The Red-card Effect on the Anxiety and Mental Toughness Among Jordanians' Professional Soccer Players

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Football is one of the most popular games in the world, and it is called the world game. However, the red card is a negative indicator of the psychological performance on players. Consequently, the primary purpose of the current study was to the effect of the red card on anxiety and mental toughness level among the professional soccer players and the differences in this level depend on play position and training experience variables. Also, the relationship between anxiety and mental toughness. To achieve this, we used the descriptive approach on a sample consisting 61 professional soccer players selected using the purposive sample technique. Additionally, an electronic questionnaire was built using Google questionnaire, which consisted of 14 paragraphs that dealt with the mental toughness, and 21 paragraphs that dealt with the anxiety. The researchers used means, standard deviations, One-Way ANOVA and Pearson correlation coefficient by using SPSS version 24 with a confidence level of 95% (p value= 0.05). The results of the study have shown that the anxiety level among professional soccer players came with a high degree; on the other hand, the mental toughness came with a low degree. Additionally, there are no statistically significant differences in the anxiety and mental toughness according to the play position and training experience variables. Finally, the researchers recommend that there is a need to enhance the mental toughness among the professional players through various psychological strategies such as mental imagery.

Key words: *Anxiety, Mental toughness, Soccer, red card, Players*

Introduction

Football is one of the most popular games in the world, and it is called the world game. This is clearly demonstrated by the number of countries registered in the International Football, Association, which are 209 for men and 170 for women. It is also practiced by 270 million players, who constitute 4% of the world's population, and 0.04% of them play in professional championships (Haugaasen & Jordet, 2012). While we find that the number of viewers for the final of the European Champions in 2015 between Barcelona and Juventus was followed by 180 million people in more than 200 regions (UEFA, 2016). On the other hand, this sport is characterised by many complex dynamic interactions, such as tactical aspects and technical performance at the team level, as well as it is need many physical and psychological requirements at the player level (Bradley et al., 2011).

But when the player commits a grave error or bad behaviour, he receives a red card, and this can happen after the first yellow card which leads to the sending–off of a player, and therefore the number of the team becomes 10 players, which gives the opposing team an additional advantage, in addition to the possible psychological effects resulting from the red card ; therefore, the goals scored for the penalised team will decrease (Cerveny, 2018). When analysing football matches, the researchers found that 59% of the teams lose the match when one of the players received a red card while 23% of them won despite receiving a red card and finally 18% of these teams ended the match with a draw (Metchel et al., 2011). The red card is an important event in soccer, which may affect the outcome of the match. Titman et al (2012) indicates that the teams that play against a competing team with a red card benefit in increasing the rate of goal scoring by 64.5%. Belbin (2004) indicates that the red card requires a re-arrangement of the players' roles based on the fact that each player has a specific function and role, therefore there is a decrease in the ability to perform and a difficulty of adapting to this situation. Anderson & Sally (2013) indicate that the least talented player is more tolerant of the red card compared to the talented player, noting that the timing of receiving the red card according to the time of the match and the outcome of the game at the expulsion is one of the important factors in terms of affecting the psychological aspects among the players.

Where, Bar-Eli (2006) indicates that the red card is a negative indicator of the psychological performance among the players by reducing the chances of scoring goals for the penalised team, because the decrease in the number of the group increases the perceived pressure of the penalised team in relation to the effort made. To succeed in football, a player needs a mixture of good physical and mental health (Higham, 2013). Therefore, the prediction and description of the player's behaviour under pressure contributes to the possibility of success in soccer (McGarry et al., 2002). Metchtel et al (2011) indicates that the player's sending-off increases the pressure on the remaining players on the team. Where, the anxiety is a normal human reaction and represents an alert system that is activated when a player is exposed to danger, but a higher level of anxiety leads to a lower level of performance (Weinberg & Gould, 2011). The

anxiety with its various components may be accompanied by many symptoms, such as negative expectations about success, negative self-talk, concerns about performance, and an inability to focus (Jarvis, 2002). The player may also experience dryness of the throat, high blood pressure and heart rate, excessive sweating as there is a close relationship between anxiety level and athletic achievement (Ampofo-Boateng, 2009).

