

Motivational Climate in Sport and Physical Education: The Role of Significant Others

**Daniel A. Weigand, Sam Carr,
Caroline Petherick, and Adrian Taylor**

The purpose of this paper is to review research that has considered the interaction of dispositional (goal orientations) and situational (motivational climates) factors of achievement motivation. The paper begins with a review of achievement goal and motivational climate theories. Next, research is highlighted that focuses on the relative influence of significant others such as parents, coaches, teachers, sport heroes, and sport scientists on the development of achievement motivation in sport and physical education.

Key Words: achievement goal theory, goal orientations, motivational climate, parents, coaches, peers, teachers, heroes, rehabilitation

Key Points:

- According to achievement goal theory, task oriented goals have been shown to be related to adaptive aspects of motivation in sport and physical education; ego oriented goals have been shown to be related to maladaptive aspects of motivation unless ability is perceived to be high.
- Significant others facilitate the development of achievement motivation through the expectations, values, beliefs, and behaviors demonstrated to participants in sport and physical education; this is known as a motivational climate.
- The relative influence of parents, coaches, teachers, sport heroes, and sport scientists may change according to the developmental status of individuals and contexts.

The purpose of this paper is to review research¹ that has considered the interaction of dispositional (goal orientations) and situational (motivational climates) factors of achievement motivation. To do so, we must first set the stage by reviewing relevant sport-related achievement motivation theory and research.

Social Cognitive Perspective

Based on research in educational achievement settings (e.g., 1, 2, 21, 22, 37-39), there has been a need to examine motivation in sport using a social cognitive perspective (e.g., 1-3, 14, 22, 35, 37-39, 48). This framework suggests that variations in behavior are not manifestations of high or low levels of motivation, but the expression of different achievement goals pursued by individuals. Specifically, individuals internalize a personal definition of achievement in a given situation. They then focus on specific achievement goals in order to meet their specific achievement definition. This approach has become one of the most important conceptual avenues

in addressing motivation in sport and physical education (PE) and is primarily based on the work of Nicholls (37-39).

Achievement Goal Theory

Nicholls (37) suggested that achievement goals represent different conceptions of, and different reasons for, approaching and engaging in achievement activities. They involve different ways of thinking about tasks and the outcomes of tasks. According to Nicholls, overt behaviour and the subjective experience of individuals should differ in predictable ways with different goals. He also believed that the primary goal in achievement contexts was the demonstration of ability; specifically, perceptions of success and failure are subjectively defined in accordance with the demonstration of ability.

Nicholls (37) proposed that two primary conceptions of ability exist and that two main types of achievement goals could be activated by individuals, depending on the specific conception of ability employed at any given time. In the first conception, task oriented individuals utilize an undifferentiated conception of ability: Ability is construed as improvement; levels of ability are self-referenced and dependent upon improvement and learning. Individuals evaluate personal performance to determine whether effort was expended and mastery achieved. A greater gain in mastery of a task would indicate greater competence. The higher the effort needed for mastery, the higher the perceived ability (37). Objective failure would only signify that the current strategy may not be sufficient for the mastery of the task and may require revising (22). Therefore, sustained performance is likely, even in the event of objective failure. Furthermore, pride and a sense of accomplishment is higher when greater effort is exerted in a task orientation.

In contrast, ego oriented individuals use a differentiated conception of ability to assess competence: Ability is perceived as capacity; self-perceptions of ability are demonstrated when outperforming others. In this instance, ego oriented individuals view effort and ability as inversely related: High effort implies low ability, and low effort that leads to success implies high ability (34, 37-39). In addition, it is assumed that ego oriented individuals with low perceptions of ability will either participate in easy tasks in order to maintain a level of perceived competence by achieving success with little effort, or may withdraw effort in the face of objective failure. In contrast, if perceptions of competence remain high, adaptive achievement strategies (e.g., continuing persistence and effort) should ensue (14).

The importance of goal orientations towards understanding achievement motivation in sport and exercise has been widely recognised by researchers (e.g., 14-16², 48). Task oriented goals have been shown to be related to behavioural variations and attitudes toward sport including enjoyment/interest (19, 36), intrinsic participation motives such as skill development and affiliation (27), and the belief that effort and cooperation leads to success (6, 18, 20, 57). In contrast, ego orientation has been linked with less enjoyment in sport (5), the belief that high ability leads to success in sport (18, 20), the belief that the purpose of sport is to enhance self-esteem and social status (57), cognitive anxiety (28³, 66), concerns about mistakes (29), and concentration disruption during competition (36, 66). In addition, Whitehead (67) has observed dropouts in youth sport clubs to be more concerned with demonstrating superior ability over their peers than youngsters who persisted. As a consequence of the impact that achievement goals

have upon individuals' motivation, researchers have begun to examine individual variations in the adoption of these goals.

