

Risk Assessment and Sport Commitment: The Sample of Field Hockey and Soccer Student-Athletes

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Footnote: This study is the extended version of the abstract titled "Investigation of Risk Assessment Levels and Sport Commitment of Field Hockey and Soccer Athletes" presented at the 18th Sports Science Congress held in Antalya/Turkey, on 7-9 November 2020.

Study Area: Kahramanmaraş, TÜRKİYE

Coordinates: 37°38'N; 36°37'E

ABSTRACT

This study aims to examine the relationship between the risk assessment perception levels of field hockey and soccer student-athletes and their sport commitment and whether there is a difference in terms of some demographic variables. The athletes were asked to assess the risks faces in sport organizations. This quantitative study was carried out in a relational survey model. The research sample is comprised of 282 participants, 143 of whom are field hockey players and 139 of whom are soccer players from Turkey. The data of the research were analysed using Jamovi 1.6.12 statistical software program. As a result of the research, it was observed that the risk assessment levels of the participants were in the moderate-risk score range, and their sport commitment scores were high. It was determined that there were significant differences in terms of demographic variables in the scores of the participants' risk assessment scale and its dimensions and their sport commitment. The dimension of competition, which is one of the independent variables, had a low and negative relationship with participants' sport commitment and was a significant predictor of sport commitment. The risk assessment perceptions and sport commitment levels of the athletes were determined. Findings reveal that risks can be eliminated or minimized.

Key Words: Field hockey, Soccer, Risk, Athlete, Sport Commitment.

INTRODUCTION

The risk may be faced by anyone in all spheres of life. All individual experiences are significantly affected by risk. People are forced to struggle with risk factors to maintain their lives. According to Dugalic (2011), Risk is a complex, set, inevitable and uncertain phenomenon that is a part of every human activity. If the risks are not explicit, individuals have to spend more energy fighting against the risks. The same situations in risk factors are also observed in sport areas.

All sport activities contain several risks. Athletes, trainers, spectator groups, as well as environmental factors are the areas of sport where risk factors are effective. In this case, the risk factors are the process of decision-making and implementation to minimizing injuries, damage, and loss of time of participants, employees, and spectators in recreation programs and activities (Nohr, 2009). Sources of risk are insufficiency of sport areas, lighting, cleaning and safe areas, and negligence in the maintenance of materials used in sport events as well as occasional mistakes of athletes, coaches, officials, and fans. It is inevitable to face risk if technical, financial, and time issues are not well-managed in achieving desired levels of programs and plans of sport organizations. It is essential in sport organizations to ensure that security is maintained and necessary precautions are taken in terms of health, transportation, technical services, press, communication, and similar basic factors (Çobanoğlu and Sevil, 2013;

Cankalp 2002) and notably to avoid hazarding the health of athletes when managing risks. Besides, the organization of tournaments requires proactive thinking and various issues such as environmental conditions, financial management, and social security or insurance. Bucher and Krotee (2002) defined risk management as a systematic process that not only protects members from individual injuries but also protects the organization from losses due to financial losses. Tükel (2020) stated that Turkey attaches importance to technological and digital developments with an innovative, risk-taking, and proactive perspective that captures opportunities in terms of all kinds of tools, materials, materials, production, employment, and performance products in the field of sport.

Sport is an important phenomenon of human life. Sport inevitably exists in the socio-cultural life of human beings. Interests, excitement, and enjoyment shape choices in sport branches. The basic principle that increases participation and sport commitment is to design sport-related plans based on conditions required by people (Tükenmez, 2009; Roberts, 2001; İlkım et al. 2018). In the study of Sücüllü (2019) and Akyol ve İlkım (2018), it was stated that sport commitment is an inconspicuous structure in the sport psychology literature and will be included in the literature for the first time with their study. In some studies on sport commitment and participation motives, it was found that some crucial factors physically affect feelings, entertainment, friendship, acquisition, learning, and development and participation in sport branches (Gill,

Gross, and Huddleston, 1985). It may not always be correct to say that there are one or more factors that affect sport commitment. Showing interest in sport, especially in certain branches, is associated with the individual who is under the influence of his world and environmental conditions. Individuals with a high level of sport commitment may fail to realize risks for reasons such as focusing on their field of sport, concentration, or high motivation. Karageorghis and Terry (2017: p, 27,143) underpins this idea defining motivation as the strong inner force that leads directly to a behaviour in a certain way. The famous tennis player Serena Williams expresses that “If you can keep playing tennis when somebody is shooting a gun down the street, that’s concentration”.

