

*Field* : Sport Psychology

*Type* : Research Article

*Received*: 12.02.2017 – *Corrected*: 09.03.2017 – *Accepted*: 22.03.2017

## **Exploring the Relationship between Cohesion and Collective Efficacy in Tunisian Sports Teams: Validation of the Tunisian Version of the Collective Efficacy Questionnaire for Collective Sports**

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### **Abstract**

This project seeks to examine the relationship between cohesion and collective efficacy in Tunisian sport's team. A total of 463 athletes (313 males, M age= 17,3, SD = 2.09 and 150 females, M age = 19.15, SD = 3.32) were recruited from 18 Tunisian amateur sport team. This sample complete the Tunisian version of GAG (group environment questionnaire, Heuzé et Fontayne, 2002) and a collective efficacy measure validate for this study which is the second objective of this research: the validity of a Tunisian (classical Arabic) translation of the Collective Efficacy Questionnaire in Sports (CEQS). Confirmatory factor, internal consistency and correlation analysis among subscales were performed. The statistical analyses undertaken provide the psychometric character of the Tunisian CEQS ( $\alpha = 0.92$ ). This study also revealed a positive and significantly relationship between the dimensions of cohesion and collective efficacy. However, subsequent multiple regression analyses indicated that collective efficacy is more related to task cohesion than social cohesion. More than, Tunisian Players who perceived a higher level of task cohesion also tended to report higher collective efficacy judgments.

**Keywords:** Collective efficacy, measurement, cohesion, sports team

## Introduction

Given the importance to the collective efficacy in sports teams, numerous study has, recently, attempt to define and estimate this construct. Indeed, Bandura (1997) suggested that collective efficacy refers to the group's shared belief in a conjoint capacity to organize and execute a course of action to achieve a particular level of attainment. Moreover, Zaccaro, Blair et al. (1995) affirms that it is representative of the group's perceived collective competence, specifically their ability to allocate, coordinate and integrate resource(s) to meet specific situational demands. Recently, Short and colleagues (2005) advance that collective efficacy is considerate as a multidimensional construct on team level attribute.

The collective efficacy return to beliefs shared on perceived competences of the group with to coordinate its actions, the availability of the collectives resources and depends on the specificity of situational or behavioural of a task to be achieved by the group. This process of group must be regarded as an emerging product of the collective who results from the interactions and of coordination between the team's members. Bandura (1997) suggested that the collective efficacy has significant implications for sports teams. Indeed, it should affect them collective choices, the persistence of the effort produced by a group and its performance, in particular in sports, which require interactions to succeed a collective task (e.g., basketball, handball). Moreover, Zaccaro and al.(1995) proposed that properties of the group, like cohesion, could contribute to a collective feeling of effectiveness.

A recent definition of cohesion in the sport considers it like "one dynamic process reflected by the trend of the group to remain dependent and to stay plain in the continuation of its instrumental objectives and for satisfaction emotional needs for the member" (Carron, Brawley & Widmeyer, 1998, p.213). Associated with this definition, Carron, Widmeyer and Brawley (1985) proposed a theoretical framework giving an account of multidimensional, dynamic, instrumental nature and emotional of this phenomenon of the group. This model is based on social cognitions of members of a group who relate to cohesion. The conceptual model designed four factors cohesion: individual attractions operational for group(GI-T) the feelings reflect individual of the athletes in connection with their implication in the task of their team, attractions individual social for group(GI-S) the individual opinions of the members translate relative to their social interactions within their group, the operational integration of group(ATG-T) individual perceptions of the athletes indicate on the unit of their team compared to her task sand its objectives, the social inclusion of group (ATG-S) return with individual perceptions of the members of the social unit of their group.

In spite of the suggestions of Bandura (1997), Zaccaro, and al.(1995), only some studies have examined the relations between cohesion and the collective efficacy in the sports context. Spink (1990) has measured cohesion and the collective effectiveness teams of volleyball. Like a measure of the aggregate efficiency, the author required with the athletes to indicate the ranking that they thought that their team was going to win, then of specifying their degree of confidence compared to this objective. Starting from discriminating analyses, Spink showed that, for the elite's teams, the GI-T and the ATG-S differentiated significantly athletes perceiving a high collective effectiveness of those or those regarding a small cumulative efficiency. The athletes who elevated levels of GI-T and ATG-S paid described a high collective effectiveness within their team. More recently, Paskevich and al. (1999) also have worked on male and female teams of volleyball. Resting on a multidimensional measurement of the collective efficacy, the authors found several positive relations between dimensions of the collective effectiveness and of cohesion. However, task cohesion (i.e., GI-T and ATG-T)

