

## **The effects of a psychological skills training program on the cohesion of a men's soccer team**

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### **Abstract**

The purpose of this study was to examine the effects of a psychological skills training program on the cohesion of a men's soccer team during a playing season. Thirty subjects were divided into an experimental group (first team) and a control group (reserve team). All subjects were measured on cohesiveness items before, in the middle, and after a seven-month psychological intervention program. Seven items were used from Sports Cohesion Questionnaire (SCQ) to measure the cohesion of the team by including both social and task elements. Test data were collected and analyzed. It was found that participants (first team players) in the seven-month intervention program did exhibit increased cohesiveness among team members and between team members and the coach. There are many positive consequences associated with enhanced team cohesion. Coaches should work to increase the task and social cohesion among members of soccer teams.

**Keywords:** Soccer Cohesion, Social Cohesion, Task Cohesion, Intervention Program

### **1. Introduction**

Team is a group and a group is a collection or set of individuals who interact with and depend on each other. Sport and physical activity are carried out in the context of groups, and cohesiveness is a fundamental property of all groups. Team Cohesion "is a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs" (Carron, Brawley, & Widmeyer, 1998, p.213). "Cohesion is the total field of forces which act on members to remain in the group" (Bird, 1986, p. 272). Because a soccer team is a group, Carron's definition of group cohesion applies equally well as a definition for team cohesion (soccer cohesion).

Peterson and Martens (1972) have all demonstrated that they are at least two distinct and independent dimensions associated with team cohesion. One dimension is related to interpersonal attraction and is identified as social cohesion. The second dimension of team cohesion is called task cohesion and reflects the degree to which members of a group work together to achieve a specific and identifiable goal.

Anyone who has been involved in any team sport knows the value of cohesiveness. Coaches try to develop cohesiveness in their teams because they believe cohesive teams win more games. Sports announcers, spectators, coaches, and players praise the unity, teamwork, and cohesiveness of

successful teams. Given the popularity of cohesiveness in sport talk, it is not surprising that cohesiveness is a popular research topic.

Human behavior in sport and exercise requires consideration of many complex factors, relationships, and interactions. Cohesion is viewed in the literature as a phenomenon that bonds members to the group and inclines them to remain together. Team cohesion does not necessarily evolve naturally, but requires careful planning and leadership from the coach. Many researchers consider cohesiveness as an ongoing process that requires the coach's attention during the off-season, pre-season, and in-season phases, and suggest an intervention program including several strategies for enhancing cohesiveness among our team members. (Yukelson, Weinberg & Jackson, 1984)

### *1.1 Social Cohesion*

Social cohesion reflects the degree to which the members of a team like each other and enjoy each other's company. Social cohesion is a part of the group cohesion which includes processes associated with the development and maintenance of harmonious interpersonal relationships (social related processes). Smith (2007) noted that an individual's connection to his/her peer group and opportunities for friendships are factors that consistently have been discussed with regard to the concept of affiliation in sport.

The coach needs to be concerned about the players' social interactions in addition to other coaching responsibilities. As Carron (1984a) asserts, "whereas cohesion is a group construct, satisfaction is an individual one". Carron's review of related literature indicates "a strong positive relationship between cohesion and satisfaction". (p.349) Weinberg and Gould (1995) suggest that "leaders do well in building group cohesion because being in a cohesive group is satisfying and also indirectly and directly enhance performance". (p.191)

A warm supportive climate on sport teams, of which group cohesion is a relevant component, is highly desirable for group member satisfaction, performance and team success. Other aspects of a healthy team environment include autonomy, recognition, natural trust among coaches and teammates, the players' perception of fairness, opportunities for innovation and the absence of social loafing. The manner in which group members interact is referred to as group dynamics coaches should monitor the frequency with which players interact and the nature of these interactions. From this ongoing assessment coaches can determine the role of each player on the team. Coaches must promote team cohesion, develop the team's beliefs about the competence of its members called collective efficacy, and to build team player satisfaction. The research by William (1986) demonstrates that social cohesion causes members satisfaction.

Sports participants who exhibit high levels of social cohesion also exhibit high scores in the expectations that they will participate in sport during the following season. Thus, social cohesion is a predictor of the intention to continue sport involvement (Sprink, 1990). This prediction is undoubtedly related to the further observation that high levels of team cohesion are related to lower state anxiety (Prapavessis & Carron, 1996).