This study aims to determine the relationship between field hockey and soccer student- athletes’ perceptions of risk assessment in sport organizations and their sport commitment and to examine whether there is a difference in terms of some demographic variables. Within the scope of this study, the following questions were addressed.

- H1: What is the level of risk assessment and sport commitment scores of the participants?
- H2: Are there any significant differences in the risk assessment and sports commitment scores of the participants according to demographic variables?
- H3: Is sport commitment a predictor of the risk assessment perception?

MATERIAL AND METHOD

The research was based on a relational survey model. Relational survey models aim to determine whether there is a relationship between two or more variables and if so, the degree and level of the relationship (Karasar, 2014).

Research Design: Research data were collected in January, February, and March 2020. Student-athletes were asked to assess sport organizations in field hockey and soccer in 2019 and inter-university soccer competitions held in Antalya between 9 and 13 March 2020 in terms of risks. The "Voluntary Informed Consent Form" was obtained from all athletes participating in the study.

Population and Sample: The research population is comprised of soccer players who study at high schools and universities in Kahramanmaraş and Gaziantep and athletes of the National Team of Field Hockey and its youth setup.

282 participants were included in the research sample with an additional sample selection. The scale forms were sent to the participants online and as a form and usable feedback was provided from 282 participants for data.

Table 1. Information related to Participants Included in the Research Sample

According to Demographic Variables		N	%
Gender	Female	71	25.2
	Male	211	74.8
Education	Graduate before bachelor's degree	129	45.7
	Bachelor's and postgraduate degree	153	54.3
Age	20 and under	166	58.9
	21-25	82	29.1
	26 and over	34	12.1
Branch	Field Hockey	143	50.7
	Soccer	139	49.3

Data Collection Tools

Risk Assessment Scale for Athletes: Risk assessment surveys applied by Gök (2006), Çobanoğlu (2008), and Karataş (2012) in volleyball, soccer, and handball were examined and a new scale consisting of 20 questions and 4 factors was developed in parallel with the nature of individual sport by Ocakoğlu (2019). The Cronbach Alpha internal consistency was found as .86, 0.86, 0.89, and 0.84 for health, competition, financial management, and social security or insurance, respectively. The Cronbach Alpha internal inconsistency was calculated as .85 for the whole of the scale. As a result of the reliability analysis of this study, the Cronbach Alpha coefficient was found as .94 for the whole of the scale while it was found as .86, .80, .80, and .89 for dimensions of health, competition, financial management, and social security or insurance, respectively. As a result of the Confirmatory Factor Analysis conducted within the scope of this study to verify the four-dimensional structure of the scale, it was seen that the four-dimensional structure of the scale was confirmed and the fit indices of the model were at acceptable levels ($\chi^2/sd = 3.01$, CFI = 0.91, TLI = 0.89, RMSEA = .076, SRMR = .060) (Figure 1).