appeared more strongly related to the collective efficacy than social orientation (i.e., GI-S and ATG-S). Similar results were got by Kozub and McDonnell(2000) in a study on teams male of Rugby of level amateur and Heuzé et al., (2006, 2007) with basketball and handball teams. The authors also noted that both scales of operational cohesion (i.e., GI-T and ATG-T) predicted the collective effectiveness significantly. The ATG-T contributed more to the prediction of the collective efficacy than GI-T. Bandura (1997) precise that type of collective efficacy measurement (one item or multidimensional) employed in the study could confuse the collective efficacy and expectations of results. Paskevich et al. (1999) and Kozub et McDonnell(2000), Heuzé et al., (2006, 2007) privileged multidimensional measurements of the collective efficacy to privilege a reasonable result.

Therefore, a validate measure of collective efficacy in Tunisian culture is needed that can achieve a different level of relation between cohesion and collective efficacy. In this context, there are many research whose design sport-specific measure of collective efficacy, for example, basketball (Bray & Widmeyer, 2000), bowling (Moritz, 1998), football (Myers, Feltz, & Short, 2004), hockey (Feltz & Lirgg, 1998), rowing (Magyar et al., 2004), rugby (Greenlees, Nunn, Graydon, & Maynard, 1999; Kozub & McDonnell, 2000), and volleyball (Paskevich, Brawley, Dorsch, & Widmeyer, 1999). Despite these various instruments, Short et al., (2005) confirm, "all of these sport-specific measures were appropriate for their research purpose". Contrariwise, the literature in sports domain needs a general measure of collective efficacy that is designed to team functioning across different sports.

According to this opinion, Short, Sullivan and Feltz (2005) developed the Collective Efficacy Questionnaire for Sports (CEQS), which provides a multidimensional research tool to quantify collective efficacy within the interdisciplinary field of the Exercise Sciences. The CEQS estimate the collective efficacy based on the five dimensions of collective efficacy (Bandura, 2001): ability, effort, persistence, preparation, unity. This approach facilitates the estimation of the reliability of the questionnaire, useful measure of collective efficacy and its correlates with another construct of similar group characteristics such as group cohesion. In this regard, the CEQS has successfully been utilised across various team sports.

The lack of validity of the CEQS demonstrated with a sample of college student-athletes in three steps: first, a 42-item questionnaire was developed and tested with 271 college-aged student-athletes. An exploratory factor analysis revealed five common efficacy factors with 27 items retained. In the second steps, the authors use college-aged student-athletes (N = 286) again, to conduct a confirmatory factor analysis (CFA) supported a 5-factor, 20-item measure. The last phase, Short and colleagues establish preliminary support for the CEQS (validity and reliability) obtained by a second CFA and by examining correlations among the CEQS subscales and a measure of team cohesion (Group Environment Questionnaire; Widmeyer, Brawley & Carron, 1985). Like it has been previously mentioned (Short et al., 2005) the main difference between the CEQS and other collective efficacy measures is that the CEQS is tailored to team sports functioning. This fact helps researchers collecting data from various teams and in different sports (Feltz et al., 2008). As evocated by Short et al confirms (2005), the CEQS is well designed for repeated measures and case study designs, which can be efficient within teams or even between different sports. The cultural nuances have also been considered relatively to collective efficacy in Spanish sports team (Martinez et al., 2011) and Flemish culture (Fransen et al., 2014). These authors examine the psychometric propriety of the Spanish CEQS in three steps with a sample of professional, semi-professional and university level athletes: Phase 1 consisted on the translation of the original version (English) into Spanish and Flemish using "parallel back translation". In the second phase, Martinez and colleagues (2011) and (Fransen et al., 2014) examine the factor structure of the questionnaire

with confirmatory factor analysis (CFA). The results confirm the 5-factor internal structure of the CEQS (Effort, Ability, Unity, Perseverance and Preparation), made up of four items each. Authors also found, in a last step, acceptable values of the alpha coefficient, which confirms that the CEQS is a reliable instrument.