In the higher competitive levels, the physical fitness and skill level of the players is significant, but psychological factors play a major role in the success of the athlete, as mental toughness is one of these effective psychological factors in sports that contribute to overcoming stress and pressure (Jones et al., 2002). ; Gucciardi, et al., 2008). It represents the ability to focus and deal with stress and persistence (Clough et al., 2012). Where psychologists and elite athletes believe that 50% of successful athletic performance is the result of psychological and mental factors resulting from mental toughness and on the other hand 83% of coaches find that mental toughness is the most important psychological feature that determines the success of the athlete (Gucciardi et al. , 2009). Mental toughness also, reduces anxiety and promotes confidence among athletes (Dominikus et al., 2009). Moreover, it helps to have good visualisation and better employment of adapting strategies in athletic performance (Omar-Fauzee et al., 2009). Smith et al (2006) indicates that the mental aspect is the determining factor for winning and by 90% when both teams have equal technical and physical abilities. Where Gould et al (2002) indicates that there is a relationship between mental toughness and successful performance. It is also the ability for an athlete to be consistently optimistic and better than the opponent in various situations during the competition (Jones et al., 2007). It is also the perseverance to achieve the goal even in difficult situations (Middleton et al., 2004).

Based on the previous presentation, the problem of this study emerged, which crystallised among researchers through a review of theoretical literature, where the researchers found that most studies attempted to relate the outcome of the match to the red card, as well as the time the team obtained this card, with a lack of studies that were interested in researching the psychological effects of this card on the players. Consequently, the primary purpose of the current study was to the effect of the red card on anxiety and mental toughness level among the professional soccer players and the differences in this level depends on play position and training experience variables. Also, the relationship between anxiety and mental toughness.

Materials and Methods

Patients

In the present online survey by Google conducted in Amman, we have been using this online questionnaire to collect the data from a sample of 61 professional soccer players selected using purposive sample technique. The sample under study explained the purpose of our study to get their consent and this study was conducted at the end of January 2020. Table 1 provides a description of the study sample.

Table 1: Description of the study sample (n= 61)

variable	Category	Number	Percent %
Age	18- less than23 years	20	32.8
	23- less than28 years	33	54.1
	More than 28	8	13.1
	total	**61**	**100**
Play position	Defender	19	31.1
	Midfielder	20	32.8
	Goalkeeper	9	14.8
	Attacker	13	21.3
	total	**61**	**100**
Training Experience	Less than 5 years	5	8.2
	5- less than10 years	40	65.6
	More than 10 years	16	26.2
	total	**61**	**100**

Study tools

The Sport Mental Toughness Questionnaire (SMTQ) (Sheard et al., 2009) was used to measure mental toughness. The SMTQ is a 14 item self-report questionnaire that yields a total mental toughness score, as well as scores on three subscales: confidence; constancy; and control. Responses to each item are indicated along a five-point Likert-type scale anchored by "Strongly disagree" and "Strongly agree". Higher scores are indicative of higher levels of mental toughness. Acceptable construct validity and internal consistency have been reported for the SMTQ. Also, the sport Anxiety Scale-2 (Smith et al., 2006) was used to measure anxiety level and this scale is a questionnaire that assesses the competitive trait anxiety experienced by athletes before or during competition. The scale has 21 items and measures responses for three factors: somatic anxiety, worry and concentration disruption, based on a five-point Likert scale for the responses, ranging from one (never) to five (very often). Table 2 provides a description of the stress and optimism scales of the study sample responses.