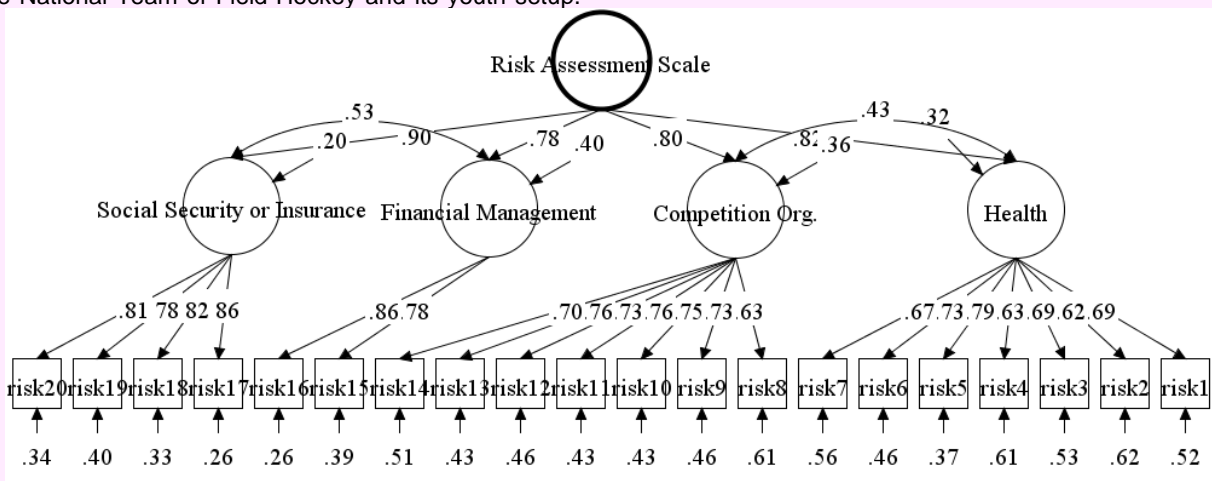


Figure 1. Fit Index Diagram of the Dimensions of the Risk Assessment Scale

Sports Commitment Scale: The Spanish version of The Utrecht Work Engagement Scale (UWES) developed by Schaufeli, Bakker (2004) was adapted for athletes by Guillen and Martinez-Alvarado (2014). The scale was analysed as a single factor within the scope of this study. The Cronbach Alpha coefficient was calculated as .89. To confirm the one-dimensional structure of the scale, the confirmatory factor analysis scale revealed that the one-dimensional structure was confirmed and the fit indices of the model were at acceptable levels ($\chi^2/df = 2.00$, CFU = 0.95, TL = 0.94, RMSEA = .060, SRMR = .043) (Figure 2).

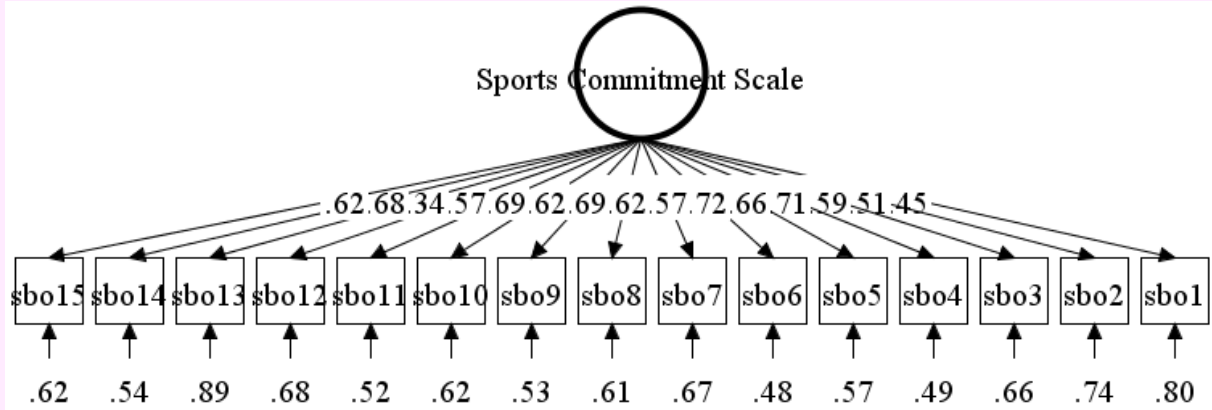


Figure 2. Fit Index Diagram of the Sport Commitment Scale.