Surprisingly, given the number of Arabic speakers across the globe (270 million)<sup>1</sup>, the validation of the CEQS in 'classical' Arabic is not currently evident in the literature. Given that there are distinct cultural differences within and between various Arab League nations the CEQS has not been validated in 'classical' Arabic. In Tunisia, there is a few study of validation for sport's psychology questionnaire. We find validation from French to classic Arabic (group environment questionnaire, Boughattas & Kridis, 2016), or from French to Tunisian Arabic (EEAC, competitive anxiety, Bouthiba et al., 2015). But there no validation, from English to classic Arabic or for collective efficacy instrument.

Considering that the CEQS has been successfully validated in Spanish (Martinez et al., (2011), Flemish Version (Fransen et al., 2014) and other questionnaire have been successfully validated in Tunisia, it may be possible to prove it in classical Arabic. The lack of a validated classic Arabic version of the CEQS is of specific concern within Tunisia where the official language is Arabic. As some Tunisians athletes have not completed their schooling, we wanted to facilitate the communication with the Tunisian Athletes, since using the English language CEQS appears not to be practical. Evidently, validation of the CEQS in classical Arabic would enable to clarify the effect of cultural nuances of collective efficacy across Arabic speaking countries, in order to facilitate critical comparisons to non-Arab team sport collective efficacy.

The main purpose of this study is to examine the relationship between cohesion and collective efficacy in Tunisian sport's team (hypothesis 1: collective efficacy is positively related to cohesion). Then, this research explores the nature of this relationship (hypothesis 2: Collective efficacy is the consequence of cohesion). To answer to this hypothesis, the second objective of this study was fixed: adaptation and validation of an English version of the collective efficacy questionnaire for sport (CEQS) in a Tunisian culture based on the protocol outlined by Vallerant (1986). We suppose (hypothesis 3) that the measure of collective efficacy in Tunisian sports team is a multidimensional framework in accordance with the conceptual model of Short et al., (2005). We also expect that the CEQS, as a general measure of collective efficacy adapting in Tunisian context, present satisfactory psychometric properties.

The experimental aims are: (1) translate the original English language CEQS into classical Arabic; (2) subsequently validate the classical Arabic CEQS for content-, construct- and predictive-validity, and associated reliability; (3) critique the Tunisian's team sport collective efficacy data to existing data from other cultures; (4) examine the relationship between cohesion and collective efficacy)

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<sup>1</sup> *Classification of languages in the world (LJ & A. Calvet, la recherche, April 2009)*

## Materials and Method

### Samples

The participants for this study includes 463 Tunisians athletes aged from 14 to 25ans (M age = 17,1 years, SD=2.8). This population includes 150 girls and 313 boys from 18 teams, and who participate various collective sports (basketball, football, handball, futsal, rugby and volleyball). They had been members of their respective teams from 1 month to 11 years (M= 4,7; SD = 2.9). All participants were still practicing sport since one month to 11 years (m Experience = 6,6 years, SD=3,1).

### Measure

**Collective efficacy:** The Collective Efficacy Questionnaire for Sports (CEQS) (Short et al., 2005) present twenty items: five factors (effort, ability, preparation, persistence and unity) each consisting of four items. The CEQS consists of 11 point scale (0 - 10) beginning with the answer «No confidence at all» to «Absolute confidence». The initial instructions reflect the confidence of the team's capacity when faced with the situation of competing shortly.

**Cohesion:** We also use the Tunisian version of the Questionnaire "l'Ambiance du Groupe" (QAG; Heuzé & Fontayne, 2002, the French version of the group environment questionnaire, Carron and al., 1985). This questionnaire (QAG-T) includes 18 items evaluating four dimensions of cohesion (i.e., individual attractions to the group task (ATG-T, four items); individual attractions to the group-social (ATG-S, five items); group integration-task (GI-T, five items); group integration-social (GI-S, four items). The participants were required to rate their level of agreement on a 9-point Likert-type scale, anchored from strongly disagree (1) to strongly agree (9).

### Procedure

For the validation of the Tunisian version of The CEQS, confirms scientific protocol of validation used in this study was inspired by work of Vallerant (1986) and Romdhane et al., (2008). We develop a preliminary version of classic Arabic expending back-translation technique. We also evaluated the clearness of the items constitutive of this version by the towing process: committee evaluation and pre-test on the target population. Then, we explore a factor analyse, to evaluated validity and rehabilitee of the Tunisian version of CEQS (CEQS-T).

