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A Survey and Comparison of Team Cohesion, Role Ambiguity, Athletic Performance and Hardiness in Elite and non Elite Football Players

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Abstract: The aim of this study is to review and compare team cohesion, role ambiguity, athletic performance and hardiness in elite and non-elite football players. Statistical sample includes 140 randomly chosen Iranian elite and non-elite football players in 2009. Data collection tools include scale of team cohesion, role ambiguity, hardiness and functioning checklist of players. The results of the research showed that there is a positive and meaningful relation between athletic performance and team cohesion (r = 0.366) and hardiness (r = 0.426), but it has a negative and meaningful relation with role ambiguity (r = 0.274). There is positive relation between team cohesion and hardiness (r = 0.543) and negative and meaningful relation with role ambiguity (r = 0.577) and the relation between hardiness and role ambiguity (r = 0.592) proved to be negative and meaningful. Also, the results showed that in champion and non-champion players, the variables of team cohesion, hardiness, role ambiguity and athletic performance are meaningfully different (p = 0.05). That is the mean score of team cohesion, hardiness, performance in champions are higher than non-champion athletes but role ambiguity is lower in champions.

Key words: Team cohesion, role ambiguity, hardiness, athletic performance, elite football players, non-elite football players

INTRODUCTION

Due to paying less attention to psychological issues in these days, athletes are at optimized level physically and body performance, but aren't prepared psychologically, which leads to their weak performance in matches. In matches, it is obvious that sometime the lack of cohesion among the team members causes turmoil and interpersonal fighting, which does no good for team. Also, when a player isn't used in his right post by coach, his mistakes go up and the performance comes down consequently (Narimani, 2007).

In team and group sports, some psychological concepts influence team function. One of them is social cohesion. Team or social cohesion is said to be a touchstone for survival and continuity for a team member in the group. Social cohesion consists of two general dimensions. The first is attractiveness, which refers to loving teammates or having satisfaction on being and playing in the team. The second dimension refers to means to control the cohesion, which is the benefit that the member gains from group relation (Festinger *et al*., 1963).

Festinger *et al*. (1963) showed that if team cohesion and assignment cohesion be high, the cohesion of the group will be high and these are the factors, which keep the team together and is determined by certain situations that is the rate of tangible cohesion of the team is due to function of factors and situations. These factors include: peripheral, personal, leadership and team.

Vender (1971) showed that the more unity and cohesion of the team, the higher rate of winning for a team. In other words, the number of gained scores will be high. Also in this research the correlation of team cohesion and performance was 0.64. Klin and Christiansen (1969) shown that interpersonal attractiveness, as one dimension of team cohesion, motivates a better game. It was also observed that high percentage of team cohesion makes the members able to demonstrate all potential talents. In Martesn and Peterson (1971) study, the results showed that the teams with higher cohesion made good games and got better results, but the teams with weak cohesion could not make favorite scores. Bakeman and Helmreich (1975) who studied team cohesion in 3 time span, showed that in all 3 spans (early season, mid season and end season), there is a positive and meaningful relation between the match and social cohesion. It was also asserted that the high rate of correlation means most cohesive teams at the end of season will have the best players. Carron and Ball (1977) showed that there is a positive and meaningful correlation between a good game and team cohesion and the cohesion mentioned was 0.77.

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Another variable, which has a prominent role in group sports, especially in football, is role ambiguity. Role ambiguity is defined as lack of information transparency about expectations concerning a person's success (Kahn *et al*., 1964). Kahn *et al.* (1964) in their theoretical model showed that the experience of role ambiguity cause several contradictory reactions in individual. One of them is excitement. As they believe, role ambiguity can cause tension, reduction of self-confidence, sport dissatisfaction and low efficiency. Recent studies of sport psychology support this hypothesis (Beauchamp and Bray, 2001). Eys *et al.* (2003) showed that low perception of role ambiguity with athlete's satisfaction and performance has a negative and meaningful relation. In Jackson and Schuler study, the relation between satisfaction and role ambiguity reported as 0.46 and in Eys *et al.* (2003), it is reported 0.20-0.40. Eys and Carron (2001) in their study indicated that in basketball, there was high relation among four representations of role ambiguity (ambiguity in taking responsibility, lack of obvious action regarding role responsibility, ambiguity of role function evaluation and ambiguity of failure consequences).

Also ambiguity of taking responsibility in defense had a meaningful relation with performance evaluation and self-efficiency evaluation. But a negative and meaningful relation proved between role ambiguity and performance. Beuchamp *et al.* (2002) showed that there is negative and meaningful relation between role ambiguity and performance. The other variable affecting performance is hardiness. Hardiness is combination of beliefs about us and the world, which has 3 constituent of commitment, control and defiance. These personality features act as a source of resistance and protective shield facing stressful events of life (Verdi, 2001).