Analysis of Data: The data of the study were analysed using Jamovi 1.6.12 statistical software program. As a result of the skewness coefficient method (Büyüköztürk, 2018), skewness was found as .295 for the general "Risk Assessment Scale" and as ".192", ".251", ".061", ".086" for the dimensions of health, competition, financial management, and social security or insurance, respectively. The "Sport Commitment Scale" was calculated as -.890" and it was accepted that all values were in the range of +1 to -1 and the distribution was normal for all dimensions. The arithmetic mean and standard deviation values were determined. Participant opinions were determined in terms of differentiation based on demographic variables via the t-test and ANOVA, while the post-hoc tests were used to determine differences. The correlation analysis was used to determine the relationship between variables, and regression analysis was used to test the predictive status of the independent variables on the dependent variable.

Findings: The ranges of the risk assessment scale (Ocakoğlu (2019) are given below to interpret the data properly.

Table 2. The distribution of the risk assessment scale of the participants according to their level of ranges

Ranges of the Risk Assessment Scale		N	% Percent
Based on Score Ranges	Very low risk (1.00 - 1.80)	34	12,06
	Low risk (1.81 - 2.60)	85	30,14
	Moderate risk (2.61 - 3.40)	99	35,11
	High risk (3.41 - 4.20)	37	13,12
	Very high risk (4.21 - 5.00)	27	9,57

Given the scores of the dimensions of the risk assessment in sport organizations attended by student-athletes, it is seen that the majority of them are in the 'low risk' and 'moderate risk' groups.

Table 3. Arithmetic Mean and Standard Deviation of Participants' Risk Assessment Scale and Sport Commitment Scale Scores

Scales	Dimensions	N	Min-Max	\bar{X}	SS
Risk Assessment	Risk (General)	282	1-5	2.83	.92
	Health	282	1-5	2.90	.97
	Competition	282	1-5	2.64	1.00
	Financial Management	282	1-5	2.99	1.31
	Social Security or Insurance	282	1-5	2.93	1.22
Sport Commitment	Sport Commitment	282	1-5	4.08	.61

Table 4. T-Test Results of the Risk Assessment and Sport Commitment of the Participants and Differentiation According to Demographic Variables

Scales	Dimensions	Gender		Education		Branch	
		t	p	t	p	t	p
Risk Assessment	Health	-1.59	.874	-3.09	.000*	.469	.639
	Competition	-2.41	.017*	-4.07	.000*	-1.17	.242
	Financial Management	-.366	.715	-3.94	.000*	.547	.585
	Social Security or Insurance	-.585	.559	-5.66	.000*	-.717	.474
Sport Commitment	Sport Commitment	2.07	.039*	.647	.518	1.31	.190

*p<.05

According to Table 3, the mean scores of the participants regarding the general and dimensions of the risk assessment scale are at a moderate level and the opinions of the participants about the sport commitment scale are at a high level.

Table 4 reveals that there is no significant difference among the dimensions of health, competition, financial management, and social security or insurance in terms of gender while there are significant differences between competition [$t(280)=-2.41, p<.05$] and sport commitment [$t(280)=2.07, p<.05$]. Female participants ($\bar{X}_{female}=2.40, SS_{female}=1.07$) had lower risk assessment levels of competition than male participants ($\bar{X}_{male}=2.73, SS_{male}=.97$). Female participants ($\bar{X}_{female}=4.21, SS_{female}=.52$) had higher sport commitment than male participants ($\bar{X}_{male}=4.04, SS_{male}=.64$).

