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ABSTRACT
RAMZANINEZHAD, R.; KESHTAN, M. H.; SHAHAMAT, M. D.; KORDSHOOLI, S. S. The relationship between collective efficacy, group cohesion and team performance in professional volleyball teams. Brazilian Journal Biomotricity, v. 3, n. 1, p. 31-39, 2009. The purpose of this study was to examining the relationship between collective efficacy, cohesion and team performance in Iran volleyball clubs professional league (2008). Athletes (N=153) from 13 volleyball teams completed collective efficacy questionnaire (CEQ) and the group environment questionnaire (GEQ). Both questionnaires were administered in second half-season. Results revealed that task cohesion positively and significantly correlated to collective efficacy and the social dimension of cohesion did not significantly correlated to collective efficacy. Therefore, athletes who perceived their teams as high in task cohesion tended to rate their teams higher in collective efficacy. In whole, significant and positive relationship was found between collective efficacy and group cohesion (r=0.57). Comparison of collective efficacy and group cohesion levels of successful, less successful and unsuccessful teams demonstrated a positive relationship between cohesion and collective efficacy with team performance. Overall, the findings support the significant relationship between group cohesion and collective efficacy, and highlight the interdependence in team sports, which can significantly affect the need for group cohesion and collective efficacy that contribute to team performance.

Key words: Collective Efficacy, Group Cohesion, and Team Performance
INTRODUCTION

The field of sport psychology has generally focused on investigating and enhancing individual motivation and performance in sport, though most sport activities occur in group setting (GEORGE & FELTZ, 1995). However, the team’s performance didn’t appear to be simply the sum of individual efforts, but it’s a more complex interaction of interpersonal and situational factors. Therefore, sport psychologists could not ignore the fact that psychosocial factors would influence group’s performance. In recent years, some researches had even examined the effect of psychosocial factors on team’s performance. Recent studies in the domain of sport psychology, acknowledge the importance of collective efficacy and cohesion to ensure successful collective outcomes (e.g., CARRON et al., 2002; HEUZE et al., 2006; MYERS et al., 2004). Bandura (1986) proposed collective efficacy as an extension of self-efficacy and suggested that collective efficacy is more than just the sum of individual efficacy levels within the group. Collective efficacy involves the individuals’ perceptions regarding the group’s performance capabilities. Collective efficacy beliefs are substantial implications for group effort and performance, especially for tasks requiring interaction among group members for success (BANDURA, 1990). Consequently, it is an important component for team sports because it can influence a team’s collective effort, their persistence in tough situations or defeat, and is a characteristic often observed in successful teams (BANDURA, 1997). Some psychologists have consistently demonstrated that collective efficacy has positive effects on sport performance (e.g., FELTZ & LIRGG, 1998; GREENLEES et al., 1999; HODGES & CARRON, 1992; WATSON et al., 2001). The key aspects comprising collective efficacy are shared beliefs among the team, coordinative capabilities between members, collective resources for task success, and situational specificity of demands (ZACCARO et al., 1995). For collective efficacy to be present within a team, these key elements should be prevalent. If collective or team efficacy is a significant component of group performance and behavior, then the antecedents or correlates of collective efficacy are important to identify. Based on the research and theory concerning antecedents of self-efficacy (BANDURA, 1997), it has been hypothesized (see for example FELTZ & LIRGG, 2002) that the same six sources of self-efficacy may serve as antecedents or sources of collective efficacy. These six sources are: prior performance, vicarious experiences, verbal persuasion, group size, leadership behaviors, and group cohesion. The sixth and last identified antecedent of collective efficacy is group cohesion. Group cohesion is the dynamic process that is found in a group’s tendency to stick together and its resistance to disruptive forces (RONAYNE, 2004). Thus, as the bond and unity among team members increases, so likely would their shared belief in the team’s competence. The relationship between group cohesion and collective efficacy is viewed as reciprocal in that group cohesion is also seen as a consequence of collective efficacy (ZACCARO et al., 1995). Specifically, it is believed that if a group has a shared belief about its competence, then its attraction to the group (cohesion) would also increase. Furthermore, as perceptions of collective efficacy increase, the cohesiveness of the group is also seen to increase. Based on the previous conceptualizations, some social psychologists described cohesion as an antecedent of collective efficacy (BANDURA, 1997), whereas others considered it both an antecedent and a consequence of collective efficacy (ZACCARO et al., 1995). As an antecedent, certain positive changes associated with cohesion (i.e., greater acceptance of group norms, assigned roles, and performance standards, stronger resistance to disruption) should enhance the performance capabilities of the group and promote a higher level of collective efficacy (BANDURA, 1997; ZACCARO et al., 1995). As a consequence, stronger perceptions of collective efficacy should increase the desirability of the group and therefore group cohesion (ZACCARO et al., 1995).
Following these suggestions, some studies have examined the relationship between these two constructs in the group sports. Paskevich et al. (1999) investigated the cohesion–collective efficacy relationship in university and club volleyball teams. Results showed the positive relationships between task cohesion and collective efficacy. The positive relationship between task cohesion and collective efficacy was also supported by another study involving rugby-union teams. Kozub & McDonnell (2000) found that task cohesion positively associated to collective efficacy. They also noted that social dimension of cohesion did not add significantly associated to collective efficacy. Finally, a slightly different pattern of results was noted in two recent studies. In line with Kozub and McDonnell’s (2000) results, Heuze et al. (2006) found athletes’ perceptions of task cohesion were positively related with their perceptions of collective efficacy, although another positive relationship was found between social dimension of cohesion and collective efficacy. Ronayne (2004) also found a significant relationship between two dimensions of group cohesion (task and social cohesion) and collective efficacy at the early season and especially at the late season measurement.

