

Team Building Through Mutual Sharing and Open Discussion of Team Functioning

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This article describes a team building intervention with a soccer team during a competitive season. Based on a mutual sharing paradigm we facilitated a series of four team meetings in which team functioning was openly discussed. These meetings were based upon highly structured performance reviews completed by players after each match and analyzed to provide the stimulus for discussion. We adopted a single-case, time series design with multiple pretests and posttests. A postintervention focus group was also conducted with the players. Results suggest the intervention led to improvements in perceptions of team functioning (cohesion, communication, and trust and confidence in teammates), training quality, self-understanding, player ownership and team performance. Players associated the meetings with themes of honesty, open team discussion, sharing of information, and improved communication. The results support the efficacy of team building interventions designed to encourage open discussion of team functioning.

Yukelson (1997) has argued that team cohesion is one of the cornerstones upon which to build effective team performance. Furthermore, being part of a team that gets along well and works together effectively in a cohesive manner can be one of the most gratifying experiences a coach or athlete can have (Orlick, 1986). Team building is the deliberate process of facilitating the development of an effective and close group, "a process by which members of a group diagnose how they work together and plan changes which will improve their effectiveness." (Beer, 1980, p. 140)

Despite the perceived importance of team building to coaches, and within applied practice generally, surprisingly little sport-specific research has been conducted. Within the sport psychology literature, team building has only a short history as a method of intervention (Hardy & Crace, 1997), with only a handful of studies published. Indeed, Carron et al.'s (2002) seminal meta-analysis on cohesion and performance also states the need for more direct interventions. Evidence-based practice guidelines are notably lacking and, in practice, team building interventions often do not appear to extend beyond social activities and events. These certainly have their place, but they often fail to address the more intentional process of diagnosing and

planning changes to the way team members actually work, which, Beer (1980) has argued, should constitute the main element of a team building program.

The recent work of Holt and Dunn (2006; see also Dunn & Holt, 2004) has added new impetus to the literature. They also provide a welcome evidence-base for the personal disclosure mutual sharing (PDMS) approach first advocated for sport teams by Yukelson (1997). To best frame our current work in this area, we firstly provide a comprehensive review of published team building studies.

A limited number of interventions focus on fostering team cohesion through social activities and events. Martin and Davis (1995) studied the impact of a 5 day army training course on 22 elite soccer players. Results revealed a positive impact on the players' well-being and social cohesion. Similarly, Rainey and Schweickert (1988) found that attending a training trip can prevent a decline in social cohesion in a training squad relative to a control. This suggested that simply spending time together can help foster social cohesion.

Other interventions focused more intentionally on team building through meetings and workshop activities. Cogan and Petrie (1995) conducted a season-long, multidimensional intervention with female collegiate gymnasts. The intervention team received 45 hr of various team building activities, and 6.25 hr of anxiety management workshops. Measures taken on the Group Environment Questionnaire (GEQ; Carron et al., 1985; Carron et al., 2002)) and the Competitive State Anxiety Inventory-2 (CSAI-2; Martens et al., 1990) were compared with a control group at six time points across the preseason and competitive season. Only at time point four at the start of the competitive season, on a single subscale of the GEQ (Group Integration-Social), were significant differences found. Within group analyses revealed improvements in social cohesion at the end of the preseason when most team building activities were conducted but these improvements were not maintained. Reflecting on the lack of difference between the control and intervention groups, the authors felt that a winning run by the control group, among other factors, may have led to improvements in cohesion that matched those of the intervention team.

Prapavessis, Carron, and Spink (1996) randomly assigned soccer coaches to a treatment, attention-placebo, or control condition. Coaches in the treatment condition were taught specific team building strategies to use with their teams during preseason and the first six weeks of the normal season. Coaches in the attention-placebo condition were provided with soccer-specific information (e.g., on nutrition and strength training). Cohesion measures at preintervention, preseason, and eight weeks into the season showed no differences between the three conditions. The authors felt the lack of impact may have been due to the indirect approach—i.e., they could not be sure that the coaches implemented the team building strategies effectively. In addition, the athletes had little input into the process and structure of the intervention.

In contrast, Voight and Callaghan (2001) adopted a direct services approach in which the psychologist worked directly with the players and coaching staff of two U.S Division I women's soccer teams. A feature of the direct approach is that team members are encouraged to be active agents in the process, empowered to be involved in diagnosis, planning and evaluation of team functioning. The intervention aimed at establishing shared vision, role clarity, leadership, accountability, team identity, and open/honest communication. One team received the intervention in the preseason with coach follow up, the other six weeks into the season with continued

psychologist reinforcement. A significant weakness in evaluating the intervention is that measures were only taken postseason, and only using the Consultant Evaluation Form (CEF). Both of the teams rated the intervention as being “helpful” in enhancing individual performance (means of 2.8 and 3.1) and “very helpful” in enhancing team performance (means of 3.1 and 3.9) and “very helpful” in enhancing team unity (means of 3.1 and 3.5). The methodological rationale for including two teams within the intervention was not clearly described by the authors, but it was evidently not for control purposes.

Stevens and Bloom (2003), on the other hand, did employ a control group design, albeit without random assignment (i.e., quasi-experimental), to examine the impact of a direct services intervention on perceptions of cohesion in softball teams. Like Cogan and Petrie (1995), results revealed perceptions of team cohesion (GEQ) directly after the program were significantly higher for the intervention group, but these differences were not maintained throughout the season. Focus groups revealed that coach-athlete communication and role understanding were perceived to be the areas showing greatest improvement. Contrasting the findings with those of Prapavessis et al. (1996), the authors felt that their intervention benefited by gaining athlete input into the process, especially in regard to perceived areas of team weakness.