For the main propose for this research (relation between cohesion and collective efficacy), the participants completed the questionnaire containing demographic items, the QAG-T, and the CEQS-T. The researchers administered the questionnaire after ten weeks of the season's beginning. We choose this timing to make sure that players know each other well and interact between them.

### Data analysis

For this study two level of statistic analyse were used: First, factor analyse to examine the validity and rehabilitee of the Tunisian version of CEQS. Second, we use a kit of statistic analyse to inspect the relationship between cohesion and collective efficacy.

In CFA, we suppose that Tunisian CEQS answer's, would be explained by five correlated factor and each item would have a loading superior to 0.33 on the factor it was designed to measure. The rehabilitee's coefficient (Cronbach's alpha coefficients) Cronbach (1951), was calculated from this model. All value superior to 0.7 is considerate a good fit. We compared



the result with the rehabilitee coefficient of the original version (Short et al, 2005) and with the other version validate American (English) Spanish and Flemish.

In a second stage, we examine the adjustment of Tunisian's population data on the theoretical model (Short et al, 2005) to discuss the cultural equivalence of the Tunisian CEQS. Therefore, we use several fit indices used in literature: chi-squared ( $X^2$ ; Joreskop and Sörbom, 1996), The Comparative Fit Index (CFI; Bentler, 1990), the "goodness of fit index" (GFI: JoreskogandSorbm1996), The Tucker Lewis Index (TLI; McDonald and March, 1990) and The Root Mean Square Measure of Approximation (RMSEA; Browne & Cudeck, 1993).

The  $X^2$  indicates the level of correspondence between a proposed factor structure and our data. For the GFI, CFI and TLI, there are no null hypothesis tests, but a commonly accepted empirical rule considerate the model as adequate when its indices are greater than or equal to 0.90. The RMSEA essentially allows for a comparison of the degree of poor fi and the covariance matrixes of the theoretical and empirical model. Values of between .05 and .10 are considered acceptable.

Finally, we examine of the correlation between collective efficacy and cohesion. Two statistics analyse were used : 1- correlation between the five factors of collective effectiveness and cohesion (All correlations should be statistically significant), 2- multiples regression also investigated to precise the direction of the relation between cohesion and collective efficacy.

## Results

### Factor analysis

The factor structure of the 20 items was analysed using a principal-component analysis and oblimin rotation as the approach taken by short and al., (2005). The statistical results revealed five factors whose value is greater than 1, which explains 64.88% of the total variance explained. These factors represent the five dimensions of collective efficacy questionnaire. Moreover, the loading of different items is greater than 0.30, and the correlations between the various items and factors are between 0.72 and 0.83. Detailed results of items' loading are presented in table 1. The correlations between the five factors are all significant and meet the statistical standards required.

In order to evaluate the validity of the theatrical model of Short and al., (2005) in Tunisian culture, we tested a first order model for group efficacy, which suggests a hierarchical organization five latent variables in the same level. A Confirmatory Factor Analysis (CFA) conducted on the 20-item CEQS questionnaire, including the five subscales, for all 463 players, revealed an adequate fit with the data ( $\chi^2(160) = 593, 77 p = .00$ , GFI = .94, TLI = .95, CFI = .94, RMESA = .08). Correlation among the five factors ranged from 0.48 to 0.79, indicate a significate correlation. Table 2 summarizes the fit statistic of factor's model.

**Table 1.** Fit indices of the confirmatory factor model of the CEQS

$X^2$	gl	CFI	GFI	TLI	RMESA
<b>628,31</b>	160	0,94	0,94	0,95	0,08

*Note: CFI: Comparative Fit Index; TLI: Tucker-Lewis Index; RMSEA: Rot-Mean-Square Error of Approximation; GFI: Goodness of Fit Index.*

### Analysis rehabilitee of the CEQS

Following these results, the rehabilitee of the Tunisian CEQS was examined by calculating the alpha coefficient. It ranged from, 81to, 85. All coefficients were superior to 0,70, attesting excellent internal consistency between the different scales of the questionnaire (Nunnally1978). Table contain all estimation of Cronbach's alpha for the total CEQS and for the five subscales. The total alpha score for the Tunisian CEQS was 92 similarly to the value shown in American, Spanish and Flemish version. Considering this result, it appeared that the internal consistency for the scale was verified.

