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Analyzing the Relation between Pain Status of Football Players and Motivation

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ABSTRACT This study aims to determine pain-causing situations and motivation levels of football players to perform sporting activities when they are in pain. Within this scope, a three-part questionnaire was conducted on 2,465 sportsmen. The respondents were chosen randomly. These sportsmen work for private or public clubs. Following the reliability analysis, the Cronbach's alpha coefficient was found 0.873. Parametric and non-parametric tests were conducted for the analysis of data obtained. It was inferred from the statistics that age, body mass index, frequency and duration of training, and the position in the pitch are the factors that have significant impacts on pain situations.

INTRODUCTION

Training is the common name of all efforts made in determined periods in order to boost one's efficiency in sport and that make some functional and/or morphologic changes in organisms (Korkmaz 2010). In order to do sports, the requirements are a developed muscle and skeletal structure, high coordination and adequate level of motivation (Kuru and Bastug 2006).

Recently, there has been a significant increase in the number of injuries related to involuntary exercises and especially, overuse. For athletes performing in competitions, these kinds of injuries occur too often due to the increase in number, duration and workload of the trainings. It also occurs frequently in athletes who are still beginners in training, and who started trainings again after a long break (Ünal 2009).

The symptoms of injuries related to overuse display themselves gradually. A tingling begins following the sport activity. It may last for hours, even for days. There may be induration in joints, inactivity or spasm. Injuries occur due to the frequency, duration and difficulty of training. The floor on which the activity is performed, materials used, techniques of training, weather conditions and anatomical structure of the athlete is also significant (Ünal 2009).

During trainings, there is a continuing burden on the muscles, tendons, ligaments and bursas due to some repetitive stresses such as buckling, stretching and sprains. The organism could tolerate this burden to some extent. When the burden on the organism exceeds the physiological limits, the tissue gets damaged and a pain and inflammation occurs following this damage. It is seen that the person has to stop training, or his/her performance dramatically decreases due to the pain. Continuing with the activity despite the pain increases the damage and inflammation, and results in a more severe pain. This vicious cycle does not let the person continue the activity anymore and causes pains even in resting times (Ünal 2009).

Many training programs increase the severity, repetition and frequency of trainings as the competitions approach. However, increasing the severity may not give the expected results for all conditions due to the differences in adaptability of individuals (Bompa 1998; Kellmann 2002; Korkmaz 2010; Wilmore and Costil 2004).

Efforts should be made to minimize the risks of getting tired or ill during trainings besides trying to get the highest efficiency for the success of the athlete during the competition period (Bompa 2001). Successive burdens may not increase the fitness. On the contrary, it may result in extreme fatigue. In order to organize trainings properly, the severity and range of activities, resting periods and frequency relations should be planned right (Korkmaz 2010).

Football players get injured in trainings and matches due to some traumas caused by overstress, impacts and fallings. Beside these kind of traumas, some physiological factors such as the

inadequate condition, skills, quickness, flexibility, concentration and long-lasting and difficult trainings, conditions of the facility, materials used and unfavorable weather conditions may also result in injuries. Football players have a high risk of getting injured (Adamczyk and Luboinski 2002). About seventy percent of injuries related to football occur in lower extremities expectedly (Schmikli et al. 2011). One of the negative effects of these kinds of injuries is a pain situation. This situation is an unexpected result for football players. The pain situation that is caused by the injuries, which occur during trainings and matches, may have a negative impact on the motivation.

Motivation is defined as the unity of certain internal and external factors and mechanisms that drives the organism to complete the activity, determines the system and continuity of these activities, shapes these activities and gives meaning to them and the other mechanisms that allow these factors to function (Aydin 2001).

In order to get high sportive performance, the athlete's endurance for long and intense practice and her/his ability to show reached performance under different weather conditions despite the effect of opponents and audience are related to the athlete's motivation. Adequate motivation is the condition of the athlete being physically and psychologically prepared for competition (Atil 2014).

The relationship between the levels of motivation and success is clearly significant for sport activities. A less motivating condition will result in less success (Soyer et al. 2010).