Collective Efficacy, Cohesion and Performance

Empirical research indicated that higher in group cohesion was associated with successful sport performance had been shown to be related in a number of sports including basketball (CARRON et al., 2002), soccer (MURRAY, 2006), and baseball (BOONE et al., 1997). Gardner et al. (1996) showed that group cohesion is hypothesized to positively influence performance and success. Carron et al. (2002) demonstrated a strong positive relationship between cohesion and team success. The results showed that there were no differences between the cohesion-to-success and the success-to-cohesion relationship. Grieve (2000) found that performance has more impact on cohesion than cohesion has on performance. Also, Fox (1984) found no significant relationship between cohesion and success, and he shown that there is a conflicting relationship between cohesion and success, and that both positive and negative relationship have found. In other hand, pervious studies indicated that collective efficacy could influence the team performance. Hodges and Carrons’ (1992) research indicated that, following failure, groups high in collective efficacy increased their efforts and performance; whereas groups low in collective efficacy showed deterioration in performance. Lirgg et al. (1994) and Swain (1996) investigated the relationship between collective efficacy and performance, and found that collective efficacy was positively correlated with group performance. Similarly, Spink's (1990) study of elite volleyball teams demonstrated that high efficacy teams performed significantly better in a competitive tournament than did teams with low levels of collective efficacy. Therefore, within the area of team sport, both collective efficacy and group cohesion would appear to share some commonality in influencing sport performance on numerous occasions in the past. This study attempt to investigate relationship between Collective Efficacy and Group Cohesion in the performance of super league teams since there was any study on the Volleyball teams in this country. Therefore, the purpose of this study was to examining the relationship between collective efficacy and group cohesion in professional volleyball teams. Also, we are going to examine the effect of collective efficacy and group cohesion on team performance.

METHOD

- Participants

Thirteen teams comprised of 153 volleyball team members (Male) in Iran professional league, ranging 19 to 31 participated as subjects (M=24.9). For evaluation of team
performance, the league schedule’s in end of season was divided to three parts. The first four teams were considered as successful teams, next five ones were considered as less successful teams, and last four teams were considered as unsuccessful teams.

- Measures

Two instruments were used in the study: Collective Efficacy Questionnaire (CEQ, FELTZ & LIRGG, 1998) and the Group Environment Questionnaire (GEQ, Carron et al., 1985).

Athletes’ assessment of their team’s collective efficacy was measured using the CEQ developed by Feltz and Lirgg (1998). The survey is designed to measure the athletes’ perception of their team’s abilities to organize and perform to their desired level. The different team aspects are preceded by the phrase, “Rate your team’s confidence in that your team has the ability to...” and then followed by different items, such as, “outplay the opposing team,” “keep cool under pressure,” and “work hard as a team.” The CEQ is a 49-item questionnaire which contains 20 actual scale items and 29 filler items. The 20 actual scale items are divided into five subscales: ability, unity, persistence, preparation, and effort. The athletes are asked to rate their confidence on a 10-point Likert scale (0-9). A 9 on the scale represents “extremely confident,” a 4-5 on the scale signifies “moderately confident,” and a 0 on the scale means “not at all confident.”

The GEQ assess the two dimensions of group cohesion- task cohesion and social cohesion. The questionnaire contains 18 items that are scored on a 9-point Likert-type scale ranging from "strongly agree" to "strongly disagree". Each item is either positively stated or negatively stated. The questionnaire has nine items for task cohesion and nine items for social cohesion. The score for each category is calculated by summing the values and dividing by the number items in that category.

Administration of the CEQ and GEQ occurred in second half-season (April 2008). Each gave approval gent on the head coaches’ approval. After practice, the coaches or assistant coach brought the team together and questionnaire was always administered by the researcher. Players first completed the CEQ questionnaire, then the GEQ. The instruments were completed individually and anonymously, and the coaches did not have access to the individual informational received.

RESULTS

- Scale Reliabilities

Previous studies have generally indicated acceptable internal consistency scores for CEQ and GEQ scales (RONAYNE, 2004). In the present study, Cronbach’s alpha coefficient was utilized to examine the internal reliability of CEQ (r=0.79) and GEQ (r=0.72), indicating high internal consistency.

