



MOTIVATIONAL DETERMINANTS OF ACHIEVEMENT OF CHILDREN IN SPORT

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RESUMEN: Este artículo presenta una revisión de las más recientes investigaciones sobre los determinantes de la motivación infantil desde el punto de vista de la motivación de logro. Desde este marco teórico, se cree que los objetivos de tarea y del ego deciden cómo las personas construyen sus contextos de logro, y se lleva a cabo la interpretación, evaluación y la reacción respecto a la consecución del objetivo. Las investigaciones revisadas sugieren que las creencias paternas constituyen un importante antecedente de las diferencias individuales respecto a la orientación de la consecución de objetivos de logro. De todas maneras, los hallazgos más recientes apoyan el argumento de que las percepciones del clima motivacional son asimismo importantes a la hora de determinar la conducta de logro del niño. Consecuentemente, en el trabajo se presenta una perspectiva interaccionista que combina tanto las variables individuales como las situacionales. Esta perspectiva promete proporcionar un entendimiento más completo de la motivación infantil en las experiencias de deporte competitivas. El trabajo concluye examinando las estrategias de intervención basadas en la creación de un clima motivacional orientado a la tarea que pueda ser usado por los adultos para mejorar la motivación y el disfrute de todos los niños en el contexto del deporte de competición.

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ABSTRACT: This paper provides a review of recent research dealing with the determinants of children's motivation stemming from an achievement goal perspective. In this framework, task and ego achievement goals are believed to govern how individuals construe achievement contexts as well as how they interpret, assess, and react to achievement feedback. Research is reviewed that suggests that parental beliefs are an important antecedent to individual differences in achievement goal orientation. Recent findings, however, support the argument that perceptions of the motivational climate are also important in determining a child's achievement behavior. Consequently, an interactionist perspective that combines both individual and situational difference variables is presented which promises to provide a more complete understanding of children's motivation in competitive sport experiences. The paper concludes by examining intervention strategies based on creating a task involving motivational climate that adults can use to enhance the motivation and enjoyment of all children in the context of competitive sport.

Motivational determinants of achievement of children in sport

Performance in physical activity is assumed to be important in the socialization process of the child. It is generally assumed that in play, games, and sport, children are brought into contact with social order and the values inherent in society, and are provided a context within which desirable social behaviors are developed (Brustad, 1993; Evans and Roberts, 1987). This assumption has given rise to cultural expectations that have resulted in steadily increasing levels of involvement of children in all aspects of physical activity, especially adult organized competitive sport. Research has demonstrated that the domain of competitive sport is a particularly important context for psycho-social development in that peer status, peer acceptance, and self-worth are established and developed (Evans and Roberts, 1987; Fox, 1988; Veroff, 1969). These social attributes are based upon many factors, but one way a child can gain acceptance is to demonstrate competence in an activity valued by other children. One area of competence highly valued by children is athletic ability (Chase and Drummer, 1992; Roberts and Treasure, 1992, 1993). Being a good athlete appears to be a strong social asset for a child, especially for boys. Thus, understanding the social dynamics of involvement and enhancing the achievement behavior of children in competitive sport contexts has been a topic of considerable interest for coaches, teachers, and parents.

The achievement goal approach to motivation and achievement

Various theories have been proposed to account for the motivational determinants of children's athletic achievement (see Roberts, 1984, 1992). The framework adopted in the present paper, however, is derived from the independent and collaborative classroom based research of Nicholls (e.g., 1980, 1984, 1989), Dweck (e.g., 1986; Dweck and Elliott, 1988), Ames (e.g., 1987; Ames and Archer, 1987), and Maehr (e.g., 1983; Maehr and Braskamp, 1986; Maehr and Nicholls, 1980). These theorists have focused on the goal-directed nature of achievement behavior and have argued that the central construct of the achievement goal approach is the desire to demonstrate ability in achievement situations that are assumed to be important to the individual. For the most part, the self-percept of ability has been assumed to refer to how much ability an individual has relative to others. Research from an achievement goal perspective, however, suggests that more than one conception of ability exists