Motivational Climate

Initial work in this area suggests that the development and adoption of task and/or ego orientations -- as these are orthogonal orientations, it is possible to be high or low on both or high on one while low on the other -- occur as a result of both dispositional and situational criteria (2, 38). Young children are exclusively task oriented, as the capacity to understand that effort does not equal ability requires cognitive maturation (38). Thus, it is not until late childhood that children have the opportunity to develop an ego orientation.

This maturational process allows an understanding to develop that effort does not equal ability. However, that does not mean that all individuals will then choose to see ability-based comparison as the only way to define success. Some individuals will continue to be task oriented and view success in terms of self-referenced improvement and effort; others will choose to view *both* ability-based comparisons and self-reference mastery as success determinants. What is happening is that during late childhood children become susceptible to situational influences and interactions with significant others such as parents, coaches, teachers, sport heroes, and sport scientists facilitate developing goal orientations (e.g., 7). In this way the development of a particular goal orientation is made salient to children with the emphasis of explicit expectations, demands, and rewards: a motivational climate develops (2). If emphasis is placed on effort, improvement, cooperation, and self-referenced goals, then a mastery climate develops. In contrast, if emphasis is placed on social comparison, winning competitions, and other-referenced goals, then a performance climate develops. As parents are the most critical social influence on children's development, it is likely that goal orientations are made clear through parents encouraging and rewarding certain actions and involvement in certain activities.

Parental Influence

Recently, research has addressed the contention that parents create a motivational climate that influences their children's achievement motivation (16, 59, 61-63). For example, Duda and Hom (16) examined the perceived and self-reported goal orientations of young athletes and their parents. Results revealed that children who were higher in task orientation, as opposed to ego orientation, perceived their significant parent to be higher in task orientation. In contrast, those children higher in ego orientation, as opposed to task orientation, perceived their significant parent to also be higher in ego orientation. One of us, Weigand (59), found similar results in a study of children and adolescents in a variety of youth sports. Results revealed that males, more than females, were significantly more ego than task oriented, perceived both parents to endorse more ego than task involvement, and perceived fathers' affective pressure in sport and importance/expectance of sport pressure to be higher. Hierarchical regression analyses indicated, for males and females, that higher parental endorsement of task orientations were related to higher personal task involvement. Lower scores on fathers' affective pressure and mothers' endorsement of an ego orientation were also related to higher task orientations for females. Higher fathers' endorsement of an ego orientation was related to higher ego involvement for the males; higher mothers' endorsement of an ego orientation was related to higher ego involvement for the females. White and her colleagues (e.g., 61-63) have provided further evidence that the parental motivational climate emphasized when children learn and perform physical skills plays

an important role in developing their dispositional goal orientations. They demonstrated that children and adolescents' perceptions of parental emphasis on a success-without-effort climate predicts ego orientation, and perceptions of parental emphasis on a learning climate predicts task orientation. Therefore, individuals are said to approach achievement domains with the predisposition to be task and/or ego oriented. However, variations in goal orientations are likely to be altered due to situational factors, such as parental influence, that reinforce or oppose dispositional tendencies. In addition to parental influence, children, adolescents, and adults in sport are subjected to a motivational climate exhibited by coaches.

Coaches' Influence

Recently, researchers have begun to examine the link between the motivational climate emphasized by coaches and athletes' achievement motivation (e.g., 32, 46, 51, 54, 58, 65). Research has generally revealed that a perceived mastery oriented climate is related to task orientation and intrinsic motivation such as effort, enjoyment, and satisfaction (32, 51, 58). A performance oriented climate has been related to ego orientation and feelings of pressure and tension in sport (32, 51, 58, 65). Two of us, Petherick and Weigand (46), expanded this line of research by examining in a group of adolescent swimmers the relative influence of goal orientations and perceptions of the motivational climate of their coaches on aspects of motivation. In this study, motivation was measured on a continuum from intrinsic to amotivation (43), as opposed to a simplistic dichotomous notion of extrinsic versus intrinsic motivation. The results indicated that dispositional goal orientations were better predictors than perceived motivational climates for all indices of motivation except amotivation, which was best predicted by a performance oriented climate and inversely related to aspects of intrinsic motivation. Together, this research seems to suggest that in addition to parents, coaches may also be influential in facilitating the development of goal orientations and other indices of motivation. If coaches can influence children and adolescents' achievement motivation, PE teachers should also be important influences.

