THE INFLUENCE OF MOTIVATION ON GROUP COHESION IN AEROBIC GYMNASTICS ATHLETES

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Abstract

The purpose of the present study was to investigate the influence of motivation on the group cohesion of aerobic gymnastic athletes. The statistical society was the men of aerobic gymnastics (team performance part) that take part in country matches of this field. 64 participants take part in this study. Data was collected with the "sport motivation scale" and "group cohesion scale" questionnaire. Data analyze was done with the linear regression and spss-18 software. Results show that motivation variable predicted group cohesion (p=0/001, R^2=0/17). The results indicate the effect of motivation on the group cohesion in the athlete. Coaches should rise the motivation for the matches or training in which cause suitable group cohesion and so that facilitates group success.

Key words: *aerobic gymnastic, sport motivation, group cohesion.*

Introduction

Cohesion or cohesiveness is an important concept for experts and researchers. Sport psychologists believe that determining a shared goal which integrates the efforts of all group members is vital for achieving success. Cohesion is defined as a dynamic process which shows the tendency of group members to prolong their friendly relation and stay loyal to each other in order to pursue shared goals and satisfy their emotional need (Carron& Brawley, 2000). Being together is a team feature which is called group cohesion. In sports and, in particular, group sports, a necessary requirement for achieving shared goals is group integration and cohesion. In group sport, in which teams have interactions with each other, success will be achieved when team members work harmoniously, cooperatively and effectively (Moradi, et. al, 2006). Different sports require different levels of interaction or interdependence among athletes for achieving success. This includes interactive sports. Football, for instance, requires high cohesion, but baseball does not need that much cohesion (Murray, 2006). Westre and Weiss (1991) stated that the perception of individual and group success is to a large extent dependent on team cohesion. Studies show that teams with high solidarity tend to have a desirable evaluation of the executive capacities which can lead to successful results in the competition (Carron, Bray, Eys, 2002). Also, it seems that cohesion, in addition to its effect on team performance, affects personal features and characteristics of players (Lowther, Lane, Lane, 2002;Eys, Hardy, Carron, 2003). Van Raalte, Cornelius, Linder, and Brewer showed in their studies that appropriate behaviors of a team's structure, which includes athletes, creates more perception in players about team solidarity. Terry et al (2000) maintained in their study that being a member of a coherent team is related to positive mood and manner. Not only does a coherent team create a supportive atmosphere through inspiring a sense of belonging, but helps make relations based on trust (Lowther, Lane, Lane, 2002). These mental conditions are also related to motivation and it can be probably said that motivation affects group cohesion among athletes as well. Also, it is quite clear that thoughts and behaviors are crucial in sport performances (Weinberg, Gould, 2007). Motivation and its effect on behaviors are shown in self-determination theory developed by Deci and Ryan (1985). In self-determination theory, the important hypothesis is that motivation is a multidimensional structure and different kinds of motivation have different effects on cognitive, emotional, and behavioral results. In other words, while most contemporary theories consider motivation as a single concept and concentrate on general motivation of people for a specific activity or behavior, self-determination theory distinguishes between different kinds of motivation (Deci, Ryan,2000; Ryan, Deci, 2000). This theory distinguishes internal motivation, external motivation, and demotivation and is set in a continuum. Team solidarity focuses on the fact how group, as a social structure, can influence people's motivation. Some researchers, then, measured motivation factors in cohesion studied (Arnold, Straub, 1972; Ball,Carron, 1976). They, as a result, stated that the domineering type of motivation which functions as the basis of the individual's engagement in a group may influence the environment (group ethics or cohesion) which has been developed. Carron and Chelladurai (1981) in a study entitled "dynamics of team cohesion in sports" investigated the factors related to perception of cohesion in individuals and sport teams. The results of this study showed that perception of cohesion is modified by the nature of sport tasks. They also showed that the most important factors involved in the perception of cohesion in sport teams is the difference between an athlete and a coach and an athlete and a team in motivation of the task (people's tendency toward group goals).