Athletes possessing high hardiness show higher performance (Mohammadamini, 2005). In many fields (sports competitions, education and living styles), people with more hardiness act better than the rivals and in case of maintaining determination, concentration, confidence and control in pressing situations act more coordinated and better than the rivals (Middleton *et al*., 2003). There is a positive relation between total scores of mental and psychological hardiness and athlete's performance (Golby and Sheard, 2004).

Hardiness as a mental talent has a meaningful role in increasing performance (Gould *et al*., 2002). Hardiness as an important personality variable has a prominent role in sport situations (Hanton *et al*., 2003). Even though, possessing hardiness doesn't compensate lack of skill, it can determine loser and winner in a tough completion (Cockerel, 2002). There is meaningful relation between hardiness and performance (Maddi and Hess, 1992).

It seems that there is negative and meaningful relation between role ambiguity and social cohesion. That is, the higher role ambiguity, the lower social cohesion and consequently, players function will decrease. In other words, with higher cohesion and solidarity or a team, this cooperation will affect the result or the game. Therefore, in this study these hypotheses were assumed:

- There is positive relation among team cohesion and hardiness and athletic performance in elite and non elite football players
- There is negative relation between team cohesion and role ambiguity
- There is negative relation among role ambiguity, hardiness and athletic performance of elite and non-elite football players
- There is positive relation between hardiness and athletic performance of elite and non-elite football players
- There are meaningful differences between two groups of elite and non-elite football players in role of variables like social cohesion, role ambiguity, athletic performance and hardiness

MATERIALS AND METHODS

Since the present study is about differences of team cohesion, role ambiguity, performance and hardiness among elite and non-elite football players, causative comparative method is applied. Another objective of the research was survey on relation of team cohesion, role ambiguity and hardiness with performance of players, so correlation method is applied too.

Statistical population: Athletes of Iranian premier league football teams, competing in the year 2009 constitute the statistical body of this research.

Statistical sample and sampling method: First 75 elite players were chosen by simple random sampling then a group of 75 non-elite players were chosen, who were matched with elite players in variables like age, gender, marital statue, education, major and income. Average age of the sample was 26.86 and their average sport activity was 10.84 years.

Questionnaires used

Social cohesion questionnaire: This questionnaire is made by Martens *et al.* (1972) and includes 7 items that each testee answers each item on a 9 grade Likert scale.

This questionnaire is used in many researches and its credibility and perpetuity are 0.70 and 0.86, respectively. Measuring scale in this questionnaire was spatial and its Cronbach's alpha was 0.71.

Role ambiguity questionnaire: This questionnaire was made by Beauchamp *et al*. (2002) and has 40 questions. It contains two subscales of ambiguity relating to defense and attack. Each one of these subscales has four subsystems ambiguity of responsibility field, role ambiguity concerning behavior, ambiguity of role evaluation and ambiguity of role consequences, which there are 51 items for each one and the testee answers them based on 9 grade Likret scale. Perpetuity of the scale using Cronbach's alpha is 0.78 for all 4 scales. Measuring scale of this questionnaire is spatial and Cronbach's alpha in this research for attack scale was 0.81 and for defense was 0.72.

Hardiness questionnaire of Ahwaz: Hardiness questionnaire is a self-reporting material-paper, which includes 27 materials. This scale is made by Kiamari and Najjarian and is based on factor analysis. Correction co efficiency in testing for all testees and girl and boy testees are r = 0.84, r = 0.85 and r = 0.84, respectively all of which are satisfactory. To evaluate and measure this scale (hardiness), Cronbach's alpha is used in 523 people sample and Cronbach's alpha for hardiness for all testees r = 0.76, girls r = 0.76 and boys r = 0.76, which are totally satisfactory Kimarsi (1997). Simultaneous credibility of this scale reported as anxiety test r = 0.55 and depression r = 0.62 and self-flourishment questionnaire of Mazlov r = 0.55 (Kimarsi, 1997).

Function checklist of players: This is a researcher made questionnaire consisting of 16 items regarding functioning in exercise and matches and the coach considering players performance answered each item on a 9 grade Likert scale. Measuring scale of this questionnaire was spatial and Cronbach's alpha proved to be 0.80.

