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EXAMINATION OF THE INJURİES ON THE MUAY THAİ ATHLETES

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Abstract

Objective: The aim of the study, investigated the injuries of athletes who compete at elite level in Muay Thai in Turkey and seventy Muay Thai athletes participated volunteer.

Method: In the study "Athlete's Profıle Questionnare" was applied to determine Muay Thai athlete's level of injuries that was modeled by M. Kazemi et al. (2005). The frequency and the percentage of research results were determined by us. Chi-Square test was used for differences between some variables.

Results: To the study, 24 female athlete (ages 17,75±2,93 years, sports ages 7,00±2,88 years, heights 8,24±32,32 m, weights 56,56±7,75 kg); 46 male athlete (ages 18,33±2,76 years, sports ages 7,28±3,07 years, heights 1,77±0,17m, weights 64,48±11,08 kg) participated.

Frequency and the percentage according to the injuries types: Females; Sprain 3 (% 12,5), muscle cramp 1 (% 4,2), bruise 4 (% 16,7); Males; Sprain 8 (% 17,3), muscle cramp 2 (% 4,3), bruise 14 (% 30,4). Female athletes were injured of neck %4,2, lower extremities %29,3; male athletes were injured of body %2,2, upper extremities % 109 and lower extremities % 71,7. Female athletes were injured in training of 5 (% 20,8), in competition 3 (% 12,5); male athletes were injured in training of 13 (% 28,3), in competition 11 (% 23,9).

Conclusion: It was seen that the athletes did not live very critical of injuries. Athletes used in terms of health protective equipment more in competition. It was considered that the protective equipment pay did not attention in training.

Key Words: Muay Thai; İnjury; Sport**.**

Introduction

Most of the in martial arts athletes do training 2 or 4 times in a week. Also, training hours and frequency in any sports may change depending on competition levels of individuals and sports' currency. Training can be defined as improving athletes' skills. A specific training can change between each of the athletes but there is a general format that is followed. The training sections often start with warming or usual streching; that is followed by kick, self-defense, training forms and sparing exercises (M. Kazemi, H. Shearer and Y.S. Choung, 2005; R.M. Buschbacher and T. Shay, 1999). The martial arts sports are done with the aims such as self-defense, mental discipline, body and mental consistency, physical condition (N. Merrilee et al., 2000). Muay Thai is martial arts of Tayland which lets kick, knee and elbow using. It supports both physical and mental development, also emphasizes many useful disciplinaries, respect and morale (C. Suhongsa, 1999). It is estimated that its

popularity increases and it has 1 million participants around the world (International Muay Thai Kickboxing Federation (IAMTF) International Office). Despite this, there is little data about injury types in Mua thai. It is quite different from taekwondo and karate about which there are much publishing. The concept of the activity depends on individuals' level. (T.W. Lloyd, M.P.H. Tyler, A.H.N. Roberts, 1998; S. Gartland, M.H.A. Malik, and M.E. Lovell, 2001) In Mua Thai, the whole body moves. The hip is in rotation with each kick, fist and block and nearly all movements are used in a competition (C. Boykin, 2002). S. Gartland and his friends (2001) investigated kidney and liver functions and muscle injury during and after the competition .While there was no effect on kidney and liver functions they found that skeletal system could be damaged. Soft tissue trauma, laceration and hematoms are among the most common and frequent injury types. Young participants and less experienced ones have a high risk of being injured. Nearly %50 of all injuries are seen on head, face and neck (R.B. Birrer, 1996; M. Oler, W. Tomson, H. Pepe, 1991). Lower extremities are one of the most common injury areas (M.L. Schwartz, A.R. Hudson, G.R. Fernie, 1986).

Material and method

Universe and sample

The aim of this research is to examine the injuries seen in athletes competing in elite level in Mua Thai in Turkey. The universe of the research is consisted of muay thai sporters participated in eliminations done in 7 regions for Turkey championship, the sample is consisted of 70 muay thai athletes of 117 athletes who have reached quarter-final, semi-final and final competitions at the end of these eliminations.

Data Collection Tool

In this study, "profile inquiry of sporters" developed by M. Kazemi et al. (2005) was used in order to determine the mutilation levels of athletes (M. Kazemi, H. Shearer and Y.S. Choung, 2005).

Statistical Analysis

The analysis of data was abstracted as personal information variables (age, gender, sports age, branch, body weight, and mutilation types), frequency and percentage distribution in SPSS software package. In examining the relation between some variables, chi-square was done as in cross table.