Motivation is the power that drives someone to achieve a determined goal and has three characteristics, namely motivating, continuing and directive towards the positive side (www. insankaynaklari. com). It is also possible to define motivation, as "any act done by someone with his/her own enthusiasm and wish in order to achieve a goal" (Koçel 2003).

One needs a developed muscle and skeletal structure, high conditions and sufficient motivation in order to perform a sport activity (Kuru and Basbug 2006). It is highly important to determine the factors that affect the motivation of sportsmen and to develop new motivating techniques. This study aims to research, to some extent, how pain situations caused by different factors affect motivation of football players playing for different leagues. In order to achieve this aim, the hypotheses below were tested:

H1: There is no significant difference in pain situations due to age.
H2: There is no significant difference in pain situations due to body-mass index.
H3: There is no significant difference in pain situations due to duration of trainings.
H4: There is no significant difference in pain situations due to frequency of trainings.
H5: There is no significant difference in motivation for performing sport activities in pain situations due to age group.
H6: There is no significant difference in motivation for performing sport activities in pain situations due to the position on the pitch.
H7: There is no significant difference in motivation for performing sport activities in pain situations due to frequency of trainings.

MATERIAL AND METHODS

The aim of this study is to determine the possibility of pain situations and the motivation for performing a sport activity based on demographic characteristics of football players. Within this scope, a three-part questionnaire was conducted on 2,465 sportsmen. The first part of the questionnaire sought to describe the demographic characteristics of the respondents, while the third part addressed the motivation of players for performing sporting activities when in a pain situation. The "Fysion Blesreg Zero-form" and "Fysion Blesreg injury card—player's card" from "Sports injury registration: the Fysion Blesreg system" of De Bruijn and Keizers (1991) and "The Victorian Institute of Sport Assessment (VISA scale)" scale from "The VISA score: an index of severity of symptoms in patients with jumper's knee (patellar tendinosis), Victorian Institute of Sport Tendon Study Group" of Visentini et al. (1998) were used in order to prepare this questionnaire. Some nonparametric and parametric statistical tests were conducted using the data obtained. This research lasted for about 14 months. Within this time, the subjected fields and people were determined. The target population and sample of the study were composed of different sport clubs and sportsmen from 25 cities. An outdated scale was developed within the scope of this study with the help of some experts. The former scale and questionnaire were used identically, without any changes. In order

to provide the reliability and validity of the study, the developed scale and method were subjected to a pre-test. A total of 126 respondents were used for this pre-test. All respondents were chosen randomly. The data collected through this pre-test was analyzed and the Cronbach's alpha coefficient was obtained as 0.801. This result showed that the questionnaire used in this study is highly reliable. A specialist preschool educator, a pedagogue, a senior psychologist, eight specialists in different fields of sport sciences, a pulmonologist, a cardiologist and other experts for assessment and evaluation accompanied the studies. The questionnaires used as measuring devices were sent to related institutions and individuals within the body of these institutions via e-mails and posts. The total number of these questionnaires is 9500. 3800 of these were taken back and only 2465 of these questionnaires were found to be convenient for an evaluation. A number of private and public sport clubs contributed to the study. The names of these clubs are not present within the study, as they preferred not to be mentioned. As a result of the reliability analysis, the researchers can say that 13 items are highly reliable due to the equation: Alpha = 0.873.

Data Analysis

Within the scope of analysis, descriptive statistics, a reliability analysis, an independent sample t-test, ANOVA and regression analysis, Kruskal Wallis-H and Jonckheere-Terpstra Testa analysis were used. PASW 18.0 packaged software was used in order to analyze the data obtained within the study. A significance level of 0.05 was taken into consideration for the relationship and differences between variables.

RESULTS

The average age, height and weight of the subjects were determined as 23 years, 181cm and 75kg, respectively. Moreover, it was determined that twenty-six percent of the attendants were in 15-19 age group, thirty-four percent between 20-23, twenty-three percent between 24-27, twelve percent between 28-31, and the other five percent were in the 32-36 age group. According to the body mass index groups, three percent of the attendants were thin, ninety-one percent had normal weights and six percent were slightly fat. Only one percent of the attendants were primary school graduates, sixty-three percent were high school graduates, eleven percent had an associate's degree, twenty-three percent were post-graduates, and one percent had a master's degree, while the other one percent had a doctor's degree. Most of the attendants, eighty percent were single, nineteen percent were married and the other one percent were divorced (Table 1).

