PREDICTIVE POWER OF GROUP COHESION AND PERCEIVED MOTIVATIONAL CLIMATE FOR COLLECTIVE EFFICACY PERCEPTION IN THE FOOTBALL TEAMS

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Abstract
The main purpose of this study is to determine the predictive power of group cohesion and perceived motivational climate for collective efficacy perception in the football teams. This study was performed on 156 players including fifty-nine women and ninety-seven men. Collective Efficacy Scale, The Group Environment Questionnaire and Perceived Motivational Climate Scale in Sports were applied to the participants. Descriptive statistics, Pearson Moments Multiplication Correlation Analysis and Multiple Linear Regression Analysis technique were used in the analysis of the obtained data. The results show that collective efficacy scores have a positive correlation with all subscales of group cohesion and with mastery-oriented motivational climate. The results of the Multiple Linear Regression Analysis indicated that the group's individual attractiveness-task dimension and mastery-oriented motivational climate dimensions are significant predictors of collective efficacy and 23% of the total variance of the collective efficacy score. Findings in the research partially support the hypothesis that task cohesion and mastery-oriented motivational climate are positively associated with collective efficacy.

Key Words: *Collective efficacy, group cohesion, perceived motivational climate*

INTRODUCTION

Efficacy perception is one of the issues that draw attention to the motivation and performance levels of sports teams in sports. According to Bandura's (1997) social cognitive theory, both self-efficacy and collective efficacy perceptions are directly related to performance and success in team sports [1]. Efficacy perception is generally defined as beliefs that individuals can perform the actions necessary to cope with possible situations. Efficacy perceptions are considered as two different structures as self-efficacy and collective efficacy. Self-efficacy is defined as the perception of the individual's ability to perform a particular job. Collective efficacy is defined as the perception of the group of a member being able to perform a certain job and task [2,3]. Bandura reported that the collective efficacy perception can be thought of as an extension of the concept of self-efficacy. Whereas the sense of collective efficacy differs from the sum of the self-efficacy perceptions of each group member. Zaccora et al. (1995), collective efficacy shows how a team works together as a whole and how much each group member believes in success. In addition, if people are working in teams, there are both self-efficacy perceptions of their own abilities and collective perceptions of the team's capacity [4].

Individuals' perceptions of collective efficacy regarding their teams are thought to influence the preferences they will make for the team, the effort they will make, and the ambition they will have for failure [1]. Recent studies on collective efficacy in sport teams focus more on the relationship between collective efficacy and performance. The studies revealed that there is a positive relationship between collective efficacy perception and performance [5-9].

The perception of collective efficacy has several sources. It is thought that this greatly influences the performance of sports teams. It is also predicted that the sources contributing to the formation of the self-efficacy perception are effective in the formation of the collective competence perception. Bandura suggested that previous performance successes, others' experiences, verbal suggestions and physiological stimuli contributed to the formation of self-efficacy beliefs. In addition, Bandura suggests that it is important for the formation of collective competence [2-3]. However, some researchers have stated that in addition to these sources suggested by Bandura, leadership behaviors, group size and group cohesion factors and the motivational climate factor created by the leader are important for the formation of collective competence perceptions [4,10].

It is considered that the concept of group cohesion, which is expressed as one of the sources of collective sufficiency, is very effective on group performance. Cohesion is defined as a dynamic process that aligns with group goals, meets the emotional needs of the group members, and reflects the tendency to keep the group together [11]. Carron, Widmayer, Brawley (1985) and Carron et al. (1998) developed a conceptual model for identifying and measuring group cohesion [11, 12]. In this model, cohesion is considered as a

concept at both individual and group level. In the case of individual-group distinction, cohesion is mentioned in terms of two basic dimensions, both attractiveness to individual group and group cohesion. While group cohesion describes each group member's beliefs about their own teams as a whole, the individual attractiveness of the group tells which features of each group member are affected and continues to be influenced by the group. The researchers also pointed out that these two dimensions are two aspects, one being task and the other being social. While the task dimension sets out motivations for the common goals of the group of individuals, the social dimension points to the motives for the members to develop protect and participate in group activities within the group. In other words, the members develop beliefs about the extent to which the group integrates in order to perform their task, while at the same time developing beliefs about how the social relations integrate. Thus, four different dimensions of group cohesion arise. These dimensions are described as individual attractiveness of the group - task, individual attractiveness of the group - social, group cohesion - task, group cohesion – social.