**Table 2.** Reliability estimates for the Tunisian version of CQES

Factors	$\alpha$	$\alpha$ -Short et all (2005)	Spanish version	Flemish version
Hability	.85	.91	.88	.93
Effort	.83	.87	.81	.83
persistance	.82	.85	.80	.83
Unity	.82	.81	.80	.84
Preparation	.81	.87	.82	.84
TOTAL	.92	.96	.94	---

Analyse of the relation between cohesion and collective efficacy:

The purpose of this party was to determine the nature of the relationship between collective efficacy and cohesion in Tunisian sports team. All participant answer the Tunisian version of CQES (collective efficacy questionnaire for sport) and GEG (group environment questionnaire). The result was exposed in tow party: first correlation between cohesion and collective efficacy to determine if there is a relationship. A second level of analysing was undertaken: multilevel regression analyses to classify the direction of the relation between collective efficacy and cohesion (whose is the consequence of the other).

Analysis of the correlations between the CEQS and GEQ subscales:

Hypothesis 1 predicted that collective efficacy would be positively related to team cohesion (task and social). (Paskevich and al., 1999; Zaccaro et and., 1995, Short and al., 2005). This analysis is limited in the literature to the relation between the collective effectiveness and task cohesion. However, this study, we will also be interested in social cohesion in order to look further into the results relating to the Tunisian population. Pearson's bivariate correlation was performed, between each of collective efficacy subscales and the four dimension of cohesion. Hypothesis 1 was supported. Table 2 summarize all bivariate correlation between collective efficacy and cohesion (task and social). For the task cohesion (IAG-T, GI-T), the results suggest that all correlation are positive, strong and significant. Correlations indices are included between 0.30\*\* and 0.94\*\*. It indicated that collective efficacy was positively associated with task-cohesion, in accordance with the results reported in the literature.

For social cohesion, the result shows that all dimension of collective efficacy is also positively correlated to social cohesion (GI-S, ATG-S), non-insignificant correlation were noted. That suppose that relationships between the task measures of cohesion and efficacy were stronger than the relationships between the social measures of cohesion and efficiency. All of the bivariate relationships were positive indicating that higher perceptions of team cohesion were associated with higher levels of perceived collective efficacy.

**Table 3.** Pearson's correlations between the CEQS and task cohesion (QAG)

CEQS	Factor of Task		Dimensions of the GAG-T			
	IAG-T	GI-T	Task cohesion	Factor of Social cohesion	GI-S	ATG-S
Ability	0,35**	0,46**	0,48**	0,466**	0,281**	0,414**
Effort	0,42**	0,45**	0,51**	0,493**	0,647**	0,617**
Persistence	0,65**	0,51**	0,68**	0,211**	0,225**	0,237**
Unity	0,49**	0,94**	0,84**	0,501**	0,462**	0,524**
Preparation	0,30**	0,52**	0,48**	0,268**	0,215**	0,263**

Note: \*\*  $p < .01$ , \*  $p < .05$

Analyse of the regression between cohesion and collective efficacy:

Given the nature of our study's hypotheses, we proceed to regression analyse to classified the direction of the relationship between cohesion and collective efficacy. A set of simple and multiple linear regression analyse was undertaken: four conditions were examined with two separate analyses (cohesion: task and social) as independent variable and five factors of collective efficacy (ability, preparation, effort, unity, persistence) as the dependant variable. Cohesion is supposed as potential predictors of collective efficacy.

In general, the result shows that cohesion predicts with a significant percent all dimension of collective efficacy except "preparation". Whereas, the factor "unity" is the most dimension related to the cohesion (90,5%). This result confirms that cohesion in Tunisian sports team predicts the variation of collective efficacy.

Then, for each collective efficacy's dimension, a step-wise of multiple regression analysis was conducted using the four cohesion dimensions as potential predictors of collective efficacy. On a first step, ATG-Tis entered into the model and accounted for 89.3% of variances in the factor "union of the group", 42.3% of variances in "persistence". Moreover, GI-T entered into the model on the second step and accounted persistence (47.7%) significantly, but only 27.2% for the preparation, 21.1% for the ability, 20% for the effort and finally 26.1% for persistence. However, GI-T and ATG-T together (task cohesion) predict 89,6% of the variance in "union". It's significate that the addition of GI-T in the regression's accounted for .03 % only. Collective efficacy is more related to ATG-T than GI-T.