While there was no statistically significant difference between the participants' sport commitment in terms of

educational status variable, there were significant differences among the dimensions of health [$t(280)=-3.09, p<.05$], competition [$t(280)=-4.07, p<.05$], financial management [$t(280)=-3.94, p<.05$], and social security or insurance [$t(280)=-5.66, p<.05$]. Those continuing undergraduate education or holding a bachelor's degree had higher risk assessment levels in the dimensions of health ($\bar{X}_{lisans\&+}=3.07, SS_{lisans\&+}=1.02$), competition ($\bar{X}_{lisans\&+}=2.86, SS_{lisans\&+}=.99$), financial management ($\bar{X}_{lisans\&+}=3.27, SS_{lisans\&+}=1.28$) and social security or insurance ($\bar{X}_{lisans\&+}=3.29, SS_{lisans\&+}=1.20$) than graduates before bachelor's degree in the dimensions of health ($\bar{X}_{lisans-}=2.71, SS_{lisans-}=.88$), competition ($\bar{X}_{lisans-}=2.39, SS_{lisans-}=.96$), financial management ($\bar{X}_{lisans-}=2.67, SS_{lisans-}=1.27$) and social security or insurance ($\bar{X}_{lisans-}=2.50, SS_{lisans-}=1.11$). No statistically significant difference was found in dimensions and sport commitment in terms of branch.

Table 5. One-Way Analysis of Variance (ANOVA) Results of Participants' Risk Assessment and Sport Commitment in Factor Dimension According to Age Variable

Factors	Age	N	\bar{X}	SS	F	p	Groups with a difference (Post-Hoc Test)
Health	20 and under (a)	166	2.70	.88	9.46	.000*	b, c - a
	21-25 (b)	82	3.19	1.05			
	26 and over (c)	34	3.21	.99			
Competition	20 and under (a)	166	2.35	.92	19.03	.000*	b, c - a
	21-25 (b)	82	3.06	.97			
	26 and over (c)	34	3.05	.97			
Financial Management	20 and under (a)	166	2.70	1.27	10.68	.000*	b, c - a
	21-25 (b)	82	3.41	1.17			
	26 and over (c)	34	3.41	1.46			
Social Security or Insurance	20 and under (a)	166	2.58	1.11	18.03	.000*	b, c - a
	21-25 (b)	82	3.41	1.17			
	26 and over (c)	34	3.44	1.33			
Sport Commitment	20 and under (a)	166	4.14	.59	2.02	.134	-
	21-25 (b)	82	4.04	.69			
	26 and over (c)	34	3.92	.52			

*($p<0.05$)

Table 6: Correlation Results Between Participants' Scores in the Dimensions of Risk Assessment including Health, Competition, Financial Management, and Social Security or Insurance and in Sport Commitment

Variable	Health	Competition	Financial Management	Social Security or Insurance
Sport Commitment	-.078	-.164*	.008	-.103
N=282				
* $p<.05$				

Table 7. Standard Multiple Regression Analysis Results Regarding the Predictive Power of Competition on Sport Commitment

Variables	B	Sh	B	T	p
Fixed	4.349	.102		42.528	.000
Competition	-.100	.036	-.164	-2.777	.006*
R= .164 R ² = .027					
F (1. 280)=7. 711 p= .000					

Table 5 reveals that there is no statistically significant difference in sport commitment ($F=2.02; p=.134$) while there is a statistically significant difference among the dimensions of health $F(2. 279)=9.46; p<0.05.$, competition $F(2. 279)=19.03; p<0.05.$, financial management $F(2. 279)=10.68; p<0.05.$, and social security or insurance $F(2. 279)=18.03; p<0.05.$ in terms of gender. In the dimensions of the risk assessment, it is seen that the risk assessment

levels of the participants aged 21-25 and over 26 years old are significantly higher than the risk assessment levels of the age group 20 and younger.

Table 6 reveals that there is a negative and low-level significant relationship between the sport commitment scores of the participants and competition ($r = -. 164$), which is one of the independent variables. It is observed that as the perception of the participants about assessing

competition decreases, their sport commitment increases. There was no significant relationship between sport commitment and health ($r = -.078$), financial management ($r = .008$), and social security or insurance ($r = -.103$).

Table 7 reveals that there is a very low-level and significant relationship between competition and sport commitment ($R = 0.164$, $R^2 = 0.27$, $p < .05$). The dimension of competition explains approximately 0.03% of the total variance in athletes' sport commitment.