Table 1: Frequency and percentage distributions related to the experiences of attendants

Variables	*Frequency*	*%*
Age to Start Football		
7 and under 7	493	20
8-10	1343	54
11-13	459	19
14-16	153	6
17 and over 17	17	1
Professional Experience		
0-2 year	731	30
2-4 years	442	18
4-6 years	391	16
6 years and more	901	37
Position		
Goal keeper	357	14
Player	2108	86
Division		
Spor Toto Super League	357	14
Ptt 1. League	323	13
Spor Toto 2. League	731	30
Sport Toto 3. League	1054	43

Only twenty percent of the attendants started playing football before the age of 7. Fifty-four percent started when they were between 8-10, nineteen percent between 11-13, six percent between 14 -16 and one percent when they were older than 17. Out of the population, thirty percent had an experience of 0-2 years, eighteen percent had 2-4 years' experience, sixteen percent had 4-6 and the remaining thirty-seven percent had a professional experience of more than 6 years. A total of fourteen percent of the attendants were playing as goalkeepers, while the other eighty-six percent were in other positions. A total of fourteen percent of these players were in Spor Toto Super League, thirteen percent in PTT (Directorate General of Post and Telegraph Organization) 1 League, thirty percent in Spor Toto 2 League, and the remaining forty-three percent were playing in Spor Toto 3. League.

As for the duration of trainings, one percent of the respondents trained for less than 1 hour, seventy-one percent for 1.5 hours, twenty-five percent for 2 hours, two percent for 2.5 hours

Table 2: Frequency and percentage distributions related to the duration, frequency and protection issues of trainings

Variables	*Frequency*	*Column N %*
Duration of the Training (hour)		
Less than 1	17	1
1	17	1
1.5	1751	71
2	612	25
2.5	51	2
3	17	1
Frequency of Training (in a week)		
Less than 1	119	5
1	51	2
2	119	5
3	51	2
4	204	8
More than 4	1921	78
Protection		
Not used	731	30
Shin pad	1649	67
Wrist guard	17	1
Knee guard	17	1
Other	51	2

and one percent for 3 hours. The frequency of weekly trainings were less than 1 for five percent of them, 1 for two percent, 2 times for five percent, 3 times for two percent, 4 times for eight percent and more than 4 times for seventy-eight percent of the attendants (Table 2).

Most of the attendants got close to 10 as the score for the evaluation above related to pain situations. It means that most of the attendants did not have a problem with pain (Table 3).

A total of thirty-five percent of the respondents are not performing any kind of sport activities currently, twenty-two percent are doing modified training or modified competition, twenty-three percent are continuing full trainings, but these are not at the same level as before the pains and the remaining twenty percent started to train at higher levels than before after seeing some symptoms (Table 4).

The proportion of attendants who do not exercise at the gym without any pain is four percent, whereas six percent of the attendants exercise for 1-5 minutes, eleven percent for 6-10 minutes, twenty-one percent for 7-15 minutes, and

Table 3: The score results of attendants related to the pain situations

Items	*0min*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*100min*
For how many minutes can you sit without pain?	1%	1%	5%	1%	1%	12%	5%	5%	3%	1%	65%		
Pain Exists	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*Doesn't Exist*	
Do you have pain when you lead downstairs nor mally?	2%	3%	5%	3%	3%	5%	4%	1%	1%	3%	69%		
Pain Exists	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*Doesn't Exist*	
Do you have pain due to a burden when the knee joints are not fully active?	1%	3%	4%	4%	3%	7%	4%	3%	4%	3%	63%		
Pain Exists	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*Doesn't Exist*	
Do you have pain when you spurt with the burden?	3%	4%	6%	4%	1%	4%	4%	5%	5%	1%	63%		
Yes	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*No*	
Do you have any problem with crouching?	3%	2%	3%	3%	2%	1%	2%	3%	3%	2%	74%		
Pain Exists	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*Doesn't Exist*	
Do you have pain during the act of jumping, or just after the act or when you perform 10 single leg exercise?	3%	6%	3%	1%	3%	4%	2%	2%	7%	4%	64%		

Table 4: Frequency and percentage distributions related to the question "Are you performing any sport or physical activities currently?"