RESULTS AND DISCUSSION

As shown in Table 1, there is negative and meaningful relation among role ambiguity and team cohesion (r = 0.577), hardiness (r = 0.592), athletic performance (r = 0.274, p<0.05). In other words, players with high role ambiguity show lower team cohesion, hardiness, athletic performance. There is positive and meaningful correlation among hardiness with team cohesion (r = 0.543), athletic performance (r = 0.426, p<0.05). There is positive and meaningful correlation role ambiguity among team cohesion with performance (r = 0.366), (p<0.05). In other words, players with team cohesion show greater performance, compared with others.

Table 1: Simple correlation coefficiency of role ambiguity, hardiness, team cohesion and athletic performance

Predictors	Criterion variables	Role ambiguity	Hardiness	Team cohesion	Athletic performance
Role ambiguity	r	1.000	-0.577	-0.592	-0.274
	Sig.	0.000	0.000	0.000	0.000
Hardiness	r		1.000	0.534	0.426
	Sig.		0.000	0.000	0.000
Team cohesion	r			1.000	0.366
	Sig.			0.000	0.000
Athletic performance	r				1.000
	Sig.				0.000

Table 2: The results of t-test to compare mean of team cohesion athletic performance, hardiness and role ambiguity in elite and none-elite football players

Dependent variables	Groups	Mean±SD	df	t	p-value
Team cohesion	Elite	56.77±4.02	138	7.20	0.001
	Non-elite	51.89±5.72			
Athletic performance	Elite	120.90±19.72	138	4.210	0.002
	Non-elite	111.67±11.19			
Hardiness	Elite	38.62±4.18	138	10.120	0.001
	Non-elite	31.15±6.57			
Role ambiguity	Elite	33.57±4.69	138	7.845	0.001
	Non-elite	38.32±4.11			

As shown in Table 2, there is meaningful difference in score means of team cohesion, performance, hardiness and role ambiguity in two groups of elite and non-elite players. In other words, team cohesion, athletic performance and hardiness in elite players are higher than the non-elite. But role ambiguity has been lower than in elites. A single factor analysis of variance.

The results of Table 3 show that there is meaningful difference among players of varied post, in terms of varied and team cohesion (p<0.05). That is, role ambiguity in half back players and team cohesion in goalkeepers are less than others. But, the difference in variable like hardiness and athletic performance isn't meaningful.

The results of Table 4 indicate that there is meaningful difference of role ambiguity among halfback and other posts players. That is, role ambiguity is lower in halfback players, but this variable difference is not meaningful among goalkeepers, defense and attack players. The Table 4 also show that in terms of team cohesion, there is meaningful difference among goal keepers, defense and attackers (p<0.05). That is, team cohesion of goal keepers is lower that the other groups. But, this variable difference is not meaningful among defense, halfback and attackers.

This study showed that there is positive and meaningful correlation between team cohesion and athletic performance. It is consistent with findings of Festinger *et al*. (1963), Martens and Peterson (1971) and Carron and Bal (1977).

Table 3: Summary of one-factor ANOVA test results to compare the means of role ambiguity, hardiness, team cohesion and athletic performance in varied posts of football players

Dependent variables	Sources	Sum of squares	Mean square	F	p-value
Role ambiguity	Between groups	7301.388	1825.347	6.182	0.000
	Within groups	39861.433	295.270		
	Total	47162.821			
Hardiness	Between groups	787.884	196.971	2.118	0.082
	Within groups	12555.909	93.007		
	Total	13343.793			
Team cohesion	Between groups	2420.646	605.161	4.389	0.000
	Within groups	18613.776	137.880		
	Total	21034.421			
Athletic performance	Between groups	2443.814	610.953	2.172	0.07
	Within groups	37977.979	281.318		
	Total	40421.793			

Table 4: Summary of LSD test to compare the means of role ambiguity and team cohesion

Groups	Mean	Goalkeeper	Defense	Halfback	Attackers
Role ambiguity					
Goalkeeper	83.34	-	-	*	-
Defense	85.21	-	-	*	-
Halfback	69.97	*	*	-	*
Attackers	86.53	-	-	*	-
Team cohesion					
Goalkeeper	47.00	-	-	*	*
Defense	54.71	-	-	-	-
Halfback	59.77	*	-	-	-
Attackers	55.36	*	-	-	-

