

Examining the Relationship between Team Cohesion, Comparative Anxiety and Self-Confidence among Ethiopian Basketball Teams

Tesfay Asgedom Haddera

Assistant Professor in Department of Sports Science, Addis Ababa University, Addis Ababa, Ethiopia

Abstract

One of the most constantly studied constructs in group dynamic research is cohesiveness. Indeed it refers to two main construct namely task and social cohesion. Since organizations become increasingly depend on group cohesiveness to strive for better performance, these two construct (social and task cohesion) had consistency effect on the performance as suggested in many studies. The main purpose of this study was to investigate the relationships between task cohesion (ATG-T and GI-T), Self-Confidence Inventory (SCI), competitive state anxiety (A-State), and also if there would be a relation between cohesion and self-confidence. The sample consisted of 60 basketball players of both genders, male and female from 4 different clubs, aged between 19-26 years old. The data for cohesion were abstained and measured using Portuguese version of the Group Environment Questionnaire (GEQ), and to assess competitive anxiety, we used the Portuguese version of the Competitive State Anxiety Inventory (SCAT). The results show that female athletes report experiencing more cognitive anxiety and less self-confidence than male athletes. Only cognitive anxiety relates in a significantly negative way with the perception of cohesion (GI-T, ATG-T) in the total number of participants and in male athletes. Relatively to the Somatic anxiety, it only relates negatively with the perception of the integration of the group in the total number of participants and in the male gender.

Keywords: Cohesion, Anxiety, Self-confidence, basketball

Introduction

Team sport requires the players working together as a group to achieve certain actions (e.g. sharing objectives, decision making communication, cooperation, conflict management and creating confidence). Team members act collectively by continuing individual courses of action for team achievement. The researcher has been interested in the related factors affecting the athlete and team performance. Studies on such variables as team cohesion, self-confidence and anxiety, have focused on the relationship with other variables and understanding the effects on players and team performance.

Carron Brawley and Widmeyer (1998) defined cohesion as “a dynamic process that is reflected in the tendency of a group to stick together and remain united in the pursuit of instrumental objectives and/or for the satisfaction of member affective need”. Carron, Widmeyer, and Brawley (1985) develop the Group Environment Questionnaires (GEQ), which is based on a conceptual model. The model includes four connected dimensions, Group Interaction-Task (GI-Task), the perceptions of a Group Integration-social (GI-Social), the perceptions of group members about the group as a social unit, individual attraction to the group members about the group task (ATG-Task), and the feelings of a group member about personal involvement with the social aspect of the group. The task cohesion aspect of team cohesion especially tends to improve performance of interactive team sports. The nature of the group task is a strong mediator of group cohesion.

Festinger et al. (1963) showed that if team cohesion and assignment cohesion be high, the cohesion of the team will be high and these are the factors, which the team together and is determined by certain situations that the rate of tangible cohesion of the team is due to function of factors and situations. These factors include peripheral, personal, leadership and team size. Research has found cohesion to be influenced by several individual and group components. A relationship was found between cohesion and such components as: Satisfaction (Aoyogi et al. 2008; Spink et al., 2005) performance (Carron et al., 2002), role ambiguity (Beauchamp et al., 2003), mood (Terry et al., 2000) and cognitive variables as competitive anxiety (Prapavessis and Carron, 1996; Cogan and Petrie, 1995).

Anxiety is another important psychological state of individuals that comprises two components, trait anxiety is a perception of certain environmental situations as threatening and state anxiety is a perception of a specific situation a threatening. In sport settings, competitive trait anxiety is a critical subject to athletic performance, which is defined as a personality disposition reflecting an individual tendency to perceive threat in sport competition. Pre-competition anxiety is the feeling of situation that exists among athletes of all levels and within every sport. Within the context of sports, research findings collectively offer that both state and trait anxiety, can be effective in individual performance in unique ways, depending upon the level of skill. High performance in sport and physical activities is the goal of many athletes and coaches. Team achievement in sports required to achieve a common goal.