The latest development in team building research has investigated the use of PDMS interventions. Dunn and Holt (2004) examined ice hockey players’ responses to a PDMS activity delivered at a national championship tournament. This involved organizing team meetings in which each player shared a personal story that, ‘you would want everyone to know about you that would make them want you in the trench beside them. . . that should illustrate something that defines your character, your motives, and your desires.’ The purpose of the activity was to create an environment in which the players would be emotionally engaged and would emphasize the importance of team unity. Follow-up interviews revealed perceived benefits including enhanced understanding (of self and others), increased cohesion (closeness, playing for each other), and improved confidence (confidence in teammates, feelings of invincibility). The findings support applied sport psychologists who argue that team meetings, especially if held regularly, build trust, support, mutual respect, and mutual understanding (Orlick, 1986).

In their second study, Holt and Dunn (2006) replicated and evaluated the PDMS intervention with an elite women’s soccer team. Fifteen members of the team provided evaluative data about the intervention they received via reflective interviews. Benefits of the PDMS activity were broadly replicated: enhanced understanding, increased cohesion, and improved confidence. The authors frame the findings in relation to principles found in organizational psychology where communication exercises designed to produce shared understanding of team functioning are well documented. They conclude by providing guidelines for consultants which relate specifically to (a) establishing group communication practices during the season, (b) delivering the meeting and, (c) demonstrating contextual sensitivity (i.e., knowing what type of intervention is appropriate to the team).

In summary, there is little overall continuity to the team building literature in sport. Studies employed a varied range of intervention designs and evaluation measures (none of which were directly performance-related), which makes it hard to compare the efficacy of various approaches. Applied team building research is

clearly a difficult undertaking with intact teams and, as a consequence, guidelines for team building in sport are often derived from the organizational and business management literature. Holt and Dunn (2006) provide some much needed sport specific and evidence-based alternatives. However, while Holt and Dunn's work clearly demonstrates the value of the PDMS approach, they point out that the highly personal nature of their disclosure exercise may not be appropriate to all teams; the level of personal engagement involved in the process is most likely to be found only in highly committed athletes. Dunn and Holt (2004) hypothesize that the PDMS process might be just as effective if the content of the disclosure were changed to something less personal, for example, individual goals or player roles. They speculate that open discussion of these task-related components might align with improved task cohesion. They also suggest that future research could more rigorously test these effects through the use of pre and post measures of understanding, cohesion, and confidence. Certainly, for athletes who are not at such elite levels, or in resistant cultures such as British soccer (Harwood, 2008), mutual sharing and open discussion of team functioning, as recommended by Yukelson (1997), may be more readily embraced than a meeting that focuses exclusively on personal disclosure:

Team building is a dynamic process that unfolds over time and is the result of coaches and athletes working together to achieve team goals and objectives, having a positive team atmosphere conducive for goal attainment, and *a mechanism in place to openly and honestly discuss the quality of group functioning and team efficiency.* (p. 82, italics added)

In the present work, we set out to examine the effectiveness of a team building intervention based upon establishing such a mechanism to openly and honestly discuss team functioning. Synthesizing the key elements of previous team building interventions our approach had three major components: (i) a systematic approach for all players and coaching staff to evaluate team functioning and contribute to the team building process; (ii) regular structured team meetings for players and coaching staff to openly communicate and discuss team functioning; (iii) season-long involvement of the consultant (i.e., a long term and direct services approach).

The intervention approach drew upon recent work examining the performance environment of the England youth soccer teams. Pain and Harwood (2007) presented a qualitative description of the performance environment comprising 158 factors identified by coaches, players and support staff. Team cohesion, player understanding, and preperformance routines were among the factors most frequently cited as having a positive impact on performance. Pain and Harwood (2008) developed these factors into a conceptually based instrument that was completed by England youth squads and support staff over a two year period. The Performance Environment Survey (PES) enabled a quantitative assessment of the potential positive and negative impact of a wide range of factors within that environment. Team and social factors were found to have the greatest positive impact on performance, which supported the findings of the 2007 study and reinforced the importance of interventions in the social domain.

In the present intervention, we used the PES to analyze team functioning on a game by game basis. This analysis provided the stimulus for open discussion in a series of structured team building meetings. Multidimensional pre and post measures were used to assess the impact of the intervention on perceptions of team functioning and cohesion. By relating the findings to previous research and our own professional experiences, we also provide guidelines for practitioners implementing team building interventions.

Method

Participants

The participants were players in the second XI soccer team at a university in central England. 18 players were involved in the study but, due to squad rotation and injuries, not at every time point. The average age was 20.6 years (range 18–24 years, $S.D = 1.87$). There were three first year, ten second year, and five final year players. Most of the players had been previously coached at Football Association (FA) academies or centers of excellence associated with professional clubs (average time = 3.9 years). The team competed in the British University Sports Association (BUSA) competition.

The coach was 25 years old, held a high-level coaching award (UEFA B-level), and had coached for 5 years. Voight and Callaghan (2001) argue that coaches may be more effective than outside consultants in facilitating a team building program due to the greater reciprocal investment between them and the players. In attempting to maximize the beneficial impact of the coach, delivery, although led by the practitioner, was always partnered by the coach, who was active in each team building meeting.

Intervention Design

While maintaining a focus on a consulting role, we followed a field-based scientific design as closely as possible. We adopted a quasi-experimental, single-case, time series design with multiple pretests and posttests. A series of baseline measures taken before the intervention enabled the establishment of linear tendencies apart from treatment (Martin & Pear, 1996).

