Psychological Momentum in Team Sport: 
An Intervention Program in Professional Soccer

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This article presents an intervention program with an under-17 soccer team, in which a coach and a sport psychology consultant integrated training of psychological momentum (PM) into daily practice sessions. Starting out with basic description of PM, we proceed to describe how the intervention program was applied in a professional soccer team. The paper provides a detailed description of an 18 months intervention program that progressed from initiation of the program, group discussions, action plans, to on-pitch training of PM. The article finishes with reviewing under-17 coach and player reflections on the application of the intervention program.

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Momentum is a well-known concept in soccer. Often players, coaches or commentators talk about momentum in soccer however often under different conditions such as: momentum during the whole match, during short periods in a match, related to ball possession, being in control of a game, a winning streak or momentum as the force that dictates the flow and ebb of matches (Higham, Harwood & Cale, 2007). Momentum was first defined as “a state of dynamic intensity marked by an elevated or depressed rate in motion, grace, and success” (Adler, 1981, p. 29) and studies show that momentum has significant (Perreault, Vallerand, Montgomery, & Provencher, 1998) as well as little (Stanimirovic & Hanrahan, 2004) influence on performance. Nevertheless, momentum comprises a number of psychological features that change according to how athletes progress or regress in relation to the goal to be reached (Gernigon, Briki, & Eykens, 2010). Along these lines, psychological momentum (PM) has been of central interest in models of momentum. Vallerand and colleagues (Perreault et al., 1998; Vallerand, Colavecchio, & Pelletier, 1988) proposed an antecedents consequences model in which PM is defined as the “perception that the actor is progressing toward his/her goal [...] perception of progression toward the goal is associated with heightened levels of motivation and enhanced perceptions of control, confidence, optimism, energy and synchronism” (Vallerand et al., 1988, p. 94). Taylor and Demick (1994) proposed a multidimensional model in which PM is linked to performance and defined as a “positive or negative change in cognition, physiology, affect, and behavior caused by a precipitating event or series of events that will result in a shift in performance” (p. 51). Recently, Gernigon, Briki, and Eykens (2010) defined PM as “a positive or negative dynamics of cognitive, affective, motivational, physiological, and behavioral responses (and their couplings) to the perception of movement toward or away from either an appetitive or aversive outcome. Such a perception might emerge from both the feedback and feedforward that are provided by the specific ongoing history of events” (p. 397). Following these notions, PM could be both a positive as well as a negative force that changes the way an event is experienced (Briki, Den Hartigh, Hauw, & Gernigon, 2012; Jones & Harwood, 2008). Briki and colleagues, define positive PM when athletes experience an upward spiral, a period in which everything appears to be going right (Briki, Den Hartigh, Markman, Gernigon, 2014) while negative PM is experienced as a downward spiral, a period in which everything appears to be going wrong (Briki et al., 2014). These examples highlight the cognitive, affective, and behavioral changes associated with PM, whether the experience of PM is positive or negative. However, despite the theoretical perspectives and amount of research in this area, PM remains a largely unknown concept within applied sport psychology in team sports, and a concept that is (to the best of our knowledge) rarely targeted in applied sport psychology service delivery (Crust & Nesti, 2006). The apparent lack of applied focus could leave PM as a hidden force that is felt and sensed,
both positively and negatively, yet about which nothing systematic is done by coaches, players, or SPCs (Higham et al., 2007). Jones and Harwood (2008) support these perspectives and furthermore highlight that to provide a basis for intervention, investigations should focus on athletes’ experiences of PM, which should include what athletes perceive as the triggers of PM; the cognitive, affective, and behavioral changes associated with experiencing PM; and how players may exert control over such perceptions. The latter perspective is previously argued by Vallerand and colleagues (1988) however other researchers argue that perceptions of PM could be an extra personal force that arises outside the control of the athlete (Markman & Guenther, 2007).

The present paper takes as a vantage point in the perspectives of Vallerand and colleagues (1988) that athletes can learn to control their perceptions of PM. The purpose of this paper is to describe a one and half year intervention program with an under-17 soccer team in AGF soccer club who play in the best youth league in Denmark. The aim of the program was to increase the players’ awareness of triggers, of cognitive, affective, and behavioral changes associated with PM, and of how players may control perceptions of PM during training and in matches. The first author (and trained sport psychology consultant) managed the intervention program and in the following we will describe the intervention program in details and present perspectives on how to integrate PM as a part of soccer training.

The intervention program

Background

The intervention was initiated on a backdrop of a lack of history in the club for sport psychology but also a historically poor season (only one victory, five drawn games and seven defeats in the autumn and a close to last finish in the league). This has led to a thorough analysis of the team during the previous season in which coaches and management pinpointed PM and reactions to adversity on individual and team level in matches and during training sessions as an area of potential improvement. For these reasons, the coach was very keen to work with the players’ psychological approach to difficult periods in matches in which opponents had overpowered the team.