Studies conducted to examine the relationship between group cohesion and collective efficacy perceptions revealed a positive relationship between collective efficacy and group cohesion [13-15]. For example, Spink (1990) found that there is a positive relationship between group cohesion and collective efficacy perceptions in elite teams when working on elite and non-elite volleyball teams [16]. It has been shown that in the elite volleyball teams the group's individual attractiveness-task dimension and collective competences of group integrity-social dimensions are important without distinguishing between teams having high and low collective efficacy. Similarly, Paskevich et al. (1999) reported that in the study they performed, there was a positive relationship between the task cohesion dimensions of group cohesion and efficacy perceptions of the athletes' own teams [15]. Similar results were obtained in a study performed by Kozub and McDonnell (2000) with 7 rugby teams. In the study, it was found that group cohesion dimensions accounted for 32% of the total variance for collective efficacy, as well as a stronger predictor of collective efficacy than the social dimensions of total cohesion dimensions [14].

It is assumed that motivational climate is another source of collective efficacy perceptions. According to Magyar et al., whether or not the team situation is focused on mastery or performance can affect the confidence of the team as a whole [10]. The motivational climate expresses how athlete perceive the situational goals created by important people like the coach and the family, and they are divided into ego-content and task content [17]. Unlike Duda and Whitehead (1998), Ames et al. stated that motivational climate can be defined in two different ways as mastery (task oriented climate) and performance (ego oriented climate) directed motivational climate [18,19]. Ego oriented motivational climate refers to competition among individuals, general evaluation, social comparison, and competitive social change, while mastery oriented motivational climate effort, individual development, the contribution of each group member to the effort demonstrated by the team, and the task of members to support each other in learning and development.

Research conducted to examine the relationship between collective efficacy and motivational climate has produced different results. For example, Magyar et al. (2004) found that there is a relationship between motivational climate and collective efficacy in their work, and that the mastery-oriented motivational climate dimension is a positive predictor of collective efficacy and the performance-oriented climate dimension is a negative predictor of efficacy [10]. Similarly, Balaguer et al. (2002) found that there is a positive relationship between perceived scores of mastery-oriented motivational climate dimension and perceptions of the enjoyment of the athletes from the game of the athletes and that the teams of the athletes are developing in technical, tactical and physical sense [20]. Similar results were obtained in Heuze et al. (2006) was conducted in an effort to determine the relationship between motivational climate, group cohesion and collective efficacy [10].

In the light of previous studies, the main purpose of this study is to determine the collective efficacy, group cohesion and motivational climate dimensions in football teams. It is also aimed to investigate the relationship between collective efficacy perception and group cohesion and motivational climate created by coach in this research. In this context, it is important to note that the relative dimensions of cohesion and the mastery-oriented climate dimensions created by the coach are positive predictors of collective efficacy, as well as the positive aspects of integrality's task dimensions and mastery-oriented instinctual climate and collective efficacy, social dimensions of collectivity and performance- negative relationship is also expected between proficiency perception.

MATERIAL AND METHOD

Research model: This study is a descriptive study in a correlational survey design aiming to reveal the relationship between perceived motivational climate, group cohesion and collective efficacy in football teams. The correlational survey design is a research model aiming to determine the relationship and the power of the correlation between two or more variables [33].

Participants: This study is performed on 156 university students in which 59 female (age=20.86±1.89) and 97 male (age = 23.19±2.34) participated the Super League Competitions among university teams.