DISCUSSION AND CONCLUSION

In the study, the risk assessment scores were found as 'low risk' and 'moderate risk' by the majority of the participants. The mean scores of the participants regarding the general and dimensions of the risk assessment scale were moderate. The opinions on the sport commitment scale were at a high level.

In terms of gender variable, significant differences were found in the dimensions of competition and sport commitment. It was concluded that the assessment levels of competition by female participants were lower than those of male participants. In general and with the influence of the lifestyle of the traditional society, male athletes have more chance of facing each other in sport organizations and competitions, which ensures that male participants have higher levels in assessing competition. Karataş (2012) did not find a significant difference in the perceptions of handball athletes in the risk assessment according to gender. Demirhan (2003) found significant differences in terms of gender and diversity in outdoor sports while Yıldırım (2007) concluded that the perception of social risk was higher in females than males.

It was determined that female participants have higher sport commitment than male participants. Cicioğlu et al. (2019) concluded that male athletes have higher levels of exercise commitment than female athletes. Such differences may occur due to differences between the study groups in the literature. Piecre (1997) found that the exercise commitment of athletes does not differ by gender.

While no statistically significant difference was found between sport commitment in terms of the educational status of the participants, those with higher levels of education were found to have higher levels of risk assessment perceptions in the dimensions of the risk assessment. It is expected that as the education level increases, the perception of risk assessment increases. Therefore, it can be expressed as a natural and expected result that the risk assessment levels of those with a higher education level are higher. Uzun, (2017), Çobanoğlu and Sevil (2013), and Ocakoğlu (2019) reached parallel results with the results of this study. Kuter (2007) stated that the education level of the athletes affects their understanding of the job and awareness of the expectations of their circle and team influence, adding that this will naturally affect performance and enable them to better analyse the risks taken while demonstrating this performance.

In terms of the branch variable, no statistically significant difference was found in the dimensions of the risk assessment and sport commitment of the participants. Field Hockey and Soccer are sports branches that have similar risks in terms of field-ground and other situations. Due to such similarities, it is an expected result that there is

no significant difference in risk assessment levels in both branches. The similarity of factors such as the environment and the playground can be considered as the factors that affect the similarity of risk factors in athletes.

While there was no statistically significant difference in sport commitment of participants in terms of the age variable, the risk assessment levels of the participants aged 21-25 years and 26 years and over in the dimensions of the risk assessment were significantly higher than the risk assessment levels of the age group of 20 and younger. As people grow, they experience more, and thus, risk assessment levels increase. As 20 years old athletes are less experienced and professional, the assessment of risk factors is carried out based on emotions and without overthinking. The results of Demirhan's (2003) study related to the risk perception of athletes according to the age variable support the results of this study. Kuter (2007) also stated that age is important in risk factors and low age groups do not avoid taking risks due to their inexperience, and such cases may affect their or other athletes' disability and health conditions. Also, the inexperienced behaviour style leads to unnecessary energy consumption and underperformance, thus jeopardizing the general performance of the team.

There was a negative and low-level significant relationship between the sport commitment scores of the participants and the competition dimension and participants' perceptions of assessing competition decreased as sport commitment increased. It was concluded that athletes mainly focus on the sport branch rather than risks in competitions and thus fail to realize risks. Existing opportunities should be increased and restrictions should be removed for athletes to participate in competitions in more risk-free environments. Alexandris et al. (2008) found in their research on athletes that restrictions significantly affect both participation and commitment.

CONCLUSION

The risk assessment perceptions and sport commitment levels of the athletes were determined according to different variables. Participants' levels of sport commitment are at desired levels. Considering the findings, it can be ensured that the athletes have a broad perspective with a proactive perception filter to increase the risk assessment perception level of the student-athletes, which is not at the desired level. It is recommended that experienced athletes and technical experts be consulted for a solution-oriented approach. Thus, risks faced in sport organizations may be eliminated or minimized if athletes are aware of such risks.

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