(Nicholls, 1984, 1989), and that an individuals' cognitive and affective patterns are determined by the conception of ability adopted. Based on developmental work with children, Nicholls concluded that the development of the concept of ability is a process of differentiating the concepts of luck, task difficulty, and effort from ability. Following a series of experiments, Nicholls (1984; Nicholls and Miller, 1984) concluded that by the age of 12, children were able to differentiate task difficulty, luck, and effort from ability. In the sport domain, Walling and Duda (1994) have reported similar findings. Replicating Nicholls and Millers' (1984) study, Walling and Duda found that it was not until age 12 that children were able to clearly differentiate the concepts of luck, task difficulty, and effort from ability. Thus, children under age 12 typically perceive ability in an undifferentiated fashion, but by age 12 are able to differentiate between the concepts of effort, luck, task difficulty, and ability.

Reaching this developmental stage, however, does not necessarily dictate that a differentiated conception of ability will be automatically invoked by individuals over the age of 12. Rather, an individual will approach a task with certain goals of action reflecting their personal perceptions and beliefs about the particular achievement activity in which they are engaged (Nicholls, 1984, 1989). The conception of ability they employ, and the ways they interpret their performance can be understood in terms of these perceptions and beliefs. These perceptions and beliefs form a personal theory of achievement at the activity (Nicholls, 1989). The adopted personal theory of achievement affects one's beliefs about how to achieve success at the activity. Therefore, people will differ in which of the conceptions of ability they use and in how they use them based on their personal theory of achievement.

Nicholls (1984) contends that the two conceptions of ability are embedded within two orthogonal achievement goal orientations. These two goal orientations are related to the conception of ability adopted by an individual and act as goals of action reflecting the individual's personal theory of achievement within a particular achievement context. In this paper, the terms task and ego will be used to describe the two goal orientations (Nicholls, 1984, 1989). An individual who is task oriented utilizes an undifferentiated conception of ability, in that the person does not differentiate between ability and effort and focuses on trying hard at developing skills, learning new skills, and in demonstrating mastery at the task. The demonstration of ability is based on maximum effort and is self-referenced. In contrast, an individual who is ego oriented utilizes a differentiated conception of ability in that the person recognizes the difference between ability and effort and focuses on being able with reference to others. The demonstration of ability is based on outperforming others with the least effort possible as succeeding with minimum effort is evidence of high ability.

Recent research has applied and tested the conceptual relevance of achievement goal theory to the domain of sport. This line of research has focused on identifying the cognitive and behavioral concomitants of task and ego orientations (e.g., Duda, 1989; Duda, Fox, Biddle, and Armstrong, 1992; Lochbaum and Roberts, 1993; Roberts and Treasure, 1995; Treasure and Roberts, 1994a), and has consistently demonstrated

that the conceptually coherent relationship between achievement goals and beliefs that has emerged in the education setting, also exist in sport (see Duda, 1993; Roberts, 1993). Determining the antecedents of individual differences in achievement goal orientation has, however, received little attention in the sport literature (Brustad, 1993). One antecedent of dispositional achievement goal orientations to receive some attention recently has been parental beliefs.

Parental Beliefs

Although many factors have been recognized as influencing children's motivation, the potential importance of parental beliefs in this socialization process has been the focus of recent research in the education context (e.g., Parsons, Adler, and Kaczala, 1982; Ames and Archer, 1987). Ames and Archer (1987) contend that parents provide an extremely important context for the development of children's motivation processes and suggest that the context provided by parents who stress task versus ego achievement goals may, in fact, be quite different. They propose that as a function of a parents' achievement goal orientation, children may be oriented to certain types of activities more than others, reinforced for certain choices, and evaluated on different aspects of their behavior.

In a recent study Roberts, Treasure and Hall (1994) extended the research of Ames and Archer (1987) and examined the linkages between the achievement goals of parents and their associated achievement beliefs concerning the competitive sport experience of their child. Specifically, the study examined whether parents' endorsing different achievement goals differed in how they defined their child's success in sport, and their preference for certain types of performance feedback about their child. The results of this study revealed that achievement goals affect the meaning of success in sport. Whereas differences in task responses appear to be critical in the classroom context (e.g., Ames and Archer, 1988), the interesting findings in the Roberts et al. study occurred along the dimension of the ego goal orientation. Parents high in ego orientation emphasized normative standards when defining success to a greater degree than parents low in ego orientation. In contrast, parents low in ego orientation viewed getting along with others as more important than high ego oriented parents, and indicated that winning was less important in interpreting success. A similar pattern of results occurred when parents had to indicate their preference for certain types of performance feedback about their child. The findings suggest that depending on the achievement goal adopted, different sources of sport performance feedback are perceived as salient. Parents high in ego orientation preferred normative performance feedback information, particularly information regarding the number of wins their children accomplished, and their performance compared to other children. In contrast, parents low in ego orientation were more concerned with whether their child was accepted as part of the team.