Discussion and conclusion

In this study carried out with the aim of examining mutilations seen in athletes competing in elite level in Muay thai branch in Turkey, while most of the injuries are seen in the foot area in females, injuries are seen in knee, leg, ankle and foot area in males. In the study by J.B. Burks and K. Satterfield (1998) over the athletes participated in karate championship, the rates of injuries seen in foot and ankle area have been seen to show similarity with this study. It has been determined that the most common injuries types that female and male athletes have are sprain and bruise and at the end of these injuries, both female and male athletes are out of training for 2 or 3 times at most. Injury is a concept including kicking and being kicked for both females and males and male athletes have more tendency of being kicked than females (K. Beis, P. Tsaklis, W. Pieter, G. Abatzides, 2001).

When the injuries are categorized anatomically as head, neck, body, lower extremity and upper extremity injuries, it has been found that %4,2 of female athletes have neck and %29,3 of them have lower extremity injuries, %2,2 of male athletes have body and %109 of them have upper extremity injuries and %71,7 of them have lower extremity injuries. S. Gartland et al. (2001) found that most of the injuries were in lower extremity (%75),body (%15,9) and upper extremity (%6,8) injuries followed in an investigation that he carried out over amateur and professional athletes dealing with Muay Thai branch. The most common injury for both amateurs (%64) and professionals (%53) was found lower extremity. G. James et al. (2003) and M. Kazemi et al. (2004) declared in their studies done over taekwondo athletes that females' lower extremity was affected mostly and as for males, beside head and neck injuries, their lower extremity was affected most frequently. These findings show similarity with the study being carried out. In taekwondo and general martial arts, mostly kick techniques are stressed to have a high potential of injuries. Throughout the taekwondo tournaments, the injuries that female and male athletes had were observed mostly to be head, neck and lower extremities (M. Feehan and A.E. Waller 1995). When percentage and frequency distribution about where female and male athletes in the research get injured are examined it is seen that both females and males get injured during the training (Table 5). M. Kazemi et al. (2005), reports in the studies about injuries seen in athletes dealing with taekwondo that 13 of 22 athletes in all got injured during training and 9 of them got injured in the competition. The nature of taekwondo is similar to muay Thai being a fighting sports, additionally Muay Thai includes knee, elbow using and is naturally a rough sports. Taekwondo's being similar as a martial arts supports this study. When we look at percentage and frequency distribution about who see the injuries of female and male athletes participated in the research, 4 (% 16,7) of 8 female athletes in all show their injuries to medical doctor,4 (% 16,7) athletes show it to noone; 11(% 23,9), of 24 male athletes show to medical doctor,3(% 6,5) of them show to physiotherapist, 9 athletes (% 29,3) show to no one, and 1 (% 2,2) athletes is seen as other (Table 6). M. Kazemi et al. (2005) founded in injuries seen in athletes dealing with taekwondo, %25 of athletes showed injury to noone,%10,7 of them showed to medical doctor, %10,7 of them showed to physiotherapist. Birrer (1996) emphasizes that most of injuries are seen during sparring and so this part of training should be cared by trainers.

In table 7 no statistically significant difference has been found that in examining the relation between who see the injuries of female and male athletes and

where they get injured (p>0.05). In examining the relation between injury type of female and male athletes participated in the research and where they get injured, whereas a statistically significant difference has been found for females (p<0.05), no significant difference has been found for males (p>0.05).

When table 9 is examined in terms of the relation between injury types of female and male athletes participated in the research and how many times they are out of training due to injury, no statistically significant difference has been found (p>0.05).

In conclusion, it has been seen that whereas female athletes have mostly lower extremity injuries males have body, upper extremity and lower extremity injuries. Also, both female and male athletes have been found to get injured during training. It has been determined that whereas female and male athletes show their injuries to medical doctor, most of them show to no one and only 3 of male athletes show to physiotherapist. Although Muay thai has a high risk of getting injured, it is seen in this study that athletes haven't had a serious injury .This study carried out suggests that protective equipment practice should be increased in both training and competition since it is thought that protective equipment is used more during competition to prevent mutilations and for athletes health but it is neglected in trainings.

Results

Table 1: Descriptive statistics table over athletes participated in the research.