Self-confidence is a variable to study to improve sports team dynamics and is necessary to achieve high level of competitions. Most studies indicated that there are positive relationships between self-confidence and performance in a variety sports. Vealey (1986) defined self-confidence is a belief that you can successfully perform a decisive behavior. The source of self-confidence was categorized into mastery, demonstration of ability, physical and mental preparation, physical self-presentation, social support, vicarious experience, coach leadership; Self-confidence is a variable to study to improve sports team dynamics and is necessary to achieve high level of competitions. Most studies indicated that there are positive relationships between self-confidence and performance in a variety sports. Vealey (1986) defined self-confidence is a belief that you can successfully perform a decisive behavior. The source of self-confidence was categorized into mastery, demonstration of ability, physical and mental preparation, physical self-presentation, social support, vicarious experience, coach leadership, environmental comfort and situation favorableness. High self-confidence expectations are commented with low pre-competitive anxiety, positive effect, strong goal importance and high personal goals, and high trait sport confidence in athletes,

Anxiety is a negative emotion that affects perceptions in sport competitions, and this leads the majority of athletes to consider anxiety as debilitating towards performance, which may result in a decrease in performance (Raglin and Hanin, 2000; Weinberg and Gould, 1999). Martens et al. (1990) developed the multidimensional model of anxiety where a distinction on reactions of anxiety in sport is presented, “cognitive anxiety is usually defined as the mental component of anxiety and is caused by negative expectations” while somatic anxiety “refers to the physiological and affective elements of the anxiety experience that develop directly from autonomic arousal”. A third dimension related with the above two is an individual difference factor, which is self-confidence, understood as the conviction of the athlete that he can perform the tasks which he has undertaken. Cognitive anxiety and self-confidence represent the opposite ends of a continuous cognitive assessment. Martens et al. (1990) propose a negative linear relationship between cognitive anxiety and performance, and a positive linear relationship between self-confidence and performance. Somatic anxiety and performance have a curvilinear relationship, where both lower and higher values are prejudicial to performance. Researchers have continued to examine issues related to the multidimensional anxiety theory, and involved the examination of potential interactive effects between sport competitive anxiety and other components. The relationship between group cohesion and competitive state anxiety appears to be a dynamic one in which both variables influence each other (Eys et al., 2003). This also speaks to the degree of team cohesion. That is “improving the dynamics of the team could enhance the psychological state of the individual” (Prapavessis and Carron, 1996). Additionally, Cogan and Petrie (1995) found that an intervention program with intercollegiate gymnasts was associated with enhanced social cohesion and reduced somatic and cognitive anxiety. Also, a significant number of the athletes who required consultation were those who were suffering from anxiety, before and during competitions (Bull, 2000).

Prapavessis and Carron’s (1996) findings revealed that cohesion and anxiety were associated. Particularly, athletes that perceived higher levels of task cohesion reported a state of less cognitive anxiety. Results also evidence that psychological costs associated with membership on cohesive teams, mediates the cohesion – state anxiety relationship. However, benefits of group cohesion go beyond the degree of competitive state-anxiety. Eys et al. (2003) indicate that participating in a cohesive group leads to higher self-esteem, increased group-efficacy, better mood and higher dissemination of responsibility among group members. Additionally, individuals who participate in a group sport are less likely to experience competitive state-anxiety in general (Craft et al., 2003). Courneya (1995) provided additional support for a cohesion-affect link by showing that perceptions of group cohesion were associated with positive feelings towards structured exercise classes. As Martin and Hall (1997) refer, it is unclear whether this difference between sports is due to the sports themselves or due to the sports attracting individuals with different characteristics. The outcome of the competitive state anxiety also depends on the type of skill (i.e., open or closed). Open skills have been defined by Craft et al. (2003) as those skills in which the athlete is “performing in an interactive ever changing environment”, represented for example by basketball players, and are more likely to be more influenced by competitive state anxiety than closed skills (Terry and Youngs, 1996).

