliğe yönlendiren birey gibi değişkenlerin stres algı puanları arasında anlamlı farklılık görülmemiştir (p>0.05).

Anahtar Kelimeler: Futbol, Atletizm, Oryantiring, Hakemler