Another relevant study, entitled team solidarity, motivation for progress, and motivational results, was carried out by Gu, Solomon, Zhang, and Xiang (Gu, Solmon, Zhang, 2011). 121 female university students who took aerobic courses participated in this study. The results showed that the structure of team solidarity is significantly related to motivation and motivational results. Another study carried out by Heuze, Sarrazin, Masiero, Raimbault, and Thomas (2006) investigated the relation between perceived motivational atmosphere and team solidarity in female genius sport teams (basketball and handball) and concluded that those teams with high solidarity are more motivated. It seems both cohesion and motivation are two factor which have the potentiality of influencing the dynamics of sport teams. Aerobic gymnastics is performed in four ways: men individual, women individual, mixed (2 persons), group (6 persons). It is done in a 10m * 10m field and takes 2 minutes. The performance of each team includes six moves from different families which can show dynamic, strength, flexibility, balance, and the ability to jump.
Some studies (Carron, Chelladurai, 1981) have investigated the effect of cohesion on motivation. Although some specific individual factors can play an important role in group cohesion, few studies have been carried out in this regard. The focus of this study is on the way individual factors predict the involvement in physical activities; in other words, how people's physical activities influence social structures like team cohesion. Our knowledge in this regard is very limited. As a result, the purpose of this study is investigating the effect of motivation on group cohesion in men athletes of aerobic gymnastics who participated in nation-wide competitions. Our focus is on their sport motivation.

Methodology

This is a causal-comparative research and it aims to investigate the ability of prediction by sport motivation on group cohesion by men athletes in aerobic gymnastics. The population of this research includes athletes present at nation-wide competitions of aerobic gymnastics. 64 men athletes in aerobic gymnastics who participated in nation-wide competitions in 6-person teams took part voluntarily in this research and filled in questionnaires about sport motivation and team cohesion. Caron, Widmeyer and Brawley's 18-question Group Environment Questionnaire (GEQ) (Carron, Widmeyer, Brawley, 1985) was used to evaluate group cohesion. This tool for evaluating cohesion is used in environments in which activity forms its basis. The reliability of this test was calculated 0.81 through Cronbach's alpha. This questionnaire measures four sub-scales (1. Individual attraction to the group-social (IATG-S), 2. Individual attraction to the group-task (IATG-T), 3. Group integration-task (GI-T), and 4. Group integration-social (GI-S)) in a Likert 9-point scale ranging from "I totally agree" (9) to "I totally disagree" (1). Mallet, Kawabata, Newcombe, Otero-ferero, and Jachson's Sport Motivation Scale (SMS-6) (Mallet et al, 2007) developed in 2007 was used to measure motivation. The incentives in this scale are those factors which motivate an individual to perform a particular activity. The goal of the SMS, with 24 items, is to measure the perceived forces that move an individual to act in the context of sport: that is the absence of motivation or non-regulation (items 5, 12, 17, 22); external pressure and compliance (items 4, 11, 19, 24); self-control (items 7, 10, 16, 23); balanced control (items 3, 8, 15, 20); harmony with the self and other activities in one's life (items 2, 9, 13, 21); and finally inherent satisfaction (items 1, 6, 14, 18). It is done in a 5-point Likert scale. Mallet (Mallet et al, 2007) in 2007 standardized this questionnaire and the results of factor analysis were NFI=0.898, CFI=0.909, and RMSEA=0.052. In Esmaili's study (Esmaiili, et. al, 2013), the overall internal consistency of this questionnaire using Cronbach's alpha was 0.88. Also, Cronbach's alpha for inherent satisfaction, harmony with the self and other activities, balanced control, self-control, eternal pressure, and the absence of motivation was 0.79, 0.85, 0.83, 0.84, 0.83, and 0.82 respectively.