Team cohesion, self-confidence and competitive trait anxiety are highly related to team performance. Task cohesion variables were the only ones used for three reasons. First, following the suggestion of Munroe et al. (1999), athletes tend to be involved in sport competition due to instrumental or tasks objectives. Second, Prapavessis and Carron (1996) only found a significant relationship between pre-competitive anxiety and the individual attraction to group dimension, while for Eyes et al. (2003) the relationship with anxiety was manifested in both dimensions of the task cohesion. The third reason was presented by Prapavessis and Carron (1996) when in their results they suggested that athletes with higher perception of cohesion tended to indicate that pressure associated to responsibilities and satisfaction of the needs of others (i.e. task orientated activities) was more reduced, thus they experienced less anxiety. The inclusion of the third subscale was due to the fact that Craft et al.’s (2003) meta-analysis demonstrates that self-confidence seems to be the strongest indicator of sport

performance compared to the remaining subscales of anxiety (somatic and cognitive), assessed by CSAI-2. Also Moritz et al. (2000) identified self-efficacy as a predictor of sport performance.

Cognitive anxiety and self-confidence represent the opposite ends of a continuous cognitive assessment. Martens et al. (1990) propose a negative linear relationship between cognitive anxiety and performance, and a positive linear relationship between self-confidence and performance. Somatic anxiety and performance have a curvilinear relationship, where both lower and higher values are prejudicial to performance. The main purpose of this study was to examine the relationship between task cohesion (ATG-T, and GI-T), competitive state anxiety (A-state) and self-confidence. Also if there would be a negative relationship between cohesion-competition A-state (cognitive and somatic) and a positive one between cohesion-self-confidence.

Methods

Participants

The sample was composed of 60 Basketball players (30 males, 30 females) from four different clubs participating in the first division of Ethiopian Basketball Federation. The athletes were on average 20.15 ± 1.75 and 24.52 ± 1.55 years of age for female and male respectively and had been members of respective teams for 2.75 ± 1.45 years and possessed 6.36 ± 2.54 year of experience in sport.

Measures

Cohesion. Cohesion was measured using the Group Environment Questionnaire (GEQ; Carron et al., 1985). The GEQ is an 18-item scale that assesses four dimensions of cohesion. All items are scored on a 9-point Likert scale, ranging from 1 (*strongly agree*) to 9 (*strongly disagree*). The GI-T dimension consists of four items, The GI-S dimension consists of four items. ATG-T consists of four items. The ATG-S dimension consists of five items. The Self-Confidence Inventory consists of four items. Research has shown that the GEQ is internally consistent (Carron et al., 1985) and exhibits content, factorial (Carron et al., 1985), predictive (Carron et al., 1988), and concurrent (Brawley, Carron, & Widmeyer, 1988) validity. As mentioned before, for this study only the two tasks oriented scales were used. Thus higher scores reflect higher perceptions of cohesion. In terms of internal consistency we found adequate values for both sub-scales: ATG-T $\alpha = .65$, GI-T, $\alpha = .75$

Pre- competition Anxiety: To assess competitive anxiety, we used the Portuguese version of the Competition State Anxiety Inventory 2 (CSAI-2p; Serpa and Santos, 1991), which consists of 27 items, grouped in three subscales: cognitive anxiety (CA; e.g. "I am concerned about performing poorly"), somatic anxiety (SA; e.g. "I feel nervous" or "I feel jittery") and self-confidence (SC; e.g. "I feel self-confident"). Each subscale has items scored in a 4- point scale (from "not at all – 1" to "very much – 4"). A good internal consistency was found in this subscales, with CA ($\alpha = .87$), SA ($\alpha = .80$) and SC ($\alpha = .87$).

Procedures

Collections of data for the study were obtained during time of basketball tournaments of the first division. Of course the researcher has ask a permission in advance and informed the coaches about the purpose of the study and the questionnaires were completed by the basketball players before the game, parallel with suggestions from Craft et. al (2003) and with no change in the team's routine. Confidentially was also guaranteed.

Analysis

The collected data was analyzed by means of descriptive statistic to distinguish players mean and standard deviation and with the Kolmogorov Smirnov test screened for normality. The researcher used Pearson product momentum to analyze the relation between concepts. To verify mean anxiety predictors stepwise multiple regressions were used.

All analysis was processed using Statistical Package for Social Sciences (SPSS for Windows, version 17.0). A significance level of 5% was adopted for the study.