Item	*Frequency*	*Column N %*	
Are you performing any sport or physical activity currently?	I'm doing nothing	867	35
	Modified training ± modified competition	544	22
	Full training ± but is not at the same level as before due to the pain	561	23
	I did at the same or higher levels after the symptoms occurred	493	20

the remaining fifty-eight percent for more than 15 minutes. When the attendants have a dull pain in the beginning, but this pain does not prevent them from completing the training, two percent of the attendants do not perform any kind of exercises while sixteen percent exercise for 1-5 minutes, twenty-five percent for 6-10 minutes, twenty-six percent for 7-15 minutes and thirty-one percent for more than 15 minutes. The percentage of the attendants who stop exercising due to pain is twenty percent, while thirty-two percent work for 1-5 minutes, thirty-two percent for 6-10 minutes, twenty percent for 7-15 minutes and seventeen percent for more than 15 minutes (Table 5).

Table 5: Frequency and percentage distributions related to the relation between pain and exercise

Item	*Frequency*	*Column N %*
How long you perform exercises when you go to the gym if you don't have pain?		
I do not	85	4
1-5 min	153	6
6-10 min	255	11
7-15 min	493	21
More than 15 min	1377	58
How long you perform exercises when you go to the gym if you have a pain but this doesn't prevent you from completing you training?		
I do not	34	2
1-5 min	289	16
6-10 min	459	25
7-15 min	476	26
More than 15 min	578	31
Which movements make you stop exercising and how long you perform exercises if you have pain?		
I do not	170	10
1-5 min	357	20
6-10 min	561	32
7-15 min	357	20
More than 15 min	306	17

H1: There is no significant difference in pain situations due to age

When the pain situations based on age groups are examined, it is seen that all asymptotic significance (Asymp. Sig.) values are less than 0.05. Thus, this result rejects all fundamental hypotheses related to these questions. There is a difference seen in pain situations of sportsmen based on age groups. The groups aged above 28 year have higher averages than other groups (Table 6).

H2: There is no significant difference in pain situations due to body-mass index

When the pain situation is examined based on body mass index, it is seen that all Asymp. Sig values are less than 0.05. Thus, this result rejects all hypotheses related to these questions. There is a difference in pain situations of sportsmen based on their body mass indexes. It has been determined that the group with slightly higher BMI suffers pain more than other groups (Table 7).

When body mass index and pain are considered together and subjected to a regression analysis, the results listed below were obtained (Table 8).

- A one-unit increase in BMI results in a 0.947-unit increase in the variable, "How many minutes can you sit without pain?"
- A one-unit increase in BMI results in a 0.938-unit increase in the variable, "Do you have pain when you walk downstairs normally?"
- A one-unit increase in BMI results in a 0.939-unit increase in the variable, "Do you have pain due to a burden when the knee joints are not fully active?"
- A one-unit increase in BMI results in a 9.928-unit increase in the variable, "Do you have pain when you spurt with the burden?"
- A one-unit increase in BMI results in a 0.944-unit increase in the variable, "Do you have problem with crouching?"

Table 6: Kruskal Wallis–H test related to the Age variable and pain situation of attendants

		Chi-square	*df*	*Asymp. C Sig.*
Table 11: Age X Pain	For how many minutes can you sit without pain?	70.327	4	.000
	Do you have pain when you lead downstairs normally?	54.030	4	.000
	Do you have pain due to a burden when the knee joints are not fully active?	81.750	4	.000
	Do you have pain when you spurt with the burden?	16.426	4	.000
	Do you have a problem with crouching?	183.591	4	.000
	Do you have pain during the act of jumping or just after the act or when you perform 10 single leg exercise?	186.874	4	.000

Table 7: Kruskal Wallis–H test related to body-mass index and pain situation of attendants