PE Teachers' Influence

In PE, the relationship between the class climate and achievement motivation has been addressed (27, 40, 41, 65). The Learning and Performance Oriented PE Climate Questionnaire (LAPOPECQ; 40) developed the work of Ames and Archer (3) in the classroom in order to assess students' perceptions of learning and performance climates in PE. However, researchers (e.g., 11, 65) have also employed other measures such as the Perceived Motivational Climate in Sport Questionnaire (PMCSQ; 51) and the PE Class Climate Scale (PECCS; 4) for this purpose. The research findings in this area have indicated that task oriented students tend to perceive a mastery oriented PE climate, and ego oriented students tend to perceive a performance oriented climate (26, 40, 41, 65). Furthermore, research that has manipulated the motivational climate in PE (e.g., 42, 54, 56, 60) has found that teachers can influence goal orientations. For example, we, Weigand and Burton⁴ (60), manipulated the motivational climate by sorting adolescent participants into one of two groups: (a) an experimental group that included a series of highly task-involved PE lessons, based on the manipulation of Epstein's (23) task, authority, recognition, grouping, evaluation, and timing (TARGET) structures; or (b) a control group receiving traditional PE lessons. Results revealed that children in the experimental group experienced significantly higher levels of task orientation and perceptions of ability, and were more satisfied and less bored post-intervention compared to pre-intervention and compared to the

control group at either time. The experimental group's ego orientation also significantly decreased from pre- to post-intervention, but did not significantly differ from the control group. Therefore, we now know that, like parents and coaches, teachers can facilitate the development of achievement motivation through the motivational climates they create. What is not known is who is the most influential social agent of motivation across developmental stages.

Relative Influence of Social Agents

Research has provided a strong foundation to suggest that a good deal of the variance in youngsters' achievement motivation originates from interaction with significant others. However, some of our recent work has centered on examining the relative influence that various significant others have on individuals' development of goal orientations and other aspects of motivation. From our perspective, it is now well established that a variety of significant others are influential in shaping goal orientations, yet what has not been clearly identified is whether specific significant others have more or less influence in regulating goal orientations at different times during development.

To address this question, we felt it important to adopt a developmental perspective. Researchers have suggested that, as a function of cognitive development, youngsters rely most heavily on parental and significant adult feedback to judge personal competency (8, 30). A large proportion of time in childhood is also spent in the familial context, and children normally have not yet developed firm social contacts outside the family unit (8). However, with expanding social experiences, cognitive maturation, and improved social skills, children and adolescents spend an increasing amount of time in peer group company, resulting in an increasing reliance on peers to evaluate competence (30). Hence, we hypothesized that the relative influence of significant others might change with cognitive and social development.

To explore our hypothesis, we initially conducted two pilot studies of youngsters involved in PE (10, 11).⁵ Our first study (11) examined the relative influence of parents, peers, and teachers on children and adolescents' goal orientations and intrinsic motivation for PE. Adapting the PECCS (4), we measured youngsters' perceptions of a learning climate, a comparison climate, and worries about mistakes in regard to their parents, peers, and PE teacher. The sample was split into two groups in accordance with age: late childhood (M age = 12.2) and adolescence (M age = 15.1). Results indicated that parents were the most influential social agent on the younger samples' task and ego orientation, effort, enjoyment, and interest for PE. Specifically, children had higher task orientation if they perceived fathers to emphasize a higher learning climate and had higher ego orientation if they perceived fathers to emphasize a comparison climate. For the adolescent sample, results indicated that teachers and the peer group were the most influential social agents for task and ego orientation. Specifically, higher task orientation was related to perceptions of a learning climate from teachers, and higher ego orientation was related to perceptions of a comparison climate from peers.

Our second study (10) addressed the same question. However, in this study we assessed youngsters' perceptions of the parental climate using the Parent Initiated Motivational Climate Questionnaire (PIMCQ; 63) and of the peer and teacher climate using the PECCS (4). In this study, participants in the sample were again split into two age groups, but this time the age difference was more pronounced: childhood (M age = 10.8) and adolescence (M age = 16.5).

Results indicated that teachers had the strongest influence on the younger samples' goal orientations for PE, and peers had the greatest influence on adolescents' goal orientations. Specifically, if children perceived that teachers emphasized a learning climate, they were more task oriented, and if they perceived teachers to emphasize a comparison climate, they were more ego oriented. If adolescents perceived peers to emphasize a learning climate, they had higher task orientation, and had higher ego orientation if they perceived peers to emphasize a comparison climate.