Table 1 – Descriptive Statistics for Cohesion and Anxiety dimensions

| | Total | | Male | | Female | |
|----------|---------|------------|---------|------------|-----------|--------------|
| | Min-Max | M (SD) | Min-Max | M (SD) | Min-Max | M (SD) |
| ATG-T | 1-9 | 6.93(1.68) | 1-9 | 6.91(1.75) | 4-8 | 7.05(1.55) |
| GI-T | 2-9 | 6.41(1.34) | 2-9 | 6.43(1.41) | 3.75-7 | 6.25(0.82) |
| SomA | 1-4 | 1.77(0.51) | 1-4 | 1.57(0.61) | 1.09-2.41 | 1.68(0.35) |
| CogA | 1-4 | 1.91(0.65) | 1-4 | 1.85(0.66) | 1.31-3.31 | 2.32(0.48)** |
| SelfConf | 1-4 | 3.06(0.57) | 1-4 | 3.13(0.53) | 1.53-3.64 | 2.55(0.56)** |

N=60(30 males, 30 females)

**p<0.05. **p<0.01*

Table 2 – Correlation coefficients between Task cohesion and competitive anxiety

| | ATG-T | G-T | ASom | ACog | AutoConf |
|----------|---------|---------|---------|---------|----------|
| ATG-T | | | | | |
| GI-T | .471** | | | | |
| SomA | -.081 | -.252** | | | |
| CogA | -.259** | -.435** | .621** | | |
| SelfConf | .101 | .195** | -.318** | -.363** | |

Correlations total simple, respectively

**p<0.05. **p<0.01*

Table 3 – Correlation coefficients between team cohesion and competitive anxiety (males and females)

| | Male | | | | Female | | | |
|----------|---------|---------|---------|---------|--------|--------|---------|---------|
| | ATG-T | GI-T | ASom | ACog | ATG-T | GI-T | ASom | ACog |
| ATG-T | | | | | | | | |
| GI-T | .501** | | | | .003 | | | |
| ASom | -.091 | -.281** | | | .81 | -.008 | | |
| ACog | -.290** | -.465** | .671** | | .006 | -.011 | .43 | |
| SelfConf | .143** | .190** | -.360** | -.302** | -.75 | .402** | -.403** | -.491** |

Correlations in males (n=30) and females (n=30), respectively

**p<0.05. **p<0.01*

Results

As indicated in Table 1, even though significant differences were found between genders at pre-competitive anxiety dimensions ($P<0.01$), no difference was registered in task cohesion (ATG-T and GI-T). From this point of view independent analysis was adopted for females and males, and also for the total number of participants.

Though the descriptive analysis, we observed that females present higher mean values in individual attraction to the group and lower mean values in group integration both in reference to the task, in comparison with male gender, although these differences are not significant. As already suggested in previous studies (Jones and Cale, 1989), females reveal significantly higher mean values ($P<0.01$) at the cognitive anxiety level before competitive than males. However, male reported experiencing significantly higher self-confidence than females ($P<0.01$). Somatic anxiety presents values near significance ($p = 0.069$) being higher in women.

The mean difference between somatic (ASom) and cognitive (ACog) anxiety as well as between individual attraction (ATG-T) and integration in the group (GI-T) associated to the task for overall participants and both male and female genders, revealed to be significant ($P<0.01$). That means, male and female perceive themselves to be more attracted to the group rather than integrated in it, as far as task is concerned, and report experiencing more cognitive anxiety than somatic before competition.

Table 2 also shows that for female participants the task cohesion does not correlated ($P<0.05$) with the dimensions of pre-competitive anxiety, except for group task integration and self-confidence ($P<0.01$). For male participants, individual attraction to the group, as well as integration in the group, both in relation to the task are: a) positively but low related ($P<0.01$) to self-confidence, and b) negatively, low to moderate correlated ($P<0.01$), to cognitive anxiety. A negative but low correlation is also observed between somatic and group task integration. On the other hand when we consider total number of participants, we can verify that task integration in the group (GI-T) is significantly correlated ($P<0.01$) to: a) self-confidence – low but positively; b) Somatic – low negatively and, c) cognitive anxiety – moderate negative. Individual attraction to the group is significantly related to a low negative way to cognitive anxiety.