		Chi-square	*df*	*Asymp. C Sig.*
Table 12: BMI X Pain	For how many minutes can you sit without pain?	36.986	2	.000
	Do you have pain when you lead downstairs normally?	87.830	2	.000
	Do you have pain due to a burden when the knee joints are not fully active?	60.553	2	.000
	Do you have pain when you spurt with the burden?	56.738	2	.000
	Do you have a problem with crouching?	52.581	2	.000
	Do you have pain during the act of jumping or just after the act or when you perform 10 single leg exercise?	37.755	2	.000

Table 8: Regression analysis related to BMI of attendants

Dependent variable	*Model*	*Unstandardized coefficients*		*Standardized coefficients*	*t*	*Sig.*	*R square*
		B	*Std. error*	*Beta*			
For how many minutes can you sit without pain?	1 Body mass index	.357	.002	.947	145.965	.000	.896
Do you have pain when you lead downstairs normally?	1 Body mass index	.356	.003	.938	134.695	.000	.880
Do you have pain due to a burden when the knee joints are not fully active?	1 Body mass index	.349	.003	.939	135.689	.000	.882
Do you have pain when you spurt with the burden?	1 Body mass index	.344	.003	.928	123.688	.000	.861
Do you have a problem with crouching?	1 Body mass index	.370	.003	.944	142.579	.000	.892
Do you have pain during the act of jumping or just after the act or when you perform 10 single leg exercise?	1 Body mass index	.352	.003	.932	127.330	.000	.868

- A one-unit increase in BMI results in a 0.932-unit increase in the variable, "Do you have pain during the act of jumping or just after the act of when you perform 10 single leg exercises?"

H3: There is no significant difference in pain situations due to duration of trainings

When the pain situation is examined based on the duration of trainings, all Asymp. Sig val-

ues except for the 1st and 2nd items are lower than 0.05. Thus, this result rejects all fundamental hypotheses related to these questions. While the duration does not have an impact on the questions: *"For how many minutes can you sit without pain?"* and *"Do you have pain when you lead downstairs normally?"* it signifies a significant difference for the others. It has been determined that the averages of the items specified in groups with 2 hours and more practice hours are higher (Table 9).

H4: There is no significant difference in pain situations due to frequency of trainings

When the pain situation is examined based on the frequency of trainings, all Asymp. Sig values except for the third question are lower than 0.05. Thus, this result rejects all fundamental hypotheses related to these questions. While the frequency is not an affective factor for "Do you have pain due to a burden when the knee joints are not fully active?", it shows a significant difference for the others. It causes more pain in the specified item for the groups with the frequency of practice 3 times and more (Table 10).

H5: There is no significant difference in motivation for performing a sport activity in a pain situation due to age group

When the motivation for performing a sport activity in a pain situation is examined based on age groups, it is seen that all Asymp. Sig. values are lower than 0.05. Thus, this result rejects all fundamental hypotheses related to these questions. There is a difference in the motivation of sportsmen for performing a sport activity in a pain situation due to age group. It has been determined that the motivation for doing sports is lower in the presence of pain for the groups aged 24 and above (Table 11).

H6: There is no significant difference in motivation for performing a sport activity in a pain situation due to the position on the pitch

When the motivation for performing a sport activity in a pain situation due to age groups is tested, it is seen that all Asymp. Sig. values except for the 1st and 2nd questions are lower than 0.05. Thus, this result rejects all fundamental

Table 9: Jonckheere-Terpstra Testa test related to the duration of trainings and pain situations of attendants

Items	*Number of levels in duration (hour):*	*N*	*Observed J-T statistic*	*Mean J-T statistic*	*Std. Deviation of J-T statistic*	*Std J-T statistic*	*Asymp. Sig. (2-tailed)*
For how many minutes can you sit without pain?	6	2465	660365.000	658053.000	12420.452	.186	.852
Do you have pain when you lead downstairs normally?	6	2465	634210.500	658053.000	12323.508	-1.935	.053
Do you have pain due to a burden when the knee joints are not fully active?	6	2465	600542.000	658053.000	12661.131	-4.542	.000
Do you have pain when you spurt with the burden?	6	2465	567596.000	658053.000	12425.553	-7.280	.000
Do you have a problem with crouching?	6	2465	624673.500	658053.000	10771.967	-3.099	.002
Do you have pain during the act of jumping or just after the act or when you perform 10 single leg exercise?	6	2465	599530.500	658053.000	11818.034	-4.952	.000