Table 2: The anxiety and mental toughness scales of the study sample responses

The response/ mental toughness	The response/ Anxiety	Degree	Average	Level
Strongly agree	Very often	5	More than 4.20	Very high
Agree	Fairly often	4	3.40- less than 4.20	High
Neutral	Sometimes	3	2.60- less than 3.40	Moderate
Disagree	Almost never	2	2.60- less than 1.80	Low
Strongly disagree	Never	1	Less than 1.80	Very low

Scientific coefficients of the study tool

To verify the consistency of the study tools, we used the Alpha Cronbach coefficient, where Cronbach alpha for the anxiety was found to be 0.92 and 0.87 for the mental toughness scale and these values are considered a high indicator of the stability of the study tools.

Ethical considerations

The participants' rights were protected by explaining the purpose and significance of the study. Participants were reassured that their responses would remain anonymous. The clients were informed that their participation in the study would remain anonymous and that their privacy was respected. They were provided with a comprehensive explanation that their involvement in the study was voluntary and that they could withdraw at any time and written approval was obtained from all study participants.

Statistical analysis

To achieve the objectives of the study and answer its questions, the researchers used means, standard deviations, One- Way- ANOVA and Pearson correlation coefficient by using SPSS version 24 with a confidence level of 95% (p value= 0.05).

Results

The data was collected from 61 soccer players; this data shown in Table 3, reveals the means and standard deviations of study sample responses about the anxiety and mental toughness levels

Table 3: Mean and standard deviations of the anxiety and mental toughness levels (n=61)

Scales	Anxiety		Agreement Degree	Mental toughness		Agreement Degree
Variables	Mean	SD		Mean	SD	
Defender	4.10	0.30	high	2.52	0.38	Low
Midfielder	3.95	0.27	high	2.53	0.36	Low
Goalkeeper	4.10	0.34	high	2.44	0.55	Low
Attacker	3.85	0.28	high	2.51	0.55	Low
Less than 5 years	4.05	0.29	high	2.13	0.41	Low
5- less than10 years	4.00	0.32	high	2.62	0.48	moderate
More than 10 years	3.98	0.22	high	2.76	0.33	moderate
Total scale	**4**	**0.29**	**high**	**2.50**	**0.72**	**Low**

Table 4 shows the differences in the anxiety and mental toughness levels among the study sample accordingly the play position variable by using One-Way ANOVA.

Table 4: One-Way ANOVA results for study sample in anxiety and mental toughness levels accordingly the play position variable (n=61)

Scale	play position variable	Number	Means	SD	F	df	Sig
Anxiety	Defender	19	4.10	0.30	0.937	60	0.429
	Midfielder	20	3.95	0.27			
	Goalkeeper	9	4.10	0.34			
	Attacker	13	3.85	0.28			
Mental toughness	Defender	19	2.52	0.38	1.205	60	0.316
	Midfielder	20	2.53	0.36			
	Goalkeeper	9	2.44	0.55			
	Attacker	13	2.51	0.55			

(*Significant for $\alpha \leq 0.05$)

Table 5 shows the differences in the anxiety and mental toughness levels among the study sample accordingly the training experience variable by using One-Way ANOVA.

Table 5: One-Way ANOVA results for study sample in anxiety and mental toughness levels accordingly training experience variable (n=61)

Scale	Training experience variable	Number	Means	SD	F	df	Sig
Anxiety	Less than 5 years	5	4.05	0.29	0.113	60	0.894
	5- less than10 years	40	4.00	0.32			
	More than 10 years	16	3.98	0.22			
Mental toughness	Less than 5 years	5	2.13	0.41	1.565	60	0.218
	5- less than10 years	40	2.62	0.48			
	More than 10 years	16	2.76	0.33			

(*Significant for $\alpha \leq 0.05$)

In order to establish the relationship between the anxiety and mental toughness among the study sample, the researchers used the Pearson correlation coefficient as illustrated in Table 6.

Table 6: Pearson correlation between the anxiety and mental toughness among (n = 61)

Scale	R	Sig
Anxiety	0.32-	0.213
Mental toughness		

(*Significant for $\alpha \leq 0.05$)

Discussion

The results of the study confirmed that the red card is a negative indicator of the psychological performance among the study sample through the high anxiety level after one of the team

members' send-off, which came in a high degree and with an average of (. Where the results of another study carried out by the researchers showed that the penalised team suffer from difficulty in communication and also do not play with a struggle and sacrifice in order to achieve victory; this consistent with the result of the current study, which showed that the fear of achieving victory as a result of the red card obtained the highest average (4.20) and a very high degree. Also, the high anxiety level among the study sample was accompanied by a decrease in the mental toughness level, which came with a low degree (2.50).