Informed consent was obtained from the coach and players. The Performance Environment Survey (PES; Pain & Harwood, 2008; see instrumentation) was distributed weekly to players and the coach in the dressing room directly following the game. The survey, which captures detailed feedback on team functioning, was completed and returned anonymously. Baseline measures were continued for a period of five games before introducing the intervention which comprised four meetings over consecutive weeks (during which three games were played). Following this period, three further games were played, from which data were collected to assess retention effects. The baseline of five games was decided 'a priori' based upon the total number of games in the season (eleven) and the need to establish any linear trends before the intervention.

Instrumentation

Developed from in-depth interviews with England national team players, coaches and sport scientists (Pain & Harwood, 2007), the PES (Pain & Harwood, 2008) was designed to evaluate team functioning in elite soccer. Sixty-six items capture information pertaining to each of the key areas of the performance environment: Physical, Psychological, Coaching, Team/Social, Planning/Organization, and Environmental. Although the psychometric properties of the PES have not been tested and future research is needed, as an applied tool, it provided a comprehensive and ecologically valid means for analyzing and describing team functioning in football over the course of the season.

Players rated both the direction and the extent to which they perceived each of the 66 variables had influenced game performance. Respondents were prompted to answer on a 3-point scale (1 = *not at all*; 2 = *somewhat*; 3 = *very much so*) to statements including: 'I found it hard to relax going into the game,' and 'The team was committed to the game.' They were then asked to rate the perceived impact on performance based on an 11-point scale (ranging from -5 = *extremely negative*; to +5 = *extremely positive*; with 0 = *no impact*). The survey ends with short answer, open-ended questions including: 'What did you find particularly helpful to your physical preparation?'; 'What did you find particularly helpful to your mental preparation?'

The PES was administered on a weekly basis throughout the baseline and intervention periods. These rich data were analyzed to generate the content for team discussions and also to measure team functioning and performance. This detailed needs assessment provided time to build rapport with the team and to shape the intervention in a way that was meaningful to those involved (see Brawley and Paskevich, 1997).

Performance Measures. Performance enhancement is often defined by objective success (e.g., win/loss record). Some interventions, however, have emphasized the importance of also addressing subjective measures of success (Wanlin, Hrycaiko, Martin, & Mahon, 1997; Lane & Chappell, 2001). Previous team-building interventions have omitted any form of performance measure.

Two items from the PES measured performance: "How would you rate your *individual* performance?" (anchored from 0 = *poor*; 5 = *average*; to 10 = *great*) and "How would you rate the *team's* overall performance?" (Anchored from 0 = *poor*; 5 = *average*; to 10 = *great*).

In line with Dunn and Holt's (2004) suggestion for assessing the impact of the meetings on team functioning using pre and post measures of cohesion, the following four items from the PES were used:

- "We had strong team cohesion on the pitch" (team cohesion)
- "The team communicated well on the pitch" (communication)
- "Socially we were a strong group off the pitch" (social cohesion)
- "There was trust and confidence between teammates" (trust & confidence)

Respondents were prompted to answer on a 3-point Likert scale (1 = *not at all*; 2 = *somewhat*; 3 = *very much so*).

Social Validation. A postseason focus group lasting 45 min was conducted with a representative sample of five team members (the captain, three regular players, one non regular player) to explore the processes associated with the intervention. The open and flexible nature of focus groups is thought to enable intensive exploration of opinions, feelings, attitudes and behaviors and can yield richer information than individual interviews with the same number of people (Murphy, Cockburn, & Murphy, 1992). The focus group followed a semistructured format, and included the following questions: "What did you think of the content and style of the team meetings?", "What changes, if any, did you notice in the team, or yourself, as a result of the team meetings?", "*How* did the meetings impact team functioning?", and "What was the most important aspect of the meetings?"

Data Analysis

Visual examination with comparison of mean values, an accepted alternative to statistical techniques in single-case designs, was used to examine the measures of team functioning taken pre and postintervention. This proceeded following the guidelines outlined by Martin and Pear (1996). When inspecting the data to determine whether the treatment has had an effect on the dependent variable, confidence that an effect has been observed is enhanced: (a) when baseline performance is stable or in a direction opposite to that predicted for the treatment, (b) the fewer the number of overlapping data points between baseline and treatment phases, (c) the sooner the effect occurs following the introduction of treatment, (d) the larger the size of the effect in comparison with baseline. Confidence in the observations is also enhanced if the results are consistent with existing data and accepted theory. Transcribed focus group data were content analyzed following the procedures outlined by Patton (1990) for inductive content analysis. A second researcher, also experienced in content analysis, independently validated the procedure at each stage.

Trustworthiness Criteria

To enhance the trustworthiness of the analytical process, focus group data were returned to the participants who were then engaged in a member-checking interview to verify they had been accurately represented (Miles & Huberman, 1994). Summaries of the results were presented to test the credibility of the analysis as a whole with the participants. The presentation of the results followed the procedure of carrying out a comprehensive member check described by Lincoln and Guba (1985). Participants were asked to comment on the accuracy of descriptions and interpretations, elaborate on issues they found important, and to confirm they were satisfied with measures to protect their identities and confidentiality.

In addition, prolonged engagement, an investment of time to learn about the context in which the phenomena is embedded (Lincoln & Guba, 1985), was accomplished by engaging fully with the team across the season-long intervention. The honest and accurate disclosure of participants is made more likely by establishing a foundation of trust (Glesne & Peshkin, 1992).