Several constructs have been found to relate to cohesion such as team satisfaction, team size, coaches efforts to faster cohesion and team goals. Widmeyer & William (1991) found that the best single predictor of cohesion on a team was total satisfaction, with total satisfaction including: 1) good competition, 2) social interaction, 3) improving skills and 4) recognition to member satisfaction.

### *1.2 Task Cohesion*

Carron and Hausenblas (1998) define the task aspect of cohesion as “motivation towards accomplishment, productivity, and performance” (p.239). It may be that an athlete’s identity or ego is directly tied to group goals, the task aspect of cohesion. Task cohesion reflects the degree to which members of a group work together to achieve a specific and identifiable task. The task is usually associated with the purpose for which the team or group was formed. We can find teams with high task cohesion but very low in terms of social cohesion. Teams, with task cohesion, can work together very well.

Cohesiveness can be hindered if, for example, a coach has a task-oriented goal of winning and team members are mainly participating for social reasons. The task aspect can be seen as a general orientation toward achieving the group's goals and objectives. The nature of the group task is a strong mediator of group cohesion (Carron, Widmeyer & Brawley, 1985).

Teams that have developed high levels of team cohesion tend to exhibit high levels of group efficacy as well. This effect is stronger for task cohesion than for social cohesion. (Kozub & McDonell. 2000). Research by Eisler and Spink (1998), demonstrated, that a high level of task cohesion is associated with perceived psychological momentum. Teams that enjoy a high level of task cohesion are more likely to enjoy the benefits of psychological momentum. There are times in an athletic contest at which the momentum seems to be in favor with your team.

Quality of teamwork is related to task cohesion since it is important to get athletes to work together within well-defined compatible roles in order to achieve successful team performance. Support and mutual respect for one another, unselfishness, team task discipline and feelings of closeness all seem to be important considerations under this factor. It is important for an individual to feel his/her role or contribution to the team is valued and appreciated by both coaches and athletes. When an individual is made to feel important, his/her senses of belonging within the team are enhanced as well. (Scott & Cotter, 1984). Team cohesion, especially task cohesion, tends to improve performance of interactive team sports.

## **2. Purpose of the study**

This paper attempts to develop and modify an intervention program, and to develop a single-case experimental design to assess the utility of the intervention program. Because the research on cohesion in sport teams is still in its relative infancy, we can provide some basis for generalization in teams of the conditions associated with high cohesiveness. The Psychological Skills Training Program (PSTP) was a cohesion-enhancing program designed to increase the quality of players mutual efforts and the

degree of team pride satisfaction. It was a program of general principles to develop team cohesion. This program was designed to improve friendships and interpersonal attraction because it leads to feelings of satisfactions. Final, this intervention program was designed to develop cooperation among team members and between players and coach, because soccer is an interactive sport. Also, this paper was an attempt to investigate the development of the soccer team cohesion and not the sport cohesion. This study examined changes in the effect of cognitive and behavioral techniques of soccer team cohesion.

### 3. Methodology

#### 3.1 Subjects

Subjects were 30 male soccer players, age 18 to 34 (M age=24,6 years), participating in a major soccer league from the Philadelphia region of the United States. Both teams including a mixture of students and non-students were examined before season. There was a wide variation in playing experience among members of each team. To avoid situation-specific response bias, the questionnaires was administered to players at times not immediately proceeding or subsequent to competition.

#### 3.2 Design

The experiment was conducted over a seven-month period. Three observations were made. On September 10, before the first game, Martens & Peterson, (1971) Sport Cohesiveness Questionnaire (SCQ) was administered to each player asking each individual to complete the questionnaire at that point in time. The second observation was on December 10. The last observation was on April 10. The study involves a single variable, dependent group's design. The reserve team was used as a control group. The reserve team did not practice the same time with the first team. This team was not involved at all in the items of the intervention program. The strength and conditioning coach of the club applies only real physical practice with the control group during the time of this experiment. This repeated measures design (pre-test, mid-test, post-test) was involved for correlated observation because the same subjects are used for both conditions of the study. Intervention program was applied to develop the cohesion during the season.