Asterisk *indicates that it is significant

They demonstrated that team cohesion and match scores of athletes have positive relation and the score of match influences the next match. Observed changes in cohesion in some way gets adapted with next match, although, it seems that more influence goes from team game to team cohesion. The results also showed that there is meaningful relation between team cohesion and hardiness. According to these findings, one can infer that hardiness creates special internal viewpoint that influences the way people face different matters of life and sport and make the individual consider stresses of life and sport in a realistic and dignified way. In other words, defiance make the hardy person able of taking unpleasant events of football as a means for learning rather a threat for safety and all these curtail or prevent negative consequences of stressful events and decrease physical stress of attending sport activities and over expectations causing increase in stress and at the end affects team cohesion of athletes. The other hypothesis of the research was that there is negative relation between team cohesion and role ambiguity of elite and non-elite football players. Results indicated that there is negative and meaningful correlation between role ambiguity and team cohesion. Therefore, the hypothesis 2 was approved. It is consistent with findings of Carron (1982), Martens and Peterson (1971), Williams and Hacher (1982), Eys and Bradway (2003) and Eys and Carron (2001). In their researches, they pointed on the relation between role ambiguity and performance and also relation of team cohesion and athletic performance. We can conclude that role ambiguity of players troubles their team cohesion and this factor decreases athletic performance. The results of this study showed that there is negative and meaningful correlation between role ambiguity and athletic performance. Therefore, hypothesis 5 was approved.

These findings are consistent with findings of Beuchamp and Bray (2001), Eys and Bradway (2003) and Eys and Corron (2001). Since, the role ambiguity is defined as lack of clarity, imperfect information about concerning expectations with success and person stance, we can say that role ambiguity can affect performance negatively. This subject has been shown in past studies of Beuchamp and Bray (2001), Eys and Bradway (2003) and Eys and Corron (2001) and they have pointed on nefgative relation of role ambiguity and athletic performance. The relation of role ambiguity with hardiness proved to be negative and meaningful. In other words, in athletes with high role ambiguity hardiness seems to be lower than others.

The other hypothesis of survey was the positive relation of hardiness and performance of athletes. The results proved the positive and meaningful correlation of hardiness and performance and the results are consistent with studies of Gould *et al.* (2002), Jones *et al.* (2002), Golby and Sheard (2004) and Hanton *et al.* (2003). We can say that personality features and psychological variables like physical features have prominent role in athlete's success in equal case of physical features and all individuals want to win. The people with better mental and psychological control make success. Although, this factor can't compensate for lack of skill but in a tough competition, it can be determiner of loser or winner.

The other finding was that in terms of role ambiguity there is meaningful difference between elite and non-elite football players. That is, the mean of this variable in elite players is lower than the non-elite players. Considering the fact that none of the researchers have pointed to this important factor, we can attribute this to the fact that

persistent sport activity and being with each other in a group makes individuals internalize their major role in group and do this role in a way that the other players know that he is playing in that post. It leads to decrease of role ambiguity and increase of awareness about their role.

Results show that among elite and non-elite players, the team cohesion is meaningful different. It means that the mean score of this variable is higher in elite players, comparing with non-elites. This result is consistent with studies of Gill (1977), Carron (1982), Martens and Peterson (1971), Bakeman and Helmriech (1977) and Williams and Hacker (1982). Similar results demonstrated that performance or win and loss percent in intra-school games has a great impact on the next games cohesion. In general, we say this game influences the next cohesion (Ruder and Gill, 1982) and observed changes and cohesion gets linked with next game in some way.

Another finding of the study showed the meaningful difference of athletic performance among elite and non-elite athletes. It means that the average score of elite players in athletic performance is higher that non-elites. To justify this fact, one can say that as wining rate goes up, athletic performance goes up too. In champion players, performance will be higher, because winnings of a team will be part of that team's performance.

Another hypothesis was that between two groups of elite and non-elite players, there is difference in terms of hardiness. Results showed the meaningful difference in mean score of hardiness in two groups of elite and non-elite athletes. In other words, hardiness is higher in elite players. We can say that due to high amount o adoptive learning of hardy players, these athletes show higher degree of resistance and diligence to reach goal (like championship).

CONCLUSION

Results showed meaningful difference of team cohesion in 3 groups of defense, halfback and attackers, and this cohesion is lower in goal keepers. To clarify this paper, one can say that team cohesion in football depends on coordination of each one of the players and knowing their own roles. And in case that the players have cooperation, team cohesion will increase. Since, goal keepers in addition to coordination with other players should prohibit goal scoring of the rivals, this fact causes decrease of their coordination and team cohesion in comparison to other players.

Results show meaningful difference of role ambiguity in defense, halfback and attackers post. That is, role ambiguity of defense and attacker post has been higher than other players. Since, no research has been pointed to this or in other words, no better interpretation of this varied post has been offered to compare them, we can say that mistake and laxation of halfbacks have fewer roles in defeat of the team. For instance, just a small mistake of goalkeeper pave the way for rival teams goal scoring, or mistakes of attacker hinders making goal. These factors cause less stress in halfbacks. Since, the past studies evaluations shows positive relation of stress and pressure with role ambiguity, this factor has led to lesser role ambiguity of halfback players.

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