Program Description

Structured team building meetings were held on a weekly basis during the intervention period. Meetings included all the players and coaching staff, and were facilitated by the sport psychologist. The baseline data pertaining to the performance environment provided the stimulus for an open discussion of team functioning.

Each area of the performance environment was, in turn, used as an opportunity for open discussion. In the first team building meeting, the analysis of PES data relating to physical factors were presented and discussed openly. In the second meeting, team factors. In the third meeting, planning and the environment (combined), and in the fourth, psychological factors. We felt it was unfair to use coaching factors as the basis of a team discussion, so these were fed back to the coach in a one-to-one meeting.

Workshop Delivery.

Each 45 min meeting was held during normal coaching time and followed a 3 stage protocol, as shown in Table 1.

As noted earlier, all players engaged in these meetings and over the course of the four meetings it was noticeable how the discussion became more fluent and open and more players became actively involved. The coach's main role was to note the key discussion points, and in the third stage of the meeting to guide the onto positive action steps.

Results

Impact on Team Functioning

The impact of the intervention on variables measuring team functioning are shown in Figures 1–4:

Improvements were shown in each measure immediately following the introduction of the intervention. Specifically, trust and confidence in teammates showed the largest overall mean improvement from baseline (1–5) and intervention phases (6–8; from 2.31 to 2.84 = 22.9%). In addition there were no overlapping data points. On-pitch communication showed a mean improvement (from 2.12 to 2.60 = 22.6%), had two overlapping data points, and dropped significantly in game 11. Team cohesion showed the largest immediate improvement and the next greatest mean change (from 2.41 to 2.91 = 21%) but had three overlapping data points. Social cohesion showed the least mean improvement (from 2.26 to 2.52 = 12.0%), but had no overlapping data points. In addition, social cohesion showed the best retention effects once the intervention period ended (games 9–11). Given the guidelines for visual inspection regarding baseline stability and overlapping data points, the effects for social cohesion, and trust and confidence can be confidently attributed to the intervention.

Impact on Performance Measures

In terms of objective outcomes, the team won one and drew two of the first three games. They then lost the next two games. It was at this point, at the end of the baseline period, that the intervention was initiated. They won their next three games

Table 1 Workshop Design and Summary of Content

Workshop Step	Process	Summary of content from meeting focusing on team/social factors
1. Raise Awareness	With players seated in a half-circle to encourage openness, we presented a summary of responses from the baseline period. Factors perceived as having the most positive impact were presented first, followed by those perceived as having the most negative (or least positive) impact. We aimed for around 5 positives and 5 negatives. These quantitative data were supported with related short answer responses the players had included on the PES.	• Impact of team/social factors highlighted—from most positive (commitment, resilience) to least positive (leadership, communication). • Impact of these factors traced through last six matches. • Communication highlighted to show that when it was good, the team performed well, when it was bad, the team performance dropped significantly. Player comments from the PES used to back this point up. “Nobody talking in the 2nd half.” “Positive encouragement dropped significantly after they scored.”
2. Open Discussion	Using these data as a stimulus, invite players to agree with or question the responses: ‘What do you think?’; ‘Does this agree with what you thought about these games?’	• Players identified that only three were natural talkers • Overall communication could be improved by simple positive comments and giving information • Indecision caused by instructions from center-back being ignored
3. Generate Action Points	Players were encouraged throughout the process to come up with realistic ways of improving team functioning: e.g., ‘Ok, so we agree there hasn’t been enough specific feedback on the pitch, what can we do about this?’	• Team agreed to remind each other to make communication a goal for training and matches • Leadership/instructions of center-backs to be unquestioned

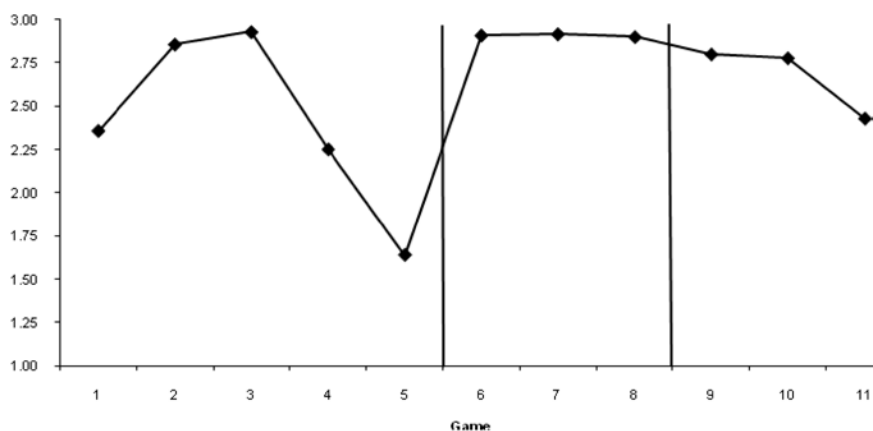


Figure 1 — Perceptions of team cohesion (on-pitch).

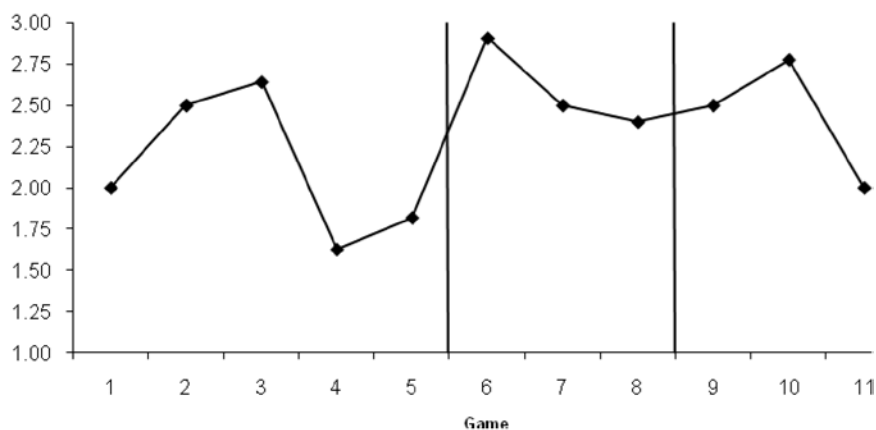


Figure 2 — Perceptions of communication (on-pitch).