Interestingly, parents low in ego orientation responded in a similar manner to the task parents, and the high ego oriented parents responded in a manner consistent

with the ego oriented parents in the Ames and Archer (1987) study. It is a significant observation that low ego oriented parents responded in much the same way as task oriented individuals in earlier classroom research (Ames and Archer, 1987). However, to assume that individual's who score low in ego orientation are task oriented in the sport context, is to disregard the orthogonality of the goal orientations, and to ignore the importance of the context in dictating which goal orientation is more salient (Ames and Archer, 1988; Butler, 1987; Nicholls, 1989). For example, for those parents in the Roberts et al. (1994) study who were high in ego orientation, the goal of demonstrating normative ability appears to have overwhelmed the task criteria all parents reported ($M=4.46$ on a 5 point scale) was important when assessing their child's success in sport. The results of this study therefore emphasize the need to develop context specific theories of achievement that recognize the unique features of the context (Nicholls, 1992). The results further indicate that in the sport context, with its inherent, perhaps overwhelming, emphasis on normative standards of performance, that the individual differences in ego responses may be more significant than task responses.

When we ask how parent's interpret their children's competitive sport experience, we begin to appreciate how they can affect the way in which their children perceive this experience. The results of the Roberts et al. (1994) study suggest that by making certain types of performance feedback and sporting behaviors salient, a parent's goal preference becomes manifest and may influence children's attitudes toward the activity and their perceptions of which criteria determine achievement and success in sport.

Situational determinants of achievement

While one avenue of research related to achievement goals in sport has demonstrated that individual differences in goal orientation are associated with different motivational processes (e.g., Duda, 1989; Duda, et al., 1992; Duda, Chi, Newton, Walling and Catley, 1995; Treasure and Roberts, 1994a), another has focused on situational influences (e.g., Seifriz, Duda and Chi, 1992; Walling, Duda and Chi, 1993). This research has examined how the structure of the environment, referred to as the motivational climate, can make it more or less likely that achievement behaviors associated with a particular achievement goal be adopted. The premise of research from a situational perspective is that the nature of a child's sport experiences, and how they interpret these experiences, influence the degree to which task and ego involvement are perceived as salient within the context. This is assumed to affect the achievement behaviors of children through their perception of the behaviors necessary to achieve success. Typically, children adopt adaptive achievement strategies (namely, to work hard, seek challenging tasks, persist in the face of difficulty) in task involving situations, because these are the behaviors deemed necessary for success in that context (see Ames, 1992). In contrast, children adopt what are called maladaptive achievement strategies (namely, to seek easy tasks,

reduce effort because succeeding without effort is deemed desirable, to socially compare, or to give up in the face of difficulty) in ego involving situations, because beating others is the criterion of success. When success is apparently assured, ego involved children reduce effort. When success is still uncertain, they choose easier tasks or give up (see Ames, 1992). Research to date is consistent with these fundamental tenets of achievement goal theory (e.g., Ames, 1992; Ames and Archer, 1988; Seifriz, Duda and Chi, 1992; Walling, Duda and Chi, 1993; Treasure and Roberts, 1995).

Research has begun to investigate the relationship between the motivational climate and children's cognitive and affective responses in sport. In a recent study with adolescent athletes competing in an amateur international competition, Walling, Duda and Chi (1993) examined the relationship between perceptions of the motivational climate and the degree of worry experienced while participating, and team satisfaction. Consistent with achievement goal theory, perceptions of a task involving climate were positively related to satisfaction with being a member on the team and negatively associated with performance worry. In contrast, perceptions of an ego involving climate were positively associated with concerns about failing and the adequacy of one's performance, and negatively related with team satisfaction.