Measuring instruments: In the study, the Collective Efficacy Scale was used to measure the beliefs of footballers' capacities, the The Group Environment Questionnaire to measure group thoughts and group cohesiveness, and the Perceived Motivational Climate Scale in Sports to measure motivational climate scores created by coaches. The Collective Efficacy Scale was developed by Riggs, Warka, Babasa, Betancourt and Hooker (1994) with the aim of measuring the belief in the capacity of the group to which the individual belongs. The scale is a 5-point Likert type measuring instrument consisting of a total of 7 items with a gradation ranging from "I strongly disagree = 1" to "I strongly agree = 5"[21]. The adaptation of the scale for Turkish athletes was carried out by Öcal (2002) and the sum of the numerical values marked for the items gives the collective efficacy score [22]. The increase in total score shows a high sense of collective efficacy. The internal consistency values calculated with Cronbach Alpha of the Turkish form of the scale were calculated as .70 [22]. As a result of the reliability analysis conducted within the scope of this study, the internal consistency coefficient of the Collective Proficiency Scale was calculated as .76.

In the study, " The Group Environment Questionnaire" developed by Widmeyer et al. (1985) [23] and adapted for Turkish population by Morallı (1994) has been used. The individual attractiveness-task (ATG-T), the individual attractiveness-social (ATG-S), group integrity-task (GI-T) and group integrity-social (GI-S) sub-dimension. The scale is in the 9-point Likert type, which ranges from "I strongly agree" to "I absolutely disagree"[24]. The reliability analysis results of this study showed that the internal consistency coefficients of the inventory were .69 for the individual attractiveness-task subscale, .51 for the individual attractiveness-social group, .67 for the group integrity-task, and .59 for the group integrity-social.

Another scale used in our study was "Perceived Motivational Climate Scale in Sports", which was developed by Walling et al. (1993) [25] and adapted for Turkish population by Toros (2001). The scale consists of two sub-dimensions including a mastery-oriented and performance-oriented motivational climate and a total of 21 items. The coefficients of internal consistency calculated by Toros for the scale were calculated as .84 for the mastery-oriented motivational climate subscale and .84 for the performance-oriented motivational climate subscale [26]. The reliability analysis results of this research show that the internal consistency coefficient of the mastery-oriented motive subscale is .78, and the internal consistency coefficient of the performance-oriented motive subscale is .75.

Analysis of data: Descriptive statistical values related to the scores of the university footballers used from the scale and sub-scales used in the study were calculated and the correlations between the scales were calculated by calculating the Pearson Moments Multiplication Correlation. If the group cohesion and motivational climate scores of football players are the power to perceive the adequacy of teams, it is calculated by Multiple Linear Regression Analysis.

RESULTS

Descriptive statistics of motivational climate, cohesion and collective efficacy are shown in Table 1.

Table 1: The mean, standard deviation, minimum and maximum values of the scores that football players get from scales and subscales

Scale and Subscales	N	Min.	Max.	$\overline{X}$	S.D.
GI-T	156	7,00	45,00	33,38	8,40
GI-S	156	6,00	36,00	24,66	6,59
ATG- T	156	4,00	36,00	26,46	7,87
ATG- S	156	7,00	45,00	33,25	8,09
Collective efficacy	156	11,00	35,00	27,54	4,68
Mastery-oriented climate	156	11,00	45,00	33,55	6,04
Performance-oriented climate	156	16,00	55,00	36,16	7,97

(GI-T: Group Integration-Task; GI-S: Group Integration-Social; ATG-T: Individual Attraction to Group- Task; ATG-S: Individual Attraction to Group)

Correlations between collective efficacy with cohesion and motivational climate were presented in Table 2. As seen Table 2, collective efficacy has positive correlation between all subscales of cohesion and mastery oriented motivational climate but has no correlation with performance-oriented motivational climate. The relationships between the task measures of cohesion and efficacy were stronger than the relationships between the social measures of cohesion and collective efficacy.