Discussion

The main target of this study was to examine and analyze the relationship between task cohesion, self-confidence and competitive state anxiety. Results of the present study (due to the number of female athletes) show that athletes of the female gender report experiencing more cognitive anxiety and less self-confidence than athletes of the male gender. Cognitive anxiety relates in a significantly but low negative way with the perception of cohesion (GI-T and ATG-T) in the total number of participants and in the male gender. With regard to somatic anxiety, it only relates negatively to the perception of integration in the group in the total number of participants and in the male gender. No relationship was found between task cohesion and competitive anxiety in the female gender. The best predictor of cognitive anxiety was GI-T, being the only one in case of somatic anxiety.

Cognitive and somatic anxiety was integration in the group associated to the task, confirming the relationship of cognitive factors associated with cohesion. This relation is supported by two studies that highlight this fact. First, Prapavessis and Carron (1996) found that athletes who had higher perceptions of

cohesion experienced less cognitive anxiety. Second, Eys et al. (2003) extended the Prapavessis and Carron's (1996) study and found that athletes who interpreted their symptoms of anxiety as facilitative to their performance were also more likely to perceive higher team cohesion. Nevertheless, this relationship should be analyzed with precaution since both cohesion as well as cognitive anxiety present associations with other components, where the influence of one upon the other could depend on other factors such as the perception of difficulty versus facility of a competition and possible outcomes, coping strategies, self-confidence, athlete satisfaction and prior experiences.

In summary, female athletes report less self-confidence than male athletes and this may be a reason why they report experiencing more cognitive anxiety. On the other hand, the significantly negative correlation between cognitive anxiety and the perception of cohesion (GI-T and ATG-T) in males supports the statement that cohesive groups tend to deal better with anxiogenic situations. Relatively to the somatic anxiety, it also only relates negatively with the perception of the integration of the group in males, supporting the previous conclusion. No relationship was found between task cohesion and competitive anxiety in females. All behaviors associated with individual attraction towards the task are increasing factors of anxiety, since the best predictor of cognitive anxiety were GI-T, being the only one in case of somatic anxiety.

From the present study the practical implications is that coaches, sport psychologists, and counselors can make use of the reported findings to provide appropriated strategies in group sport levels and athletes who showed the highest level of anxiety in order to reduce their anxiety level before and during the competition.