Participants

AGF soccer club is one of the most successful Danish soccer clubs with five Danish championships and nine cup titles (a record). The club consists of two departments: a volunteer, non-elite department for a wide range of soccer
players, and a professional elite department for male youth teams (ranging from under-13 to under-19) and a professional senior team organized into a section of its own and plays in the Danish Premier League. The club is a successful talent development environment and produced between 15 and 25 male youth national players from 2007 to 2009. Seven of the club’s 25 professional players are products of the youth department. The participants in the present intervention program were the under-17 team and its associated coach. The team has two youth national players and was a relatively homogeneous group of players who in recent years have come to AGF soccer club from local clubs in and around Aarhus. This means that the players have only played together a few seasons ahead of the program.

**Program Design**

The program involved five related steps spanning 18 months from spring 2011 to autumn 2012. Inspired by the recommendations by Jones and Harwood (2008), the program aimed at: (1) preparation of the program to ensure that the program was supported in the club, (2) identify triggers of PM (3) to ensure that behavioral changes associated with PM were a part of daily practice, (4) to identify and practice how players may control perceptions of PM during training and in matches (Jones & Harwood, 2008) and (5) finally there was an evaluation of the intervention program. These steps reflect the purpose and aims of the intervention and are described in the following sections. Following the definitions of PM, we do not assume that players experiencing positive PM always perform at a higher level or that their team will win the game (nor that negative PM means a bad performance). This corresponds with some authors (e.g. Higham et al., 2007) who highlight that PM might not always be seen in the score.

**Step 1: Preparation of the program.** As sport psychology was new to the club and the team, the sport psychology consultant (SPC) and under-17 coach wanted to create an awareness and ownership of the intervention in the club. Therefore, the SPC and under-17 coach spent a lot of time ‘lobbying’ for the program and making sure that managers, coaches from other teams and the health department were supportive of the program. Such lobbying included presenting and discussing the purpose of the program and asking people how they see the team’s challenges and to give advice about the intervention. Establishing a supportive atmosphere in the whole club is an important precondition for successful delivery of sport psychology services in professional soccer (Larsen, Alfermann, Henriksen, & Christensen, 2014). Together, the preparation served as a foundation for the following stages in the program and a starting point of the intervention program.
Step 2: Areas of development. The aim of this step was to identify triggers of PM. The intervention program incorporated four areas of development that Moesch and Apitzsch (2012) previously has identified as triggers of positive PM in team sport. These areas are divided in two main categories: the team and the individual player. On the team level we targeted three areas: Communication, interpersonal skills and group cohesion. In terms of the individual player we targeted self-regulatory skills, which are associated with effective team functioning and the achievement of group psychological outcomes (Kleinert, Ohlert, Carron, Eys, Feltz, Harwoo, Linz, Seiler, & Sulprizio, 2012). Self-regulation is defined as the degree to which learners are meta-cognitively, motivationally and behaviorally proactive participants in the learning process (Jonker, Elferink-Gemser, & Visscher, 2011). Furthermore, meta-cognition is defined as awareness of and knowledge about one’s own thinking and the skills of planning, self-monitoring, evaluation and reflection (Jonker et al., 2011; Zimmerman, 1986; 2006). In this perspective, targeting self-regulatory skills was crucial for the individual player to actively participate in and learn from the program, and to be aware of his and the teams strengths and weaknesses and of his perceptions of PM in different situations according to tactical changes (Moesch & Apitzsch, 2012). In line with Kleinert and colleagues (2012), improving these four main areas served the ultimate goal of enhancing team functioning and competitive performance through enhanced team member behavior as well as a trigger of PM. These areas of development were selected by the coach and SPC and guided the intervention program on and off the pitch.