For social cohesion (ATG-S and GI-S),the tow factor explains together significantly only dimension effort of the collective efficacy with a percentage of 41.8%. For other dimensions, the ATG-S and the GI-S to get her accounted for only of 4% to 27% of the variance. These results also indicate that for social cohesion, only the factor "GI-S" explain 41.6% of the variance in dimension "effort", contrary to the GI-S which does more predict dimension of collective efficacy. Table 4 summarize the detailed results of regression analyse.



**Table 4.** Regression analyse between cohesion and collective efficacy dimensions.

Dependents variable		Independents variables	$\beta$	R <sup>2</sup>	t
Ability	Step1	ATG-T	,21	0,46	7,98
	Step 2	ATG-T and GI-S	,23		
		GI-S	,12	0,35	5,73
	Step 3	ATG-T, GI-S, ATG-S, GI-S	,33*		
		ATG-S	,21	,047	8,23
		GI-S	,07	,28	4,54
Effort	Step1	ATG-T	,20	,45	7,67
	Step 2	ATG-T and GI-S	,25		
		GI-S	,17	,42	7,16
	Step 3	ATG-T, GI-S, ATG-S, GI-S	,46*		
		ATG-S	,24	,49	8,59
		GI-S	,41	,64	12,87*
Persistence	Step1	ATG-T	,26	,51	9,08
	Step 2	ATG-T and GI-S	,47*		
		GI-S	,42	,65	13,05*
	Step 3	ATG-T, GI-S, ATG-S, GI-S	,48*		
		ATG-S	,04	,21	3,27
		GI-S	,04	,22	3,50
union	Step1	ATG-T	,89**	,94	44,00**
	Step 2	ATG-T and GI-S	,89**		
		GI-S	,24	,49	8,71
	Step 3	ATG-T, GI-S, ATG-S, GI-S	,48*		
		ATG-S	,28	,50	8,77
		GI-S	,21	,04	7,90
Preparation	Step1	ATG-T	,27	,52	9,35
	Step 2	ATG-T and GI-S	,27		
		GI-S	,09	,30	4,92
	Step 3	ATG-T, GI-S, ATG-S, GI-S	,28		
		ATG-S	,04	,21	3,32
		GI-S	,06	,26	4,21

Note: \*\*  $p < .01$ , \*  $p < .05$

The final result of this analyse confirm that collective efficacy is more related to task cohesion than social cohesion. More than, collective efficacy the consequence of cohesion. Tunisian

Players who perceived higher level of task cohesion also tended to report higher collective efficacy judgments

## Discussion

This research aimed to contribute to the development of theoretical knowledge on the concept of collective efficacy in general and specifically in Tunisia. This study presents first a result of validation for a multidimensional measure of collective efficacy (CEQS, Short and al., 2005) in Tunisian culture and second explore the relationship between collective efficacy and cohesion which is the primary propose of this study.

We examine the discriminant validity of the conceptual model of collective efficacy presented by Short and al, (2005) and thus in Tunisian sports teams. The scale is composed of five interrelated factors: Ability, Effort, Preparation, Persistence and Unity, with four items in each. The validation of this questionnaire was elaborated in accordance with the recommendations of Vallerand (1986) and of Romdhane and al., (2008). The Tunisian CEQS respects the original English language version as regards the number of items (twenty) and therefore the number of dimensions (five). The results of the various analyzes have supported the psychometric qualities of CEQS in Arabic. These results are very similar to those found in the original English version of the questionnaire (Short and al., 2005), with similar fit indices (CFI= .92; RMSEA= .09). The factor analyse provides support for the construct validity of the Tunisian CEQS in that result were regular with the theoretical model.

The 20 items showed a good correlation with the five factors. After oblimin rotation, the items split into the five expected factors. The data structure looks identical to the theoretical model proposed by Short and al., (2005). Static indices demonstrate that the model proposed by Short et al. (2005) could account for the manifestations of collective efficacy within Tunisian collective sports teams. Moreover, internal consistency indices are almost good and identical to that of CEQS. The results of this study demonstrated that the internal consistency (reliability) of each of the five factors of the Collective Efficacy Questionnaire for Sports (Short, et al., 2005), as well as the internal consistency of the full scale, was high. All subscales had internal reliability coefficient with Cronbach's alphas above .90. According to Nunnally., (1978) as psychometrics experts, psychological tests should be as internally consistent as possible.