Table 10: Jonchheere-Terpstra Testa test related to the frequency of trainings and pain situations of attendants

Items	*Number of levels in frequency (weekly)*	*N*	*Observed J-T statistic*	*Mean J-T statistic*	*Std. Deviation of J-T statistic*	*Std J-T statistic*	*Asymp. Sig. (2-tailed)*
For how many minutes can you sit without pain?	6	2465	692733.000	577711.000	11381.848	10.106	.000
Do you have pain when you lead downstairs normally?	6	2465	624384.500	577711.000	11293.012	4.133	.000
Do you have pain due to a burden when the knee joints are not fully active?	6	2465	582624.000	577711.000	11602.403	.423	.672
Do you have pain when you spurt with the burden?	6	2465	650539.000	577711.000	11386.522	6.396	.000
Do you have a problem with crouching?	6	2465	620338.500	577711.000	9871.206	4.318	.000
Do you have pain during the act of jumping or just after the act or when you perform 10 single leg exercise?	6	2465	658342.000	577711.000	10829.804	7.445	.000

Table 11: Anova test related to the relationship between pain situation and motivation of attendants

Items		*Sum of squares*	*df*	*Mean square*	*F*	*Sig.*
Are you performing any sport or physical activity currently?	Between groups	904.030	4	226.008	15.792	.000
	Within groups	35206.784	2460	14.312		
	Total	36110.814	2464			
How long you perform exercises when you go to the gym if you don't have pain?	Between groups	5735.772	4	1433.943	20.262	.000
	Within groups	166879.782	2358	70.772		
	Total	172615.554	2362			
How long you perform exercises when you go to the gym if you have a pain but this doesn't prevent you from completing you training?	Between groups	5703.124	4	1425.781	19.919	.000
	Within groups	131061.718	1831	71.579		
	Total	136764.843	1835			
Which movements make you stop exercising and how long you perform exercises if you have pain?	Between groups	3204.726	4	801.182	10.005	.000
	Within groups	139822.051	1746	80.081		
	Total	143026.777	1750			

hypotheses related to these questions. While there is no difference in the questions, "Are you performing a sport or physical activity currently?" and, "For how long you perform exercises when you go to the gym if you don't have pain?", there is a significant difference for other questions based on the position (Table 12).

Table 12: t-test related to the position of the player and the relationship between pain and motivation

Items		*Levene's Test for Equality of Variances*		*t-test for Equality of Means*				
		F	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean difference*	*Std. error difference*
Are you performing any sport or physical activity currently?	Equal variances assumed	.161	.689	-.761	2463	.447	-.16667	.21912
	Equal variances not assumed			-.771	489.952	.441	-.16667	.21604
How long you perform exercises when you go to the gym if you don't have pain?	Equal variances assumed	2.261	.133	-1.579	2361	.114	-.79118	.50091
	Equal variances not assumed			-1.525	448.471	.128	-.79118	.51864
How long you perform exercises when you go to the gym if you have a pain but this doesn't prevent you from completing you training?	Equal variances assumed	.077	.782	-3.966	1834	.000	-2.36930	.59744
	Equal variances not assumed			-3.867	306.658	.000	-2.36930	.61270
Which movements make you stop exercising and how long you perform exercises if you have pain?	Equal variances assumed	1.784	.182	-4.171	1749	.000	-2.70085	.64754
	Equal variances not assumed			-4.204	288.775	.000	-2.70085	.64251

Table 13: Anova test related to the frequency of trainings and pain-motivation situations of attendants