Results

The results of the analysis of descriptive and inferential statistics are shown in the following tables. Descriptive statistics are presented in Table 1. Based on Table 1, 64 men athletes with the average age of 20.42±3.32 participated in the study.

Table 1. descriptive statistics of variables.

Variables	Mean	Standard deviation	numbers
age	20.42	3.32	64
Motivation	4.50	0.53	64
Group cohesion	6.52	1.07	64

Skewness and Kurtosis were sued to measure the normality of data. It was shown they were in the ±1 range which is normal.

Table 2. Summary of regression model of motivation on team cohesion.

Model	R	R2	Modified R2	Estimated standard error
1	0.41	0.17	0.15	0.98

Predictors: (fixed), motivation
Dependent variable: team cohesion

The results of summary of regression model (Table 2) shows that R=0.41, estimated standard error = 0.98, R2= 0.170, and modified R2=0.15. Results show motivation determines 17 percent of the changeability of group cohesion in this study. Based on Table 3, the results indicate motivation has a significant relation with group cohesion and it is able to predict the cohesion of research participants (p=0.001). Also, based on the results, motivation could predict more than 41 percent of group cohesion.

Table 3. Regression correlations for determining the relation between motivation and group cohesion.

model	Non-standardized correlations		standardized correlations	t	Level of significance
	B	Standard error	beta		
Fixed	3.19	0.94	0.41	3.38	0.001
motivation	0.82	0.23		3.56	0.001

Significant at 0.05
Dependent variable: group cohesion.

Discussion and conclusion

The purpose of this study is to investigate the effect of motivation on group cohesion in aerobic gymnastics athletes. As it was observed in the results, sport motivation has an acceptable ability to predict group cohesion. Also, self-determination theory explains how motivation influences people (Frederick & Ryan, 1995). A lot of studies showed that self-determination motivation is such positively related to more commitment to sports (Standage, Duda, Ntoumanis, 2003; Moreno, Cervelló, González-Cutre, 2007) that it can turn into a value for prediction (Duda, Ntoumanis, 2003; Moreno, Llamas, 2007). These results support the findings of the present study. It seems motivation can be an important factor in guiding behaviors toward specific aims in sports and affect group cohesion in sport teams. As Sage states, motivation is defined as an internal mechanism and external incentives which inspires behavior and guides it (Sage, 1974). One of the fundamental functions of motivation is its guiding function which directs behaviors toward specific aims (Sage, 1974). As mentioned earlier, in self-determination theory, different types of motivation have different effects on cognitive, emotional, and behavioral results. These effects can be seen in group cohesion behaviors and affect them. Nevertheless, the relation between team cohesion and physical activity results can be context-specific and differ in different contexts (Spink, 2013). Most team cohesion studies are performed in contexts such as fitness classes in which people have less structured opportunities for interaction. This may be due to the fact that in these contexts, task cohesion inspires participation in physical activities (Izumi, et al, 2015). As Carron and Chelladurai (1981) suggest the perception of participation in cohesion is different based on the type of group and is different in individual sports (in which an athlete performs their tasks individually) and group ones (in which individuals are dependent on one another for doing their tasks) and motivation shows a considerable consistency in perception of solidarity in cohesion factors. The present research supports this study and based on the type of sport (aerobic gymnastics) which mandates high group cohesion, this cohesion is seen and motivation variable has a remarkable effect in predicting group cohesion. When groups are involved in inter-group competitions, individual commitment to tasks increases and internal consistency for the task boosts as well (Sherif, 1967). Given the fact that sports require group work (Cox, 1990), the results of this study are important for trainers of interactive sports from the perspective of the importance of sport motivation in making team cohesion. In aerobic gymnastics (performed in a group), this finding is considerable and crucial.

Message of the Article
Trainers, coaches, and teachers need to increase the motivation of athletes to a point where they can get a good understanding of group cohesion. Thus, their team success is facilitated. Designing fun and innovative physical exercise is a way for increasing this understanding.

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