Table 2: The relationship between the scores of footballers' collective efficacy scale and the subscales of the Group Cohesion subscales and the Perceived Motivational Climate Scale subscales

	Collective Efficacy	GI-T	GI-S	ATG-T	ATG-S	Mastery Climate	Performance Climate
Collective Efficacy							
GI-T	.286**						
GI-S	.247**	.543**					
ATG- T	.376**	.528**	.517**				
ATG- S	.285**	.559**	.501**	.591**			
Mastery Climate	.383**	.392**	.173**	.302**	.259**		
Performance Climate	.-149	-329**	-.350**	-.283**	-.282**	-.068	

(GI-T: Group Integration-Task; GI-S: Group Integration-Social; ATG-T: Individual Attraction to Group- Task; ATG-S: Individual Attraction to Group)

Also, results of multiple linear regression analysis were presented in Table 3. As seen in Table 3, individual attraction to the group- task and mastery-oriented climate are the positive predictor of collective efficacy in football teams. Individual attraction to the group- task and mastery-oriented climate subscales accounted for %22.8 of variance in collective efficacy (F=7,351, p <.000). Inspection of the standardized regression coefficients revealed that mastery-oriented climate (β=31) was a slightly better predictor of collective efficacy than ATG-Task (β=.23). The results showed that football players , who perceived higher levels of mastery-oriented motivational climate and higher level of individual attraction to the group, also tended to report higher collective efficacy judgments.

Table 3: Results of multiple regression analysis related to collective efficacy prediction

Predictor variables	**B**	**S.E.**	**β**	**t**	**p**
GI-T	-.031	.056	-.056	-.556	.579
GI-S	.041	.067	.058	.620	.536
ATG- T	.142	.058	.238	.2.450	.015
ATG- S	.032	.056	.055	.566	.572
Mastery Climate	.237	.062	.306	.3855	.000
Performance Climate	.026	.046	-.044	-.555	.580
R= .478 R^2=.228		Durbin Watson=1.73			
F=7.351 p=.000					

(GI-T: Group Integration-Task; GI-S: Group Integration-Social; ATG-T: Individual Attraction to Group- Task; ATG-S: Individual Attraction to Group)

Table 3 shows that the mastery-oriented climate subscales of the group perceived instinctual climate scale perceived by the individual attractiveness-task sub-dimension of the group integrity scale included in the analysis as predictive variables positively predict perceived collective efficacy scores for teams of athletes (R = .478, R2 = .228; F = 7.351, p = .000). These findings show that the individual attractiveness to the group -task subdivision and the mastery-oriented motivational climate dimensions together account for 22.8% of the variance for the scores from the collective efficacy scale. According to the t-test results of the

predictor variables, it is seen that the mastery-oriented motivational climate dimension (β = .306) is the most important predictor of collective efficacy, followed by the individual attractiveness-task dimension (β = .238). However, it is seen that the collective efficacy ratios of the other predictive variables did not reach statistical significance level on their own (p> 0.05).

DISCUSSION

The main purpose of this study is to determine whether group cohesion and perceived motivational climate predict the perceptions of the efficacy of teams of football players. The results of multiple linear regression analysis made for this purpose show that the individual attractiveness-task sub-dimension of integrality and the mastery-oriented motivational climate sub-dimensions together predict positively the perceived collective efficacy scores of football players. The results revealed that 22.8% of the variance was explained by individual attractiveness- task sub-dimension and mastery-oriented motivational climate.

In the study, it was concluded that the most important predictors of collective efficacy were the mastery-oriented motivational climate and the individual attractiveness-task sub-dimension of the group cohesion. These findings could be interpreted as the athletes who have high scores at the individual attractiveness-task sub-dimension and mastery-oriented motivational climate perceives their teams and teammates more successfully and sufficiently. In other words, those who believe that teams are composed of sportsmen, who are attracted to group tasks and struggling for group efficiency,and who are integrated at the same time in terms of group goals and objectives, and coaches should emphasize teamwork, skillfulness and effort in the team and each team member has important roles And that the athletes who believed it was a collective enough team. The research also found that the relationship between collective efficacy and group cohesion and perceived motivational climate scales was positively correlated with collective appropriateness of all subscales of group completeness and mastery-induced motivational climate subscale, but not with a performance-driven motivational climate subscale. This finding indicates that teams of football players who perceive their teams as both a task and a social whole and who believe that their coaches emphasize the workmanship-oriented working environment are perceived as more adequate.