		Sum of squares	*df*	*Mean square*	*F*	*Sig.*
Are you performing any sport or physical activity currently?	Between groups	1811.577	5	362.315	25.975	.000
	Within groups	34299.237	2459	13.948		
	Total	36110.814	2464			
How long you perform exercises when you go to the gym if you don't have pain?	Between groups	13313.771	5	2662.754	39.398	.000
	Within groups	159301.783	2357	67.587		
	Total	172615.554	2362			
How long you perform exercises when you go to the gym if you have a pain but this doesn't prevent you from completing you training?	Between groups	17359.206	5	3471.841	53.209	.000
	Within groups	119405.637	1830	65.249		
	Total	136764.843	1835			
Which movements make you stop exercising and how long you perform exercises if you have pain?	Between groups	9361.885	5	1872.377	24.444	.000
	Within groups	133664.892	1745	76.599		
	Total	143026.777	1750			

H7: There is no significant difference in motivation for performing a sport activity in a pain situation due to frequency of trainings

When the motivation for performing a sport activity in a pain situation is examined based on the frequency of trainings, it is seen that all Asymp. Sig. values are lower than 0.05. Thus, this result rejects all fundamental hypotheses related to these questions. There is a difference in the motivation of sportsmen for performing a sport activity in a pain situation based on the frequency of trainings (Table 13). It has been determined that the motivation for performing sports in the presence of pain for the groups with the frequency of practice 3 times and more is lower.

DISCUSSION

According to the results obtained in this study, there is a significant relationship between the increase in age and the pain situation. The researchers can say that it is related to the fact that the tissues of the body (muscle, tendon, joints) undergo structural changes, as they get older. But due to the lack of subjects from a group of later ages, it is not exactly possible to show the relationship between the increase in age and the pain situation.

Body mass index creates a significant difference in pain situation. The increase in body mass index can be explained with an increase in the uncontrolled burden on tissue that occurs during the trauma. However, there is a need for new studies in order to carry out a research on body mass index and structural changes in the tissues of a sportsman.

There is a significant relationship between duration and frequency of trainings and the pain situation. It is seen in this study that as the duration and frequency of trainings increase, the pain increases too. This situation can be linked to the traumas during trainings, uncontrolled forcing impacts and tissue fatigue.

The results obtained within this study were not analyzed based on sexes (based on being male or female) and there is a need for other studies that will take this difference into consideration.

CONCLUSION

- Age, height and weight averages were determined as 23 years, 181 cm and 75 kg, respectively.
- When the body mass indexes were examined, it was seen that most of the subjected sportsmen had normal weights.
- Age groups create a significant difference in pain situations. The groups aged above 28 years have higher averages than other groups. The older the age is, the more pain is suffered from.
- Body mass index creates a significant difference in pain situations. It has been determined that the group with slightly higher BMI suffers from pain more than other groups.
- Duration of trainings creates a significant difference in the pain situation except for the questions, “For how many minutes can you sit without pain?” and, “Do you have pain when you walk downstairs normally?” It has been determined that the averages of the items specified in groups with 2 or more practice hours are higher. The more the practice hours are, the more pain is suffered depending on the physiological changes in the body.
- The frequency of trainings creates a significant difference in pain situations except for the questions, “Do you feel pain due to a burden when the knee joints are not fully active?” It causes more pain in the specified item for the groups with the frequency of practice being 3 times and more. When the frequency of practice increases, pain also raises depending on the physiological changes in the body.
- Body mass index has a positive increasing relationship with all questions related to pain. An upper trend in body mass index causes increase in pain.
- Age groups show a significant difference in the motivation for performing a sport activity in a pain situation.
- The position of the player on the pitch creates a significant difference in the motivation for performing the activity in a pain situation except for the questions, “Are you performing any sport or physical activity?” and, “How long you perform exercises when you go to the gym if you don’t have pain?”
- The frequency of trainings creates a significant difference in the motivation for performing a sport activity in a pain situation.

It has been found that the participants tend to perform more sports (15 minutes and more) mostly (58%) when they do not suffer from pain. It has also been among the findings that the par-

ticipants (31%) continue to perform sports for more than 15 minutes if the pain they slightly suffer does not prevent them from completing the activity. When the pain of participants increases, the rate of those who immediately stop doing sports and completes it at certain times under 15 minutes is eighty-three percent. Speaking of the importance of motivation in sports and emphasizing that such painful conditions are a factor affecting motivation, it can be said that they cannot sustain their activities for long when pain increases as related to motivation.

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