#### 3.3 Measuring Instrument

The dependent variable, team cohesion was measured by the subject's response to the SCQ. The SCQ is a 7-item scale regarding group cohesion in sports including friendship or interpersonal attraction within the group personal power of influence within the group, enjoyment, teamwork, and closeness, since of belonging and value placed on group membership. The first five items of the SCQ measure attraction, to either the team or to the individual (social cohesion). The last two items dealing with teamwork and closeness seem to be measuring task cohesion. The questionnaire was completed by an athlete in less than 15 minutes. An example item with its corresponding scale is as follows: How good was the teamwork on your team?

1	2	3	4	5	6	7	8	9
X	x	x	X	x	X	x	X	X

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Not	Very
Good	Good

Identical cohesion questions were used with pre, mid, and post-measure. Also, players were to respond to two coach-players questions from Team Cohesion Questionnaire (TCQ) in order to investigate the cohesion between the players and the coach (Gruber & Gray, 1982). Administration occurred at weekday practices within the regular season.

### 3.4 Procedure

The players had been together from July 10 to April 10, which was the playing season period of 2006-2007. The team had practiced twice a week plus the game every Sunday. The pre, mid, and post-test questionnaire was administered by the first investigator. The members of the team took the test together at a time on the playing field. The dependent variable in the study, the relative cohesiveness level of the team, was determined by measures obtained by the anonymous responses that each player gave to the written questionnaire.

### 3.5 Psychological Skills Training Program (PSTP)

In attempting to develop team cohesion, the following ideas and strategies were used (Orlick, 1980; Carron 1984a; Widmeyer, Brawley & Carron, 1985; Bird & Cripe, 1986; Carron, Spink & Prapavessis, 1997; Janssen, J., 2002; Papanikolaou, Patsiaouras & Keramidas, 2003). These strategies helping players feel like valued and important team members. We identified specific interventions calculated to enhance team cohesion. Also, this intervention program (PSTP) can help a coach accomplish the task of promoting team cohesion.

1. Developing Team Identity, 2. Enhancing Individual and Group Motivation,
3. Developing Social Cohesion, 4. Promoting Communication,
5. Developing Player Satisfaction, 6. Develop a feeling of "ownership" among the players,
7. Developing Team Leadership, 8. Emphasizing the Value of Discipline,
9. Stress Team Concept, 10. Optimistic Attitudes,
11. Players Help Each Other, 12. Positive - Negative - Positive Theme. (Note 1)

### 3.6 Statistical Analysis

A repeated measures analysis of variance (ANOVA) was performed to measure the effects of the intervention program. The repeated measures were the pre-, mid-, and post-test during treatment. The repeated measures were used as three levels of the independent variable which was time. The dependent variable was team cohesion. Statistical significance level for both teams were set at  $P < .05$  for data analysis.

#### 4. Results

The SCQ and the TCQ were administered to both the first team and reserve team. After the data were compiled, a repeated measure ANOVA was utilized to identify any statistically significant differences in cohesion among the players on both teams and between the players and the coach on both teams. The means, standard deviations, and confidence intervals of cohesiveness from first and reserve team are presented in tables 1, 2, 3, and 4. Analysis of the results indicated that there was a statistically significant increase in social and task cohesion among first players.

There was a significant increase in the cohesion scores of first team players before and after the PSTP: pre-( $M=64.13$ ,  $SD=2.03$ ), Mid- ( $M=83.46$ ,  $SD=4.12$ ), and post-( $M=102.13$ ,  $SD=2.82$ )(Table 1). The cohesion scores of the first team players and the coach before and after the PSTP was: Pre-( $M=6.93$ ,  $SD=1.10$ ), Mid-( $M=12.06$ ,  $SD=1.48$ ), and post- ( $M=15.46$ ,  $SD=1.24$ ) (Table 2). It is thus fair to say that the level at cohesion is relatively high.

For the reserve team players the means and standard deviations on cohesion was: pre-( $M=68.33$ ,  $SD=1.79$ ), Mid-( $M=65.86$ ,  $SD=2.06$ ), post-(  $M=66.46$ ,  $SD=1.08$ ) (Table 3). There was no significant increase in the cohesion between the reserve team players. Also, there was no significant increase in the cohesion between the reserve team players and the coach: pre-( $M=7.80$ ,  $SD=.75$ ), Mid-( $M=6.60$ ,  $SD=1.35$ ), post- ( $M=5.66$ ,  $SD=1.17$ ) (Table 4).

The repeated measures analysis of variance (ANOVA) showed a main effect on cohesion among first team  $F(2,14)=538.56$ ,  $P < .05$  (Table 5). Also, an ANOVA showed a significant effect on cohesion between the first team players and the coach, [ $F(2.14)=142.59$ ,  $P < .05$ ] (Table 6).