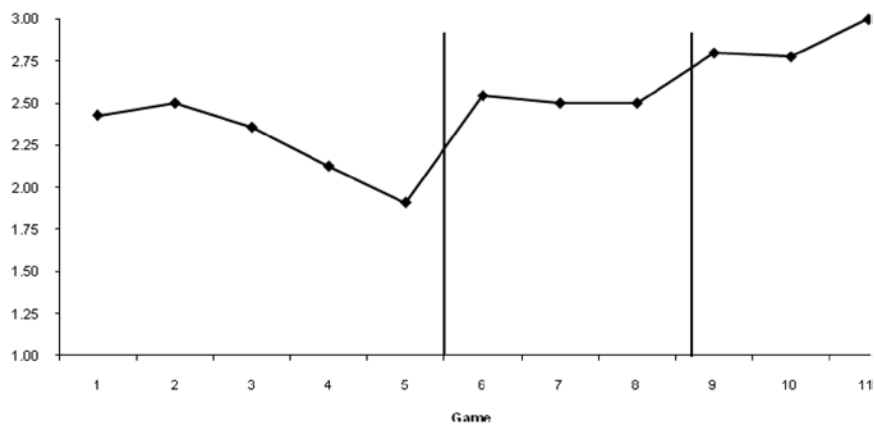


Figure 3 — Perceptions of social cohesion.

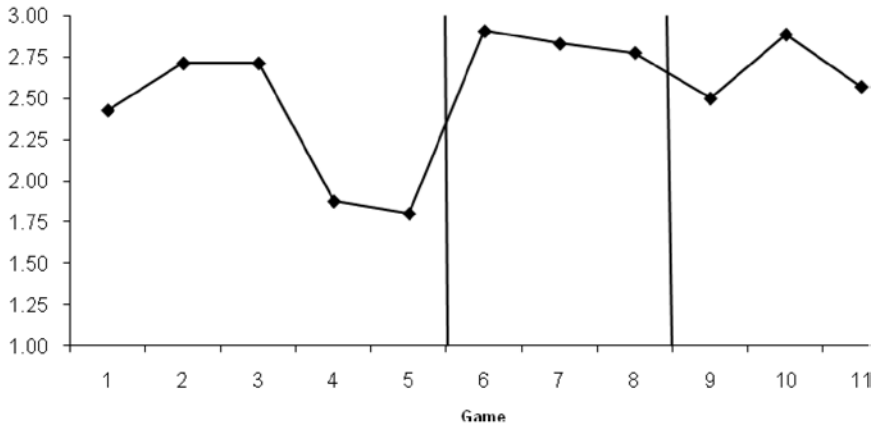


Figure 4 — Perceptions of trust and confidence in teammates.

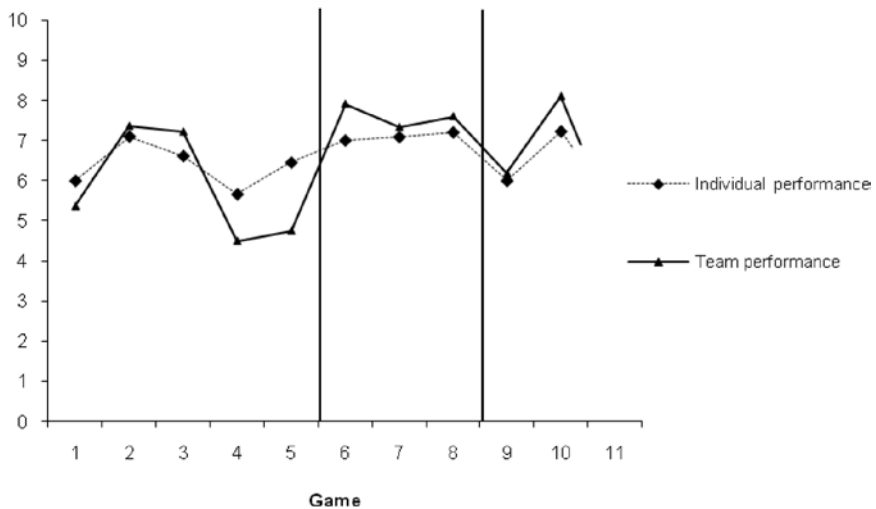


Figure 5 — Individual (dashed line) and Team (solid line) performance ratings.

without conceding a goal and qualified for the BUSA knockout tournament. They then won in the last 16 and quarter-final matches, before losing in the semifinals.

Performance measures increased immediately after introducing the intervention, especially the team performance measure (see Figure 5). Between the baseline and intervention periods there were no overlapping data points for team performance and one for individual performance. Specifically, mean scores for individual performance were higher during the intervention period (from 6.37 to 7.09 = 11.3%) with one overlapping data point. Team performance also showed an increase (from 5.84 to 7.61 = 30.4%). Overall, perceptions of team performance fluctuated more markedly than those of individual performance. The difference

between the two measures provides an indication of the additive or subtractive effect of team processes in each game.