Both our studies provide preliminary evidence of a developmental shift in the influence of specific significant others on goal orientations for PE. Both studies supported previous suggestions (e.g., 8, 30) that parental and significant adult influence might be more profound in childhood, and peer influence might predominate in adolescence. However, while our first study revealed parents to be the strongest influence on the younger samples' goal orientations, our second study revealed teachers to be a stronger influence. In addressing this inconsistency, we have suggested (10) that the different measures of parental climate (i.e., PECCS & PIMCQ) used in the two studies might explain this difference in results. For example, the PECCS measures perceptions of a comparison climate in significant others, and the PIMCQ measures perceptions of a success without effort climate and worrying about mistakes. Examination of the ego orientation subscale of the Task and Ego Orientation in Sport Questionnaire (TEOSQ; 15), the most used measure of goal orientations, reveals that all six items appear to assess concern with the demonstration of ability in comparison to others. Bearing this in mind, it is logical to suggest that the PECCS assessment of parental climate, emphasizing a comparison oriented subscale, would correlate more strongly with the ego subscale of the TEOSQ than the PIMCQ. The PIMCQ appears to neglect the comparison element of the parental climate in its overemphasis on success without effort and worries about mistakes. This may be one explanation as to why our study, incorporating the PECCS as a parental-climate measure, revealed parental influence as the stronger predictor. In the second study, we assessed teacher influence via the PECCS and parental influence via the PIMCQ. Teachers could have emerged as the strongest predictor of youngsters' ego orientation in this study simply because the comparison subscale of the PECCS correlated more strongly with the TEOSQ's ego scale than any of the PIMCQ subscales. We would suggest that development of a more conceptually valid measure of the parental climate would assist our efforts if we are to continue to approach this area of research from a multivariate, correlational perspective. Recently, initial work was conducted by one of our post-graduate students (52)⁶ to solve this problem. Her results suggest that the need for a new measure is great but that the instrument she is developing needs further validation.

Sport Heroes

We have recently expanded our work on the relative influence of significant others on goal orientations to include an exploration of sport hero influence. Two of our studies (9, 12⁷) have applied to a sporting context research (e.g., 44, 45, 49, 50) examining children's interaction with media heroes. From this perspective, it is suggested that through processes of parasocial interaction and wishful identification (45, 49), youngsters might be able to deduce an opinion of the achievement orientations that their sport heroes hold. That is, children are able to deduce, through media interaction, the values, attitudes, beliefs, and behaviors that they associate with their heroes. The development of a familiarity with such media icons, through regular

transmission of these characters into the lives of children, can lead children to feel they *know* their icons and can, consequently, predict their behaviors, values, and belief systems (33, 45, 49). Our (12) recent work has therefore extended our previous research and suggested that goal orientations might also extend from sporting heroes to young admirers. In our first study (12), we assessed children's perceptions of the achievement orientations adopted by their favorite sport hero. We developed a pool of items that children could respond to based upon the kind of interaction they have with their sporting heroes (e.g., watching them play on TV, seeing interviews, hearing commentary, reading newspapers and magazines). We then examined the influence that sport heroes had on goal orientations for sport in conjunction with parental and peer influence. Results of this preliminary investigation indicated that perceptions of a higher mastery orientation, emphasized by heroes, most strongly predicted higher task orientation for sport in both male and female samples. In addition, perceptions of higher ego orientation and lower mastery orientation, emphasized by heroes, most strongly predicted higher ego orientation for sport in the male sample. This finding has been further supported in a follow-up study of youngsters involved in PE (9). Overall, it seems clear that parents, coaches, teachers, and sport heroes can either directly or indirectly influence the development of achievement motivation in children and adolescents. Another potential source of influence should be the support network provided by sport scientists.

Rehabilitation Influences

Recent collaborative research by one of us, Taylor (24), has considered the usefulness of achievement goal theory and motivational climates within an injury rehabilitation context. Specifically, he has identified, from past research (31, 47, 55) and his involvement in a long-term action research project, the need for injured athletes to develop skills to aid recovery, where both dispositional and situational factors have been identified as being influential in this process.

Within their research, Gilbourne⁸ and Taylor (24) have identified two important aspects of athletes' rehabilitation process. First, athletes require specific skills in order to adjust to the rehabilitation environment; and second, that differing phases of the recovery process may place differing demands on athletes. Therefore, the application of a goal setting program based on task oriented goals would prove useful in that it would allow athletes to specify their recovery intentions in a positive, controllable way that would enhance both intra- and inter-personal skills (13).