Variables	Gender	N	Mean	Sd
Age (year)	Female	24	17,75	2,93
	Male	46	18,33	2,76
Experience (year)	Female	24	7,00	2,88
	Male	46	7,28	3,07
Height (m)	Female	24	1,59	0,32
	Male	46	1,77	0,17
Weight (kg)	Female	24	56,56	7,75
	Male	46	64,48	11,08

When the table above is examined ,it has been determined that age average of 24 female athletes in all is 17,75±2,93 year, average of experience is 7,00±2,88 year, height average is 1,59±0,32 m, weight average is 56,56±7,75 kg; age average of 46 male athletes in all is 18,33±2,76 year, average of experience is 7,28±3,07 year, height average is 1,77±0,17m,weight average is 64,48±11,08 kg.

Table 2: According to injury areas percentage and frequency distribution of female and male athletes participated in the research

Variables		Female		Male	
		f	%	f	%
neck		1	4.2	0	0
rib	right	0	0	1	2.2
	left	0	0	0	0
arm	right	0	0	1	2.2
	left	0	0	0	0
elbow	right	0	0	0	0
	left	0	0	1	2.2
wrist	right	0	0	1	2.2
	left	0	0	0	0
hand	right	0	0	0	0
	left	0	0	2	4.3
knee	right	1	4.2	4	8.7
	left	0	0	3	6.5
leg	right	0	0	3	6.5
	left	0	0	6	13.0
ankle	right	1	4.2	5	10.9
	left	1	4.2	1	2.2
foot	right	1	4.2	6	13.0
	left	3	12.5	5	10.9
Total		8	33.5	39	84.8

When the percentage and frequency distribution of female and male athletes participated in the research in terms of injury areas are examined ,it has been found that 8 female athletes in all are exposed to injury in reported areas and 1 (% 4,2),of these athletes is exposed to neck injury,1(%4,2) of them is to knee injury, 1(%4,2) of them is to right ankle, 1(%4,2) of them is to left ankle, 1(%4,2) of them is to right foot,3 of them (% 12,5) are to left foot area. It has been found that 39 male athletes in all are exposed to injury in reported areas and 1 (% 2,2)of these athletes is exposed to rib injury, 1 (% 2,2)of them is to left elbow, 1 (% 2,2)of them is to right wrist, 2 (% 4,3)of them are to left hand,4 of them(%8,7) are to right knee,3 (%6,5)of them are to left knee,3 (%6,5)of them are to right leg,6 (%13,0) of them are to left leg,5 of them (%10,9) are to right foot, 1 (% 2,2)of them is to left ankle, 6 (%13,0) of them are to right foot and 5 of them (%10,9) are to left foot area.

Table 3: percentage and frequency distribution of female and male athletes participated in the research according to the types of injuries.

variables	female		male	
	f	%	f	%
sprain	3	12,5	8	17,4
Muscle cramp	1	4,2	2	4,3
bruise	4	16,7	14	30,4
total	8	33,3	24	52,2

When the percentage and frequency distribution of female and male athletes participated in the research in terms of injury types are examined,8 female athletes in all have been found to have injury and it has been determined that 3 of these athletes (%12,%) had sprain,1of them (% 4,2) had muscle cramp, 4 of them (% 16,7) had bruise. 24 of male athletes had injury and it has been determined that 8 of them(% 17,3) has sprain, 2 of them (% 4,3) had muscle cramp and 14 of them(%30,4) had bruise.

Table 4: percentage and frequency distribution about how many times the female and male athletes in the research were out of training at the end of injury.

variables	female		male	
	f	%	f	%
once	1	4.2	4	8.7
twice	4	16,7	6	13,0
Three times	2	8,3	6	13,0
more	1	4,2	5	10,9
total	8	33.4	21	45,7

When table 4 is examined , how many times 8 female athletes in all were out of training at the end of injury has been found and it has been seen that 1 of them (% 4,2) was out of training once, 4 of them (% 16,7)were twice,2 of them (% 8,3)were three times, 1 of them (% 4,2) was more times. How many times 21 male athletes in all in the research were out of training at the end of injury has been found and it has bee seen that 4 of these athletes (% 8,7) were out of training once, 6 of them (% 13,0) were twice, 6 of them (% 13,0) were three times, 5 of them (% 10,9) were more times.