Postseason Focus Group

The postseason focus group offered some stimulating insights into the processes and outcomes associated with the intervention.

Processes. Six themes emerged in relation to the processes engendered by the intervention: open team discussion, raised problems with team functioning, honesty, mutual sharing, player participation and communication to the coach. Quotations are included to illustrate each of these themes. Firstly, the meetings themselves provided an environment conducive to the kind of *open team discussion* the intervention was designed to facilitate:

It gives you a chance to say everything, rather than talking behind backs. Not behind backs because we weren't slagging anybody off, but it gives you a chance in group, to get everyone together, and in the right environment. In a room where we can all talk about what was on the sheets. (Captain)

The following player expressed how he felt able to be *honest* in the meetings, which was seen as important to the overall aims of the process:

I felt really relaxed in the meetings, that I could honestly say what I thought. And I wouldn't be punished, or the boys wouldn't look at me bad, or [the coach] drop me because I've said preparation was rubbish or something. That was a big help, because if you did, it's a bit false isn't it. (Regular player)

This process of *mutual sharing* led to insights that may not have occurred outside of the team meetings. These insights could relate to the team as a whole, "There were a couple of times when people had said things that I hadn't thought about myself, and that was interesting to work back through it like that as a team," (Captain); or to personal knowledge, "If somebody said something and it was related to you as well, but you wouldn't have thought of it yourself if they hadn't brought it up. So it was good to actually be able to see it." (Regular player)

The questionnaire feedback process facilitated *player participation* by giving even the quieter players an opportunity to share their views with the team: "The people who were still in their shells weren't gonna stand up in the changing room and say this was poor, or whatever. Or question the manager's view," and another said, "They wouldn't normally pipe up on the training ground. It's good to hear what the quieter people in the team think about the team and things." (Captain)

Similarly, the process facilitated open *communication to the coach*:

Nobody really wanted to go up to [the coach] and say what they thought. But then we were talking about it on the sheets, and points were coming out, and we felt we were being heard by him, but not in a bad way. It's not like going up to somebody and saying you should have done this and this. (Non regular player)

Outcomes. Six themes emerged in relation to the outcomes engendered by the intervention: togetherness, inclusion, communication, training quality, self-understanding, player ownership. In the following quotations, players provide

examples of how individually and collectively they benefited from the intervention. They reported how the process had improved the *togetherness* of the team:

It got us together as a team. And we needed it as well, because we were going through a rough patch. There was just more of a spirit. Everyone was there for that extra half hour or forty minutes and people just got to know each other a bit better I think. (Non regular player)

Meetings were held at the start of the regular training sessions, and were perceived by the following player as leading directly to an improvement in *training quality*:

I remember when we trained over the college after a meeting and that session was absolutely buzzing. Because everyone was talking about it on the way over, and saying, 'yeah, that's good, and that's good.' (Regular player)

Completing the questionnaire after games helped the following player increase his *self-understanding* and diagnose the actions needed to improve them:

It made me look back and reflect on my own game and what I did. It asks you all the questions, like, 'how well did you prepare?' and you actually start thinking about it . . . you can think about what you're going to do next time and think in some detail for yourself and the team. Like next time I need to get myself organized properly, if I need to do something I'll do it. Get my food and drink early on. Get there early for myself. (Regular player)

For the following player, team discussions led to an improved self-awareness regarding different components of his game:

I think on the communication side, when we went round and discussed who were the talkers in the team, it made me realize . . . when I'm out there playing I think I'm talking a lot, but when you hear other people reflect on it, you realize that maybe you're not as much as you think you are. And that helps you look at the components of your game as well. (Regular player)

Finally, taking the intervention as a whole, players reported how it had given them greater *ownership* over team functioning, "It was good because we had input on how to do it. Instead of being told you've gotta do this do this do that." (Regular player); and from a non regular player, "Because we were putting our views in and they were actually being followed, it meant we had some control over it."

Discussion

The major purpose of the study was to determine the effectiveness of a team building intervention based upon establishing a mechanism for honest and open discussion of team functioning. We took a direct services approach in which the sport psychologist, coach, and players were actively involved in all stages of the process. The central component of the intervention comprised a structured series of meetings in which performance environment data collected from the players over the course of the competitive season was shared and discussed within the team.

Based upon a multidimensional assessment of change the intervention was associated with improvements in perceptions of team functioning and team performance. The discussion will briefly examine the overall impact of the intervention, and secondly, will pull together the present findings with previous research to provide guidelines for applied practitioners.

Measures of team functioning (team cohesion, social cohesion, trust and confidence in teammates, and communication) revealed improvements directly following the first feedback meeting that were generally maintained throughout the intervention period. Given the guidelines for visual examination, however, only the effects for social cohesion and trust and confidence could be attributed to the intervention. It should be noted that using a 3-point scale introduced a potential ceiling effect that may have obscured more powerful results, particularly for team cohesion. Focus group themes revealed outcomes associated with improved cohesion (togetherness, inclusion and communication), training quality, self-understanding, and player ownership. Ratings of performance satisfaction also showed improvements following the intervention which, supporting the team building focus, were much greater for the team than the individual measure. With respect to the processes perceived to lead to these outcomes, players associated the themes of honesty, open team discussion, sharing of information, and raising issues of team functioning with the meetings. Overall, the results lend support to Yukelson's (1997) assertion concerning the centrality of open and honest discussion to the team building process, with themes emerging from the focus group data suggesting that the intervention met its design objectives in this respect.