- Collective Efficacy and Group cohesion

Pearson correlation analysis indicated that the task cohesion was significantly related to collective efficacy. Specifically, those who perceived their teams to be high in collective efficacy also perceived higher levels of task cohesion. In contrast, athletes who perceived their teams to be low in collective efficacy perceived lower levels of task cohesion. Also, social dimension of cohesion did not significantly relate to collective efficacy. In hole, significant and positive relationship was found between collective efficacy and group cohesion (see Table 1).
**Table 1 - Relationship between collective efficacy and group cohesion**

<table>
<thead>
<tr>
<th>Collective Efficacy</th>
<th>Task Cohesion</th>
<th>Social Cohesion</th>
<th>Group Cohesion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>0.71</td>
<td>0.49</td>
<td>0.57</td>
</tr>
<tr>
<td>Sig</td>
<td>0.05*</td>
<td>0.19</td>
<td>0.05*</td>
</tr>
</tbody>
</table>

- Collective Efficacy, Cohesion and Performance

ANOVA with repeated measures and Tukey's post hoc test was used to comparison group cohesion levels of successful, less successful and unsuccessful teams. The findings demonstrated that successful teams tend to be more cohesive than less successful and unsuccessful teams. There was no significant differences between cohesion level of less successful and unsuccessful teams (see Figure 1).

![Figure 1](image-url)  
**Figure 1 -** Comparison of group cohesion level of successful, less successful and unsuccessful teams

ANOVA and Tukeys’ post hoc comparison revealed that collective efficacy was positively correlated with team performance. Athletes from successful teams rated high in collective efficacy than less successful teams and athletes from less successful teams rated high in collective efficacy than unsuccessful teams (see Figure 2).
DISCUSSION

The main aim of this study was to examine the relationship between cohesion and collective efficacy in elite male volleyball teams. Results partially supported our hypotheses, showing that only one aspect of group cohesion (task cohesion) was correlated to collective efficacy. Elite male volleyball players’ perceptions of collective competence in coordinated group activities increased their feelings about their personal and group involvement with their team’s task and objectives. Understanding why in this study, task dimension of cohesion associated to collective efficacy, whereas Zaccaro et al. (1995) suggested that collective efficacy might be a predictor of task cohesion. Also Paskevich et al. (1999); Kozub & McDonnell (2000); and Heuzé et al. (2006) found that task cohesion positively correlated with collective efficacy. They also noted that the social dimension of cohesion did not add significantly related to collective efficacy. According to these authors and our findings, shared belief in the team’s competence might influence athlete’s perceptions about the personal motivations-toward task concerns- acting to attract and to retain them in their team (CARRON & BRAWLEY, 2000). Indeed, our findings supported relationship between group cohesion (total cohesion- task and social cohesion) with collective efficacy (r=0.57), that consistent with Zaccaro et al. (1995) and Ronayne (2004). It can conclude that athlete’s perception about group performance capabilities affected their feeling about bonding, closeness and tendency to stick together, and similarity within the team as a whole around the group’s task.

The next hypothesis supported the notion that there are significant differences between cohesion levels of successful, less successful and unsuccessful teams and demonstrated that successful teams tend to be more cohesive than less successful and unsuccessful teams. For most team sport, primary reason for sticking together is to increase the potential for obtaining success. Especially volleyball is a sport that takes more coordination and corporation, team performance is related to level of and changes in both task and social cohesion. Many researchers believe there is strong relationship between cohesion and team performance. Our findings especially agree with Range (2002), Carron et al. (2002), Hung (2004), and Murray (2006) found that highly cohesive teams were more successful than teams with lower levels of cohesion. On the other hand, in present study,

Figure 2 - Comparison of collective efficacy level of successful, less successful and unsuccessful teams
no significant difference was found between cohesion level of less successful and unsuccessful teams. Perhaps the poor results of less successful teams that accrued in end of season (the three last week), influence cohesion levels of these teams. With this regard Boone et al. (1997) showed that win/loss records have more effect on group cohesion. Grieve (2000) also found that success has more impact on cohesion than cohesion on success. However, it can be concluded that group cohesion is a necessary (not sufficient) factor for high team performance and success.

The final hypothesis supported the notion that collective efficacy affects team performance in a positive manner, as predicted. Results of this study showed that Athletes from successful teams rated high in collective efficacy than less successful teams and athletes from less successful teams rated high in collective efficacy than unsuccessful teams. With this regard Spink (1990); Lirgg et al. (1994); and Swain (1996) found that collective efficacy was positively correlated with group performance. They reported that high efficacy teams performed significantly better in competition than did teams with low levels of collective efficacy. Logically, according to past researches, it seems collective efficacy to be acceptable predictor of team performance. For one, more highly skilled athletes may have higher efficacy beliefs based on day to day experience. This may have also been reflected in the positive association between collective efficacy and team performance. Additionally, athletes from higher efficacy teams may demonstrate more confident behaviors on the court, influencing team performance and success. Therefore, within the area of team sport, both collective efficacy and group cohesion would appear to share some commonality in influencing team performance. In summary, these results support following items: (a) Positive relationship are between collective efficacy and group cohesion. (b) Both collective efficacy and group cohesion influencing team performance.

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