It is important to point out that the reserve team, which did not receive the intervention program, did not increase in cohesion among team members nor between the coach and the players. We did not observe a main effect of cohesion among reserve team players,  $F(2,14)=7.41$ ,  $P < .05$  (Table 7). Finally, there was no significant effect on cohesion between reserve team and the coach,  $F(2.14)=14.84$ ,  $P < .05$  (Table 8).

High significant difference ( $p < .05$ ) was found in cohesion values among the first players and between the first players and the coach, while less cohesiveness was found among the reserve players (control group) and between the coach and the reserve players during the playing season. Findings of the present study suggest that the first team players reporting feeling an increase in cohesion and the reserve team players reporting a decrease in cohesion.

#### 5. Discussion

It is evident from Table 1 and 2 that at the second and third periods of the study the cohesion was increased very high from measure to measure on the experimental group. The statistical results determined that the PSTP (Intervention Program) that was designed for this study was related to an increase in team cohesion. The obtained F ratios of 538.56 and 142.59 (Tables 5 & 6) were very significant at the  $p < .05$  level of confidence. This means that the team cohesion was improved greatly

By examining the mean score of the reserve team, it was found that the passage of time had an inverse effect on cohesiveness among reserve players and between the reserve players and the coach (Tables 3 & 4). The reserve team shows less cohesion from measure to measure. This would be expected because this team was not involved in the PSTP. The study has value for the practitioner because it demonstrates that a PSTP such as was presented in this study, does enhance cohesiveness. Team cohesion is a psycho-social characteristic and the coach must be aware of the psychological well-being of his/her players as well as the physical well-being.

It would be fair to say that despite the high level of interest in measurement and theoretical debate, with few exceptions (for example Spink, 1990; Widmeyer & William, 1991) primary sport-related research in relatively sparse. In terms of the relationship between sporting success and cohesiveness (Carron, Brays & Eys, 2002; Matheson, Mathes & Murray, 1997), the conclusions that have been reached from this research have been equivocal to say the least (for example Grieve, Whelan & Meyers, 2000). On the one hand, studies of team sports, including basketball, American football, soccer, volleyball and baseball, at various times have shown that the success of teams can depend more on cohesion than the skill level of individual members.

Looking to the future, Widmeyer, Brawley & Carron (1992) have argued that more sport-based research is needed, which must be rooted in theory, adopt a longitudinal perspective, use multivariate analysis and look at a wider range of groups in different competitive and recreational sports. Whether such a research strategy will eventually reveal the intricacies of teams' cohesion remains to be seen, but it is a useful guide towards the right direction.

In an important study, reported by Widmeyer & William (1991), factors that determine team cohesion among female golfers were investigated and the strongest predictor of team cohesion, however, was personal satisfaction. For inter-collegiate golfers, the best way to develop team cohesion is by cultivating a personal feeling of satisfaction towards the team and the team members.

Specifically, females on an individual sport were lower on cohesion scores than males and females on a team sport. Perhaps cohesion has different emphases for females and males because of the female emphasis on relationships. In addition, research has found that females place more emphasis on the coach/athlete relationship than males ( Papanikolaou, et al, 2005, Tuffey, 1995). In addition, the consideration of coaches and the more affective aspects of the coach-athlete relationship have been examined in a series of studies by Jowett and colleagues (e.g., Jowett & Chaundy, 2004; Jowett & Ntoumanis, 2004). As Jowett (2007) stated “ A coach is viewed as central in turning a collection of individuals into a group (i.e., team unit) by building and managing the various dyadic coach-athlete relationships” (pp. 63-64). Interestingly, Jowett and Chaundy (2004) found a positive relationship



between perceptions of the coach-athlete relationship and cohesion in university age athletes.

Cohesion, of the tendency for a group to stick together, can be important to sport teams for two reasons (Carron, 1982). First, coaches strive for an effective, cohesive team (Carron & Dennis, 1998). Second, cohesion has been found to be related to satisfaction of group members and team success and performance (Mullen & Copper, 1994; Widmeyer & William, 1991).

## **6. Conclusions**

A limitation of the present study is that the small sample size restricts the generalization of findings. We suggest that future research should test the effectiveness of applied interventions designed to improve cohesion of a professional soccer teams. These findings will help researchers continue to examine cohesion and its correlates in soccer teams, and may help coaches and professionals working with teams maintain positive team dynamics.