The findings also endorse the efficacy of Dunn and Holt's (2004; Holt & Dunn, 2006) team building approach, specifically in regard to the perceived benefits of meetings in which mutual sharing is encouraged. As revealed in the focus group data, at the individual level the sharing process reportedly helped players discover new things about themselves. At the team level, the sharing of information was reported to have improved the overall understanding players had of their teammates and the different aspects of team functioning. These findings support arguments linking mutual-sharing to mutual understanding in team sports (Hardy & Crace, 1997). Cannon-Bowers and Salas (2001) assert that shared cognition can lead to "motivational outcomes such as cohesion, trust, morale, collective efficacy and satisfaction with the team" (p. 200). The improvements reported in training quality also suggest the meetings had a motivational effect.

Mental models is an umbrella term given to aspects of shared cognition and understanding. The basic premise of the approach is that team effectiveness will improve if team members have an adequate shared understanding of the task, team, equipment and situation. Mohammed and Dumville (2001) describe four knowledge areas in which knowledge may be shared by team members: task-specific knowledge, task-related knowledge, knowledge of teammates, and attitudes/beliefs. Any combination of these areas may be addressed in an attempt to improve shared cognition. Dunn and Holt (2004) used players' personal stories as the basis for mutual sharing (i.e., knowledge of teammates). The present study, on the other hand, mainly addressed task-specific knowledge. That is, the processes, actions, and sequences used to accomplish team objectives. In doing so, tentative support was found for Dunn and Holt's (2004) suggestion that team discussions targeting areas related to the task, such as personal goals or player roles, may yield benefits

aligning with aspects of task cohesion. Overall, the results suggest that open and honest discussion of team functioning can yield benefits aligning with aspect related to both task *and* social aspects of cohesion. These findings support Carron et al.'s (2002) assertion regarding the benefits of interventions that target both task and social aspects of cohesion.

The collection of GEQ data at regular intervals would have enabled a more thorough consideration of the relative impact of the intervention on these two aspects of team cohesiveness and would have helped toward clarifying the cohesion-performance link. In addition, given that the feedback discussed in team meetings was grounded in aspects of team functioning, this approach would have facilitated a more thorough exploration, in particular, of the impact on task cohesion (i.e., group integration-task and individual attraction to group-task). Carron et al.'s (2002) analysis found the strongest link between task cohesion and team success and exploring this relationship in more detail appears especially pertinent.

Retrospective completion of the PES opened the possibility for the match outcome to confound the measures of team functioning. However, only in the final match of the season, a loss, did measures decline noticeably, and even then only team cohesion and communication were greatly affected. Comparing this game to the two losses that occurred before the intervention (4 & 5), both of which rated similarly on measures of performance, it is notable that measures of team functioning were still consistently much higher in the final game. In addition, measures of team functioning following game 3 (a draw) were higher than following many games that had been won.

The strengths of the intervention were that it was conducted in the field over the course of a competitive season, and therefore had high ecological validity. In addition, data were gathered from multiple sources, using repeated measures and mixed methods, which made it possible to examine in detail the processes as well as the outcomes associated with the intervention. However, lacking a randomized control group design makes it impossible to infer causality. We were guided by Brawley's (1990) proposal that the cohesion-performance relationship might be examined not from a linear cause-effect perspective but, instead, to find out what *processes* build team cohesion and also contribute to team performance. In this spirit, the PES data were seen as revealing trends in team functioning which, when supplemented by qualitative data, enabled key processes to be illuminated.

The intervention was shown to have a greater effect on team performance satisfaction than individual performance satisfaction, which did not improve greatly. This provides further validation that the intervention met its overall team building purpose. The contrast between team and individual measures of performance directly following the intervention also suggests a positive impact on team processes.

Implications for Professional Practice: Guidelines

1. Direct Services Approach With Athlete and Coach Input. In support of Stevens and Bloom (2003), the direct services approach adopted here, in which the input of players formed the basis of the intervention, appeared central to its perceived positive impact and may also help explain some of the positive effects on individuals. Players associated with the intervention greater levels of control and input into team functioning, including improved communication with the

coach. Within the organizational literature, the strategy of empowering people is seen in team-focused management approaches that, “encourage the integration of goals among the individuals who must work together, rather than placing the entire responsibility for coordination on a common superior.” (Beardwell, Holden, & Claydon, 2005, p. 539). Beer (1976) argues that the survey feedback approach to organizational change may equalize power by, “increasing communication, information flow, confrontation of problems – all important dimensions of organizational health.” (p. 949). Similar processes were found in the current study. It was particularly interesting to note how the intervention was perceived to have helped the quieter players to find a voice, and the non regular players to feel more involved with the team. UK Sport recently published a report in which elite athletes raised the importance of two-way communication between themselves and management, as the following quote illustrates:

It boils down to communication. So if you split it into two sides, which is the athletes and their management, communication flow tends to only go one way. I mean we get told what to do, we have to know how to receive feedback, we’ve got to take it, swallow it, and get on with what you’re doing. But it doesn’t got the other direction. It’s very difficult for an athlete to say to their team manager ‘If you want some feedback, actually we didn’t handle this very well and maybe it should be structured differently.’ (Douglas & Carless, 2006, p. 64)

The full backing and involvement of the coach appeared integral to the success of the program. Firstly, this support was helpful in encouraging the players to complete the PES after matches and to do this in a consistent way. Secondly, it was helpful to the dynamic of the feedback meetings, whereby issues that were important to the team were prompted and probed in a united manner by the consultant and coach. An indication of the coach’s support for the intervention was the use of normal coaching time for the team building meetings, which sent a clear sign to the players that the work was valued.