Table 5: percentage and frequency distribution about where the female and male athletes in the research had injury

variables	female		male	
	f	%	f	%
In training	5	20,8	13	28,3
In competition	3	12,5	11	23,9
total	8	33,3	24	52,2

When the percentage and frequency distribution about where the female and male athletes in the research had injury are examined ,8 female athletes in all have been found to have injury in training and competition and it has been seen that 5 of them (%20,8) had injury in training,3 of them (%12,5) had injury in competition. 24 male athletes in all have been found to have mutilation in training and competition and it has been seen that 13 of them (%28,3) had injury in training and 11 of them(%23,9)had injury in competition.

Table 6: percentage and frequency distribution about which female and male athletes in the research show their injuries to

variables	female		male	
	f	%	f	%
Medical doctor	4	16,7	11	23,9
physiotherapist	0	0	3	6,5
noone	4	16,7	9	29.6
others	0	0	1	2,2
total	8	33,3	23	52.2

When table 6 is examined, according to the percentage and frequency distribution about whom female and male athletes in the research show their injuries to ;it has been seen that 4 (%16,7)of 8 female athletes in all showed to medical doctor and 4 (%16,7) of them showed to no one. It has been seen that 11 (%23,9)of 23 male athletes in all showed to medical doctor,3 (%6,5) of them showed to physiotherapist,9(%29,6) of them showed to noone and other 1 athlete (%2,2) showed to others.

Table 7: examining the relation between the person whom the female and male athletes in the research show their injuries and the place where they get injured.

variables		Medical doctor	Physio therapist	noone	others	Chi-square	P
female	In training	3	0	2	0	0.541	0.462
	In competition	1	0	2	0		
male	In training	6	3	4	0	5.244	0.155
	In competition	5	0	4	1		

When the table above is examined, no statistically significant difference has been found between who see the injuries of female and male athletes in the research and where they get injured (p>0.05)

Table 8: examining the relation between injury type of female and male athletes in the research and where they get injured

variables		sprain	Muscle cramp	bruise	Chi -square	P
Female	In training	0	1	4	10.585	0.005*
	In competition	3	0	0		
male	In training	6	0	7	4.699	0.095
	In competition	2	2	7		

In the table above, in examining the relation between injury type of female and male athletes in the research and where they get injured, whereas a statistically significant difference has been found for females (p<0.05), no significant difference has been found for males (p>0.05).

Table 9: Examining the relation between injury types of female and male athletes in the research and how many times they are out of training due to injury

variables		sprain	Muscle cramp	bruise	Chi-square	P
Female	once	0	0	0	5.742	0.219
	Twice	1	1	2		
	Three times	2	0	0		
	more	0	0	1		
male	once	2	0	2	6.868	0.333
	Twice	1	0	5		
	Three times	2	0	4		
	more	3	1	1		

When table above is examined in terms of the relation between injury types of female and male athletes in the research and how many times they are out of training due to injury, no statistically significant difference has been found (p>0.05)

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MARTIAL ARTISTS VERSUS TEAM SPORTSMEN: AGGRESSIVENESS AND RECEIVED SOCIAL SUPPORT

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Abstract

Purpose. The aim of this study to determine and compare the received social support and aggressiveness level of martial artists and team sportsmen.

Method. The study was conducted by the athletes in Muğla Province of Turkiye. The researchers gave information about the aim and scope of the study to the athletes, and then they completed the scales voluntarily. There were 180 athletes in both martial arts in team sports group. The instruments of the study were Kiper's Aggressiveness Inventory and Multidimensional Scale of Perceived Social Support.

Results. The scores of aggressiveness for martial artists and team sportsmen were x_m = 46,51±7,85; x_m= 47,74±7,26 and x_f =46,64±7,42; x_f =47,69±7,46 respectively. There is not significant differences between male and female martial artists and team sportsmen (p>0.05) in aggressiveness. Received social support scores for martial artists and team sportsmen were: x_m= 35,19±14,07, x_m = 60,20±12,31 and x_f = 66,86±6,25, x_f = 48,07±8,13 respectively. Thus, the scores of male team sportsmen were significantly higher than martial artists (p<0,001). On contrary this, the social support scores of martial artists for women are higher than team sportsmen significantly (p<0,001). In total, aggressiveness and received social support scores of martial artists (x_{ma}= 46,58±7,62; x_{ma}= 51,02±19,23) and team sportsmen (x_{ts}= 47,72±7,34; x_{ts}= 54,13±12,05) showed no significant differences.

Conclusions. Aggressiveness is not related to sports branches. Future research on this subject is a need.

Keywords. martial artists, team sportsmen, social support, aggressiveness.