Step 3: Working with psychological momentum off the pitch. The aim of this stage of the program was to create a forum in which the players individually and together began to reflect upon (a) what PM is and (b) cognitive, affective, and behavioral changes associated with PM (as a group) (Jones & Harwood, 2008). This was prepared through position-specific group discussions for defenders, goalkeepers, midfielders and strikers. The first purpose of separating the team in four smaller groups was to create a room for the players to actively participate in group discussions, which is harder in large groups, and because we expected that challenges and players perception of control of PM would differ across playing positions. Playing a certain position is subject to different tasks and each task is related to and underpins the tactics provided by the coach. In that sense each position is related to and affected by coaching strategies (e.g., tactical changes are among the strategies that increase chances of positive momentum, see Moesch & Apitzsch, 2012). Therefore each players perception of control changes and is affected by decisions of the coach during a match. The second purpose was for the players to start becoming aware of their own reaction patterns during positive and negative PM. At this point we wanted to the players to reflect upon PM and for this reason we gave no answers or definitions but only asked about...
the players’ own experiences. To keep motivation high, this part was organized as many short group discussions, typically of approximately 20 minutes. While reflections were allowed to be individual, the group was asked to agree upon specific actions and behaviors they would engage in on the pitch. Each of the questions posed by the SPC implicitly aimed at making the players reflect upon the four areas of development (communication, interpersonal skills, group cohesion and self-regulation). For example making the players sit and listen to each other also created an opportunity for the players to clarify individual and team communication patterns negative or when experiencing positive PM. In each group discussion there were three stages, and the SPC managed the process of the discussions. First step consisted of broad questions with the purpose of making the players reflect upon PM with questions as “What is momentum?” “Do you remember a match in which you thought you had momentum?” “What did you do as a team and as individual player in these momentum situations?” “What behaviors would I notice if I watched you while you experienced positive momentum?” These questions are examples of integrating some of the four areas of development such as clarifying communication and stimulating reflection on momentum and thereby contributing to group cohesion and team functioning. Second step was task specific and aimed at making the players think upon actions that could change negative (or adversity) to positive momentum with questions such as “What are possible team and individual actions to change adversity into positive momentum on the pitch?” These questions aimed at making the players reflect upon actions in which the team or the player could control perceptions of PM and thus reinforced self-regulation, team functioning and competitive performance. The third step was action specific and aimed agreeing on specific strategies with questions such as: “How can you train the process of gaining momentum on the pitch?” “What specific actions will you engage in more often during the next training sessions?” If the players were passive or not discussing the SPC would actively ask direct questions or provide personal perspectives to initiate discussions.

**Reflections and agreements from the under-17 players based on group discussions.** The group discussions led the players to agree upon several areas of improvement for them to be able to control perceptions of PM and turning adversity to positive PM. The players agreed that sticking to appointments, staying organized and working hard were pivotal for the team. The team further realized the importance of their communication for the team’s ability to control perceptions of PM in a match, and therefore agreed to stick to positive and productive communication even in adversity and that each player through body language would show that he was ready and focused even when he was tired or frustrated. These agreements were the foundation for working with PM on the pitch and thereby creating a bridge from the meeting room to
the pitch. Together these agreements contributed to the aim of supporting team functioning and competitive performance through enhanced team member behavior.

**Step 4: Working with psychological momentum on the pitch.** In order to implement the agreements from the group discussions, the coach designated a number of training sessions to the program. The aim of this stage of the program was to create situations in which the players learned to control perceptions of PM during practice and in matches (Jones & Harwood, 2008). In these sessions, the players were divided into two teams of approximately nine players on each team, and played a 40 minute match on two goals with three extra breaks (after approximately 10, 20, and 30 minutes). In the game stops, the players were asked to reflect upon what had happened and how they had experienced positive or negative PM in the past ten minutes. The under-17 coach and the SPC (on each team) used open-ended questions in each break to help the players reflect on their experiences of PM, while also reminding the players about the agreements about on pitch actions. These questions included: “Did you experience periods of momentum or adversity as we talked about it in the group discussions?” “Could you provide examples of when you experienced positive momentum and your emotions, thoughts and actions in these situations?” “Were there times when the other team had momentum and how did you respond to that?” “What individual actions did you engage in to change momentum during the game?” The time frame for each break only allowed for brief responses and not everyone spoke but nevertheless the players who had experienced positive or negative PM during the game were able to express themselves and the other players could listen to the responses. These short breaks were pivotal for creating a bridge between and meeting room and the pitch. After each session, the team, SPC and under-17 coach evaluated the sessions in order to anchor the experiences and create new perspectives that needed to be integrated in the program and for long-term integration on the team. After a number of such training sessions, and in order to put the under-17 players in situations of adversity (and of experiencing negative PM) we staged matches with the under-19 team of the club. In these matches, stronger, faster, older and more experienced players overmatched the under-17 players. This proved to be a useful learning situation, in which each individual player and the team became even more aware of their automatic reactions and communication patterns in adversity and strategies that increase chances of a positive PM (Moesch & Apitzsch, 2012) when playing against more skilled opponents. This is an example of teaching the players about self-monitoring, evaluation and reflection as a part of self-regulation and about team and individual communication patterns in adversity which is related to team functioning and related to strategies that increase chances of experiencing positive PM (Moesch & Apitzsch, 2012). In the following months the coach each
week designated a number of exercises in each training session to the program in order for the players to stay aware of how control perceptions of PM during practice sessions.

**Step 5: Long-term integration through coach supervision.** During the first four steps of the program, the SPC played a very visible role as leader of the intervention. In step five the SPC withdrew to a less visible but equally important role as supervisor of the coach in his efforts to integrate the work on momentum in the daily practices of the team. Step five comprises the main part of the program and describes the long-term day-to-day training of the players’ ability to control perceptions of PM during training and in matches.