However, Gilbourne, Taylor, Downie, and Newton (25) identified, through interviews with sport physiotherapists, that athletes often displayed considerable variations in their dispositional goal orientations. This was most likely due to the athletes coming from a diversity of motivational climates outside of the rehabilitation center. Thus, initial problems in the recovery process are likely to be experienced due to conflicting goal orientations between the athlete and the recovery center. For example, ego oriented athletes, who attend a center that places an emphasis on a mastery climate, may experience negative effects in the form of frustration and anxiety. This will be experienced by those athletes who are unable to maintain a sense of self-worth through interpersonal comparisons due to restrictions of the rehabilitation process.

According to Taylor and May⁹ (53), to counteract this negativity, sport physiotherapists need to be prepared to promote mastery by educating the athlete through goal setting and task oriented

skill development. However, the maintenance of a task orientation may become problematic for athletes when leaving the rehabilitation center to continue recovery within a differing environment. For this reason, it is vitally important to educate and promote the necessary skills at the early stages of the rehabilitation process. This will promote the potential benefits available to athletes throughout the differing stages of rehabilitation and, when required, will allow athletes to make informed choices about changing to a center that facilitates a different goal orientation (24).

Furthermore, differing restrictions on athletes are likely to change throughout the rehabilitation process (24). For example, as athletes recover from injury, they become more exposed to the training environment and training colleagues. Therefore, the motivational climate perceived by recovering athletes may be focused on re-establishing one's presence and capability to perform in front of the squad. This performance climate may in effect entice athletes into doing too much too soon (24). It is at this mid-recovery point that an emphasis upon mastery, as opposed to performance, would be most beneficial for athletes. Through goal setting, they could identify the skills that still require revising due to injury and in this way maintain a sense of mastery and achievement when attaining personal goals. However, without the prerequisite skills required to structure a new training program, performance recovery will be greatly impeded (24).

Conclusion

In summary, research has revealed that task oriented goals have been shown to be related to adaptive aspects of motivation in sport and PE; ego oriented goals have been shown to be related to maladaptive aspects of motivation, unless ability is perceived to be high. Significant others, such as parents, coaches, teachers, peers, heroes, and scientists, facilitate the development of goal orientations through the expectations, values, beliefs, and behaviors demonstrated to participants in sport and PE. However, the relative influence of significant others changes according to the developmental status of individuals and contexts. Although our research has begun to examine the dynamics of motivational climate, more investigations are needed to clarify issues such as: Who has the most influence on developing achievement motivation in sport and PE? What can be done to best create adaptive patterns of motivation in sport and PE?

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Notes

¹Please see the other articles included in this special issue of the *European Journal of Sport Science*, especially the introduction to the special issue for additional research not cited in this paper.

²Howard Hall is a Professor of Sport and Exercise Psychology and one of our colleagues at De Montfort University.

³Alistair Kerr is a Principal Lecturer of Sport and Exercise Psychology and one of our colleagues at De Montfort University.

⁴Shane Burton is a graduate in Sport Studies of De Montfort University; his BSc honors thesis, under the supervision of Daniel Weigand, formed the basis for this study.

⁵Wayne Hussey is a graduate in Sport Studies of De Montfort University; his BSc honors thesis, under the supervision of Daniel Weigand, formed the basis for this study.

⁶Michaela Smith is a graduate in Sport Studies of De Montfort University; her MPhil, under the supervision of Daniel Weigand and Howard Hall, formed the basis for this study. She is currently pursuing a PhD at the University of Birmingham under the supervision of Joan Duda.

⁷Jason Jones is a graduate in Sport Studies of De Montfort University; his BSc honors thesis, under the supervision of Daniel Weigand, formed the basis for this study.

⁸David Gilbourne is at Liverpool John Moores University; his PhD, under the supervision of Adrian Taylor while at the University of Brighton, formed the basis for this study.

⁹Sally May's PhD, under the supervision of Adrian Taylor while at the University of Brighton, formed the basis for this study.

About the Authors

Daniel A. Weigand <dweigand@dmu.ac.uk>, Caroline Petherick <c_petherick@hotmail.com>, and Adrian Taylor <ataylor@dmu.ac.uk> are with De Montfort University. Sam Carr <samuelcarr@hotmail.com> is with the University of Lancaster.

Daniel A. Weigand, PhD, is a Principal Lecturer of Sport & Exercise Psychology in the Department of Sport & Leisure at De Montfort University.

Sam Carr is a Research Student at the University of Lancaster and formally a student at De Montfort University; his BSc and MPhil studies, under the guidance of Daniel Weigand, form the basis for some of the research reviewed here.

Caroline Petherick is a PhD student at De Montfort University; her BSc research, under the guidance of Daniel Weigand, forms the basis for one of the studies reviewed here.

Adrian Taylor, PhD, is the Alexander Chair in Physical Activity and Health at De Montfort University.