For the relation between collective efficacy and cohesion, correlation's results underlined in general significant and positive relations between the factors of cohesion and the dimensions of collective efficacy. Those results confirm those of Paskevichetal.,(1999) and of Kozuband McDonnell (2000), Heuzé al., (2006; 2007) which supported connections between all dimensions of cohesion and collective efficacy. However, these relations did not appear with the same intensity in this study that in those previously quoted. Thus, if Paskevich and al.(1999) and Kozub and McDonnell (2000) had noted that the strongest relations were established between operational cohesion and the collective efficacy, our results have underlined a different model. The social cohesion is also related to collective efficacy that tasks cohesion. Within the Tunisian sports teams, it seemed that a general quality of operation of the group was required, at the same time by the report with the task and social aspects, because it was related to the effectiveness of the teams.

To clarify more this result, we use a kit of regression analyse to determine with of cohesion or collective efficacy is the consequence of the other, and to confirm or not the correlation's

result. In general, regression's result shows that both task cohesion and social cohesion are positively related to collective efficacy but not with the same intensity. Moreover, analyses of regression revealed that the ATG-T predict strongly the factor "union of the group" (89.3%), and "persistence" 42.3%. GI-T accounted with a significant percentage only persistence(47.7%). However, GI-T and ATG-T together (task cohesion) predict 89,6% of the variance in "union". Collective efficacy is more related to ATG-T than GI-T. This result is inadequacy with those obtained by Heuzé et al., (2006).

Concerning the possible prediction of the collective efficacy by factors of cohesion, the studies of Kozub & McDonnell (2000); Paskevich and al., (1999), Zaccaro et al., (1995) indicate that task cohesion predicts collective efficacy and only ATG-T of the group expected significantly collective efficacy. Those results are confirmed in our study: the ATG-T explained 89% of the variance of the overall collective efficacy, whereas, statistic analyse confirm that the GI-T explained only 42% of them. According to Bandura (1997), the relation between task cohesion of the group and the collective efficacy can be explained by the fact that this factor of cohesion is of direct interest for perceptions of collective efficacy in the interactives ports. However, according to Kozub and McDonnell (2000), athletes perceives his team like a collective linked where the members work together for to achieve common goals, or it should to trust the capacities of its team with to succeed of the tasks which require a high degree of coordination and of collective work. On the other hand, contrary to Kozub and McDonnell (2000),the GI-T predict the collective efficacy, but less than ATG-T.In addition, it was determined that the factor "unity" is better linked to cohesion than other factors of collective efficacy.

Our results have also affirmed contrary to the literature (Kozub & McDonnell, 2000; Paskevich et al.,1999, Zaccaro et al., 1995), that social cohesion (GI-S) predict the factor "effort" of collective efficacy. The same result was observed in a French culture (Heuzé et al., 2006; 2007). Carron et al.,(2002)and Felts et Lirgg (1998) explain this result by the importance of social cohesion in amelioration of the relationships between team's players, and by consequence the performance.

Finally, this study confirm that in Tunisian sport's team, collective efficacy is the consequence of cohesion. All dimension of collective efficacy is positively and significantly correlated to all factor of cohesion. But, analyse of regression prove a different result: collective efficacy is more related to task-cohesion than social cohesion. The dimension "unity" of collective efficacy is the better one related to task cohesion. Social cohesion predicts only "effort" of collective efficacy. However, cohesion (social and task) did not predict the dimension "preparation" of collective efficacy significantly.

## Conclusion

In conclusion, the present study provided evidence of the relationship between collective efficacy and cohesion. A second objective was also verified: The hierarchical conceptualization of collective efficacy in Tunisian culture and the validation of the Tunisian CEQS as a valid measure of collective efficacy in collective sports teams. This research confirms some conclusion in the literature about the relationship between collective efficacy and cohesion. It also offers a new insight on this rapport in Tunisian sports team.

Finally, we outlined that, in the future, other research should go beyond this study and examine the different manifestation of collective efficacy in sport: there are many unanswered questions regarding the sources and outcomes of collective efficacy. This study is a modest

beginning in this direction in Tunisia allowing having a reliable and valid measurement questionnaire of collective efficacy.

### **Conflict of Interest**

The authors have not declared any conflicts of interest.

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