Although there were no statistically significant differences in the anxiety and mental toughness level, according to the player's position and training experience variables, however, the means showed that the defenders and the goalkeepers are the most affected by the red card, according to the anxiety level and an average of 4.10 and for both groups, while the attackers were the least affected and with an average (3.85. Sending-off the player increases the pressure on the remaining members of the team and the greatest burden falls on the defenders and the goalkeepers; after one of the team members send-off, this will negatively effect the rate of goal registration, where studies indicate that 59% of the teams lose the match when receiving a red card (Metchel et al., 2011). The red card also entails a rearrangement of roles, and this may lead to a decrease in the ability of the players to perform and may be accompanied by the difficulty of adapting to the new situation, although some indicate that the remaining players can achieve victory despite the case of sending-off.

Noting that there are other interfering factors that may contribute to raising the anxiety level, including the timing of the red card, according to the time of the match, the result of the match at the moment of sending-off and the importance of the player being sent-off. Also, the wrong imagery among some players regarding the effort made by the red card may contribute to the high anxiety level. The results of the study also showed that the more experienced players are less affected by the red card, as well as they have better mental toughness compared to the less experienced. On the other hand, we find that the goalkeepers are the most affected by the red card with regard to mental toughness, where they got the lowest average (2.44), then the attackers, with an average of 2.51. Noting also that players who have more than 10 years of experience got the highest average in the mental toughness variable (2.76), then the category 5- less than 10 years, with an average of 2.62.

Based on the previous presentation, the problem is the high anxiety level and the low of the mental toughness level may be accompanied by a decrease in the performance level, and the appearance of some negative behaviours of the players, such as an increase the objection to the ruler's decisions, expressing anger by hitting the competitor and a decrease in sportsmanship, which may expose them to receive another red card, and this will contribute to increasing pressure on the team and decrease the performance level. With the high anxiety level and low mental toughness level, players become unable to control their negative energy in difficult situations and may also be accompanied by a decrease in their self-confidence level, as this

psychological characteristic is one of the most important variables related to the athlete's performance, from helping the athlete to controlling negative emotions. This is reflected in the player skill level and the ability to deal with the crisis rationally and wisely. On the other hand, we find that positive energy contributes to enhancing the confidence level among athletes and contributes to developing cohesion among team members in difficult situations. It also contributes to enhancing attention and improving the athlete's ability to communicate, focus and make the right decision.

The results of the study also showed an inverse relationship that is not statistically significant between the anxiety level and mental toughness, meaning that the greater the mental toughness is accompanied with the lower anxiety level; also the mental toughness helps the athlete in dealing with various stresses by reducing the anxiety level and developing self-confidence, and thus the athlete who enjoys mental toughness is characterised by continuous optimism and is better than the competitor in various situations during the competition. An athlete with mental toughness is characterised by discipline in his thinking and deals calmly with various pressures and the ability to increase his positive energy in critical times. This requires attention to various psychological aspects, considering that mental toughness is an importance psychological factor to overcoming various stresses and pressures, as mental toughness is the most important psychological feature that can determine the success of an athlete.

Conclusions

In this study, the researchers tried to identify the effect of the red card on the anxiety and mental toughness among professional soccer players, where the results of the study revealed that the red card in soccer has negative effects on the psychological aspects among the players and this was represented in the high anxiety level and low mental toughness among those players. Also, the goalkeepers and defenders were the most affected by the red card. On the basis of the results of this study, the researchers presented recommendations on the necessity of enhancing mental toughness among professional soccer players through various psychological strategies such as mental imagery, writing future goals, social support and practising breathing and yoga exercises.

Conflicts of Interest

We declare no competing interests

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