Although the results of Walling, Duda and Chi (1993) demonstrate how a child's perception of the motivational climate may influence their motivation, achievement goal theory states that dispositional goal orientations and perceptions of the climate are two independent dimensions of motivation that interact to affect behavior (Nicholls, 1989). Research to date, however, has primarily dealt with dispositional goal orientations and perceptions of the motivational climate in isolation. It has been suggested, therefore, that an interactionist approach that looks to combine both variables promises to provide a more complete understanding of children's achievement behaviors and their perceptions of the sport experience (Duda et al., 1995; Roberts, 1992; Roberts and Treasure, 1992).

An interactionist approach

An interactionist approach that integrates these two variables is one in which dispositional goal orientation may be viewed as an individual difference variable that «determine(s) the a priori probability of adopting a particular goal and displaying a particular behavior pattern, and situational factors are seen as potentially altering these probabilities» (Dweck and Leggett, 1988, p.269). For example, in a sport context where the ego involving or task involving cues are vague or weak, an individual's predisposition toward an ego or task goal orientation should hold sway. If, on the other hand, the situational cues are strong in favor of either an ego or task involving climate, dispositions may be overridden and greater homogeneity among individuals may result. The stronger the disposition, the less likely it is to be overridden by situational cues or the stronger will be the situational cues necessary to override it. Alternatively, the weaker the disposition, the more easily it can be altered by situational cues. Clearly, one would expect children to behave inconsistently across situations when the strength of the situational cues varies across these

situations. It also is expected that children and young adolescents, who have yet to firm up their personal theories of achievement, may be more susceptible to the structure of the motivational climate than older adolescents and adults (Roberts and Treasure, 1992).

In a study with high school varsity male basketball players, Seifriz, Duda, and Chi (1992) examined the degree to which intrinsic motivation and attributional beliefs were a function of the motivational climate, dispositional goal orientation, or a combination of both variables. Results from hierarchical regression procedures indicated that the motivational climate was the most significant predictor of the players' perceptions of the degree of tension experienced while playing. The authors suggest that affective responses such as anxiety may be more heavily influenced by situational factors. Consequently, affective responses are less stable across situations than certain dispositional self-reported measures, such as personal criteria of success. Consistent with this line of thinking, an individual's goal orientation was found to be a better predictor of self-reported exerted effort, perceived ability, and attributional beliefs than perceptions of the climate. These results are consistent with an interactionist perspective as one would expect personal beliefs, which reflect a more dispositional tendency, to be best predicted by a dispositional measure. The results of this study suggest, therefore, that how one views achievement situations may generalize across situations, but how one experiences these situations may shift according to the motivational climate.

It has been suggested that individual remediation to enhance the quality of motivation in the context of physical activity by affecting change in a child's dispositional goal orientation may be effective. However, to concentrate on individual change for children is not very practical in most sport and physical education contexts. In addition to being expensive and time consuming, the research reported above suggests that children perceive the meaning and purpose of the achievement context in different ways and that these perceptions influence the goals that children themselves adopt, thereby influencing the quality of motivation (Ames and Archer, 1988; Maehr and Midgley, 1991). Consequently, strategies to determine how we may most effectively use this information to enhance motivation and foster adaptive achievement behaviors need to be developed. To this end, a growing body of literature exists to suggest that the teacher or coach plays an active role in the construction of children's perceptions of the motivational climate and, consequently, the quality of their motivation. What is suggested, therefore, is that time and effort be spent in developing strategies and instructional practices to facilitate the teacher or coach in creating a task involving motivational climate (Ames, 1992; Maehr and Midgley, 1991; Roberts, 1992, 1993; Roberts and Treasure, 1992, 1993).

Creating a task involving motivational climate

Lloyd and Fox (1992) conducted a study in which they attempted to manipulate the motivational climate of a physical education context during six 50 minute sessions. Specifically, the author's examined the effect of two contrasting approaches to

teaching an aerobics/fitness course on adolescent female's exercise motivation and enjoyment. In this investigation, different motivational climates were created by manipulating certain verbal cues and teaching strategies. In the task-involving condition, emphasis was placed on self-improvement through working at one's own level and task mastery, while in the ego-involving condition, emphasis was placed on demonstrating competence through peer performance and normative comparisons. After the effectiveness of the context manipulations had been assessed, participants who took part in the task condition reported higher motivation to continue participating in aerobics, and enjoyment than those who participated in the ego condition.