The findings of the study show that the positive correlation between the collective efficacy score of the football players and all sub-dimensions of group cohesion supports a great deal of previous research findings [14-16, 22, 27]. For example, Spink (1990) found that both tasks and social cohesion of teams with high collective competencies were high in their work with volleyball players [16], while Paskevich et al. (1999) found positive correlations between task cohesion and collective efficacy perception [15]. Marcus et al. (2010) investigated the relationship between group cohesion, self-efficacy, collective efficacy and perceptions of coach athletes' competencies in their recent work, and found a positive and significant relationship between group cohesion and other variables [28]. In the study conducted by Kozub and McDonell (2000), it was found that the dimensions of task cohesion are more positive predictors of collective efficacy than of social cohesion [14].

The findings of the research reveal that task dimensions of group cohesion are more relevant to collective efficacy than social dimensions of group cohesion and also individual attractiveness of group of group unity is one of the important predictors of collective efficacy and that the dimensions of task cohesion are more related with collective efficacy scores than group's social cohesion [14,15,27]. It is also important to support previous research findings that have stronger association. For example, Paskevich et al. (1999) found that there was a positive and high correlation between the dimension of cohesiveness in relation to the work carried out with college volleyball players and the collective efficacy perception of the members of the teams [15]. Similarly, Kozub & Mc Donnell (2000) found that task dimensions of cohesion positively predicted collective efficacy in their rugby team work, and that individual attractiveness of the group- task dimensions was stronger predictor than other task dimensions [14]. This result, which is parallel to previous research, supports Carron and Brawley's (1998) view that all of the group integrity sub-

dimensions do not have equivalent effect on the group's development and effectiveness. According to Carron and Brawley (1998), in the early stages of group formation, it is believed that team member focus on group task rather than social interaction would be more beneficial for team productivity. According to them, ensuring social cohesion is more effective after task integrity is achieved within the team. Hence, it is expected in this research that the individual attractiveness-task dimension is an important predictor of collective efficacy [29].

In the study, it was found that the mastery-oriented motivational climate created by the coach is the most important predictor of collective efficacy. This finding suggests that athletes who believes their coaches are more likely to cooperate with team members and that each team members are more important for the team, that each team member has a significant role in the team, and they support the previous research findings to a large extent [13,25,30]. For example, Heuze et al. (2006) found that mastery-oriented motivational climate predominates on group integrality-task and collective efficacy in a positive way, while performance-oriented motivational climate is a negative predictor of individual attractiveness-social, group integrity-social and group integrity-task dimensions [13].

According to many researchers, team strength and performance levels are due to the beliefs of team members on their abilities, that is, their collective efficacy. The collective efficacy-related perceptions of team members 'perceptions of team efficacy are related to team performance [6,21], perceived success of team members and causal attributions [31], perceptions of members' and expectations [22] and the targets they set for their teams [32]. Thus, in the light of previous research findings, athletes who believe that their team's efficacy are higher should set higher goals for themselves and their teams, more motivated to achieve these goals, more success expectancy, more perseverance in case of possible failure, and in the event of failure, they may be expected to make self-protective causal loads and to have more relative loyalty.

CONCLUSION

It can be said that one of the ways of increasing the collective efficacy perceptions in the team in the direction of the findings in the research is to create a team environment in which the mastery-oriented motive climate prevails and the other to make the group tasks attractive to the athletes in the team. Therefore, the coaches are not only able to compete with each other, to be superior to others, to learn new skills from behaviors such as being the best in the team, to master a skill, to make individual efforts to fulfill the goals of the group and to be in solidarity and cooperation with other team members and promoting the collective efficacy perception s of footballers by promoting group-relative integrity of the group.

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