The researchers concluded that group cohesion strategies should focus on the primary goals of group members, in this study, improving task and social cohesion. The intervention was effective because it targeted meeting this need. Thus, the SCQ can be used in soccer to assess current level of, and changes in group cohesion.

It is especially important for soccer as an interactive sport, to work hard to develop task cohesion among the players of the team. Coaches should also encourage the development of social cohesion on soccer teams and both task and social cohesion are critical to team success. The coach must develop high team cohesion among all the players of a team and not just the starters. Successful teams are characterized of homogeneity (agreement in team cohesion between starters and non-starters).

It is useful to understand that winning or losing can influence perceived team cohesion, but the coach must not allow this information to reduce his effort to develop team cohesion among members of a soccer team.

## **7. Recommendations and Implications**

This study should be replicated in other interactive sports. Additional recommendations for future research include continuing the work on cohesion, collecting qualitative data from coaches concerning their experiences with cohesion in soccer, and interviewing players of all levels of development about their experiences with cohesion could also provide insight. It would be useful to collect similar data with professional, semi-professional, college, high school, and young players and to interview parents of youth sport participants. It would be valuable to consider the effects on cohesiveness of personnel changes, team success, coaching strategy changes, role changes, injuries and many other factors.

Some practical implications arise from this study. First, the positive relationship between the PSTP and cohesion should be of concern to coaches, sport psychology consultants and other professionals working closely with soccer teams. Second, soccer coaches should use team cohesion measuring



instrument of choice to monitor task and social cohesion of interactive soccer team players. Third, the current study provides a useful indication for further application of the PSTP in professional soccer teams, and national teams, with systematic and organized methods developing the cohesion.

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**Notes**

Note 1. A complete copy of the intervention program can be obtained by contacting the lead author.

Table 1. Cohesion Descriptive Data Among First Team Players.

Test	Subject's Number	Mean	S.D.	95% Conf. Intervals
Pre –	15	64.13	2.03	62.964 to 65.303
Mid –	15	83.46	4.12	81.094 to 85.839
Post –	15	102.13	2.82	100.507 to 103.760

Table 2. Cohesion Descriptive Data Between First Team Players and Coach.

Test	Subject's Number	Mean	S.D.	95% Conf. Intervals
Pre –	15	6.93	1.10	6.300 to 7.567
Mid –	15	12.06	1.48	11.211 to 12.923
Post –	15	15.46	1.24	14.749 to 16.184

Table 3. Cohesion Descriptive Data Among Reserve Team Players

Test	Subject's Number	Mean	S.D.	95% Conf. Intervals
Pre –	15	68.33	1.79	67.227 to 69.369
Mid –	15	65.86	2.06	64.677 to 67.056
Post –	15	66.46	1.88	65.381 to 67.552

Table 4. Cohesion Descriptive Data Between Reserve Team Players and Coach

Test	Subject's Number	Mean	S.D.	95% Conf. Intervals
Pre –	15	7.80	.75	7.354 to 8.246
Mid –	15	6.60	1.35	5.821 to 7.379
Post –	15	5.66	1.17	4.990 to 6.343

Table 5. Repeated Measures ANOVA on Cohesion Among First Players.

	Sum of Squares	df	Mean square	F
Between groups	10831.111	2	5.415.556	538.56
Within subjects	125.644	14	8.975	
Interaction	281.555	28	10.056	
Total	11238.310	44		

Table 6. Repeated Measures ANOVA on Cohesion Between First team and coach

	Sum of squares	df	Mean square	F
Between groups	553.644	2	276.822	142.59
Within subjects	15.244	14	1.089	
Interaction	45.356	28	1.941	
Total	623.244	44		

Table 7. Repeated Measures ANOVA on Cohesion Among Reserve Players.

	Sum of squares	df	Mean square	F
Between groups	49.645	2	24.822	7.41
Within subjects	61.111	14	4.365	
Interaction	93.689	28	3.346	
Total	204.444	44		

Table 8. Repeated Measures ANOVA on Cohesion Between Reserve Team and Coach.

	Sum of squares	df	Mean square	F
Between groups	34.311	2	17.156	14.84
Within subjects	20.978	14	1.498	
Interaction	32.356	28	1.156	
Total	87.644	44		

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