Marsh and Peart (1988) have reported similar results from a 14 session intervention program designed to contrast the effects of competitive and cooperative aerobic programs on physical fitness and multi-dimensional self-concepts with adolescent females. The results of this study revealed that although physical fitness improved in both the competitive and cooperative programs, when compared to a control group, only in the cooperative program were any self-concept variables affected. Specifically subjects who participated in the cooperative context reported higher levels of physical self-concept, and physical appearance self-concept than subjects who participated in the competitive context.

The results of the studies conducted by Lloyd and Fox (1992) and Marsh and Peart (1988) demonstrate that it is possible to change cognitive and affective responses of children by manipulating the structure of the physical activity context. The results also suggest that achievement goal theory may be an efficacious and parsimonious conceptual framework from which to design intervention strategies to enhance motivation in youth sport and physical education settings. As Duda (1993) and Roberts (1984, 1992, 1993) have argued, however, much more theory driven research is required to enhance the motivation of children in the physical domain. Recent research from an achievement goal perspective in education may facilitate this endeavor.

Reviewing the situational research, Epstein (1988, 1989) has argued that the various structural features that have been consistently identified as influencing a wide range of motivational processes are interdependent variables that, when taken together, define the nature of an achievement context. Coining the acronym TARGET to represent the Task, Authority, Reward, Grouping, Evaluation, and Time structures of the achievement context, she contends that how the teacher goes about structuring the context determines, to a great extent, children's motivation and development. Although initially identified and described by Epstein (1988, 1989), Ames (1992) has suggested that the TARGET structures be placed within an achievement goal theoretical framework arguing that depending on how a teacher manipulates each of the structures makes the adoption of a task or ego achievement goal more likely (Ames, 1992).

Two recent motivation enhancement studies in physical activity settings have utilized Epstein's TARGET structures. Adapting an intervention program developed in the classroom (Ames & Maehr, 1989), Treasure and Roberts (1994b, 1995) conducted a 10 session soccer intervention which entailed identifying those strategies

that are consistent with promoting either an ego or task achievement goal in a physical education setting and organizing these strategies into Epstein's six TARGET areas. Consequently, Treasure and Roberts' (1995) study afforded the comparison between an ego involving motivational climate that emphasized normative standards of performance with a task involving climate that focused on learning and personal improvement. Consistent with classroom research (Ames and Maehr, 1989) the results of this study demonstrated that students who perceive a motivational climate in which the demonstration of ability is based on personal improvement and effort manifest a significantly more adaptive pattern of achievement cognitions and affective responses than those who perceive a physical education context in which the demonstration of ability is based on normative ability and outperforming others. Specifically, participants in the task treatment condition indicated that they preferred to engage in more challenging tasks, believed success was the result of motivation and effort, experienced more satisfaction with the activity than participants in the ego treatment condition. Participants who took part in the ego treatment condition, however, reported that deception was a key to success. The author's concluded that it is possible for a teacher to manipulate the physical education context to be task and ego involving and that children perceive these motivational climates in qualitatively different ways.

Similar findings have been reported by Theeboom, De Knop and Weiss (1995) in a youth sport setting. Specifically, Theeboom and colleagues examined the effectiveness of an ego versus task involving teaching program on children's enjoyment, perceived competence, intrinsic motivation and motor skill development. Designing the intervention around Epstein's TARGET structures, the results of the study revealed that children in the task involving condition experienced higher levels of enjoyment and exhibited better motor skills than those children in the ego involving condition. Although the quantitative data did not provide evidence to this end, in depth interview data indicated that children in the task condition were almost unanimous in reporting high levels of perceived competence and intrinsic motivation, while those from the ego condition showed less pronounced effects. It has been suggested that fostering task involvement may be a particular challenge in the context of physical activity as competition is inherent in the activity (Duda, 1992). The results of recent studies (Lloyd and Fox, 1992; Marsh and Peart, 1988; Theeboom, De Knop and Weiss, 1995; Treasure and Roberts, 1995), however, suggest that in a relatively short period of time, a teacher or coach can structure a youth sport or physical education context in such a way as to influence a child's recognition of a task involving motivational climate and in so doing significantly enhance her/his quality of motivation. From a motivational perspective, the recent research from an achievement goal perspective clearly shows that not only is it possible to create a task involving climate, but also that children thrive in such a context.