References

- Carron, A.V., Coleman, M.M., Wheeler, J., & Stevens, D. (2002). Cohesion and performance in sport: A meta analysis. *Journal of Sport & Exercise Psychology*, 24, 168-188.
- Carron, A.V., Estabrooks, P.A., Horton, H., Prapavessis, H., & Hausenblas, H.A. (1999). Reductions in social anxiety associated with group membership: Distraction, anonymity, security, or diffusion of evaluation? *Group Dynamics*, 3, 1-9. doi: 10.1177/1046496497284002
- Carron, A.V., & Hausenblas, H.A. (1998). The nature of group cohesion. In *Group dynamics in sport* (2nd ed., pp. 227-242). Morgantown, WV: Fitness Information Technology.
- Carron, A.V., Hausenblas, H.A., & Eys, M.A. (2005). *Group dynamics in sport* (3rd ed.). Morgantown, WV: Fitness Information Technology.
- Carron, A.V., & Prapavessis, H. (1997). Self presentation and group influence. *Small Group Research*, 28, 500-516. doi: 10.1177/1046496497284002
- Carron, A.V., Prapavessis, H., & Grove, J.R. (1994). Group effects and selfhandicapping. *Journal of Sport and Exercise Psychology*, 16, 246-257.
- Carron, A.V., Shapcott, K.M., & Burke, S.M. (2008). Group cohesion in sport and exercise: past, present and future. In M.R. Beauchamp, & M.A. Eys (Eds.), *Group dynamics in exercise and sport psychology: Contemporary themes* (pp. 117-139). New York: Routledge.
- Carron, A.V., Widmeyer, W.N., & Brawley, L.R. (1985). The development of an instrument to assess cohesion in sports teams: The Group Environment Questionnaire. *Journal of Sport Psychology*, 7, 244-266.
- Carron, A. V., Widmeyer, W. N., & Brawley, L. R. (1988). Group cohesion and individual adherence to physical activity. *Journal of Sport & Exercise Psychology*, 10, 119-126.
- Carron AV, Brawley L, Widmeyer W. *The Measurement of Cohesiveness in Sport Groups*. In J Duda, ed, *Advances in Sport and Exercises Psychology Measurement*. Morgantown: WV: Fitness Information Technology Inc, 213-226; 1998
- Carron AV, Bray SR, Eys MA. Team cohesion and team success in sport. *J Sport Sci*, 2002; 20(2): 119-126
- Carron AV. Cohesiveness in sport groups: Interpretations and considerations. *Journal of Sport Psychology*, 1982; 4:123-138
- Eys MA, Hardy J, Carron AV, Beauchamp MR. The relationship between task cohesion and competitive state anxiety. *J Sport Exercise Psy*, 2003; 25: 66-76
- Jones G, Cale A. Precompetition temporal patterning of anxiety and self-confidence in males and females. *Journal of Sport Behavior*, 1989; 12: 183-195
- Krane V, Williams JM. Cognitive anxiety, somatic anxiety and confidence in track and field athletes: the impact of gender, competitive level and characteristics. *Int J Sport Psychol*, 1994; 25: 203-217
- Martens R, Vealey R, Burton, D. *Competitive Anxiety in Sport*. Champaign, IL: Human Kinetics Publications; 1990
- Martens, R. (1977). *Sport Competition Anxiety Test*. Champaign, IL: Human Kinetics
- Martens, R., Burton, D., Vealey, R.S., Bump, L.A., & Smith, D.E. (1990). The Competitive State Anxiety Inventory-2 (CSAI-2). In R. Martens, R.S. Vealey, & D. Burton (Eds.), *Competitive anxiety in sport* (pp. 117-190). Champaign, IL: Human Kinetics.
- Prapavessis, H., & Carron, A.V. (1996). The effect of group cohesion on competitive state anxiety. *Journal of*

- Sport & Exercise Psychology*, 18, 64-74.
- Prapavessis, H., & Carron, A.V. (1997). Sacrifice, cohesion and conformity to norms in sport teams. *Group Dynamics*, 1, 231-240. doi: 10.1037/1089-2699.1.3.231
- Prapavessis H, Carron AV. *The effect of group cohesion on competitive state anxiety. J Sport Exercise Psy*, 1996; 18: 64-74
- Smith, R.E., Smoll, F.L., Cumming, S.P., & Grossbard, J.R. (2006). Measurement of multidimensional sport performance anxiety in children and adults: The Sport Anxiety Scale-2. *Journal of Sport & Exercise Psychology*, 28, 479-501.
- Smith, R.E., Smoll, F.L., & Schutz, R.W. (1990). Measurement and correlates of sport-specific cognitive and somatic trait anxiety: The Sport Anxiety Scale. *Anxiety Research*, 2, 263-280.
- Spalding, S.M. (2010). *Exploring the effect of athlete leadership on the cohesion performance relationship*. (Unpublished master's thesis). University of Windsor, Windsor, ON.
- Spink, K.S. (1995). Cohesion and intention to participate of female sport team athletes. *Journal of Sport & Exercise Psychology*, 12, 301-311.
- Vealey, R.S. (1990). Advancements in competitive anxiety research: Use of the Sport Competition Anxiety Test and Competitive State Anxiety Inventory-2. *Anxiety Research*, 2, 243-261.
- Vealey, R. (1986) conceptualization of sport confidence and competitive orientation: *preliminary investigation and instrument development*.
- Wilson, P., & Eklund, R.C. (1998). The relationship between competitive anxiety and self-presentational concerns. *Journal of Sport & Exercise Psychology*, 20, 81-97.
- Woodman, T., & Hardy, L. (2001). Stress and anxiety. In R. Singer, H.A. Hausenblas, & C.M. Janelle (Eds.), *Handbook of research on sport psychology* (2nd ed., pp. 290-318). New York: Wiley.
- Yalom, I.D. (1975). *The theory and practice of group psychotherapy*. New York: Basic Books.
- Zander, A. (1982). *Making groups effective*. San Francisco: Jossey-Bass.