The practical benefits of the direct services approach, in which coach, players and psychologist work together, were reinforced by the comments of players, especially those relating to ownership and communication with the coach. The skill, however, is in balancing these three groups so that each has the right level of input into the process and the direction of the intervention. Some coaches may, however, be reluctant to allow “outsiders” direct access to their players (Ravizza, 1988), especially in soccer (Pain & Harwood, 2004). In these cases an indirect approach may be necessary. The intervention strategy employed within the current study could certainly be delivered by the coaching staff with the consultant working in the background to analyze and provide the pertinent themes for team building discussions.

Recent research with ice-hockey coaches has shown positive results for the indirect approach in youth sport settings (Newin, Bloom, & Loughhead, 2008). It is perhaps also significant that the delivery of these coaches was monitored throughout.

2. Establish a Mechanism to Openly Discuss Team Functioning. Simply presenting and discussing team performance feedback appears to an effective approach to team building. It grounds the intervention in team specific information, and this appears to help build interest and make discussion much easier and more

relevant to the players. Furthermore, given the misconceptions of athletes and coaches with respect to sport psychology (Ravizza, 1988; Pain & Harwood, 2004), grounding sessions on aspects of team functioning, and keeping them short and to the point, is an effective strategy.

As with Dunn and Holt (2004), it appeared to be the honesty, openness, and mutual-sharing encouraged by the meetings that underpinned many of the improvements perceived in team processes. Holt and Dunn (2006) note that high-performance teams are most likely to fully engage in a PDMS intervention due to their commitment and willingness to “do whatever it takes.” It is our experience that players at a lower level who are reluctant to discuss highly personal events with the team are more likely to engage in discussions relating directly to team functioning. If these are systematic and well managed they can, as shown here, yield similar benefits. These task-focused discussions may also pave the way for a PDMS intervention.

Team cohesion thrives in open and honest environments. Coaches and consultants should attempt to promote more open communication between players and between players and staff. Providing players with a mechanism for communicating more openly with the coach helps to build a sense of ownership and involvement. This approach requires the commitment and support of the coaching staff, not least because they must also be prepared to receive the honest feedback of their players. The boundaries for this communication will be set by the coaching staff and will depend to a large extent on the level of input they are prepared to receive from players. Coaches who are open to feedback appear to appreciate the greater understanding it gives them of their players. Bear in mind however, that in certain sporting cultures, seeking input from players may appear to be a sign of weakness (Potrac, Jones, & Armour, 2002).

3. Long-Term Involvement of the Consultant / Timing of the Intervention. Team building should begin in the preseason with ice-breakers and social activities to help integrate new players and staff. A regular schedule of team meetings should then be continued in which players as well as staff are given the opportunity to raise issues regarding team functioning. It is important to regularly create space, away from the training ground, where players feel comfortable discussing team issues in an honest and open manner.

Periodically, feedback meetings, based upon the input of all players (and ideally, staff) should be held to foster open communication and mutual-sharing. Using a contextually relevant feedback tool, such as the PES (which can be abridged), to act as a stimulus makes the process more systematic and help secure the involvement of all players (quieter players who may not contribute so much in meetings can still contribute through an anonymous survey).

The extensive baseline period (effectively a needs analysis) meant that in team meetings we could comprehensively address the key factors within each domain of the performance environment. Taking a systematic and long-term approach to a team building intervention is recommended (cf. Brawley & Paskevich, 1997). The timing of this type of meeting can also have a significant impact on its success. Early in the season it is more difficult to objectively discuss aspects of team functioning simply because the players have not gone through many different competitive experiences. It is interesting to note that, with the exception of Dunn and Holt

(2004), all the published team interventions, many of which failed to show a clear effect, were conducted over the preseason. Expert coaches interviewed by Bloom, Stevens, and Wickwire (2003) reported the importance of team building activities in the preseason, but also at key times including before key games, after confidence had been shaken and after breaks. Building up to key games, it is important to have more social activities and exercises that build on emotional bonds, such as personal disclosure in meetings (Dunn & Holt, 2004; Holt & Dunn, 2006). The consultant must, however, take time to develop the contextual intelligence necessary to pitch the meetings at an appropriate level for the players involved. Generally the higher the level and more committed the players, the more likely they are to fully engage with PDMS exercises. In a tournament environment (often residential), a well-timed disclosure exercise can be especially powerful. The tournament environment can also become monotonous (Pain & Harwood, 2007), and it may be helpful to introduce social activities and team building games that take the team outside of the hotel and the normal routine.

In team meetings, knowing when to take a positive lead and when to allow others to do so is greatly helped by having a close and long-term involvement with the team and especially coach. The more time is spent around the team and the coach, the more likely it is that they will respond honestly and openly in team feedback sessions. Holt and Dunn (2006) make the same recommendation:

We cannot overemphasize the importance of understanding and considering contextual factors prior to implementing this type of applied sport psychology intervention... We suggest that this requisite level of contextual intelligence can only be truly attained if the SPC works closely with the team over a prolonged period of time.

Conclusion

The present study is the first in sport to examine, and tentatively establish using multidimensional measures, a link between team building, team cohesion, and improvements in team performance during a competitive season. The PES afforded the possibility of synthesizing mutual sharing (Dunn & Holt, 2004) with open discussions of team functioning (Yukelson, 1997) and enabled team members to be active agents in the process, empowered to be involved in diagnosis, planning and evaluation of team functioning (Bloom, 1996). This approach has a strong conceptual grounding and the findings suggest it is an effective approach to team building in sport. Future work is needed to develop and refine the evidence-based guidelines presented here.

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