As is often the case in sport psychology interventions, the services of the SPC are limited in time, most often due to financial restrictions. For this reason the overall and long-term success of any sport psychology interventions is highly dependent on the ability of the coach to work independently of the SPC. The present program was designed to allow for a natural progression in which the coach would increasingly take responsibility for the program. During this overtaking the SPC would support and supervise the coach to help him remain focused and confident in keeping the program running. Key tasks for the coach that were often discussed in supervision were the design of soccer specific exercises that promote awareness of PM, the initiation of ongoing discussions regarding PM, and the ongoing evaluation of the players’ progress in terms of their ability to control perceptions of PM. More specifically, supervisions on the coach’s role initially took place every two weeks which soon was reduced to on a monthly basis. In addition to formal supervisions, the coach and SPC would talk on the phone when critical incidents arose, and in a few cases, the SPC visited the team to observe a training session or game and provide feedback to the coach.

The gradual transfer of responsibility from the SPC to the coach was much helped by the fact that the coach attended every group discussion (step three) and was curious to learn and eager to keep the program running, which created a strong connection and transfer from meeting room to the actual training on the pitch (step four). We realized the coach’s role as selector of the team could be problematic and lead players to present themselves in the best possible light and thus be less than honest about their perceptions of PM. At the same, the SPC did not hold a permanent position in the team and had to gradually withdraw. We attempted to solve this potential dilemma by having an up-front dialogue with the players about the coach’s dual role and by deliberately distinguishing between a development and a performance context in training.
Reflections from the under-17 coach and players. At the end of the 18 months intervention program, the program was evaluated in two separate interviews. One interview with the coach and a focus group interview with the players. The interviews were conducted by the SPC and aimed at evaluating the experiences of the coach and players during the intervention as well the program’s perceived effects on individual players’ ability to attain psychological momentum (Warr, 2005). The players and coach described that they most often found the program insightful and beneficial and the coach commented: “The players have just become so much more aware of what they need to do to win the matches”. The coach moreover related about what it takes to be successful to work with PM as a coach: “I have to let go of the control and share my knowledge with the players for them to be able to control the game on the pitch”. The under-17 players agreed that working with adversity and PM was beneficial, as one of the players related: “I think that it has helped us a lot, because now we are conscious of what we should do in matches and when we are in adversity or have PM. It is one of the reasons we are doing so well this year, that we are helping each other. We have become a lot better at thinking about our tasks instead of being negative when errors occur”. Another player additionally said: “Now we actually know what we should do on the pitch. We have more than a specific plan. We have the solutions and we just have to communicate it to each other”. Following the program the players described that a key part of its success was to stick to the agreements and have a good plan, which provided security when everybody did their job and the individual player did not have to think about whether the player next to him did his.

During the intervention program the team went from being close to relegation to silver medals in the following year. The under-17 coach mentioned that he did not doubt the effect of the program and currently he continues the program by himself and each year he coaches and educates new players in how to control perceptions of PM in the best under-17 soccer league in Denmark.

Reflections on psychological momentum within applied sport psychology in team sports. The intervention program focused on five steps. We acknowledge that the program could have integrated a more comprehensive focus on mental skills training through individual consulting sessions (e.g., conducted by the SPC), however this paper focused on the role of self-regulatory skills in the intervention process and more specifically on team processes and their relationship to PM. Looking at the individual parts of the intervention program also makes it conceptually difficult to distinguish from many other types of team interventions. Moesch and Apitzsch (2012) describe strategies associated to positive PM (e.g., roles, climate, communication) that is similar to strategies used to improve group cohesion or team development. However, the
presented intervention to improve PM was always focused on PM. Discussions and evaluations always related to PM, all strategies were introduced as strategies to improve the players’ ability to control of perceptions of PM. In this sense we argue that although specific strategies could be used for other purposes, they were always conceptually defined as strategies to improve momentum.

A pivotal foundation for the success of the presented intervention program was the involvement of the coach. The coach took interest, attended group discussions, created a strong connection and transfer from meeting room to the actual training on the pitch, and even designed specific drills and exercises to support the program. This supports literature that emphasizes that the coach is pivotal for the success of sport psychology intervention programs and that integrating the coach more readily is a sustainable approach to create long-lasting results (Larsen, 2013). Similarly it supports the notion of cultural leadership (Schein, 2014) in which is emphasized that members of a culture are shaped by what their leader takes an interest in, pay attention to and rewards.

We see the present paper as an example of a scientist-practitioner approach (Lane & Corrie, 2006). The notions presented in the intervention program is derived from a clear theoretical basis (the concept of PM) while the empirical data (reflections of the players and coach) provide new perspectives and insight into applied perspectives of triggers, cognitive, affective, and behavioral changes associated with PM and how players may control perceptions of PM in team sport.

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References


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