Practical Implications

Research in both the classroom and sport support the significance of task

involvement in regard to facilitating adaptive cognitive and positive affective patterns. Indeed, the results of the Treasure and Roberts (1995) study suggest that if the objective of adult organized children's competitive sport is to offer an achievement experience that allows all children to succeed, then task involvement should be the goal. In addition, in an activity in which performance during childhood is so closely linked to physiological maturing (e.g., Malina, 1988) it seems sensible, even for those individual's interested solely in developing elite level adult performers, to promote task involvement during childhood (Roberts, 1984). By emphasizing ego involvement, less mature children are likely to make inappropriate perceived ability assessments when the demonstration of high ability is restricted to those children who are currently the top performers. From a practical perspective, it makes sense that practitioners should be attempting to keep the athletic pool of talent as wide as possible during childhood and not to engage in the elimination of many children by emphasizing ego involving criteria. By emphasizing task involvement it is suggested that children will become active participants in sport, focus on their skill development, experience positive feelings toward sport and toward their involvement in sport regardless of their level of perceived ability.

In line with recent interpretations of motivational theory and research (Ames and Archer, 1988; Maehr and Midgley, 1991), the physical activity research reported above suggest that children perceive achievement contexts as defining the meaning and purpose of the activity in different ways and that these perceptions influence the goals that children themselves adopt, thereby influencing the quality of their motivation. This supports research from a social-cognitive perspective that suggests that changing the structure of the achievement context, and consequently an individual's perception of the psychological climate, may be the most utilitarian approach to enhancing children's motivation (e.g., Ames, 1992; Dweck and Leggett, 1988; Maehr and Midgley, 1991).

The results of the research above provide evidence in support of the contention that the teacher/coach plays an active role in the construction of a child's perception of the motivational climate in a sport context and, consequently, the quality of her/his motivation (Ames, 1992; Roberts, 1984, 1992, 1993; Roberts and Treasure, 1992, 1993). Congruent with the classroom based work of Ames and Maehr (1989), the findings also demonstrated the ease in which an ego or task goal can be induced in a sport context. By manipulating the TARGET structures of the context, it appears that a teacher/coach can encourage a particular achievement goal and in so doing significantly affect a child's sport experience. In contrast to those who have suggested that fostering task involvement may be a particular challenge in the sport context therefore (Duda, 1992), the results of this study suggest that in a relatively short period of time, a teacher/coach can structure the sport context in such a way as to influence a child's adoption of a task achievement goal and in so doing significantly enhance her/his quality of motivation. Indeed, from a practical perspective, the findings provide empirical evidence for Ames' (1992) contention that it is possible to create a task involving climate in a sport setting.

Conclusion

From an applied perspective therefore, the research reported above (Lloyd and Fox, 1992; Marsh and Peart, 1988; Theeboom, De Knop and Weiss, 1995; Treasure and Roberts, 1994b, 1995) begins to address the practical issue of how a teacher/coach can go about structuring the sport context to be task involving. Congruent with the classroom based intervention programs of Ames and Maehr (1989), this research took the important step of translating an organized and coherent set of strategies into guidelines for instruction and the organization of the sport context. It is important to recognize that as important as it may be to provide a working taxonomy of actions that may influence the perceived ego or task involving nature of the sport context, implementation of any intervention program will be greatly facilitated by operational detail that will guide the teacher/coach in strategy choice and selection (Maehr and Midgley, 1991).

Critically, in an achievement context in which the overwhelming emphasis is on normative standards of performance, teacher/coaches need to have resources available that will guide them in their attempts to foster a task involving psychological climate. It is suggested that, similar to the coaching effectiveness program established by Smith, Smoll and their colleagues to enhance the communication behaviors of coaches (Smith and Smoll, 1990; Smith, Smoll, and Curtis, 1979; Smith, Smoll, and Hunt, 1977; Smoll and Smith, 1989), training programs will need to be developed to assist teacher/coaches in constructing task involving sport contexts.

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